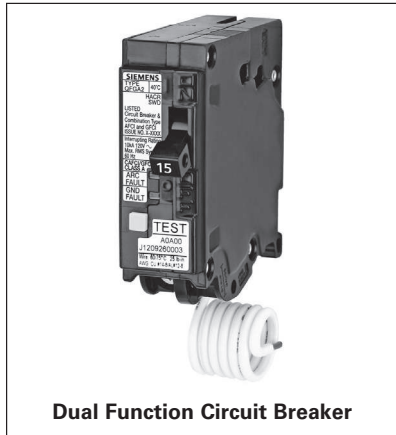
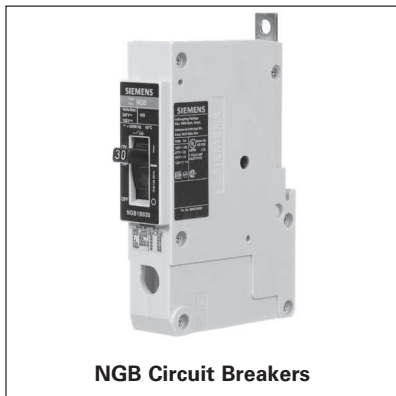


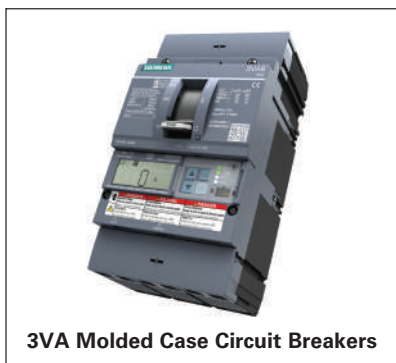
Contents



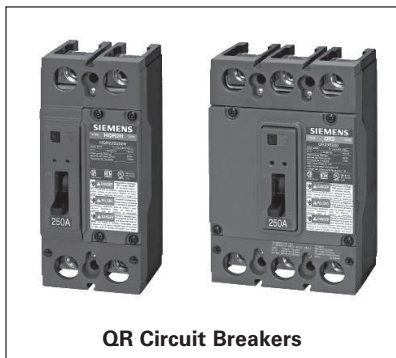
Dual Function Circuit Breaker



NGB Circuit Breakers



3VA Molded Case Circuit Breakers



QR Circuit Breakers

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(continued on next page)

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Molded Case Circuit Breakers

What's **NEW** in molded case circuit breakers:

New Sentron Sensitrip

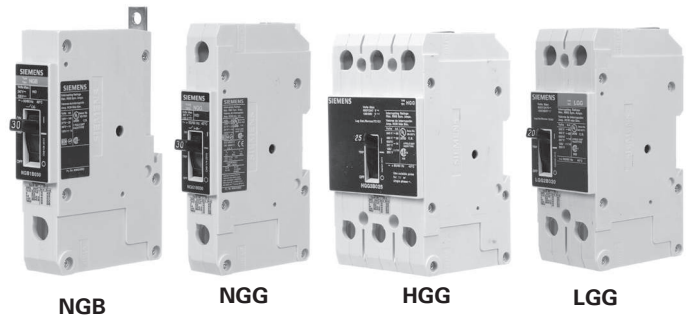
Sentron Sensitrip IV ETU Circuit Breakers with Integrated DAS / Maintenance Mode

Design enhancements include:

- Upgraded ETU
- Frame ratings from 400A to 1600A
- Identical footprint, kAIC ratings and accessory offering as legacy Sensitrip III ETU breakers to ease integration / retrofit
- Maintenance mode versions require customer-supplied 24V external power supply, maintenance switch and light



The Siemens GG, and xGB2 circuit breaker is a compact, industrial design thermal magnetic breaker with valuable features for the global markets. These features include a design that meets multi-national standards, is suitable for DIN rail or base mounting without the need for adapters, and includes CSA Certified / UL Listed field installable accessories. The GG, and xGB2 also has an over center toggle mechanism that is trip free and uses repulsion contact arm construction. Therefore, should a short circuit or tripping condition occur, the contacts are forced apart and the breaker cannot be held closed by means of the handle.



The New Siemens QR Circuit Breaker

Implemented in loadcentres, panelboards, switchboards, meter centres, and modular metering, the new QR breaker is the same form-factor/mounting as QJ breaker for easy retrofit.

Design enhancements include:

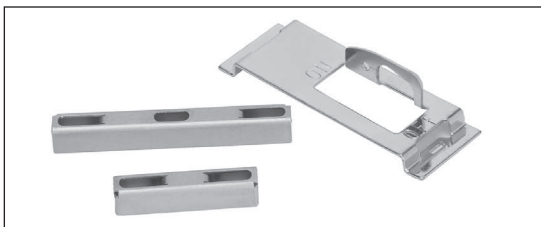
- Trip unit ratings from 100A to 250A.
- Field installable internal accessories – shunt trip, aux switch or shunt/aux combo.
- Two accessory pockets in 3-pole breakers. One accessory pocket in 2-pole breakers.
- High in-rush current capability (450%).
- Push-to-trip button.



The new Siemens 3VA Molded Case Circuit Breakers



- 125A and 250A Thermal Magnetic Trip Breakers
- 150A thru 600A Electronic Trip Circuit Breakers
- Extensive and flexible accessories
- Common internal accessories for the entire breaker family
- Power metering with the series-8 LCD electronic trip
- Illuminated rotary handles show switch position
- Smaller footprint than Sentron or VL breakers
- Enhanced Tools and Resources breakers.



BQD and NGB, HGB, LGB handle ties are now released for use where single pole breakers are using shared neutrals and must be locked out simultaneously.

Molded Case Circuit Breakers

Introduction

Ordering

In the FD through RD frames, you may order molded case circuit breakers three basic ways:

1. As separately ordered frames, trip units and lugs
2. As frame, trip unit and lugs ordered as one catalog number and shipped unassembled or assembled
3. As Frame and Trip Unit shipped assembled and with the trip unit made non-removable, in compliance with UL 489 / CSA C22.2 No. 5 requirements that to be reverse fed the circuit breaker must not have an interchangeable trip unit.

These two options are described in the following:

Components Ordered Separately

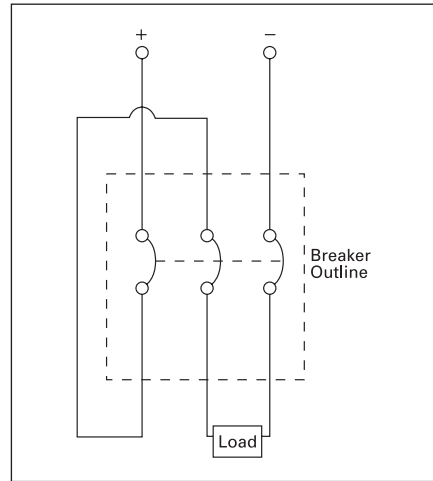
To get the components for a 3-pole, 400 Amp standard interrupting circuit breaker, you would order the frame (JD63F400), the trip unit (JD63T400) and six lugs (TA2J6500). This option is normally useful only if you stock and use large volumes of product and wish to reduce your inventory cost. You may stock, for example, a smaller number of frames (JD63F400) and a variety of trip units (JD63T300, JD63T350, etc.) and assemble breakers as you need them.

Frame, Trip Unit and Lugs Ordered Together

If you order the catalog number JD63B400, you will receive a frame, a trip unit and 6 lugs in separate packages. By suffixing this number with "L" (e.g. JD63B400L), you will receive frame, trip unit and lugs assembled in one container. Pursuant to CSA C22.2 No. 5-13 / UL 489, a product ordered thus will have the markings "LINE" and "LOAD", and may not be "reverse fed" (with power flowing from the "OFF" end of the breaker toward the "ON" end).

Non-Interchangeable Trip Breakers

If you place an "X" after the frame size designator (e.g. JXD63B400), you will receive a frame and trip unit assembled, with the trip unit made non-removable. If you suffix an "L" to this catalog number (e.g. JXD63B400L), you will receive the breaker, non-removable trip unit and lugs assembled. Unless you anticipate a specific need to change the breaker's ampere rating in the future, this is the preferred ordering method, as the products are assembled to Siemens' specifications in our factories. These breakers are suitable for use reverse fed according to CSA C22.2 No. 5-13 / UL 489, since the trip unit is not removable. The smaller frames (QJ, ED and below) do not have removable trip units, and consequently are shipped only as assembled products. To add lugs, see the ordering instructions on each product's catalog page.

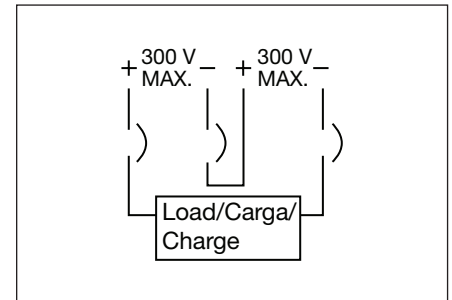


500V DC Wiring Configuration

Connecting Breakers for DC Application

Most Siemens thermal magnetic trip MCCBs are applicable on direct current (dc) systems. Generally, for 250 V dc systems a two pole breaker is used, with one pole on each leg of the supply circuit. For three pole breakers applied on 500 V undergrounded DC systems, it is important to connect the power supply "zig-zag" through the breaker as shown in the figure below. This assures that the Voltage between phases on the breaker terminals is uniformly distributed.

See below for an alternative connection diagram. For a list of Sentron breakers with the DC ratings, please refer to pages 5-11 - 5-16.



Molded Case Circuit Breakers

Catalogue Numbering System

Selection/Application

If used on 250A frame and above means non-interchangeable trip breaker with factory assembled frame and trip. Solid state trip and current limiting (S or C in first character) are non-interchangeable only, and the "X" is omitted.

Trip Unit Type

- Omitted — Thermal-Magnetic
- S — Sensitrip® Electronic Trip

Sentron Series Type/Interrupting Range

- Omitted — Standard Rating
- H — High IC Rating
- HH — Extra High IC Rating
- C — Highest IC Rating and Current Limiting

Frame Identifier

- | | |
|---------------|-------------|
| E — Type ED | M — Type MD |
| F — Type FD | N — Type ND |
| J — Type JD | P — Type PD |
| L — Type LD | R — Type RD |
| LM — Type LMD | |

Maximum Voltage

- 2 — 240 Vac
- 4 — 480 Vac
- 6 — 600 Vac

Number of Poles

- 1
- 2
- 3
- 9 used to indicate the max. functions for an electronic trip circuit breaker (always 3 poles)

(Specific Application Type)

- B — Standard 40°C Breaker
- M — Calibrated for 50°C Application
- F — Frame Only
- T — 40°C Trip Unit Only
- W — 50°C Trip Unit Only
- S — Molded Case Switch
- L — Low Instantaneous Range ETI Breaker
- A — Standard Range ETI Breaker
- H — High Instantaneous Range ETI Breaker

Maximum Continuous Current Rating

- ED Frame — 015, 020, 025, 030, 035, 040, 045, 050, 060, 070, 080, 090, 100, 110, 125
- FD Frame — 070, 080, 090, 100, 110, 125, 150, 175, 200, 225, 250
- JD Frame — 200, 225, 250, 300, 350, 400
- LD Frame — 250, 300, 350, 400, 450, 500, 600
- LMD Frame — 500, 600, 700, 800
- MD Frame — 500, 600, 700, 800
- ND Frame — 900, 100 (1000A), 120 (1200A)
- PD Frame — 120 (1200A), 140 (1400A), 160 (1600A)
- RD Frame — 160 (1600A), 180 (1800A), 200 (2000A)

Suffix

- L — where applicable indicates a breaker shipped with line/loads lugs installed
- A — used with a switch to show automatic self protection
- Y — 400 Hertz
- H — 100% rated
- P — Load side lugs only
- NAV — Navel Ratings

NOTE: — Position omitted if not used.

Applicable Standards

- CSA-C22.2 No. 5, C22.2 No. 14
- UL489 — Molded Case Circuit Breakers and Circuit Breaker Enclosures.
- UL486A — Wire Connectors and

NOTE:

(A) Molded case circuit breakers are designed and tested in accordance to applicable portions of UL 489 and CSA22.2 No. 5 and meet application requirements of the National Electric Code. Unless marked otherwise, circuit breakers are 80% duty rated.

- Solderless Lugs for use with copper wire
- UL486B — Wire Connectors and Solderless Lugs for use with aluminum wire
- UL943 — Ground Fault Interrupters (for personnel protectors)

(B) Molded case circuit breakers are to be connected with 60 or 75°C wire for circuit breakers having a rated ampacity of 100 amperes or less. Circuit breakers having a rated ampacity greater than 100 amperes shall only be cabled with 75°C cable unless otherwise indicated on the circuit breaker label. Exceptions to this rule are outlined in the article 110-14 C(1)(2) of the 2005 National Electric Code and Canadian Electric Code.

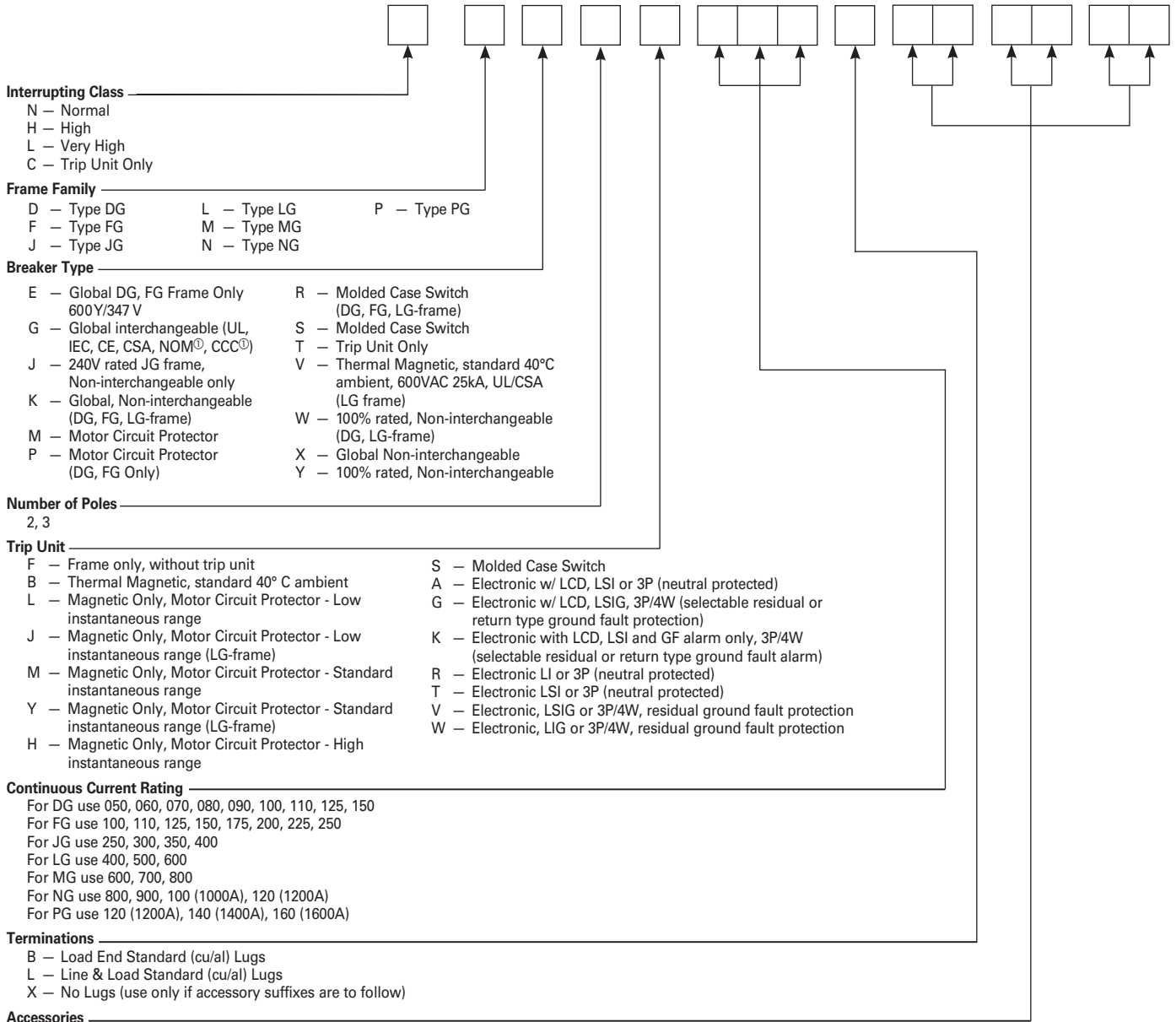
- UL1087 — Molded Case Switches
- UL50 — Cabinets and Boxes
- UL869 — Service Equipment
- NEMA AB-1 — Molded Case Circuit Breakers and Molded Case Switches

- ① Interrupting ratings are not limited to the values or groups of values listed. However, the values listed are minimum values for the class specified.
- ② Single-unit or duplex construction must be specified.
- ③ Use minimum frame size for ampere rating.

Molded Case Circuit Breakers

Catalogue Numbering System

Selection/Application



LCD = Liquid Crystal Display
 LI = Long Delay & Instantaneous trip functions
 LSI = Long Delay, Short Delay, & Instantaneous trip functions
 LSIG = Long Delay, Short Delay, Instantaneous, & Ground Fault trip functions
 GF = Ground Fault
 3P = 3-pole
 4W = 4-wire

© Select Frames

VL Circuit Breakers

Catalogue Numbering System

Selection

If ordering factory-installed accessories or special modifications, you must order a 15-digit catalog number. See the examples below for a detailed explanation. The 15 digit number is achieved by placing X's in positions not being occupied by an accessory/modification. Contact Siemens for circuit breakers configured with accessories.

Auxiliary Switch Example:

H F G 3 B 2 0 0 L **A 2** **X X X X**
Standard 9-digit Aux. Switch Completes Cat #

Shunt Trip / UVR Example:

H F G 3 B 2 0 0 L **X X** **U N** **X X**
Standard 9-digit UVR Completes Cat #

Shunt Trip / Auxiliary Switch Example:

H F G 3 B 2 0 0 L **A 2** **R N** **X X**
Standard 9-digit Aux. Switch Shunt Trip Completes Cat #

Non-Interchangeable Trip Breakers Example:

H F X 3 B 2 0 0 L
Standard 9-digit

Molded Case Circuit Breakers

Reference Guide

Selection/Application

Thermal-Magnetic Trip Breakers

| Page | Plug-In Breakers | | | | | | Panelboard Breakers | | | | | | | | | | |
|----------------------------------|--------------------------------------|----------------------|----------------------|----------------------|----------------|----------|---------------------|----------------|---------|-----------|-----------|---------|---------|---------|---------|--------|-------|
| | QT | QP | QPH | HQP | HQPPH | QPJ | BL [®] | BLH | HBL | BQD, BQD6 | NGB, NGB2 | HGB2 | LGB2 | | | | |
| | 5-21 | 5-22, 5-24 | 5-22, 5-24 | 5-20, 5-24 | 5-20, 5-24 | 5-24 | 5-29 | 5-29 | 5-29 | 5-32 | 5-33 | 5-33 | 5-33 | | | | |
| | 1, 2 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 ^② | 2 | 2, 3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | | | | |
| | 15-50 | 10-125 ^{③④} | 10-125 ^{③④} | 10-125 ^{③②} | 100-225 | 150-200 | 10-125 | 15-125 | 15-100 | 15-100 | 15-125 | 15-125 | 15-125 | | | | |
| Ratings | Poles | | | | | | | | | | | | | | | | |
| | | Amperes | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | Volts (50/60 Hz) | | 1 Pole | 120/240 | 120/240 | 120/240 | 120/240 | 120/240 | 120/240 | 120/240 | 120/240 | 120/240 | 277 | 347 | 347 | 347 | |
| | | 2 Pole | — | — | — | — | — | — | — | — | — | 480/277 | 600/347 | 600/347 | 600/347 | | |
| | | 3 Pole | — | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 480/277 | 600/347 | 600/347 | 600/347 | | |
| | | Interrupt Ratings | CSA/UL | 120V | 10,000 | 10,000 | 22,000 | 65,000 | — | — | 10000 | 22000 | 65000 | 65000 | — | — | |
| | | | | 240V | 10,000 | 10,000 | 22,000 | 65,000 | 100,000 | 10,000 | 10000 | 22000 | 65000 | 65000 | 100000 | 100000 | |
| | | | | 277V | — | — | — | — | — | — | — | — | — | 14000 | — | — | |
| | | | | 347V | — | — | — | — | — | — | — | — | — | 10000 | — | — | |
| | | | | 480/277V | — | — | — | — | — | — | — | — | — | 14000 | 25000 | 35000 | 65000 |
| | | | | 480V | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | | 600/347V | — | — | — | — | — | — | — | — | — | 10000 | 14000 | 22000 | 25000 |
| | | | | 600V | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | | IEC 947-2 50/60 Hz | 220/240V | I_{cu} | — | — | — | — | — | — | — | — | — | — | — |
| | I_{cs} | | | | — | — | — | — | — | — | — | — | — | — | — | | |
| 380/415V | I_{cu} | — | — | | — | — | — | — | — | — | — | — | — | | | | |
| 500V | I_{cu} | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| | I_{cs} | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| DC | 125/250 V DC Interrupting Rating | 2-Pole | — | — | — | — | — | — | — | — | 14000 | 14000 | 14000 | 14000 | | | |
| | | 3-Pole | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| Dimensions in Inches | Height | 10-50A | — | 2.87 | 2.87 | — | — | — | 3.56 | 3.56 | 3.75 | 4.50 | 5.00 | 5.00 | 5.00 | | |
| | | 10-60A | 3.12 | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 55-125A | — | 3.12 | 3.12 | 3.12 | 3.12 | 3 ^⑤ | 3.75 | 3.75 | 3.75 | 4.50 | 5.00 | 5.50 | 5.50 | | |
| | Width | 1-Pole | 1.00 | 1.00 | 1.00 | 1.00 | — | — | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | |
| | | 2-Pole | 2.00 ^① | 2.00 | 2.00 | 2.00 | 4.00 | ⑥ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | | |
| 3-Pole | | 2.00 ^① | 3.00 | 3.00 | 3.00 | — | 3.00 ^⑤ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | | | |
| Depth | 2.06 | 2.37 | 2.37 | 2.37 | 2.37 | 2.34 | 2.37 | 2.37 | 2.37 | 2.69 | 2.71 | 2.71 | 2.71 | | | | |
| Overcurrent Devices | Thermal and Fixed magnetic Trip | | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Thermal and Adjustable Magnetic trip | | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | Adjustable Magnetic trip only | | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | Motor Circuit Protector | | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | Molded Case Switch | | — | √ ^⑦ | — | — | — | — | — | — | — | — | — | — | | | |
| Accessories & Modifications | Undervoltage Trip | | — | — | — | — | — | — | — | — | √ | — | √ | √ | | | |
| | Shunt Trip | | — | √ ^⑧ | √ ^⑧ | √ | √ ^⑧ | — | √ | √ | √ | √ | √ | √ | | | |
| | Auxiliary Switch | | — | — | — | — | √ ^⑧ | — | √ | √ | √ | √ | √ | √ | | | |
| | Alarm Switch | | — | — | — | — | — | — | — | — | — | √ | √ | √ | | | |
| | Mechanical Interlock | | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| Fungus Proofing (ref. page 5-89) | | — | — | — | — | — | — | √ | √ | √ | √ | √ | √ | | | | |

5
MOLDED CASE
CIRCUIT BREAKERS



For inches / millimeters conversion, see Technical section.
For Plug-in Breakers, see Loadcentres section.

① BQD6 CSA certified 10,000A @ 600Y/347V 15-70A only.
② Single pole circuit breakers available in ratings 15-70A only, 125A available as a 2-pole only.
③ 10A, 1-pole & 2-pole 120/240V AC only.
④ 125A, 2-pole 120/240V AC only.
⑤ Single pole circuit breakers available in ratings 15-70A only, 125A available as a 2-pole only.
⑥ 10A, 1-pole & 2-pole 120/240V AC only.

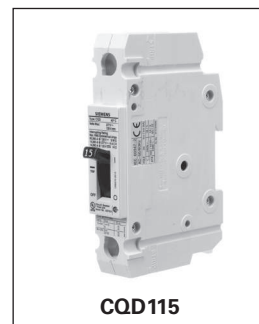
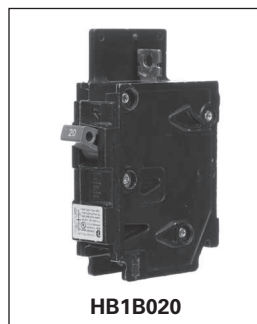
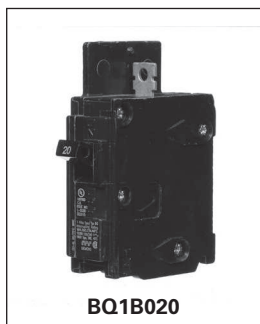
Molded Case Circuit Breakers

Reference Guide

Selection/Application

Thermal-Magnetic Trip Breakers

| | | | General Purpose Breakers | | | | | | | | | |
|----------------------------------------|----------------------------------|------------------------------------------------------|--------------------------|---------|---------|---------|---------|----------------|---------|---------|---------------------|---------|
| | | | BQ | BQH | HBQ | QR2 | QRH2 | HQR2 | HQR2H | CQD | NGG | |
| Page | | | 5-35 | 5-35 | 5-35 | 5-37 | 5-37 | 5-37 | 5-37 | 5-38 | 5-39 | |
| Ratings | AC | Poles | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 2, 3 | 2, 3 | 2, 3 | 2, 3 | 1, 2, 3 | 1, 2, 3 | |
| | | Amperes, Continuous | 1-Pole | 15-70 | 15-70 | 15-50 | — | — | — | — | 15-100 | 15-125 |
| | | | 2-Pole | 15-125 | 15-100 | 15-70 | 100-250 | 100-250 | 100-250 | 100-250 | 15-100 | 15-125 |
| | | | 3-Pole | 15-100 | 15-100 | 15-100 | | | | | 15-100 | 15-125 |
| | | Volts (50/60 Hertz) | 1-Pole | 120/240 | 120/240 | 120/240 | — | — | — | — | 277 | 347 |
| | | | 2-Pole | | | | 240 | 240 | 240 | 240 | 480/277 | 600/347 |
| | | | 3-Pole | 240 | 240 | 240 | 240 | 240 | 240 | 480/277 | 600/347 | |
| | | CSA/UL Interrupting Rating – Symmetrical RMS Amperes | 120V | 10,000 | 22,000 | 65,000 | — | — | — | — | 65,000 | 65,000 |
| | | | 240V | 10,000 | 22,000 | 65,000 | 10,000 | 25,000 | 65,000 | 100,000 | 65,000 | 65,000 |
| | | | 480V | — | — | — | — | — | — | — | 14,000 ^① | 25,000 |
| 600/347V | — | | — | — | — | — | — | — | 10,000 | 14,000 | | |
| DC | Volts – 2-Pole | — | — | — | — | — | — | — | 125/250 | 125/250 | | |
| | Interrupting Rating – DC Amperes | — | — | — | — | — | — | — | 14,000 | 14,000 | | |
| Dimensions in Inches | Height | 15-50A | 3.75 | 3.75 | 4.00 | — | — | — | — | 4.50 | 5.40 | |
| | | 55-125A | 4.00 | 4.00 | 4.00 | — | — | — | — | 4.50 | 5.40 | |
| | | 60-225A | — | — | — | 7.00 | 7.00 | 7.00 | 7.00 | — | — | |
| | Width | 1-Pole | 1.00 | 1.00 | 1.00 | — | — | — | — | 1.00 | 1.00 | |
| | | 2-Pole | 2.00 | 2.00 | 2.00 | 3.00 | 3.00 | 3.00 | 3.00 | 2.00 | 2.00 | |
| 3-Pole | | 3.00 | 3.00 | 3.00 | 4.50 | 4.50 | 4.50 | 4.50 | 3.00 | 3.00 | | |
| Depth | | 2.37 | 2.37 | 2.37 | 2.53 | 2.53 | 2.53 | 2.53 | 2.87 | 2.90 | | |
| Overcurrent Devices | Thermal and Fixed Magnetic Trip | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Molded Case Switch | ✓ | — | — | ✓ | — | — | ✓ ^③ | — | — | | |
| Accessories & Modifications | Undervoltage Trip | — | — | — | — | — | — | — | — | — | | |
| | Shunt Trip | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Auxiliary Switch | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Alarm Switch | — | — | — | — | — | — | — | ✓ | ✓ | | |
| | Mechanical Interlock | — | — | — | ✓ | ✓ | ✓ | ✓ | — | — | | |
| Fungus Proofing (ref. page 5-89) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Individual Enclosures | Type 1 – Indoor Surface | ✓ | ✓ | ✓ | — | — | — | — | — | — | | |
| | Type 1 – Indoor, Flush | ✓ | ✓ | ✓ | — | — | — | — | — | — | | |
| | Type 3R – Outdoor-Rainproof | ✓ | ✓ | ✓ | — | — | — | — | — | — | | |



For inches / millimeters conversion, see Technical section.

① CQD breakers are rated 14,000 KAIC at 480/277V.

③ 3-pole only.

Molded Case Circuit Breakers

Reference Guide

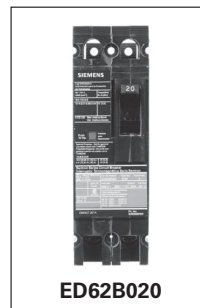
Selection/Application

Thermal-Magnetic Trip Breakers

| Page | | General Purpose Breakers | | | | | | | | | |
|-----------------------------|---|---------------------------------------------------|----------------------|--------------|--------------|--------------|-----------------------|---------------------|--------------|----------------------|---------|
| | | HGG | LGG | ED2 | ED4 | ED6 | HED4 | CED6 | | | |
| Ratings | | Poles | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1 [ⓐ] , 2, 3 | 1, 2, 3 | 2, 3 | | |
| AC | | Amperes, Continuous | 15-125 | 15-125 | 15-100 | 15-125 | 15-125 [ⓑ] | 15-125 | 15-125 | | |
| | | Volts 50/60HZ | 1-Pole | 347 | 347 | 120 | 277 | 347 | 277 | — | |
| | | Interrupt Rating Symmetrical RMS Amperes | CSA/UL | 2-Pole | 600/347 | 600/347 | 240 | 480 | 600 | 480 | 600 |
| | | | | 3-Pole | — | — | — | — | — | — | — |
| | | | | 120V | — | — | 10,000 | — | — | 100,000 | — |
| | | | | 240V | 85,000 | 100,000 | 10,000 | 65,000 | 65,000 | 100,000 [ⓓ] | 200,000 |
| | | | | 277V | — | — | — | 22,000 [ⓐ] | — | 65,000 [ⓑ] | — |
| | | | 347V | — | — | — | — | 30,000 | — | — | |
| | | | 480V | 35,000 | 65,000 | — | 18,000 | 25,000 | 42,000 | 200,000 | |
| | | | 600V | 14,000 | 14,000 | — | — | 18,000 | — | 100,000 | |
| | | | IEC 947-2 50/60HZ | 220/240V | lcu | — | — | — | 65,000 | — | — |
| | | | | | lcs | — | — | — | 17,000 | — | — |
| | | 380/415V | | lcu | — | — | — | — | 35,000 | — | |
| | | | | lcs | — | — | — | — | 9,000 | — | |
| | | 500V | | lcu | — | — | — | — | 18,000 | — | |
| lcs | — | — | — | — | 5,000 | — | — | | | | |
| DC | | 2-Pole, 250V DC Interrupting Ratings | 35,000 | 42,000 | 5,000 | 30,000 | 30,000 | 30,000 | 30,000 | | |
| | | 3-Pole, 500V DC Interrupting Ratings [ⓔ] | — | — | — | — | 18,000 | — | 50,000 | | |
| Dimensions in inches | | Height | 1-Pole | 5.40 1.00 | 5.40 1.00 | 6.34 1.00 | 6.34 1.00 | 6.34 1.00 | 6.34 1.00 | | |
| | | Width | 2-Pole | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | | |
| | | | 3-Pole | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | | |
| | | | 4-Pole | 4.00 | 4.00 | — | — | — | — | | |
| | | Depth | 2.90 | 2.90 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | | |
| Overcurrent Devices | | Thermal and Fixed Magnetic Trip | √ | √ | √ | √ | √ | √ | √ | | |
| | | Thermal and Adjustable Magnetic Trip | — | — | — | — | — | — | — | | |
| | | Adjustable Magnetic Trip only | — | — | — | — | √ | — | √ | | |
| | | Motor Circuit Protector | — | — | — | — | — | — | √ | | |
| | | Molded Case Switch | — | — | √ | √ | √ | √ | √ | | |
| Accessories & Modifications | | Undervoltage Trip | — | — | √ | √ | √ | √ | √ | | |
| | | Shunt Trip | √ | √ | √ | √ | √ | √ | √ | | |
| | | Auxiliary Switch | √ | √ | √ | √ | √ | √ | √ | | |
| | | Alarm Switch | √ | √ | √ | √ | √ | √ | √ | | |
| | | Mechanical Interlock | — | — | — | — | — | — | — | | |
| | | Rear Connection Studs | — | — | √ | √ | √ | √ | √ | | |
| | | Electric Motor Operator | — | — | √ | √ | √ | √ | √ | | |
| | | Plug-In Mounting Assembly (3 Pole Only) | — | — | √ | √ | √ | √ | √ | | |
| | | Fungus Proofing (ref. page 5-89) | √ | √ | √ | √ | √ | √ | √ | | |
| Individual Enclosures | | Type 1 — Indoor Surface | √ | √ | √ | √ | √ | √ | √ | | |
| | | Type 1 — Indoor, Flush | √ | √ | √ | √ | √ | √ | √ | | |
| | | Type 3R — Outdoor-Rainproof | √ | √ | √ | √ | √ | √ | √ | | |
| | | Type 12 — Lint, Fine Dust, Oils, Coolants | — | — | √ | √ | √ | √ | √ | | |

For inches / millimeters conversion, see Technical section.

- ⓐ 1-pole only.
- ⓑ 35-100A: 25,000 AIR at 277V AC/15-30A:
65,000 AIR at 277V AC.
- ⓓ For DC UPS system application.
- ⓔ Single pole ED6 (15-30A) 30kA, (35-100A) 18 kA. CSA Only.
- ⓕ Single pole HED4, 15-30A: 65,000 AIR at 240V AC; single pole HED4, 35-100A: 25,000 AIR at 240V AC.
- ⓖ HGG and LGG breakers are rated at 600/347V.
- ⓗ ED6, 2-pole available 15-125 amps only.



Molded Case Circuit Breakers

Reference Guide

Selection/Application

Thermal-Magnetic Trip Breakers

| Page | | General Purpose Breakers | | | | | | | | | | | | |
|----------------------------------------|----------------------------------------------------------|------------------------------------------------|-----------------------|---------------|--------|---------|---------------|-----------------|-------------------|---------|---------|---------|---------|---------|
| | | FD6A, FXD6A | HFD6, HFXD6 | HHFD6, HHFXD6 | CFD6 | JXD2-A | JD6-A, JXD6-A | HJD6-A, HJXD6-A | HHJD6-A, HHJXD6-A | CJD6-A | | | | |
| Ratings | AC | Poles | 2, 3 | 2, 3 | 2, 3 | 3 | 2, 3 | 2, 3 | 2, 3 | 2, 3 | 3 | | | |
| | | Amperes, Continuous | 70-250 | 70-250 | 70-250 | 70-250 | 200-400 | 200-400 | 200-400 | 200-400 | 200-400 | | | |
| | | Volts 50/60HZ | 2-Pole 3-Pole | 600 | 600 | 600 | 600 | 240 | 600 | 600 | 600 | 600 | | |
| | | Interrupt Rating Symmetrical RMS Amperes | CSA/UL | 240V | 65,000 | 100,000 | 200,000 | 200,000 | 65,000 | 65,000 | 100,000 | 200,000 | 200,000 | |
| | | | | 480V | 35,000 | 65,000 | 100,000 | 200,000 | — | 35,000 | 65,000 | 100,000 | 150,000 | |
| | | | IEC60947-2 50/60HZ | 220/240V | 600V | 22,000 | 25,000 | 25,000 | 100,000 | — | 25,000 | 35,000 | 50,000 | 100,000 |
| | | | | | lcu | 65,000 | 100,000 | — | — | — | 65,000 | 100,000 | — | — |
| | | | | 380/415V | lcs | 33,000 | 50,000 | — | — | — | 33,000 | 50,000 | — | — |
| | | | | | lcu | 35,000 | 65,000 | — | — | — | 40,000 | 65,000 | — | — |
| | | lcs | 18,000 | 33,000 | — | — | — | 20,000 | 33,000 | — | — | | | |
| DC | 2-Pole 250V DC Interrupting Ratings | | 30,000 | 30,000 | — | 50,000 | 30,000 | 30,000 | 30,000 | — | — | | | |
| | 3-Pole, 500V DC Interrupting Ratings [Ⓞ] | | 18,000 | 25,000 | — | 50,000 | — | 25,000 | 35,000 | — | 50,000 | | | |
| Dimensions in inches | Height | | 9.50 | 9.50 | 14.12 | 14.12 | 11.00 | 11.00 | 11.00 | 11.00 | 17.86 | | | |
| | Width | 2-Pole 3-Pole | 4.50 | 4.50 | 4.50 | 4.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | | | |
| | | Depth | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | | | |
| Overcurrent Devices | Thermal and Fixed Magnetic Trip | | — | — | — | — | — | — | — | — | — | | | |
| | Thermal and Adjustable Magnetic Trip | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Adjustable Magnetic Trip Only Motor Circuit Protector | | ✓ | — | — | ✓ | — | — | ✓ | ✓ | — | | | |
| | Molded Case Switch | | ✓ | — | — | ✓ | ✓ | ✓ | — | — | ✓ | | | |
| Accessories & Modifica- tions | Undervoltage Trip | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Shunt Trip | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Auxiliary Switch | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Auxiliary Switch | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Mechanical Interlock | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Rear Connection Studs | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Electric Motor Operator | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Plug-In Mounting Assembly | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Fungus Proofing (ref. page 5-89) | | ✓ | ✓ | ✓ | ✓ | — | ✓ | ✓ | ✓ | ✓ | | | | |
| Individual Enclosures | Type 1 — Indoor Surface | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Type 1 — Indoor, Flush | | — | ✓ | — | ✓ | — | — | — | — | — | | | |
| | Type 3R — Outdoor-Rainproof | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | | | |
| | Type 12 — Lint, Fine Dust, Oils, Coolants | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |

For inches / millimeters conversion, see Technical section.

Ⓞ For DC UPS application.

Molded Case Circuit Breakers

Reference Guide

Selection/Application

Thermal-Magnetic Trip Breakers

| | | General Purpose Breakers | | | | | | | | | | | |
|---------------------------------------------------|------------------------------------------------|-------------------------------------|----------------|-----------------|---------|----------------|------------------|--------------|----------------|---------|---------|---------|---|
| | | LD6, LXD6 | HLD6, HLXD6 | HHL6, HHLXD6 | CLD6-A | LMD6, LMXD6 | HLMD6, HLMXD6 | MD6, MXD6 | HMD6, HMXD6 | CMD6 | | | |
| Page | | 5-53 | 5-54 | 5-54 | 5-54 | 5-57 | 5-58 | 5-60 | 5-61 | 5-61 | | | |
| Ratings | AC | Poles | 2, 3 | 2, 3 | 2, 3 | 3 | 2, 3 | 2, 3 | 2, 3 | 2, 3 | 3 | | |
| | | Amperes, Continuous | 250-600 | 250-600 | 250-600 | 450-600 | 500-800 | 500-800 | 500-800 | 500-800 | 400-800 | | |
| | | Volts 50/60 HZ | 2-Pole | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | | |
| | | | 3-Pole | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | | |
| | Interrupt Rating Symmetrical RMS Amperes | CSA/UL | 240V | 65,000 | 100,000 | 200,000 | 200,000 | 65,000 | 100,000 | 65,000 | 100,000 | 200,000 | |
| | | | 480V | 35,000 | 65,000 | 100,000 | 150,000 | 50,000 | 65,000 | 50,000 | 65,000 | 100,000 | |
| | | | 600V | 25,000 | 35,000 | 50,000 | 100,000 | 25,000 | 50,000 | 25,000 | 50,000 | 65,000 | |
| | | IEC 947-2 50/60HZ | 220/240V | Icu | 65,000 | 100,000 | — | — | 65,000 | 100,000 | 65,000 | 100,000 | — |
| | | | 380/415V | Ics | 33,000 | 50,000 | — | — | 33,000 | 50,000 | 33,000 | 50,000 | — |
| | | | | Icu | 40,000 | 65,000 | — | — | 40,000 | 65,000 | 40,000 | 65,000 | — |
| | | 500V | Ics | 20,000 | 33,000 | — | — | 20,000 | 33,000 | 20,000 | 33,000 | — | |
| | | | Icu | — | — | — | — | — | — | — | — | — | |
| | DC | 2-Pole 250V DC Interrupting Ratings | 30,000 | 30,000 | — | — | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | | |
| 3-Pole, 500V DC Interrupting Ratings [Ⓞ] | | 35,000 | — | — | 50,000 | 25,000 | 50,000 | 25,000 | 50,000 | 50,000 | | | |
| Dimensions in inches | Height | 11.00 | 11.00 | 11.00 | 17.86 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | | | |
| | Width | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 9.00 | 9.00 | 9.00 | | | |
| | Depth | 4.00 | 4.00 | 4.00 | 4.00 | 4.59 | 4.59 | 6.19 | 6.19 | 6.19 | | | |
| Overcurrent Devices | Thermal and Adjustable Magnetic Trip | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Adjustable Magnetic Trip Only | ✓ | — | — | ✓ | ✓ | ✓ | ✓ | — | ✓ | | | |
| | Motor Circuit Protector | ✓ | — | — | ✓ | ✓ | — | ✓ | — | ✓ | | | |
| Accessories & Modifications | Molded Case Switch | ✓ | — | — | ✓ | ✓ | — | ✓ | — | ✓ | | | |
| | Undervoltage Trip | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Shunt Trip | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Auxiliary Switch | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Alarm Switch | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Mechanical Interlock | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Rear Connection Studs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Electric Motor Operator | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Plug-In Mounting Assembly | ✓ | ✓ | ✓ | ✓ | — | — | ✓ | ✓ | ✓ | | | |
| Fungus Proofing (ref. page 5-89) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Individual Enclosures | Type 1 — Indoor Surface | ✓ | ✓ | ✓ | ✓ | — | — | ✓ | ✓ | ✓ | | | |
| | Type 1 — Indoor, Flush | — | — | — | — | — | — | — | — | — | | | |
| | Type 3R — Outdoor-Rainproof | ✓ | ✓ | ✓ | — | — | — | ✓ | ✓ | ✓ | | | |
| | Type 12 — Lint, Fine Dust, Oils, Coolants | — | — | — | — | — | — | ✓ | ✓ | ✓ | | | |

For inches / millimeters conversion, see Technical section.

Ⓞ For DC UPS application.

Molded Case Circuit Breakers

Reference Guide

Selection/Application

Thermal-Magnetic Trip Breakers

| Page | | | | General Purpose Breakers | | | | | | | |
|-----------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------|-------------------|--------------------------|-------------|----------|------------------------|----------------------------------------|-------------------|---------|---|
| | | | | ND6, NXD6 | HND6, HNXD6 | CND6 | PD6, PXD6 ^① | HPD6 ^② , HPXD6 ^② | CPD6 ^③ | | |
| Ratings | | | | 5-64 | 5-65 | 5-65 | 5-68 | 5-68 | 5-68 | | |
| Ratings | AC | Poles | | 2, 3 | 2, 3 | 3 | 3 | 3 | 3 | | |
| | | Amperes, Continuous | | 800-1200 | 800-1200 | 800-1200 | 1200-1600 | 1200-1600 | 1200-1600 | | |
| | | Volts 50/60 HZ | | 3-Pole | 600 | 600 | 600 | 600 | 600 | 600 | |
| | | Interrupt Rating Symmetrical RMS Amperes | CSA/UL | 240V | 65,000 | 100,000 | 200,000 | 65,000 | 100,000 | 200,000 | |
| | | | | 480V | 50,000 | 65,000 | 100,000 | 50,000 | 65,000 | 100,000 | |
| | | | | 600V | 25,000 | 50,000 | 65,000 | 25,000 | 50,000 | 65,000 | |
| | | | IEC 947-2 50/60HZ | 220/240V | lcu | 65,000 | 100,000 | — | — | — | — |
| | | | | | lcs | 33,000 | 50,000 | — | — | — | — |
| | | | | 380/415V | lcu | 40,000 | 65,000 | — | — | — | — |
| | | | lcs | 20,000 | 33,000 | — | — | — | — | | |
| | | 500V | lcu | — | — | — | — | — | — | | |
| | | lcs | — | — | — | — | — | — | — | | |
| DC | 2-Pole 250V DC Interrupting Ratings | | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | | | |
| | 3-Pole, 500V DC Interrupting Ratings ^① | | 25,000 | 50,000 | 50,000 | 25,000 | 50,000 | 50,000 | | | |
| Dimensions in inches | Circuit breakers require Connect-all mounting block. Dimensions shown are for circuit breaker only. | | Height | 16.00 | 16.00 | 16.00 | 16.0 | 16.00 | 16.00 | | |
| | | | Width | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | | |
| | | | Depth | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | | |
| Overcurrent Devices | Thermal and Adjustable Magnetic Trip | | √ | √ | √ | √ | √ | √ | | | |
| | Adjustable Magnetic Trip Only | | — | — | — | — | — | — | | | |
| | Motor Circuit Protector | | — | — | — | — | — | — | | | |
| Accessories & Modifications | Molded Case Switch | | √ | — | √ | √ | — | — | | | |
| | Undervoltage Trip | | √ | √ | √ | √ | √ | √ | | | |
| | Shunt Trip | | √ | √ | √ | √ | √ | √ | | | |
| | Auxiliary Switch | | √ | √ | √ | √ | √ | √ | | | |
| | Alarm Switch | | √ | √ | √ | √ | √ | √ | | | |
| | Mechanical Interlock | | √ | √ | √ | √ | √ | √ | | | |
| | Rear Connections Studs | | √ | √ | √ | — | — | — | | | |
| | Electric Motor Operator | | √ | √ | √ | √ | √ | √ | | | |
| | Plug-in Mounting Assembly | | √ | √ | √ | — | — | — | | | |
| | Fungus Proofing (ref. page 5-89) | | √ | √ | √ | √ | √ | √ | | | |
| Mounting Block (required) | | — | — | — | √ | √ | √ | | | | |
| Individual Enclosures | Type 1 – Indoor Surface | | √ | √ | √ | — | — | — | | | |
| | Type 1 – Indoor, Flush | | — | — | — | — | — | — | | | |
| | Type 3R – Outdoor-Rainproof | | √ | √ | √ | — | — | — | | | |
| | Type 12 – Lint, Fine Dust, Oils, Coolants | | — | — | — | — | — | — | | | |

For inches / millimeters conversion, see Technical section.

- ① For DC UPS application.
- ② 2-pole design.
- ③ 3-pole design.

- ④ Requires Connect-all mounting assembly. Dimensions shown are for circuit breaker only.

Molded Case Circuit Breakers

Reference Guide

Selection/Application

| Thermal-Magnetic Trip Breakers & Electronic Trip Breakers | | | | General Purpose Breakers | | Solid State Trip Circuit Breakers | | | | | | | |
|-----------------------------------------------------------|---------------------------------------------------|------------------------------------------|--------------------|-----------------------------------------|-------------------------------------------|-----------------------------------|---------|---------|---------|---------|---------|---------|---|
| | | | | RD6 ^① , RXD6 ^① | HRD6 ^① , HRXD6 ^① | SJD6 | SHJD6 | SCJD6 | SLD6 | SHLD6 | SCLD6 | | |
| Page | | | | 5-71 | 5-71 | 5-51 | 5-51 | 5-51 | 5-55 | 5-55 | 5-55 | | |
| Ratings | AC | Poles | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | | Amperes, Continuous | | | 1600-2000 | 1600-2000 | 200-400 | 200-400 | 200-400 | 300-600 | 300-600 | 300-600 | |
| | | Volts 50/60 HZ | | 3-Pole | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | |
| | | Interrupt Rating Symmetrical RMS Amperes | CSA/UL | 240V | 65,000 | 100,000 | 65,000 | 100,000 | 200,000 | 65,000 | 100,000 | 200,000 | |
| | | | | 480V | 50,000 | 65,000 | 35,000 | 65,000 | 150,000 | 35,000 | 65,000 | 150,000 | |
| | | | | 600V | 25,000 | 50,000 | 25,000 | 35,000 | 100,000 | 25,000 | 35,000 | 100,000 | |
| | | | IEC60947-2 50/60HZ | 220/240V | lcu | — | — | — | — | — | — | — | — |
| | | | | | lcs | — | — | — | — | — | — | — | — |
| | | | | 380/415V | lcu | — | — | — | — | — | — | — | — |
| | | | | lcs | — | — | — | — | — | — | — | — | |
| | | | 500V | lcu | — | — | — | — | — | — | — | | |
| | | | | lcs | — | — | — | — | — | — | — | | |
| DC | 2-Pole 250V DC Interrupting Ratings | | 30,000 | 30,000 | — | — | — | — | — | — | | | |
| | 3-Pole, 500V DC Interrupting Ratings ^① | | 25,000 | 50,000 | — | — | — | — | — | — | | | |
| Dimensions in inches | Height | | 16.00 | 16.00 | 11.00 | 11.00 | 17.86 | 11.0 | 11.00 | 17.86 | | | |
| | Width | | 3-Pole | 9.00 | 9.00 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | | | |
| | Depth | | | 6.19 | 6.19 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | | | |
| Overcurrent Devices | Solid State Trip | | — | — | √ | √ | √ | √ | √ | √ | | | |
| | Thermal and Adjustable Magnetic Trip | | √ | √ | — | — | — | — | — | — | | | |
| | Adjustable Magnetic Trip Only | | — | — | — | — | — | — | — | — | | | |
| | Motor Circuit Protector | | — | — | — | — | — | — | — | — | | | |
| | Molded Case Switch | | √ | — | — | — | — | — | — | — | | | |
| Accessories & Modifications | Undervoltage Trip | | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Shunt Trip | | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Auxiliary Switch | | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Alarm Switch | | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Mechanical Interlock | | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Rear Connections Studs | | — | — | √ | √ | √ | √ | √ | √ | | | |
| | Electric Motor Operator | | √ | — | √ | √ | √ | √ | √ | √ | | | |
| | Plug-In Mounting Assembly | | — | — | √ | √ | √ | √ | √ | √ | | | |
| | Fungus Proofing (ref. page 5-89) | | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| | Mounting Block (required) | | √ | √ | — | — | — | — | — | — | | | |
| Individual Enclosures | Type 1 — Indoor Surface | | — | — | √ | √ | √ | √ | √ | √ | | | |
| | Type 1 — Indoor, Flush | | — | — | — | — | — | — | — | — | | | |
| | Type 3R — Outdoor-Rainproof | | — | — | √ | √ | — | √ | √ | — | | | |
| | Type 12 — Lint, Fine Dust, Oils, Coolants | | — | — | √ | √ | √ | — | — | — | | | |

For inches / millimeters conversion, see Technical section.

^① Requires Connect-all mounting assembly. Dimensions shown are for circuit breaker only.

Molded Case Circuit Breakers

Reference Guide

Selection

Electronic Trip Breakers

| Page | | | | Solid State Trip Circuit Breakers | | | | | | | | |
|--------------------------------|-------------------------------------------|------------------------------------------------|----------|-----------------------------------|---------|---------|----------|----------|----------|-------------------|--------------------|---------|
| | | | | SMD6 | SHMD6 | SCMD6 | SND6 | SHND6 | SCND6 | SPD6 ^① | SHPD6 ^① | |
| Ratings | | | | 5-62 | 5-62 | 5-62 | 5-66 | 5-66 | 5-66 | 5-69 | 5-69 | |
| Ratings | AC | Poles | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | Amperes, Continuous | | 600-800 | 600-800 | 600-800 | 800-1200 | 800-1200 | 800-1200 | 1200-600 | 1200-1600 | |
| | | Volts 50/60HZ | | 3-Pole | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| | | Interrupt Rating Symmetrical RMS Amperes | CSA/UL | 240V | 65,000 | 100,000 | 200,000 | 65,000 | 100,000 | 200,000 | 65,000 | 100,000 |
| | | | | 480V | 50,000 | 65,000 | 100,000 | 50,000 | 65,000 | 100,000 | 50,000 | 65,000 |
| | | | | 600V | 25,000 | 50,000 | 65,000 | 25,000 | 50,000 | 65,000 | 25,000 | 50,000 |
| | | IEC60947-2 50/60HZ | 380/415V | lcu | — | — | — | — | — | — | — | — |
| | | | | lcs | — | — | — | — | — | — | — | — |
| | | | 690V | lcu | — | — | — | — | — | — | — | — |
| | | | | lcs | — | — | — | — | — | — | — | — |
| Dimensions in inches | Height | | 10.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | | |
| | Width | | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | | |
| | Depth | | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | 6.19 | | |
| Overcurrent Devices | Solid State Trip | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Undervoltage Trip | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Accessories & Modifications | Shunt Trip | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Auxiliary Switch | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Alarm Switch | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Mechanical Interlock | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Rear Connection Studs | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | |
| | Electric Motor Operator | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Plug-In Mounting Assembly | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | |
| | Fungus Proofing (ref. page 5-89) | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Individual Enclosures | Type 1 — Indoor Surface | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | |
| | Type 1 — Indoor, Flush | | — | — | — | — | — | — | — | — | | |
| | Type 3R — Outdoor-Rainproof | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | |
| | Type 12 — Lint, Fine Dust, Oils, Coolants | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | |

5
MOLDED CASE
CIRCUIT BREAKERS

For inches / millimeters conversion, see Technical section.

① Requires connect-all mounting block assembly. Dimensions shown are for circuit breaker.

② Breaker has rating plugs which can be changed within each frame rating.

Molded Case Circuit Breakers

Reference Guide

Selection/Application

| Page | | 5-96 | | | 5-100 | | | 5-104 | | | |
|-------------------------------------------|--------------------------------------------------------|--------------------------------------------|-------|--------|-----------|-------|--------|-------------------|-------|--------|---------|
| Breaker Frame Family | | DG | | | FG | | | JG | | | |
| | Continuous Amps | 30–150A | | | 40–250A | | | 70–400A | | | |
| | Poles | 2, 3 | | | 2, 3 | | | 2, 3 | | | |
| | Max. Volts AC | 600Y/347V | | | 600Y/347V | | | 600V | | | |
| Breaker Type | | NDGA | HDGA | LDGA | NFGA | HFGA | LFGA | NJGA | HJGA | LJGA | |
| Ratings | Interrupting Class | | N | H | L | N | H | L | N | H | L |
| | Interrupting Rating RMS Symmetrical Amperes AC 50/60Hz | 240Vac | 65 | 100 | 200 | 65 | 100 | 200 | 65 | 100 | 200 |
| | | CSA/UL 480Vac | 35 | 65 | 100 | 35 | 65 | 100 | 35 | 65 | 100 |
| | | 600Vac | 18 | 18 | 18 | 18 | 18 | 18 | 25 | 25 | 25 |
| | | 220/240Vac | 65/65 | 100/75 | 200/150 | 65/65 | 100/75 | 200/150 | 65/65 | 100/75 | 200/150 |
| | | I _c /I _{cs} 380/415Vac | 40/40 | 70/70 | 100/75 | 40/40 | 70/70 | 100/75 | 45/45 | 70/70 | 100/75 |
| | 690Vac | 12/6 | 12/6 | 12/6 | 12/6 | 12/6 | 12/6 | 12/6 | 15/8 | 15/8 | |
| DC Interrupting Ratings (UL) ^① | 250Vdc (2-Pole) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | |
| | 500Vdc (3-Pole) ^① | 18 | 18 | 18 | 18 | 18 | 30 | 25 | 35 | 35 | |
| Dimensions in Inches | 1-Pole | — | | | | | | — | | | |
| | 2-Pole | 6.9H x 4.1W x 3.4D | | | | | | 11H x 5.5W x 4.2D | | | |
| | 3-Pole | 6.9H x 4.1W x 3.4D | | | | | | 11H x 5.5W x 4.2D | | | |
| | 4-Pole | — | | | | | | — | | | |
| Trip Unit Information | Thermal-Magnetic | ◆ | | | ◆ | | | ◆ | | | |
| | Electronic | ◆ | | | ◆ | | | ◆ | | | |
| | Electronic with LCD | ◆ | | | ◆ | | | ◆ | | | |
| | Interchangeable Trip Unit | — | | | — | | | — | | | |
| | Reverse Feed (w/Non-Interchangeable Trip) | ◆ | | | ◆ | | | ◆ | | | |
| | Communications Capability ^③ | ◆ | | | ◆ | | | ◆ | | | |
| Specific Application Breakers | Molded Case Switch | ◆ | | | ◆ | | | ◆ | | | |
| | Motor Circuit Protector | ◆ | | | ◆ | | | ◆ | | | |
| | 100% Rated | ◆ | | | | | | ◆ | | | |
| | 50°C Calibrated ^④ | | | | | | | | ◆ | | |
| Accessories & Modifications | Auxiliary Switch | ◆ | | | ◆ | | | ◆ | | | |
| | Alarm Switch | ◆ | | | ◆ | | | ◆ | | | |
| | Shunt Trip | ◆ | | | ◆ | | | ◆ | | | |
| | Undervoltage Release | ◆ | | | ◆ | | | ◆ | | | |
| | Mechanical Interlocks | ◆ | | | ◆ | | | ◆ | | | |
| | Electric Motor or Stored Energy Operator | ◆ | | | ◆ | | | ◆ | | | |
| | Rear Connecting Studs | ◆ | | | ◆ | | | ◆ | | | |
| | Plug-In Mounting Assy. w/Trip Interlock | ◆ | | | ◆ | | | ◆ | | | |
| | Draw-Out Assembly | ◆ | | | ◆ | | | ◆ | | | |
| | Handle Mechanism Options | ◆ | | | ◆ | | | ◆ | | | |
| | Terminal Shields | ◆ | | | ◆ | | | ◆ | | | |
| | Distribution Lugs | ◆ | | | ◆ | | | ◆ | | | |
| | Ground Sensor (Neutral Transformer) | ◆ | | | ◆ | | | ◆ | | | |

① 500Vdc nominal, for ungrounded DC UPS systems.
 ② DC Interrupting Ratings are not applicable to electronic circuit breakers.
 ③ Communications available via a COMPRO or COMMODO modules using Profibus or Modbus protocols.
 ④ Consult Siemens for availability.
 ⑤ Special version, see page 5-124.
 GG are not VL family breakers and do not share common VL accessories.
 ⑥ 304 and 316 Stainless Steel

Molded Case Circuit Breakers

Reference Guide

Selection/Application

| Page | | 5-108 | | | 5-112 | | | 5-116 | | | 5-120 | | | | |
|-------------------------------|--------------------------------------------------------|---------------------------------|------------|-----------------|-------------------|---------|-------|-----------------|---------|-------|-----------|---------|-------|--------|---------|
| Breaker Frame Family | | LG | | | MG | | | NG | | | PG | | | | |
| | Continuous Amps | 150–600A | | | 200–800A | | | 300–1200A | | | 400–1600A | | | | |
| | Poles | 2, 3 | | | 2, 3 | | | 2, 3 | | | 3 | | | | |
| | Max. Volts AC | 600V | | | 600V | | | 600V | | | 600V | | | | |
| Breaker Type | | NLGB | HLGB | LLGB | NMG | HMG | LMG | NNG | HNG | LNG | NPG | HPG | LPG | | |
| Ratings | Interrupting Class | | N | H | L | N | H | L | N | H | L | N | H | L | |
| | Interrupting Rating RMS Symmetrical Amperes AC 50/60Hz | CSA/UL | 240Vac | 65 | 100 | 200 | 65 | 100 | 200 | 65 | 100 | 200 | 65 | 100 | 200 |
| | | | 480Vac | 35 | 65 | 100 | 35 | 65 | 100 | 35 | 65 | 100 | 35 | 65 | 100 |
| | | | 600Vac | 18 [Ⓞ] | 18 | 18 | 25 | 35 | 65 | 25 | 35 | 65 | 25 | 35 | 65 |
| | | I _c /I _{cs} | 220/240Vac | 65/65 | 100/75 | 200/150 | 65/35 | 100/50 | 200/150 | 65/65 | 100/75 | 200/100 | 65/35 | 100/50 | 200/100 |
| | | | 380/415Vac | 45/45 | 70/70 | 100/75 | 50/50 | 70/70 | 100/75 | 50/25 | 70/35 | 100/50 | 50/25 | 70/35 | 100/50 |
| | | | 690Vac | 12/6 | 15/8 | 15/8 | 20/10 | 30/15 | 35/17 | 20/10 | 30/15 | 35/17 | 20/10 | 30/15 | 35/15 |
| | DC Interrupting Ratings (CSA/UL) [Ⓢ] | 250Vdc (2-Pole) | 30 | 30 | 30 | 22 | 25 | 42 | 22 | 25 | 42 | 22 | 25 | 42 | |
| | | 500Vdc (3-Pole) [Ⓢ] | 25 | 35 | 35 | 35 | 50 | 65 | 35 | 50 | 65 | 35 | 50 | 65 | |
| Dimensions in Inches | 2-Pole | 11H x 5.5W x 4.2D | | | 16H x 7.5W x 4.7D | | | 16H x 9W x 6.2D | | | — | | | | |
| | 3-Pole | 11H x 5.5W x 4.2D | | | 16H x 7.5W x 4.7D | | | 16H x 9W x 6.2D | | | | | | | |
| Trip Unit Information | Thermal-Magnetic | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Electronic | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Electronic with LCD | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Interchangeable Trip Unit | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Reverse Feed (w/Non-Interchangeable Trip) | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Communications Capability [Ⓢ] | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| Specific Application Breakers | Molded Case Switch | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Motor Circuit Protector | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | 100% Rated [Ⓢ] | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| Accessories and Modifications | Auxiliary Switch | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Alarm Switch | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Shunt Trip | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Undervoltage Release | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Mechanical Interlocks | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Electric Motor or Stored Energy Operator | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Rear Connecting Studs | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Plug-In Mounting Assy. w/Trip Interlock | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Draw-Out Assembly | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Handle Mechanism Options | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Terminal Shields | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Distribution Lugs | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |
| | Ground Sensor (Neutral Transformer) | ◆ | | | ◆ | | | ◆ | | | ◆ | | | | |

[Ⓢ] Communications available via COMPRO or COMMOD modules using Profibus or Modbus protocol.
[Ⓢ] 500Vdc nominal, for ungrounded DC UPS systems.
[Ⓢ] DC Interrupting Ratings are not applicable to electronic circuit breakers.
[Ⓢ] LG frame maximum 500A.
[Ⓢ] Special version, see page 5-124.
[Ⓢ] Special 600Vac 25kA version available, see page 5-124.

Molded Case Circuit Breakers

Panelboard Mounting Circuit Breakers

Selection

Arc-Fault Circuit Interrupters (AFCI)

AFCI's detect arcing faults (an unintentional arcing condition in a circuit) that standard circuit breakers are unable to detect. The device is intended to mitigate the effects of arcing faults by functioning to de-energize the circuit when an arc-fault is detected.

Combination Type AFCI

Detects all three possible types of arc fault: line-to-ground, line-to-neutral, and series.

| Breaker Type | Ampere Rating | 10,000 A IR Catalog Number | 22,000 A IR Catalog Number | 65,000 A IR Catalog Number |
|-------------------------------------------|---------------|------------------------------------------------|----------------------------|----------------------------|
| BAF2/BAFH2/HBAF2 1-Pole 120V AC | 15 20 | BA115AFC [Ⓞ] BA120AFC [Ⓞ] | BA115AFCH BA120AFCH | BA115AFCHH BA120AFCHH |
| BAF/BAFH 2-Pole 120/240V AC | 15 20 | B215AFC [Ⓞ] B220AFC [Ⓞ] | B215AFCH B220AFCH | — — |

Branch-Feeder AFCI

Detects line-to-ground and line-to neutral arcs.

| Breaker Type | Ampere Rating | 10,000 A IR Catalog Number | 22,000 A IR Catalog Number | 65,000 A IR Catalog Number |
|-------------------------------------------|---------------|----------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------|
| BAF2/BAFH2/HBAF2 1-Pole 120V AC | 15 20 | BA115AF [Ⓞ] BA120AF [Ⓞ] | BA115AFH [■] [Ⓞ] BA120AFH [■] [Ⓞ] | BA115AFHH [■] BA120AFHH [■] |

NEW Dual Function AFCI/GFCI

The Dual Function Circuit Breaker combines Combination Type AFCI and GFCI, protecting against both Arc Faults and (5mA) Ground Faults. The device includes the Self Test feature, making it the first in class in electrical safety for homeowners.

| Breaker Type | Ampere Rating | 10k A IR Cat. No. | 22k A IR Cat. No. | 65k A IR Cat. No. |
|----------------------------------------------|---------------|-------------------|----------------------------------------------|------------------------------------------------|
| BFGA2/BFGAH2/HBFGA2 1-Pole 120V AC | 15 20 | B115DF B120DF | B115DFH [■] B120DFH [■] | B115DFHH [■] B120DFHH [■] |

Ground-Fault Circuit Interrupters (GFCI)

Provides Class A (5mA) ground fault protection. Intended for personnel protection. De-energizes the circuit for all ungrounded conductors of the circuit.

| Breaker Type | Amp Rating | 10k A IR Cat. No. | 22k A IR Cat. No. | 65k A IR Cat. No. |
|--------------------------------------------------------|----------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------|
| BLF/BLHF 1-Pole 120V AC Bolt-On | 15 20 25 30 | BF115A [Ⓞ] BF120A [Ⓞ] BF125A BF130A | BF115AH [Ⓞ] BF120AH [Ⓞ] BF125AH BF130AH | BF115AHH BF120AHH — BF130AHH |
| BLF/BLHF 2-Pole 120/240V AC Bolt-On | 15 20 30 40 50 60 | BF215A BF220A BF230A BF240A BF250A BF260A | BF215AH BF220AH BF230AH BF240AH BF250AH BF260AH | — — — — — — |

Ground Fault Equipment Protection (30mA)

Provides protection of equipment from damaging line-to-ground faults currents. De-energizes the circuit for all ungrounded conductors of the circuit.

| Breaker Type | Amp Rating | 10k A IR Cat. No. | 22k A IR Cat. No. |
|---------------------------------------------------------|----------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| BLE/ BLEH 1-Pole, 120V AC Bolt-On | 15 20 30 | BE115 [Ⓞ] BE120 [Ⓞ] BE130 | BE115H [■] [Ⓞ] BE120H [■] [Ⓞ] BE130H [■] |
| BLE/ BLEH 2-Pole 120/240V AC Bolt-On | 15 20 30 40 50 60 | BE215 BE220 BE230 BE240 BE250 BE260 | BE215H [■] BE220H [■] BE230H [■] BE240H [■] BE250H [■] BE260H [■] |

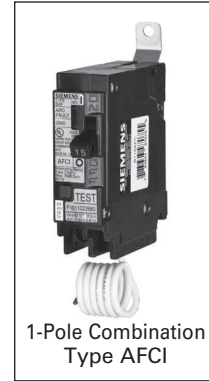
QAF2/QPF/QE Accessories

| Description | Catalog Number |
|--------------------------|----------------|
| Padlocking Device 1-Pole | ECPLD1 |
| Padlocking Device 2-Pole | ECPLD2 |
| Handle Block | ECBX231M |

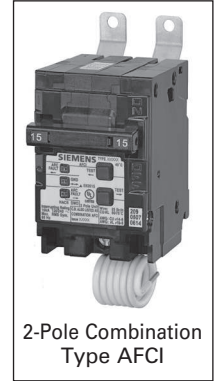
■ Built to order. Allow 8-10 weeks for delivery.
[Ⓞ] UL Listed as SWD (Switching Duty) Rated, suitable for 120V AC Fluorescent Lighting.

• UL Listed

• HACR Rated



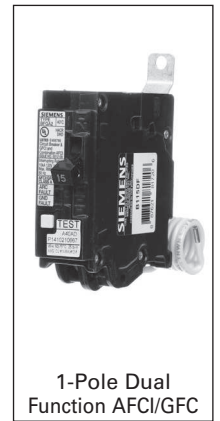
1-Pole Combination Type AFCI



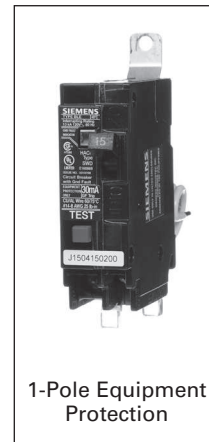
2-Pole Combination Type AFCI



1-Pole Branch Feeder AFCI



1-Pole Dual Function AFCI/GFCI

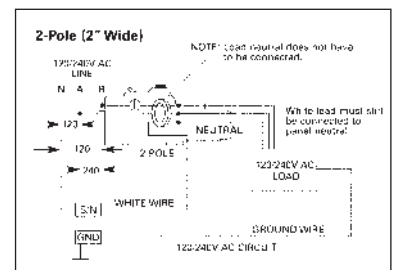
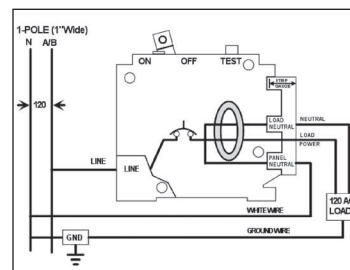


1-Pole Equipment Protection



2-Pole Equipment Protection

Wiring Diagrams



Molded Case Circuit Breakers

Panelboard Mounting with INSTA-WIRE

Selection

1-Pole Bolt-On (120V AC)^⑤

| Continuous Current Rating @ 40° C | Type BL ^{①②} | Type BLH ^{①②} | Type HBL ^{①②} |
|-----------------------------------|-----------------------|------------------------|------------------------|
| | 10,000A IR | 22,000A IR | 65,000A IR |
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 15 | B115 ^③ | B115H ^④ | B115HH ^④ |
| 20 | B12 ^③ | B120H ^④ | B120HH ^④ |
| 25 | B125 | B125H | B125HH■ |
| 30 | B130 | B130H | B130HH |
| 35 | B135 | B135H■ | B135HH■ |
| 40 | B140 | B140H | B140HH |
| 45 | B145■ | B145H■ | B145HH■ |
| 50 | B150 | B150H | B150HH■ |
| 60 | B160 | B160H■ | B160HH■ |
| 70 | B170 | B170H■ | B170HH■ |

2-Pole Bolt-On (Common-Trip 120/240V AC)^④

| | | | |
|-----|--------|---------|----------|
| 15 | B215 | B215H | B215HH |
| 20 | B220 | B220H | B220HH |
| 25 | B225 | B225H■ | B225HH■ |
| 30 | B230 | B230H | B230HH |
| 35 | B235 | B235H■ | B235HH■ |
| 40 | B240 | B240H | B240HH |
| 45 | B245 | B245H■ | B245HH■ |
| 50 | B250 | B250H | B250HH |
| 60 | B260 | B260H | B260HH |
| 70 | B270 | B270H■ | B270HH■ |
| 80 | B280 | B280H■ | B280HH■ |
| 90 | B290 | B290H■ | B290HH■ |
| 100 | B2100 | B2100H | B2100HH |
| 110 | B2110■ | B2110H■ | B2110HH■ |
| 125 | B2125 | B2125H | B2125HH■ |

2-Pole Bolt-On (Common-Trip 240V AC)^{③⑥⑩}

| | | | |
|----|--------|---|---|
| 15 | B215R | — | — |
| 20 | B220R | — | — |
| 30 | B230R | — | — |
| 40 | B240R■ | — | — |
| 50 | B250R | — | — |

3-Pole Bolt-On (Common-Trip 240V AC)^⑦

| | | | |
|-----|-------|--------|---------|
| 15 | B315 | B315H | B315HH |
| 20 | B320 | B320H | B320HH |
| 25 | B325 | B325H | B325HH■ |
| 30 | B330 | B330H | B330HH |
| 35 | B335 | B335H■ | B335HH■ |
| 40 | B340 | B340H | B340HH |
| 45 | B345 | B345H■ | B345HH■ |
| 50 | B350 | B350H | B350HH |
| 60 | B360 | B360H | B360HH |
| 70 | B370 | B370H | B370HH |
| 80 | B380 | B380H■ | B380HH |
| 90 | B390 | B390H■ | B390HH |
| 100 | B3100 | B3100H | B3100HH |

BL/BLH/HBL Internal Accessories

| Description | Catalogue Number | Field/Factory Installed |
|-----------------------|-------------------------------|-------------------------|
| 120VAC Shunt Trip | add suffix...00S01■ | Factory |
| 24VAC Shunt Trip | add suffix...00S07■ | Factory |
| 120V Auxiliary Switch | add suffix...01■ ^② | Factory |

■ Built to order. Allow 2-3 weeks for delivery

① UL Listed for use with 60/75° wire through 40 amps, CSA Certified / UL Listed for use with 75° wire only for 50 amps and above, HACR rated. 120V AC Fluorescent Lighting.

② 1A and 1B contacts.

③ UL Listed for use on 3-phase grounded "B" systems — 10,000 for this application.

④ UL Listed for frequent switching applications (SWD).

⑤ Shipped 12 per sleeve.

⑥ Shipped 6 per sleeve.

⑦ Shipped 4 per sleeve.

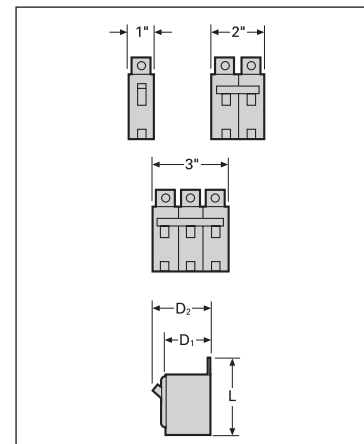
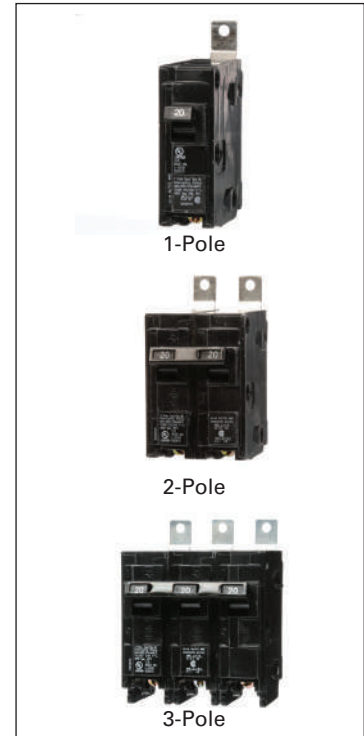
⑧ UL Listed 5KA IR.

⑨ 10 Amp breaker does not have INSTA-WIRE.

⑩ For 3 Phase Applications.

⑪ UL Listed for reverse feed."

⑫ CSA Certified for frequent switching applications (SWD)



| Breaker Type | Amperes | Dimensions | | |
|--------------|---------|--------------------------------|--------------------------------|----------------|
| | | L | D ₁ | D ₂ |
| BL, BLH | 15-50 | 3 ³ / ₁₆ | 2 ³ / ₁₆ | 3 |
| BL, BLH | 55-125 | 3 ³ / ₁₆ | 2 ³ / ₁₆ | 3 |
| HBL | 15-125 | 3 ³ / ₁₆ | 2 ³ / ₁₆ | 3 |

For external accessories, please refer to page 5-83 - 5-89

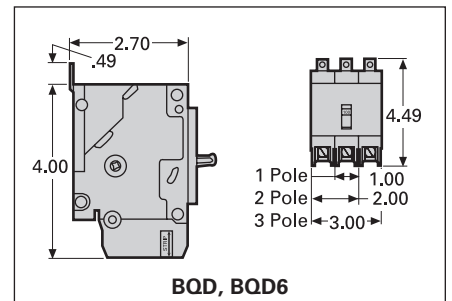
Molded Case Circuit Breakers

BQD 100A Frame Panelboard Mounting Circuit Breakers

Selection/Dimensions

BQD^④

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole ^⑤ | 3-Pole ^③ |
|----------------------------------|----------------------|--------------------------|---------------------|
| | 277V AC–125V DC | 480Y/277V AC–125/250V DC | 480Y/277V AC |
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | BQD115 ^{①②} | BQD215 ^⑤ | BQD315 ^③ |
| 20 | BQD120 ^{①②} | BQD220 ^⑤ | BQD320 ^③ |
| 25 | BQD125 ^③ | BQD225 ^⑤ | BQD325 ^③ |
| 30 | BQD130 ^③ | BQD230 ^⑤ | BQD330 ^③ |
| 35 | BQD135 ^② | BQD235 ^⑤ | BQD335 ^③ |
| 40 | BQD140 ^② | BQD240 ^⑤ | BQD340 ^③ |
| 45 | BQD145 ^{②■} | BQD245 ^⑤ | BQD345 ^③ |
| 50 | BQD150 ^② | BQD250 ^⑤ | BQD350 ^③ |
| 60 | BQD160 | BQD260 | BQD360 |
| 70 | BQD170■ | BQD270 | BQD370 |
| 80 | BQD180■ | BQD280 | BQD380 |
| 90 | BQD190■ | BQD290 | BQD390 |
| 100 | BQD1100■ | BQD2100 | BQD3100 |



BQD6 CSA Certified

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole ^⑤ | 3-Pole ^③ |
|----------------------------------|----------------------|---------------------|---------------------|
| | 347V AC | 600/347V AC | 600/347V AC |
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | BQD6115 ^① | BQD6215 | BQD6315 |
| 20 | BQD6120 ^① | BQD6220 | BQD6320 |
| 25 | BQD6125■ | BQD6225■ | BQD6325■ |
| 30 | BQD6130 | BQD6230 | BQD6330 |
| 35 | BQD6135■ | BQD6235■ | BQD6335■ |
| 40 | BQD6140■ | BQD6240■ | BQD6340 |
| 45 | BQD6145■ | BQD6245■ | BQD6345■ |
| 50 | BQD6150■ | BQD6250■ | BQD6350 |
| 60 | BQD6160■ | BQD6260■ | BQD6360 |
| 70 | BQD6170■ | BQD6270■ | BQD6370 |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) (ea.) |
|-----------------|-------------------|------------------------------|
| 1 | 1/12/48 | 0.6 |
| 2 | 1/6/24 | 1.2 |
| 3 | 1/4/16 | 2.0 |

Interrupting Ratings

| Breaker Type | Number of Poles | RMS Symmetrical Amperes (KA) | | | | | | | |
|--------------|-----------------|------------------------------|-----|-----|---------|-----|---------|----------|---------|
| | | Volts AC | | | | | | Volts DC | |
| | | 120 | 240 | 277 | 480/277 | 347 | 600/277 | 125 | 125/250 |
| BQD (CSA/UL) | 1 | 65 | — | 14 | — | — | — | 14 | — |
| | 2 | — | 65 | — | 14 | — | — | — | 14 |
| | 3 | — | 65 | — | 14 | — | — | — | — |
| BQD6 (CSA) | 1 | 65 | — | — | — | 10 | — | 14 | — |
| | 2 | — | 65 | — | — | — | 10 | — | 14 |
| | 3 | — | 65 | — | — | — | 10 | — | — |

Lugs For 60/75°C Wire

| BQD – Load End Only | |
|---------------------|--------------------------------|
| 15–40 | #14–#6 AWG Cu #12–#6 AWG Al |
| 45–100 | #9–#1 AWG Cu #6–#1/0 AWG Al |

For inches / millimeters conversion, see Technical section.
■ Built to order. Allow 2–3 weeks for delivery.

①UL Rated SWD rated for switching fluorescent lighting.
②HID rated at 277V AC.
③Not suitable for 3-phase delta 480V applications.
④HACR rated.
⑤HID rated at 480Y/277V AC.

For external accessories, please refer to pages 5-83 - 5-89
For internal accessories, please refer to page 5-24

Molded Case Circuit Breakers

GB2 Frame

Selection

Type NGB2[®] (Panelboard Mount)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 15 | NGB1K015B ^② | NGB2K015B ^② | NGB3K015B ^② |
| 20 | NGB1K020B ^{①②} | NGB2K020B ^② | NGB3K020B ^② |
| 25 | NGB1K025B ^② | NGB2K025B ^② | NGB3K025B ^② |
| 30 | NGB1K030B ^② | NGB2K030B ^② | NGB3K030B ^② |
| 35 | NGB1K035B ^② | NGB2K035B ^② | NGB3K035B ^② |
| 40 | NGB1K040B ^② | NGB2K040B ^② | NGB3K040B ^② |
| 45 | NGB1K045B ^② | NGB2K045B ^② | NGB3K045B ^② |
| 50 | NGB1K050B ^② | NGB2K050B ^② | NGB3K050B ^② |
| 60 | NGB1K060B | NGB2K060B | NGB3K060B |
| 70 | NGB1K070B | NGB2K070B | NGB3K070B |
| 80 | NGB1K080B | NGB2K080B | NGB3K080B |
| 90 | NGB1K090B | NGB2K090B | NGB3K090B |
| 100 | NGB1K100B | NGB2K100B | NGB3K100B |
| 110 | NGB1K110B | NGB2K110B | NGB3K110B |
| 125 | NGB1K125B | NGB2K125B | NGB3K125B |



Load lugs are included as standard. HACR rated.

Type HGB2[®] (Panelboard Mount)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 15 | HGB1K015B ^{①②} | HGB2K015B ^② | HGB3K015B ^② |
| 20 | HGB1K020B ^{①②} | HGB2K020B ^② | HGB3K020B ^② |
| 25 | HGB1K025B ^② | HGB2K025B ^② | HGB3K025B ^② |
| 30 | HGB1K030B ^② | HGB2K030B ^② | HGB3K030B ^② |
| 35 | HGB1K035B ^② | HGB2K035B ^② | HGB3K035B ^② |
| 40 | HGB1K040B ^② | HGB2K040B ^② | HGB3K040B ^② |
| 45 | HGB1K045B ^② | HGB2K045B ^② | HGB3K045B ^② |
| 50 | HGB1K050B ^② | HGB2K050B ^② | HGB3K050B ^② |
| 60 | HGB1K060B | HGB2K060B | HGB3K060B |
| 70 | HGB1K070B | HGB2K070B | HGB3K070B |
| 80 | HGB1K080B | HGB2K080B | HGB3K080B |
| 90 | HGB1K090B | HGB2K090B | HGB3K090B |
| 100 | HGB1K100B | HGB2K100B | HGB3K100B |
| 110 | HGB1K110B | HGB2K110B | HGB3K110B |
| 125 | HGB1K125B | HGB2K125B | HGB3K125B |

Type LGB2[®] (Panelboard Mount)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 15 | LGB1K015B ^{①②} | LGB2K015B ^② | LGB3K015B ^② |
| 20 | LGB1K020B ^{①②} | LGB2K020B ^② | LGB3K020B ^② |
| 25 | LGB1K025B ^② | LGB2K025B ^② | LGB3K025B ^② |
| 30 | LGB1K030B ^② | LGB2K030B ^② | LGB3K030B ^② |
| 35 | LGB1K035B ^② | LGB2K035B ^② | LGB3K035B ^② |
| 40 | LGB1K040B ^② | LGB2K040B ^② | LGB3K040B ^② |
| 45 | LGB1K045B ^② | LGB2K045B ^② | LGB3K045B ^② |
| 50 | LGB1K050B ^② | LGB2K050B ^② | LGB3K050B ^② |
| 60 | LGB1K060B | LGB2K060B | LGB3K060B |
| 70 | LGB1K070B | LGB2K070B | LGB3K070B |
| 80 | LGB1K080B | LGB2K080B | LGB3K080B |
| 90 | LGB1K090B | LGB2K090B | LGB3K090B |
| 100 | LGB1K100B | LGB2K100B | LGB3K100B |
| 110 | LGB1K110B | LGB2K110B | LGB3K110B |
| 125 | LGB1K125B | LGB2K125B | LGB3K125B |

5
MOLDED CASE
CIRCUIT BREAKERS

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight lbs. (kg) |
|-----------------|-------------------|---------------------------|
| 1 | 1 | .75 (.34) |
| 2 | 1 | 1.3 (.59) |
| 3 | 1 | 2.0 (.98) |

Lugs for 60/75°C Wire

| Type | Ampere Rating | Wire Size | Catalog Number |
|----------------------|---------------|--------------------------------|-----------------|
| NGB2 HGB2 LGB2 | 15-30A | #14-#6 AWG Cu | TC1Q1 (qty. 1) |
| | | #12-#6 AWG Al | 3TC1Q1 (qty. 3) |
| | 35-125A | #8-1/0 AWG Cu #8-2/0 AWG Al | 3TC1GG20 |

Interrupting Ratings (max. RMS symmetrical amperes kA)

| Type | Poles | UL 489 | | | | | | | |
|------|-------|----------|-----|-----|-----|-----|----------|----------|-----------------|
| | | Volts AC | | | | | | Volts DC | |
| | | 120 | 240 | 277 | 480 | 347 | 600Y/347 | 125 | 125/250 |
| NGB2 | 1 | 100 | — | 25 | — | 14 | — | 14 | — |
| | 2, 3 | — | 100 | — | 25 | — | 14 | — | 14 ^④ |
| HGB2 | 1 | 100 | — | 35 | — | 22 | — | 14 | — |
| | 2, 3 | — | 100 | — | 35 | — | 22 | — | 14 ^④ |
| LGB2 | 1 | 100 | — | 65 | — | 25 | — | 14 | — |
| | 2, 3 | — | 100 | — | 65 | — | 25 | — | 14 ^④ |

① 2-pole only.

② 2-pole only or two outer poles of 3-pole breaker

③ Suitable for reverse feed applications

④ 3 pole breakers suitable for single phase applications

For external accessories, please refer to pages 5-83 - 5-89
For internal accessories, please refer to page 5-23

Molded Case Circuit Breakers

GB Frame

Selection

Type NGB Frame^⑤ (Panelboard Mount)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | NGB1B015B ^{①②} | NGB2B015B ^② | NGB3B015B ^② |
| 20 | NGB1B020B ^{①②} | NGB2B020B ^② | NGB3B020B ^② |
| 25 | NGB1B025B ^② | NGB2B025B ^② | NGB3B025B ^② |
| 30 | NGB1B030B ^② | NGB2B030B ^② | NGB3B030B ^② |
| 35 | NGB1B035B ^② | NGB2B035B ^② | NGB3B035B ^② |
| 40 | NGB1B040B ^② | NGB2B040B ^② | NGB3B040B ^② |
| 45 | NGB1B045B ^② | NGB2B045B ^② | NGB3B045B ^② |
| 50 | NGB1B050B ^② | NGB2B050B ^② | NGB3B050B ^② |
| 60 | NGB1B060B | NGB2B060B | NGB3B060B |
| 70 | NGB1B070B | NGB2B070B | NGB3B070B |
| 80 | NGB1B080B | NGB2B080B | NGB3B080B |
| 90 | NGB1B090B | NGB2B090B | NGB3B090B |
| 100 | NGB1B100B | NGB2B100B | NGB3B100B |
| 110 | NGB1B110B | NGB2B110B | NGB3B110B |
| 125 | NGB1B125B | NGB2B125B | NGB3B125B |



NGB1B030B

Load lugs are included as standard. HACR rated.

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) (ea.) |
|-----------------|-------------------|------------------------------|
| 1 | 1 | 0.9 (0.4) |
| 2 | 1 | 1.9 (0.9) |
| 3 | 1 | 2.9 (1.2) |

Lugs For 60/75°C Wire

| NGB | | |
|---------------|---------------|-----------------------|
| Ampere Rating | Wire Size | Catalogue Number |
| 15-30A | #14-#6 AWG Cu | Integral with breaker |
| | #12-#6 AWG Al | |
| 35-125A | #8-1/0 AWG Cu | Integral with breaker |
| | #8-2/0 AWG Al | |

Interrupting Ratings (max. RMS symmetrical amperes kA)

| Breaker Type | Number of Poles | UL489 | | | | | | | |
|--------------|-----------------|----------|-----|-----|----------|-----|----------|----------|-----------------|
| | | Volts AC | | | | | | Volts DC | |
| | | 120 | 240 | 277 | 480Y/277 | 347 | 600Y/277 | 125 | 125/250 |
| NGB | 1 | 100 | — | 25 | 14 | — | — | 14 | — |
| | 2,3 | — | 100 | — | — | 25 | 14 | — | 14 ^④ |

① SWD rated.
② HID rated.

③ 2-pole only.
④ 2-pole only or two outer poles of 3-pole breaker
⑤ Suitable for reverse feed applications

For external accessories, please refer to pages 5-83 - 5-89
For internal accessories, please refer to page 5-23

Molded Case Circuit Breakers

Accessories

Selection

Shunt Trip

| Control Voltage | | BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, NGB2, HGB, HGB2, LGB2 and LGB2 |
|-----------------|------|-----------------------------------------------------------------------------------|
| V AC | V DC | |
| 120 | — | CQDST120 |
| 240 | — | CQDST240 |
| 277 | — | CQDST277 |
| 480 | — | CQDST480 |
| 600 | — | CQDST600 |
| — | 12 | CQDST12 |
| — | 24 | CQDST24 |
| — | 48 | CQDST48 |
| — | 125 | CQDST125 |



CQDST120AAS

Auxiliary Switch

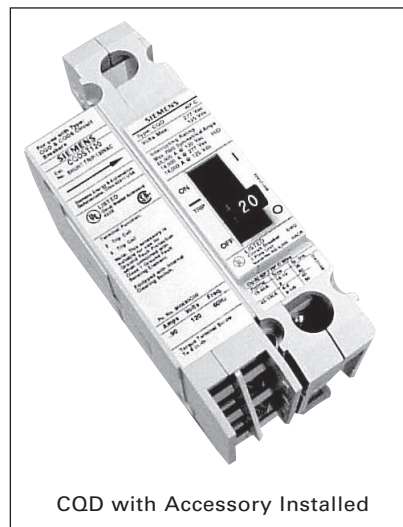
| Maximum Voltage | | Number of Contacts | BQD, BQD6, CQD, CQD6,NGG, HGG, LGG, NGB, NGB2, HGB, HGB2, LGB2 and LGB2 |
|-----------------|-----|--------------------|-------------------------------------------------------------------------|
| AC | DC | | |
| 240 | 125 | 1A-1B | CQDA1 |
| 240 | 125 | 2A-2B | CQDA2 |

Alarm Switch

| Maximum Voltage | | BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, NGB2, HGB, HGB2, LGB2 and LGB2 |
|-----------------|-----|-----------------------------------------------------------------------------------|
| AC | DC | |
| 240 | 125 | CQDBA |

Shunt Trip and Auxiliary Switch Combinations

| Shunt Trip Voltage | | BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, NGB2, HGB, HGB2, LGB2 and LGB2 |
|--------------------|-----|-----------------------------------------------------------------------------------|
| AC | DC | |
| 24 | — | CQDST24AAS |
| 120 | — | CQDST120AAS |
| 240 | — | CQDST240AAS |
| 277 | — | CQDST277AAS |
| 480 | — | CQDST480AAS |
| 600 | — | CQDST600AAS |
| — | 12 | CQDST12DAS |
| — | 24 | CQDST24DAS |
| — | 48 | CQDST48DAS |
| — | 125 | CQDST125DAS |



CQD with Accessory Installed

Alarm and Auxiliary Switch Combinations

| For Breaker | Catalog Number |
|-------------------------------------------------|----------------|
| BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB | CQDA1BA |

①Adds 1-pole space for accessory.

Circuit Breakers

Lug-In/Lug-Out with INSTA-WIRE

Selection

All BQ/BQH/HBQ circuit breakers are supplied with load side lugs. If line side lugs are required, add suffix "L" to catalog number. Consult Siemens for any additional charge. All standard circuit breakers are calibrated for 40°C maximum ambient application.

| Continuous Current Rating @ 40° C | Type BQ ^① | Type BQH | Type HBQ |
|-----------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | 10,000A IR Catalogue Number | 22,000A IR Catalogue Number | 65,000A IR Catalogue Number |

1-Pole (120V AC)^②

| Rating | Type BQ ^① | Type BQH | Type HBQ |
|--------|-----------------------|-----------------------|----------------------|
| 15 | BQ1B015 ^{④⑩} | BQ1B015H ^④ | HB1B015 ^④ |
| 20 | BQ1B020 ^{④⑩} | BQ1B020H ^④ | HB1B020 ^④ |
| 25 | BQ1B025 | BQ1B025H | HB1B025 |
| 30 | BQ1B030 | BQ1B030H | HB1B030 |
| 35 | BQ1B035 | BQ1B035H | HB1B035 |
| 40 | BQ1B040 | BQ1B040H | HB1B040 |
| 45 | BQ1B045 | — | HB1B045 |
| 50 | BQ1B050 | BQ1B050H | HB1B050 |
| 60 | BQ1B060 ^⑨ | BQ1B060H | HB1B060 |
| 70 | BQ1B070 | BQ1B070H | HB1B070 |

2-Pole (Common-Trip 120/240V AC)^②

| Rating | Type BQ ^① | Type BQH | Type HBQ |
|--------|----------------------|----------|----------|
| 15 | BQ2B015 | BQ2B015H | HB2B015 |
| 20 | BQ2B020 | BQ2B020H | HB2B020 |
| 25 | BQ2B025 | BQ2B025H | HB2B025 |
| 30 | BQ2B030 | BQ2B030H | HB2B030 |
| 35 | BQ2B035 | BQ2B035H | HB2B035 |
| 40 | BQ2B040 | BQ2B040H | HB2B040 |
| 45 | BQ2B045 | — | HB2B045 |
| 50 | BQ2B050 | BQ2B050H | HB2B050 |
| 60 | BQ2B060 ^⑨ | BQ2B060H | HB2B060 |
| 70 | BQ2B070 | BQ2B070H | HB2B070 |
| 80 | BQ2B080 | BQ2B080H | HB2B080 |
| 90 | BQ2B090 | BQ2B090H | HB2B090 |
| 100 | BQ2B100 | BQ2B100H | HB2B100 |
| 110 | BQ2B110 | — | HB2B110 |
| 125 | BQ2B125 | BQ2B125H | HB2B125 |

2-Pole (Common-Trip 240V AC)^{③②}

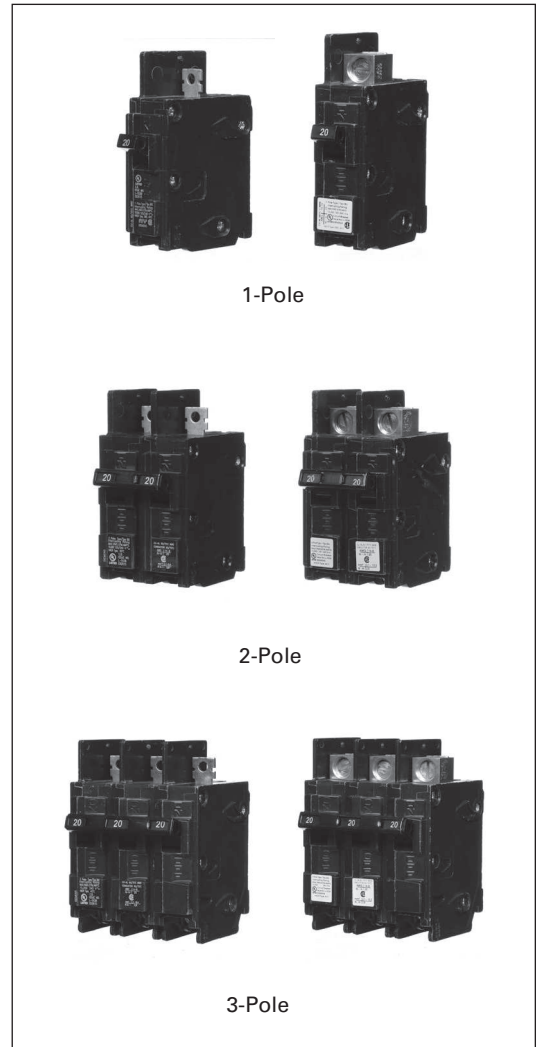
| Rating | Type BQ ^① | Type BQH | Type HBQ |
|--------|----------------------|----------|----------|
| 15 | BQ2H015 | — | — |
| 20 | BQ2H020 | — | — |
| 30 | BQ2H030 | — | — |
| 40 | BQ2H040 | — | — |
| 50 | BQ2H050 | — | — |
| 60 | BQ2H060 | — | — |
| 70 | BQ2H070 | — | — |
| 80 | BQ2H080 | — | — |
| 90 | BQ2H090 | — | — |
| 100 | BQ2H100 | — | — |

3-Pole (Common-Trip 240V AC)^②

| Rating | Type BQ ^① | Type BQH | Type HBQ |
|--------|----------------------|----------|----------|
| 15 | BQ3B015 | BQ3B015H | HB3B015 |
| 20 | BQ3B020 | BQ3B020H | HB3B020 |
| 25 | BQ3B025 | BQ3B025H | HB3B025 |
| 30 | BQ3B030 | BQ3B030H | HB3B030 |
| 35 | BQ3B035 | BQ3B035H | HB3B035 |
| 40 | BQ3B040 | BQ3B040H | HB3B040 |
| 45 | BQ3B045 | BQ3B045H | HB3B045 |
| 50 | BQ3B050 | BQ3B050H | HB3B050 |
| 60 | BQ3B060 | BQ3B060H | HB3B060 |
| 70 | BQ3B070 | BQ3B070H | HB3B070 |
| 80 | BQ3B080 | BQ3B080H | HB3B080 |
| 90 | BQ3B090 | BQ3B090H | HB3B090 |
| 100 | BQ3B100 | BQ3B100H | HB3B100 |

BQ / BQH / HBQ Internal Accessories

| Description | Catalogue Number | Field/Factory Installed |
|-----------------------|------------------------------|-------------------------|
| 120VAC Shunt Trip | add suffix...00S01 | Factory |
| 24VAC Shunt Trip | add suffix...00S07 | Factory |
| 120V Auxiliary Switch | add suffix...01 ^③ | Factory |



Factory Modifications

| Description | Catalogue Number |
|----------------------------------|-----------------------------|
| Line Side Lugs | add suffix...L |
| Quick Connect Lug | add suffix...QX |
| 400Hz Calibration | add suffix...Y ^③ |
| Marine 50° C Ambient Calibration | add suffix...M |
| Fungus Proofing | add suffix...F |

■ Built to order. Allow 2-3 weeks for delivery

① UL Listed for use with 60/75° wire through 40 amps, CSA Certified / UL Listed for use with 75° wire only for 50 amps and above, HACR rated.

② 1A and 1B contacts.

③ UL Listed for use on 3-phase grounded "B" systems — 10,000 for this application.

④ UL Listed for frequent switching applications (SWD). 120V AC Fluorescent Lighting.

⑤ Shipped 12 per sleeve.

⑥ Shipped 6 per sleeve.

⑦ Shipped 4 per sleeve.

⑧ UL Listed 5KA IR.

⑨ Refer to Table A on page 5-86

⑩ CSA Certified for frequent switching applications (SWD)

For external accessories, please refer to page 5-83 - 5-89

Molded Case Circuit Breakers

DIN Rail Mounted Circuit Breakers

Selection/Dimensions

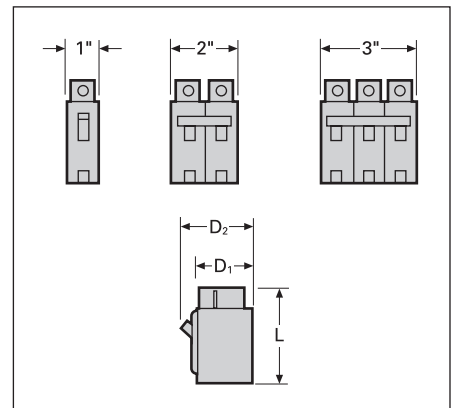
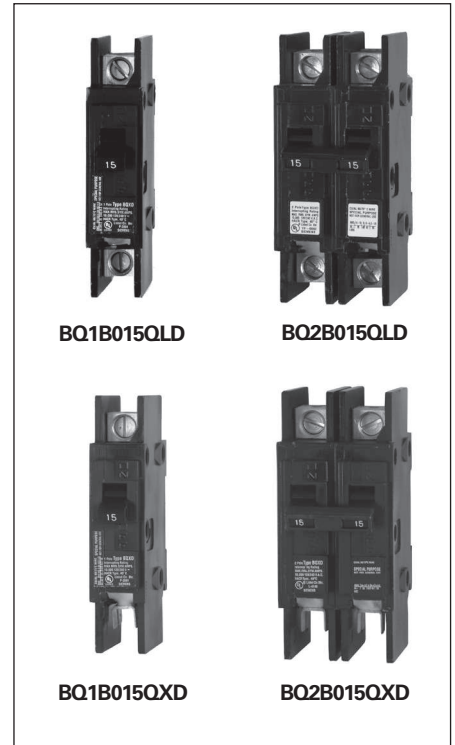
| Breaker Type | Ampere Rating | Catalog Number | Line Side Connector | Load Side Connector | Interrupting Ratings (KA) (RMS Symmetrical Amperes) Volts AC | |
|--------------|---------------|----------------|---------------------|---------------------|--------------------------------------------------------------|---------|
| | | | | | 120 | 120/240 |

1-Pole DIN Rail (120V AC)

| | | | | | | |
|-------------------------------------------|----|------------|-------|---------------|----|--|
| BQLD 1-Pole 120V DIN Rail | 10 | BQ1B010QLD | TC1Q1 | TC1Q1 | 10 | |
| | 15 | BQ1B015QLD | TC1Q1 | TC1Q1 | 10 | |
| | 20 | BQ1B020QLD | TC1Q1 | TC1Q1 | 10 | |
| | 25 | BQ1B025QLD | TC1Q1 | TC1Q1 | 10 | |
| | 30 | BQ1B030QLD | TC1Q1 | TC1Q1 | 10 | |
| | 35 | BQ1B035QLD | TC1Q1 | TC1Q1 | 10 | |
| | 40 | BQ1B040QLD | TC1Q1 | TC1Q1 | 10 | |
| BOXD 1-Pole 120V DIN Rail | 45 | BQ1B045QLD | TA1Q1 | TA1Q1 | 10 | |
| | 50 | BQ1B050QLD | TA1Q1 | TA1Q1 | 10 | |
| | 60 | BQ1B060QLD | TA1Q1 | TA1Q1 | 10 | |
| | 10 | BQ1B010QXD | TC1Q1 | Quick-Connect | 10 | |
| | 15 | BQ1B015QXD | TC1Q1 | Quick-Connect | 10 | |
| | 20 | BQ1B020QXD | TC1Q1 | Quick-Connect | 10 | |
| | 25 | BQ1B025QXD | TC1Q1 | Quick-Connect | 10 | |
| BOXD 1-Pole 120V DIN Rail | 30 | BQ1B030QXD | TC1Q1 | Quick-Connect | 10 | |
| | 35 | BQ1B035QXD | TC1Q1 | Quick-Connect | 10 | |
| | 40 | BQ1B040QXD | TC1Q1 | Quick-Connect | 10 | |
| | 45 | BQ1B045QXD | TA1Q1 | Quick-Connect | 10 | |
| | 50 | BQ1B050QXD | TA1Q1 | Quick-Connect | 10 | |
| | 60 | BQ1B060QXD | TA1Q1 | Quick-Connect | 10 | |

2-Pole DIN Rail (120/240V AC)

| | | | | | | |
|-----------------------------------------------|----|------------|-------|---------------|--|----|
| BQLD 2-Pole 120/240V DIN Rail | 10 | BQ2B010QLD | TC1Q1 | TC1Q1 | | 10 |
| | 15 | BQ2B015QLD | TC1Q1 | TC1Q1 | | 10 |
| | 20 | BQ2B020QLD | TC1Q1 | TC1Q1 | | 10 |
| | 25 | BQ2B025QLD | TC1Q1 | TC1Q1 | | 10 |
| | 30 | BQ2B030QLD | TC1Q1 | TC1Q1 | | 10 |
| | 35 | BQ2B035QLD | TC1Q1 | TC1Q1 | | 10 |
| | 40 | BQ2B040QLD | TC1Q1 | TC1Q1 | | 10 |
| BOXD 2-Pole 120/240V DIN Rail | 45 | BQ2B045QLD | TA1Q1 | TA1Q1 | | 10 |
| | 50 | BQ2B050QLD | TA1Q1 | TA1Q1 | | 10 |
| | 60 | BQ2B060QLD | TA1Q1 | TA1Q1 | | 10 |
| | 10 | BQ2B010QXD | TC1Q1 | Quick-Connect | | 10 |
| | 15 | BQ2B015QXD | TC1Q1 | Quick-Connect | | 10 |
| | 20 | BQ2B020QXD | TC1Q1 | Quick-Connect | | 10 |
| | 25 | BQ2B025QXD | TC1Q1 | Quick-Connect | | 10 |
| BOXD 2-Pole 120/240V DIN Rail | 30 | BQ2B030QXD | TC1Q1 | Quick-Connect | | 10 |
| | 35 | BQ2B035QXD | TC1Q1 | Quick-Connect | | 10 |
| | 40 | BQ2B040QXD | TC1Q1 | Quick-Connect | | 10 |
| | 45 | BQ2B045QXD | TA1Q1 | Quick-Connect | | 10 |
| | 50 | BQ2B050QXD | TA1Q1 | Quick-Connect | | 10 |
| | 60 | BQ2B060QXD | TA1Q1 | Quick-Connect | | 10 |



| Breaker Type | Amperes | Dimensions (inches) | | |
|--------------|---------|---------------------|-------|----|
| | | L | D1 | D2 |
| BQ, BQH | 15-50 | 3 3/4 | 2 3/8 | 3 |
| BQ, BQH | 55-125 | 4 | 2 3/8 | 3 |
| HBQ | 15-125 | 4 | 2 3/8 | 3 |
| BQXD | 15-60 | 4 1/2 | 2 3/8 | 3 |

Lugs-For Use with BOXD[®]

| Circuit Breaker Amp. Rtg. | Cab. Per Lug | Lug Wire Range AWG | Catalogue Number |
|---------------------------|--------------|------------------------|---------------------|
| Line Side | | | |
| 10-40 | 1 | #16-#6 Cu #12-#6 Al | TC1Q1 ^{①②} |
| 45-125 | 1000 | #8-#1 Cu #6-#1/0 Al | TA1Q1 |

Finger Safe Terminal Shield

Protects against accidental contact with lugs-1 per lug. Fits line and load end.

| Catalogue Number | Qty |
|------------------|------|
| BQFS2 | 2 |
| BQFS1K | 1000 |

For inches / millimeters conversion, see Technical section.

■ Built to order. Allow 2-3 weeks for delivery.

① UL Listed for use with 60/75° wire through 40 amps, UL listed for use with 75° wire only for 50 amps and above, HACR rated.

② Connector has steel construction.

③ Surface mounted indoor. If flush mounting is required, replace suffix "S" in catalog number with suffix "F".

④ Neutral included in enclosure.

⑤ Enclosure will not accept circuit breakers with shunt trips or auxiliary switches installed.

Enclosures, see page 5-68

For external accessories, please refer to pages 5-83 - 5-89

⑥ Type BOXD uses TA1Q1 or TC1Q1 lugs on line side of circuit breaker.

Molded Case Circuit Breakers

QR 250A Frame

Selection/Dimensions

| Continuous Current Rating @ 40°C | 2-Pole 240V AC Catalog Number | 3-Pole 240V AC Catalog Number |
|----------------------------------|-------------------------------|-------------------------------|
|----------------------------------|-------------------------------|-------------------------------|

Type QR2^②

| | | |
|-----|----------|----------|
| 100 | QR22B100 | QR23B100 |
| 125 | QR22B125 | QR23B125 |
| 150 | QR22B150 | QR23B150 |
| 175 | QR22B175 | QR23B175 |
| 200 | QR22B200 | QR23B200 |
| 225 | QR22B225 | QR23B225 |
| 250 | QR22B250 | QR23B250 |

Type QRH2^②

| | | |
|-----|------------|-----------|
| 100 | QRH22B100■ | QRH23B100 |
| 125 | QRH22B125 | QRH23B125 |
| 150 | QRH22B150 | QRH23B150 |
| 175 | QRH22B175■ | QRH23B175 |
| 200 | QRH22B200 | QRH23B200 |
| 225 | QRH22B225 | QRH23B225 |
| 250 | QRH22B250 | QRH23B250 |

Type HQR2^②

| | | |
|-----|------------|-----------|
| 100 | HQR22B100■ | HQR23B100 |
| 125 | HQR22B125 | HQR23B125 |
| 150 | HQR22B150 | HQR23B150 |
| 175 | HQR22B175■ | HQR23B175 |
| 200 | HQR22B200 | HQR23B200 |
| 225 | HQR22B225 | HQR23B225 |
| 250 | HQR22B250 | HQR23B250 |

Type HQR2H^②

| | | |
|-----|------------|------------|
| 100 | HQR22B100H | HQR23B100H |
| 125 | HQR22B125H | HQR23B125H |
| 150 | HQR22B150H | HQR23B150H |
| 175 | HQR22B175H | HQR23B175H |
| 200 | HQR22B200H | HQR23B200H |
| 225 | HQR22B225H | HQR23B225H |
| 250 | HQR22B250H | HQR23B250H |

Ordering Information

Load side 3TA1QR300 lugs are mounted and included when circuit breaker is ordered. For line and load lugs (3TA1QR300) installed at no additional charge, add suffix "L" to catalog number.

50°C Calibration - See page 5-79.
400HZ - See page 5-79.

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|-----------------|-------------------|------------------------|
| 2 | 1 | 3.2 |
| 3 | 1 | 4.5 |

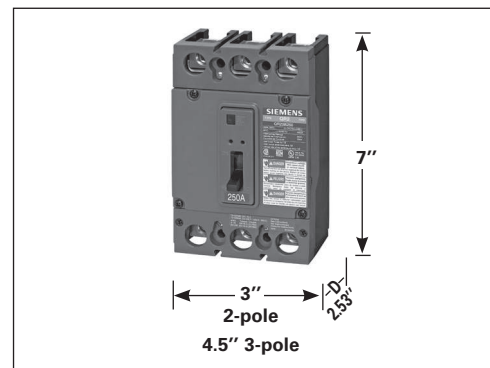
Lugs For 75°C Wire^①

| Catalog Number | Lug Body | Lug Wire Range |
|----------------|----------|------------------------|
| 3TA1QR300 | Al | #3 - 300 Kcmil Al/Cu |
| 3TC1QR250 | Cu | #3 - 300 Kcmil Cu ONLY |

CSA C22.2 No. 5 / UL 489

Interrupting Ratings

| Breaker Type | RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) |
|--------------|-----------------------------------------------------|
| | 240 |
| QR2 | 10 |
| QRH2 | 25 |
| HQR2 | 65 |
| HQR2H | 100 |



For external accessories, please refer to pages 5-83 - 5-89. For internal accessories, please refer to page 5-79.

■ Built to order. Allow 2-3 weeks for delivery.

① See **Note: A** page 5-76.

② HACR rated.

Note: Suitable for reverse feed applications

Molded Case Circuit Breakers

CQD 100A Frame

Selection/Dimensions

Type CQD (Cable In - Cable Out) DIN Rail Mount^③

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-----------------------|-----------------------------|-----------------------|
| | 277V AC 125V DC | 480Y/277V AC 125/250V DC | 480Y/277V AC |
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | CQD115 ^{①②} | CQD215 ^② | CQD315 ^② |
| 20 | CQD120 ^{①②} | CQD220 ^② | CQD320 ^② |
| 25 | CQD125 ^② | CQD225 ^② | CQD325 ^② |
| 30 | CQD130 ^② | CQD230 ^② | CQD330 ^② |
| 35 | CQD135 ^② ■ | CQD235 ^② ■ | CQD335 ^② |
| 40 | CQD140 ^② ■ | CQD240 ^② | CQD340 ^② |
| 45 | CQD145 ^② ■ | CQD245 ^② ■ | CQD345 ^② ■ |
| 50 | CQD150 ^② ■ | CQD250 ^② | CQD350 ^② |
| 60 | CQD160■ | CQD260 | CQD360 |
| 70 | CQD170■ | CQD270 | CQD370 |
| 80 | CQD180■ | CQD280 | CQD380 |
| 90 | CQD190■ | CQD290■ | CQD390 |
| 100 | CQD1100■ | CQD2100 | CQD3100 |

Shipping Weights

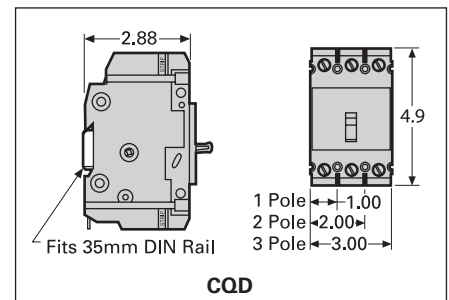
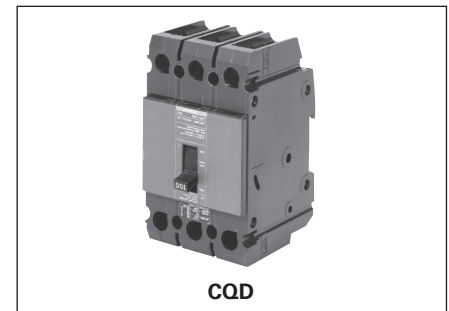
| Number of Poles | Number per Carton | Shipping Weight lbs. (kg) |
|-----------------|-------------------|---------------------------|
| 1 | 1 | 0.5 (0) |
| 2 | 1 | 1.0 (0) |
| 3 | 1 | 1.5 (1) |

Lugs For 60/75°C Wire

| Amps | Wire Size |
|--------|--------------------------------|
| 15-40 | #14-#6 AWG Cu #12-#6 AWG Al |
| 45-100 | #8-#1 AWG Cu #8-#1/0 AWG Al |

Interrupting Ratings

| Breaker Type | Number of Poles | RMS Symmetrical Amperes (KA) | | | | | | |
|-----------------|-----------------|------------------------------|-----|-----|---------|---------|----------|---------|
| | | Volts AC | | | | | Volts DC | |
| | | 120 | 240 | 277 | 480/277 | 600/277 | 125 | 125/250 |
| CQD (CSA/UL) | 1 | 65 | — | 14 | — | — | 14 | — |
| | 2 | — | 65 | — | 14 | — | — | 14 |
| | 3 | — | 65 | — | 14 | — | — | — |



For inches / millimeters conversion, see Technical section.

■ Built to order. Allow 2-3 weeks for delivery.

① SWD rated.

Note: Suitable for reverse feed applications

② HID rated.

③ HACR rated.

Enclosures page 5-68
Accessories pages 5-80 - 5-89.

Molded Case Circuit Breakers

GG 125A Frame

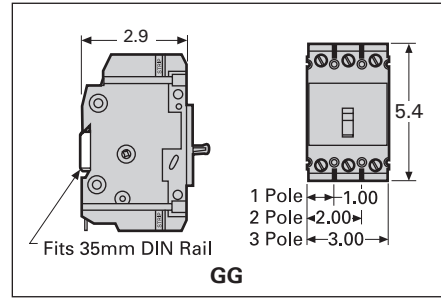
Selection/Dimensions

GG 125A Frame (Cable In - Cable Out)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | NGG1B015L ^{①②} | NGG2B015L ^② | NGG3B015L ^② |
| 20 | NGG1B020L ^{①②} | NGG2B020L ^② | NGG3B020L ^② |
| 25 | NGG1B025L ^② | NGG2B025L ^② | NGG3B025L ^② |
| 30 | NGG1B030L ^② | NGG2B030L ^② | NGG3B030L ^② |
| 35 | NGG1B035L ^② | NGG2B035L ^② | NGG3B035L ^② |
| 40 | NGG1B040L ^② | NGG2B040L ^② | NGG3B040L ^② |
| 45 | NGG1B045L ^② | NGG2B045L ^② | NGG3B045L ^② |
| 50 | NGG1B050L ^② | NGG2B050L ^② | NGG3B050L ^② |
| 60 | NGG1B060L | NGG2B060L | NGG3B060L |
| 70 | NGG1B070L | NGG2B070L | NGG3B070L |
| 80 | NGG1B080L | NGG2B080L | NGG3B080L |
| 90 | NGG1B090L | NGG2B090L | NGG3B090L |
| 100 | NGG1B100L | NGG2B100L | NGG3B100L |
| 110 | NGG1B110L | NGG2B110L | NGG3B110L |
| 125 | NGG1B125L | NGG2B125L | NGG3B125L |



GG



GG

Line and load lugs are included as standard. If no lugs are required, remove the "L" suffix. HACR rated. Suitable for screws or DIN rail mounting.

Type HGG (Cable In - Cable Out)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | HGG1B015L ^{①②} | HGG2B015L ^② | HGG3B015L ^② |
| 20 | HGG1B020L ^{①②} | HGG2B020L ^② | HGG3B020L ^② |
| 25 | HGG1B025L ^② | HGG2B025L ^② | HGG3B025L ^② |
| 30 | HGG1B030L ^② | HGG2B030L ^② | HGG3B030L ^② |
| 35 | HGG1B035L ^② | HGG2B035L ^② | HGG3B035L ^② |
| 40 | HGG1B040L ^② | HGG2B040L ^② | HGG3B040L ^② |
| 45 | HGG1B045L ^② | HGG2B045L ^② | HGG3B045L ^② |
| 50 | HGG1B050L ^② | HGG2B050L ^② | HGG3B050L ^② |
| 60 | HGG1B060L | HGG2B060L | HGG3B060L |
| 70 | HGG1B070L | HGG2B070L | HGG3B070L |
| 80 | HGG1B080L | HGG2B080L | HGG3B080L |
| 90 | HGG1B090L | HGG2B090L | HGG3B090L |
| 100 | HGG1B100L | HGG2B100L | HGG3B100L |
| 110 | HGG1B110L | HGG2B110L | HGG3B110L |
| 125 | HGG1B125L | HGG2B125L | HGG3B125L |

Type LGG (Cable In - Cable Out)

| Continuous Current Rating @ 40°C | 1-Pole | 2-Pole | 3-Pole |
|----------------------------------|-------------------------|------------------------|------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| 15 | LGG1B015L ^{①②} | LGG2B015L ^② | LGG3B015L ^② |
| 20 | LGG1B020L ^{①②} | LGG2B020L ^② | LGG3B020L ^② |
| 25 | LGG1B025L ^② | LGG2B025L ^② | LGG3B025L ^② |
| 30 | LGG1B030L ^② | LGG2B030L ^② | LGG3B030L ^② |
| 35 | LGG1B035L ^② | LGG2B035L ^② | LGG3B035L ^② |
| 40 | LGG1B040L ^② | LGG2B040L ^② | LGG3B040L ^② |
| 45 | LGG1B045L ^② | LGG2B045L ^② | LGG3B045L ^② |
| 50 | LGG1B050L ^② | LGG2B050L ^② | LGG3B050L ^② |
| 60 | LGG1B060L | LGG2B060L | LGG3B060L |
| 70 | LGG1B070L | LGG2B070L | LGG3B070L |
| 80 | LGG1B080L | LGG2B080L | LGG3B080L |
| 90 | LGG1B090L | LGG2B090L | LGG3B090L |
| 100 | LGG1B100L | LGG2B100L | LGG3B100L |
| 110 | LGG1B110L | LGG2B110L | LGG3B110L |
| 125 | LGG1B125L | LGG2B125L | LGG3B125L |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight lbs. (kg) |
|-----------------|-------------------|---------------------------|
| 1 | 1 | 0.75 (0.34) |
| 2 | 1 | 1.3 (0.59) |
| 3 | 1 | 2.0 (0.98) |

Lugs For 60/75°C Wire

| NGG | | |
|---------------|-------------------------------------------------|-------------------|
| Ampere Rating | Wire Size | Catalogue Number |
| 15-30A | #14-#6 AWG Cu | TC1Q1 (qty. 1) |
| | #12-#6 AWG Al | 3TC1Q1 (qty. 3) |
| 35-125A | #8-1/0 AWG Cu #8-2/0 AWG Al | 3TC1GG20 (qty. 3) |
| 15-125A | Nut Keeper plate w/ screw (for crimp terminals) | TNKG3 (qty. 3) |

Interrupting Ratings (max. RMS symmetrical amperes kA)

| Breaker Type | Poles | UL489 Volts AC | | | | | | | IEC 60947-2 (Ics = 50%Icu) | | | | |
|--------------|-------|----------------|-----|-----|-----|-----|----------|-----|----------------------------|-----|----------|---------|----------|
| | | | | | | | | | Volts DC | | Volts AC | | Volts DC |
| | | 120 | 240 | 277 | 347 | 480 | 600Y/347 | 125 | 125/250 | 240 | 415 | 125/250 | |
| NGG | 1 | 65 | — | 25 | 14 | — | — | 14 | — | 25 | — | — | |
| | 2,3 | — | 65 | — | — | 25 | 14 | — | 14 ^① | 65 | — | 14 | |
| HGG | 1 | 85 | — | 35 | 14 | — | — | 14 | — | — | — | — | |
| | 2,3 | — | 85 | — | — | 35 | 14 | — | 14 ^① | — | — | — | |
| LGG | 1 | 100 | — | 65 | 14 | — | — | 14 | — | — | — | — | |
| | 2,3 | — | 100 | — | — | 65 | 14 | — | 14 ^① | — | — | — | |

For inches / millimeters conversion, see Technical section.

① HID rated at 15-50A 1-pole @ 277 VAC; 2 & 3-pole @ 480 VAC

Enclosures page 5-68
Accessories pages 5-80 - 5-68

Molded Case Circuit Breakers

Accessories

Selection

Shunt Trip

| Control Voltage | | BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number |
|-----------------|------|-------------------------------------------------------------------------|
| V AC | V DC | |
| 120 | — | CQDST120 |
| 240 | — | CQDST240▲ |
| 277 | — | CQDST277▲ |
| 480 | — | CQDST480▲ |
| 600 | — | CQDST600 |
| — | 12 | CQDST12 |
| — | 24 | CQDST24 |
| — | 48 | CQDST48 |
| — | 125 | CQDST125 |

Auxiliary Switch

| Maximum Voltage | | Number of Contacts | BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number |
|-----------------|-----|--------------------|-------------------------------------------------------------------------|
| AC | DC | | |
| 240 | 125 | 1A-1B | CQDA1 |
| 240 | 125 | 2A-2B | CQDA2 |

Alarm Switch

| Maximum Voltage | | BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number |
|-----------------|-----|-------------------------------------------------------------------------|
| AC | DC | |
| 240 | 125 | CQDBA |

Shunt Trip and Auxiliary Switch Combinations

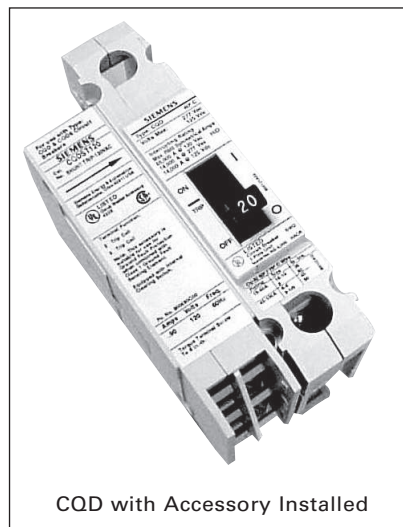
| Shunt Trip Voltage | | BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number |
|--------------------|-----|-------------------------------------------------------------------------|
| AC | DC | |
| 24 | — | CQDST24AAS▲ |
| 120 | — | CQDST120AAS▲ |
| 240 | — | CQDST240AAS▲ |
| 277 | — | CQDST277AAS▲ |
| 480 | — | CQDST480AAS▲ |
| 600 | — | CQDST600AAS▲ |
| — | 12 | CQDST12DAS▲ |
| — | 24 | CQDST24DAS▲ |
| — | 48 | CQDST48DAS▲ |
| — | 125 | CQDST125DAS▲ |

Alarm and Auxiliary Switch Combinations

| For Breaker | Catalog Number |
|-------------------------------------------------------|----------------|
| BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB | CQDA1BA▲ |



CQDST120AAS



CQD with Accessory Installed

▲ Built to order. Allow 6-8 weeks for delivery.

Ⓞ Adds 1-pole space for accessory.

Molded Case Circuit Breakers

3VA UL Circuit Breakers

Catalog Numbering System

5
MOLDED CASE
CIRCUIT BREAKERS

| | | | | | | | | | | | 3VA | 6 | 1 | 40 | - | 5 | HL | 3 | 1 | - | 0 | A | A0 | | |
|------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|--|--|--|-----|---------|-----|-----|------|-------|-------------------|------|--------------------|----------|---|---|----|---------|----|
| Breaker Designation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thermal magnetic panelboard breakers | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Thermal magnetic (Cable-in Cable-out) breakers | | | | | | | | | | | | 5 | | | | | | | | | | | | | |
| Electronic trip breakers | | | | | | | | | | | | 6 | | | | | | | | | | | | | |
| Frame Size | | | | | | | | | | | | | | | | | | | | | | | | | |
| 125/150A | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 250A | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| 400A | | | | | | | | | | | | 3 | | | | | | | | | | | | | |
| 600A | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Rated Current | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3VA51 | 3VA52 | 3VA53 | 3VA54 | 3VA61 | 3VA62 | 3VA63 | 3VA64 | | | | | | | | | | | | | | | | | | |
| 15A | | | | | | | | | | | | 95 | | | | | | | | | | | | | |
| 20A | 200A | 200A | | | | | | | | | | 20 | | | | | | | | | | | | | |
| | 225A | 225A | | | | | | | | | | 22 | | | | | | | | | | | | | |
| 25A | 250A | 250A | | | 250A | 250A | | | | | | 25 | | | | | | | | | | | | | |
| 30A | | 300A | | | | | | | | | | 30 | | | | | | | | | | | | | |
| 35A | | 350A | | | | | | | | | | 35 | | | | | | | | | | | | | |
| 40A | | 400A | | 40A | | 400A | 400A | | | | | 40 | | | | | | | | | | | | | |
| 45A | | | 450A | | | | | | | | | 45 | | | | | | | | | | | | | |
| 50A | | | 500A | | | | | | | | | 50 | | | | | | | | | | | | | |
| 60A | | | 600A | | | | 600A | | | | | 60 | | | | | | | | | | | | | |
| 70A | | | | | | | | | | | | 70 | | | | | | | | | | | | | |
| 80A | | | | | | | | | | | | 80 | | | | | | | | | | | | | |
| 90A | | | | | | | | | | | | 90 | | | | | | | | | | | | | |
| 100A | 100A | | | 100A | 100A | | | | | | | 10 | | | | | | | | | | | | | |
| 110A | 110A | | | | | | | | | | | 11 | | | | | | | | | | | | | |
| 125A | 125A | | | | | | | | | | | 12 | | | | | | | | | | | | | |
| | 150A | | | 150A | | | | | | | | 15 | | | | | | | | | | | | | |
| | 175A | | | | | | | | | | | 17 | | | | | | | | | | | | | |
| Interrupting Capacity @ 480V | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3VA5 | | | | | | | | | | | | 3VA6 | | | | | | | | | | | | | |
| MCP/MCS | | | | | | | | | | | | | | | | | | | | | | 0 | | | |
| MCP/MCS | | | | | | | | | | | | MCP/MCS | | | | | | | | | | 1 | | | |
| 25K | | | | | | | | | | | | | | | | | | | | | | 4 | | | |
| 35K | | | | | | | | | | | | 35K | | | | | | | | | | 5 | | | |
| 65K | | | | | | | | | | | | 65K | | | | | | | | | | 6 | | | |
| 100K | | | | | | | | | | | | 100K | | | | | | | | | | 7 | | | |
| | | | | | | | | | | | | 150K | | | | | | | | | | 8 | | | |
| Trip Unit Protection Functions | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3VA5 | | | | | | | | | | | | L | I | N | | | | | | | | | | | |
| TM230 | | | | | | | | | | | | MCCB | fix | adj | | | | | | | | | EC | | |
| TM210 | | | | | | | | | | | | MCCB | fix | fix | | | | | | | | | ED | | |
| TM240 | | | | | | | | | | | | MCCB | adj | adj | | | | | | | | | EF | | |
| TM230 | | | | | | | | | | | | MCCB | fix | adj | 100% | | | | | | | | GC | | |
| TM210 | | | | | | | | | | | | MCCB | fix | fix | 100% | | | | | | | | GD | | |
| TM240 | | | | | | | | | | | | MCCB | adj | adj | 100% | | | | | | | | GF | | |
| TM110M | | | | | | | | | | | | MSP | | fix | | | | | | | | | MG | | |
| TM120M | | | | | | | | | | | | MSP | | adj | | | | | | | | | MH | | |
| TM120M | | | | | | | | | | | | MSP | | adj | | | | | | | | | MU | | |
| MCS110 | | | | | | | | | | | | MSP | | fix | | | | | | | | | BB | | |
| 3VA6 | | | | | | | | | | | | L | S | I | G | N | LCD | com. | measurement values | | | | | | |
| ETU230 LI | | | | | | | | | | | | MCCB | adj | | adj | | | | | | | | HL | | |
| ETU330 LIG | | | | | | | | | | | | MCCB | adj | | adj | adj | | | | | | | HM | | |
| ETU350 LSI | | | | | | | | | | | | MCCB | adj | adj | fix | | | | | | | | HN | | |
| ETU550 LSI | | | | | | | | | | | | MCCB | adj | adj | adj | | | | | | | | JP | | |
| ETU556 LSI(G) | | | | | | | | | | | | MCCB | adj | adj | adj | alarm | 20/40%...100/160% | yes | yes | standard | | | JT | | |
| ETU560 LSI(G) | | | | | | | | | | | | MCCB | adj | adj | adj | adj | 20/40%...100/160% | yes | yes | standard | | | JQ | | |
| ETU820 LI | | | | | | | | | | | | MCCB | adj | | adj | | 20/40%...100/160% | yes | yes | advanced | | | KL | | |
| ETU830 LIG | | | | | | | | | | | | MCCB | adj | | adj | adj | 20/40%...100/160% | yes | yes | advanced | | | KM | | |
| ETU850LSI | | | | | | | | | | | | MCCB | adj | adj | adj | | 20/40%...100/160% | yes | yes | advanced | | | KP | | |
| ETU856 LSI(G) | | | | | | | | | | | | MCCB | adj | adj | adj | alarm | 20/40%...100/160% | yes | yes | advanced | | | KT | | |
| ETU860 LSI(G) | | | | | | | | | | | | MCCB | adj | adj | adj | adj | 20/40%...100/160% | yes | yes | advanced | | | KQ | | |
| ETU310M | | | | | | | | | | | | MCP | | | adj | | | | | | | | MS | | |
| MCS110 | | | | | | | | | | | | MCS | | | fix | | | | | | | | BB | | |
| Number of Poles | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 pole | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| 2 pole | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| 3 pole | | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| 4 pole | | | | | | | | | | | | | | | | | | | | | | | 4 | | |
| 1-in-2 pole | | | | | | | | | | | | | | | | | | | | | | | 5 | | |
| 2-in-3 pole | | | | | | | | | | | | | | | | | | | | | | | 6 | | |
| Connection Technology | | | | | | | | | | | | | | | | | | | | | | | | | |
| blank, punched copper bar without any lugs | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Regional Specifics (as applicable) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| NAVAL/50C | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 100% Rated (3VA6) | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Auxiliary Releases | | | | | | | | | | | | | | | | | | | | | | | | Without | A |
| Auxiliary/Alarm Switches | | | | | | | | | | | | | | | | | | | | | | | | Without | A0 |

Molded Case Circuit Breakers

3VA51 125A Thermal-magnetic Trip Circuit Breakers

Selection

3VA51 125A Frame, 1-Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | S-Interrupting Class (SEAS) | M-Interrupting Class (MEAS) | H-Interrupting Class (HEAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM210 FTFM | | | |
| 15 | 3VA5195-4ED11-0AA0 | 3VA5195-5ED11-0AA0 | 3VA5195-6ED11-0AA0 |
| 20 | 3VA5120-4ED11-0AA0 | 3VA5120-5ED11-0AA0 | 3VA5120-6ED11-0AA0 |
| 25 | 3VA5125-4ED11-0AA0 | 3VA5125-5ED11-0AA0 | 3VA5125-6ED11-0AA0 |
| 30 | 3VA5130-4ED11-0AA0 | 3VA5130-5ED11-0AA0 | 3VA5130-6ED11-0AA0 |
| 35 | 3VA5135-4ED11-0AA0 | 3VA5135-5ED11-0AA0 | 3VA5135-6ED11-0AA0 |
| 40 | 3VA5140-4ED11-0AA0 | 3VA5140-5ED11-0AA0 | 3VA5140-6ED11-0AA0 |
| 45 | 3VA5145-4ED11-0AA0 | 3VA5145-5ED11-0AA0 | 3VA5145-6ED11-0AA0 |
| 50 | 3VA5150-4ED11-0AA0 | 3VA5150-5ED11-0AA0 | 3VA5150-6ED11-0AA0 |
| 60 | 3VA5160-4ED11-0AA0 | 3VA5160-5ED11-0AA0 | 3VA5160-6ED11-0AA0 |
| 70 | 3VA5170-4ED11-0AA0 | 3VA5170-5ED11-0AA0 | 3VA5170-6ED11-0AA0 |
| 80 | 3VA5180-4ED11-0AA0 | 3VA5180-5ED11-0AA0 | 3VA5180-6ED11-0AA0 |
| 90 | 3VA5190-4ED11-0AA0 | 3VA5190-5ED11-0AA0 | 3VA5190-6ED11-0AA0 |
| 100 | 3VA5110-4ED11-0AA0 | 3VA5110-5ED11-0AA0 | 3VA5110-6ED11-0AA0 |
| 110 | 3VA5111-4ED11-0AA0 | 3VA5111-5ED11-0AA0 | 3VA5111-6ED11-0AA0 |
| 125 | 3VA5112-4ED11-0AA0 | 3VA5112-5ED11-0AA0 | 3VA5112-6ED11-0AA0 |



3VA51 125A 1-Pole

3VA51 125A Frame, 2-Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | S-Interrupting Class (SEAS) | M-Interrupting Class (MEAS) | H-Interrupting Class (HEAS) |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM210 FTFM [Ⓞ] | | | |
| 15 | 3VA5195-4ED21-0AA0 | 3VA5195-5ED21-0AA0 | 3VA5195-6ED21-0AA0 |
| 20 | 3VA5120-4ED21-0AA0 | 3VA5120-5ED21-0AA0 | 3VA5120-6ED21-0AA0 |
| 25 | 3VA5125-4ED21-0AA0 | 3VA5125-5ED21-0AA0 | 3VA5125-6ED21-0AA0 |
| 30 | 3VA5130-4ED21-0AA0 | 3VA5130-5ED21-0AA0 | 3VA5130-6ED21-0AA0 |
| 35 | 3VA5135-4ED21-0AA0 | 3VA5135-5ED21-0AA0 | 3VA5135-6ED21-0AA0 |
| 40 | 3VA5140-4ED21-0AA0 | 3VA5140-5ED21-0AA0 | 3VA5140-6ED21-0AA0 |
| 45 | 3VA5145-4ED21-0AA0 | 3VA5145-5ED21-0AA0 | 3VA5145-6ED21-0AA0 |
| 50 | 3VA5150-4ED21-0AA0 | 3VA5150-5ED21-0AA0 | 3VA5150-6ED21-0AA0 |
| 60 | 3VA5160-4ED21-0AA0 | 3VA5160-5ED21-0AA0 | 3VA5160-6ED21-0AA0 |
| 70 | 3VA5170-4ED21-0AA0 | 3VA5170-5ED21-0AA0 | 3VA5170-6ED21-0AA0 |
| 80 | 3VA5180-4ED21-0AA0 | 3VA5180-5ED21-0AA0 | 3VA5180-6ED21-0AA0 |
| 90 | 3VA5190-4ED21-0AA0 | 3VA5190-5ED21-0AA0 | 3VA5190-6ED21-0AA0 |
| 100 | 3VA5110-4ED21-0AA0 | 3VA5110-5ED21-0AA0 | 3VA5110-6ED21-0AA0 |
| 110 | 3VA5111-4ED21-0AA0 | 3VA5111-5ED21-0AA0 | 3VA5111-6ED21-0AA0 |
| 125 | 3VA5112-4ED21-0AA0 | 3VA5112-5ED21-0AA0 | 3VA5112-6ED21-0AA0 |



3VA51 125A 2-Pole

Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|------|
| 3VA51 | 1 | 1 (25.4) | 5.5 (140) | 3 (76.5) | 0.84 | 0.38 |
| 3VA51 | 2 | 2 (50.8) | 5.5 (140) | 3 (76.5) | 1.37 | 0.62 |
| 3VA51 | 3 | 3 (76.2) | 5.5 (140) | 3 (76.5) | 1.73 | 0.78 |
| 3VA51 | 4 | 4 (101.6) | 5.5 (140) | 3 (76.5) | 2.09 | 0.95 |

Shipping Weight

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA51 thermal-magnetic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

For NAVAL-rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA51 would be catalog number 3VA5140-5ED31-1AA0)

[Ⓞ] Available with NAVAL/50C ratings.

Molded Case Circuit Breakers

3VA51 125A Thermal-magnetic Trip Circuit Breakers

Selection

3VA51 125A Frame, 3-Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | S-Interrupting Class (SEAS) | M-Interrupting Class (MEAS) | H-Interrupting Class (HEAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |

TM210 FTFM[Ⓞ]

| | | | |
|-----|--------------------|--------------------|--------------------|
| 15 | 3VA5195-4ED31-0AA0 | 3VA5195-5ED31-0AA0 | 3VA5195-6ED31-0AA0 |
| 20 | 3VA5120-4ED31-0AA0 | 3VA5120-5ED31-0AA0 | 3VA5120-6ED31-0AA0 |
| 25 | 3VA5125-4ED31-0AA0 | 3VA5125-5ED31-0AA0 | 3VA5125-6ED31-0AA0 |
| 30 | 3VA5130-4ED31-0AA0 | 3VA5130-5ED31-0AA0 | 3VA5130-6ED31-0AA0 |
| 35 | 3VA5135-4ED31-0AA0 | 3VA5135-5ED31-0AA0 | 3VA5135-6ED31-0AA0 |
| 40 | 3VA5140-4ED31-0AA0 | 3VA5140-5ED31-0AA0 | 3VA5140-6ED31-0AA0 |
| 45 | 3VA5145-4ED31-0AA0 | 3VA5145-5ED31-0AA0 | 3VA5145-6ED31-0AA0 |
| 50 | 3VA5150-4ED31-0AA0 | 3VA5150-5ED31-0AA0 | 3VA5150-6ED31-0AA0 |
| 60 | 3VA5160-4ED31-0AA0 | 3VA5160-5ED31-0AA0 | 3VA5160-6ED31-0AA0 |
| 70 | 3VA5170-4ED31-0AA0 | 3VA5170-5ED31-0AA0 | 3VA5170-6ED31-0AA0 |
| 80 | 3VA5180-4ED31-0AA0 | 3VA5180-5ED31-0AA0 | 3VA5180-6ED31-0AA0 |
| 90 | 3VA5190-4ED31-0AA0 | 3VA5190-5ED31-0AA0 | 3VA5190-6ED31-0AA0 |
| 100 | 3VA5110-4ED31-0AA0 | 3VA5110-5ED31-0AA0 | 3VA5110-6ED31-0AA0 |
| 110 | 3VA5111-4ED31-0AA0 | 3VA5111-5ED31-0AA0 | 3VA5111-6ED31-0AA0 |
| 125 | 3VA5112-4ED31-0AA0 | 3VA5112-5ED31-0AA0 | 3VA5112-6ED31-0AA0 |

TM230 FTAM[Ⓞ]

| | | | |
|-----|--------------------|--------------------|--------------------|
| 15 | 3VA5195-4EC31-0AA0 | 3VA5195-6EC31-0AA0 | 3VA5195-6EC31-0AA0 |
| 20 | 3VA5120-4EC31-0AA0 | 3VA5120-5EC31-0AA0 | 3VA5120-6EC31-0AA0 |
| 25 | 3VA5125-4EC31-0AA0 | 3VA5125-5EC31-0AA0 | 3VA5125-6EC31-0AA0 |
| 30 | 3VA5130-4EC31-0AA0 | 3VA5130-5EC31-0AA0 | 3VA5130-6EC31-0AA0 |
| 35 | 3VA5135-4EC31-0AA0 | 3VA5135-5EC31-0AA0 | 3VA5135-6EC31-0AA0 |
| 40 | 3VA5140-4EC31-0AA0 | 3VA5140-5EC31-0AA0 | 3VA5140-6EC31-0AA0 |
| 45 | 3VA5145-4EC31-0AA0 | 3VA5145-5EC31-0AA0 | 3VA5145-6EC31-0AA0 |
| 50 | 3VA5150-4EC31-0AA0 | 3VA5150-5EC31-0AA0 | 3VA5150-6EC31-0AA0 |
| 60 | 3VA5160-4EC31-0AA0 | 3VA5160-5EC31-0AA0 | 3VA5160-6EC31-0AA0 |
| 70 | 3VA5170-4EC31-0AA0 | 3VA5170-5EC31-0AA0 | 3VA5170-6EC31-0AA0 |
| 80 | 3VA5180-4EC31-0AA0 | 3VA5180-5EC31-0AA0 | 3VA5180-6EC31-0AA0 |
| 90 | 3VA5190-4EC31-0AA0 | 3VA5190-5EC31-0AA0 | 3VA5190-6EC31-0AA0 |
| 100 | 3VA5110-4EC31-0AA0 | 3VA5110-5EC31-0AA0 | 3VA5110-6EC31-0AA0 |
| 110 | 3VA5111-4EC31-0AA0 | 3VA5111-5EC31-0AA0 | 3VA5111-6EC31-0AA0 |
| 125 | 3VA5112-4EC31-0AA0 | 3VA5112-5EC31-0AA0 | 3VA5112-6EC31-0AA0 |

TM240 ATAM

| | | | |
|-----|--------------------|--------------------|--------------------|
| 15 | 3VA5195-4EF31-0AA0 | 3VA5195-5EF31-0AA0 | 3VA5195-6EF31-0AA0 |
| 20 | 3VA5120-4EF31-0AA0 | 3VA5120-5EF31-0AA0 | 3VA5120-6EF31-0AA0 |
| 30 | 3VA5130-4EF31-0AA0 | 3VA5130-5EF31-0AA0 | 3VA5130-6EF31-0AA0 |
| 40 | 3VA5140-4EF31-0AA0 | 3VA5140-5EF31-0AA0 | 3VA5140-6EF31-0AA0 |
| 50 | 3VA5150-4EF31-0AA0 | 3VA5150-5EF31-0AA0 | 3VA5150-6EF31-0AA0 |
| 60 | 3VA5160-4EF31-0AA0 | 3VA5160-5EF31-0AA0 | 3VA5160-6EF31-0AA0 |
| 70 | 3VA5170-4EF31-0AA0 | 3VA5170-5EF31-0AA0 | 3VA5170-6EF31-0AA0 |
| 80 | 3VA5180-4EF31-0AA0 | 3VA5180-5EF31-0AA0 | 3VA5180-6EF31-0AA0 |
| 100 | 3VA5110-4EF31-0AA0 | 3VA5110-5EF31-0AA0 | 3VA5110-6EF31-0AA0 |



3VA51 125A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA51 thermal-magnetic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

For NAVAL-rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA51 would be catalog number 3VA5140-5ED31-**1**AA0)

Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|------|
| 3VA51 | 1 | 1 (25.4) | 5.5 (140) | 3 (76.5) | 0.84 | 0.38 |
| 3VA51 | 2 | 2 (50.8) | 5.5 (140) | 3 (76.5) | 1.37 | 0.62 |
| 3VA51 | 3 | 3 (76.2) | 5.5 (140) | 3 (76.5) | 1.73 | 0.78 |
| 3VA51 | 4 | 4 (101.6) | 5.5 (140) | 3 (76.5) | 2.09 | 0.95 |

Shipping Weight

[Ⓞ] Available with NAVAL/50C ratings.

Molded Case Circuit Breakers

3VA51 125A Thermal-magnetic Trip Circuit Breakers

Selection

3VA51 125A Frame, 4-Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | S-Interrupting Class (SEAS) | M-Interrupting Class (MEAS) | H-Interrupting Class (HEAS) |
|--------------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM210 FTFM Unprotected Neutral | | | |
| 15 | 3VA5195-4ED41-0AA0 | 3VA5195-5ED41-0AA0 | 3VA5195-6ED41-0AA0 |
| 20 | 3VA5120-4ED41-0AA0 | 3VA5120-5ED41-0AA0 | 3VA5120-6ED41-0AA0 |
| 25 | 3VA5125-4ED41-0AA0 | 3VA5125-5ED41-0AA0 | 3VA5125-6ED41-0AA0 |
| 30 | 3VA5130-4ED41-0AA0 | 3VA5130-5ED41-0AA0 | 3VA5130-6ED41-0AA0 |
| 35 | 3VA5135-4ED41-0AA0 | 3VA5135-5ED41-0AA0 | 3VA5135-6ED41-0AA0 |
| 40 | 3VA5140-4ED41-0AA0 | 3VA5140-5ED41-0AA0 | 3VA5140-6ED41-0AA0 |
| 45 | 3VA5145-4ED41-0AA0 | 3VA5145-5ED41-0AA0 | 3VA5145-6ED41-0AA0 |
| 50 | 3VA5150-4ED41-0AA0 | 3VA5150-5ED41-0AA0 | 3VA5150-6ED41-0AA0 |
| 60 | 3VA5160-4ED41-0AA0 | 3VA5160-5ED41-0AA0 | 3VA5160-6ED41-0AA0 |
| 70 | 3VA5170-4ED41-0AA0 | 3VA5170-5ED41-0AA0 | 3VA5170-6ED41-0AA0 |
| 80 | 3VA5180-4ED41-0AA0 | 3VA5180-5ED41-0AA0 | 3VA5180-6ED41-0AA0 |
| 90 | 3VA5190-4ED41-0AA0 | 3VA5190-5ED41-0AA0 | 3VA5190-6ED41-0AA0 |
| 100 | 3VA5110-4ED41-0AA0 | 3VA5110-5ED41-0AA0 | 3VA5110-6ED41-0AA0 |
| 110 | 3VA5111-4ED41-0AA0 | 3VA5111-5ED41-0AA0 | 3VA5111-6ED41-0AA0 |
| 125 | 3VA5112-4ED41-0AA0 | 3VA5112-5ED41-0AA0 | 3VA5112-6ED41-0AA0 |
| TM210 FTFM 100% Neutral | | | |
| 90 | 3VA5190-4GD41-0AA0 | 3VA5190-5GD41-0AA0 | 3VA5190-6GD41-0AA0 |
| 100 | 3VA5110-4GD41-0AA0 | 3VA5110-5GD41-0AA0 | 3VA5110-6GD41-0AA0 |
| 110 | 3VA5111-4GD41-0AA0 | 3VA5111-5GD41-0AA0 | 3VA5111-6GD41-0AA0 |
| 125 | 3VA5112-4GD41-0AA0 | 3VA5112-5GD41-0AA0 | 3VA5112-6GD41-0AA0 |
| TM230 FTAM Unprotected Neutral | | | |
| 15 | 3VA5195-4EC41-0AA0 | 3VA5195-5EC41-0AA0 | 3VA5195-6EC41-0AA0 |
| 20 | 3VA5120-4EC41-0AA0 | 3VA5120-5EC41-0AA0 | 3VA5120-6EC41-0AA0 |
| 25 | 3VA5125-4EC41-0AA0 | 3VA5125-5EC41-0AA0 | 3VA5125-6EC41-0AA0 |
| 30 | 3VA5130-4EC41-0AA0 | 3VA5130-5EC41-0AA0 | 3VA5130-6EC41-0AA0 |
| 35 | 3VA5135-4EC41-0AA0 | 3VA5135-5EC41-0AA0 | 3VA5135-6EC41-0AA0 |
| 40 | 3VA5140-4EC41-0AA0 | 3VA5140-5EC41-0AA0 | 3VA5140-6EC41-0AA0 |
| 45 | 3VA5145-4EC41-0AA0 | 3VA5145-5EC41-0AA0 | 3VA5145-6EC41-0AA0 |
| 50 | 3VA5150-4EC41-0AA0 | 3VA5150-5EC41-0AA0 | 3VA5150-6EC41-0AA0 |
| 60 | 3VA5160-4EC41-0AA0 | 3VA5160-5EC41-0AA0 | 3VA5160-6EC41-0AA0 |
| 70 | 3VA5170-4EC41-0AA0 | 3VA5170-5EC41-0AA0 | 3VA5170-6EC41-0AA0 |
| 80 | 3VA5180-4EC41-0AA0 | 3VA5180-5EC41-0AA0 | 3VA5180-6EC41-0AA0 |
| 90 | 3VA5190-4EC41-0AA0 | 3VA5190-5EC41-0AA0 | 3VA5190-6EC41-0AA0 |
| 100 | 3VA5110-4EC41-0AA0 | 3VA5110-5EC41-0AA0 | 3VA5110-6EC41-0AA0 |
| 110 | 3VA5111-4EC41-0AA0 | 3VA5111-5EC41-0AA0 | 3VA5111-6EC41-0AA0 |
| 125 | 3VA5112-4EC41-0AA0 | 3VA5112-5EC41-0AA0 | 3VA5112-6EC41-0AA0 |
| TM230 FTFM 100% Neutral | | | |
| 90 | 3VA5190-4GC41-0AA0 | 3VA5190-5GC41-0AA0 | 3VA5190-6GC41-0AA0 |
| 100 | 3VA5110-4GC41-0AA0 | 3VA5110-5GC41-0AA0 | 3VA5110-6GC41-0AA0 |
| 110 | 3VA5111-4GC41-0AA0 | 3VA5111-5GC41-0AA0 | 3VA5111-6GC41-0AA0 |
| 125 | 3VA5112-4GC41-0AA0 | 3VA5112-5GC41-0AA0 | 3VA5112-6GC41-0AA0 |
| TM240 ATAM Unprotected Neutral | | | |
| 15 | 3VA5195-4EF41-0AA0 | 3VA5195-5EF41-0AA0 | 3VA5195-6EF41-0AA0 |
| 20 | 3VA5120-4EF41-0AA0 | 3VA5120-5EF41-0AA0 | 3VA5120-6EF41-0AA0 |
| 30 | 3VA5130-4EF41-0AA0 | 3VA5130-5EF41-0AA0 | 3VA5130-6EF41-0AA0 |
| 40 | 3VA5140-4EF41-0AA0 | 3VA5140-5EF41-0AA0 | 3VA5140-6EF41-0AA0 |
| 50 | 3VA5150-4EF41-0AA0 | 3VA5150-5EF41-0AA0 | 3VA5150-6EF41-0AA0 |
| 60 | 3VA5160-4EF41-0AA0 | 3VA5160-5EF41-0AA0 | 3VA5160-6EF41-0AA0 |
| 70 | 3VA5170-4EF41-0AA0 | 3VA5170-5EF41-0AA0 | 3VA5170-6EF41-0AA0 |
| 80 | 3VA5180-4EF41-0AA0 | 3VA5180-5EF41-0AA0 | 3VA5180-6EF41-0AA0 |
| 100 | 3VA5110-4EF41-0AA0 | 3VA5110-5EF41-0AA0 | 3VA5110-6EF41-0AA0 |
| TM240 ATAM 100% Neutral | | | |
| 100 | 3VA5110-4GF41-0AA0 | 3VA5110-5GF41-0AA0 | 3VA5110-6GF41-0AA0 |



3VA51 125A 4-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA51 thermal-magnetic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

For NAVAL-rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA51 would be catalog number 3VA5140-5ED31-1AA0)

Molded Case Circuit Breakers

3VA51 125A Thermal-magnetic Trip Circuit Breakers

Technical information

Interrupting Ratings for 3VA51

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|-----|-----------|-----|-----------|----------|-----|------------------|------------------|-----|
| | | Volts AC (50/60 Hz) | | | | | | | Volts DC | | | | |
| | | 120 | 240 | 277 | 347 | 480Y/277V | 480 | 600Y/347V | 125 | 250 | 500 ^① | 600 ^① | |
| S | SEAS | 1 | 65 | | 25 | 14 | | | | 14 | | | |
| | | 2, 3, 4 | | 65 | | | | 25 | 25 | 14 | 14 | 50 | 50 |
| M | MEAS | 1 | 85 | | 35 | 18 | | | | 25 | | | |
| | | 2, 3, 4 | | 85 | | | | 35 | 35 | 18 | 25 | 85 | 85 |
| H | HEAS | 1 | 150 | | 50 | 18 | | | | 30 | | | |
| | | 2, 3, 4 | | 150 | | | | 65 | 65 | 25 | 30 | 100 | 100 |

① Applies to 3VA51 3-Pole

Trip Settings for 3VA51

| TM210 - FTFM | | |
|--------------------|--------------------|--------------------|
| I _n (A) | I ₁ (A) | I ₂ (A) |
| 15 | 15 | 300 |
| 20 | 20 | 300 |
| 25 | 25 | 300 |
| 30 | 30 | 300 |
| 35 | 35 | 350 |
| 40 | 40 | 400 |
| 45 | 45 | 450 |
| 50 | 50 | 500 |
| 60 | 60 | 600 |
| 70 | 70 | 700 |
| 80 | 80 | 800 |
| 90 | 90 | 900 |
| 100 | 100 | 1000 |
| 110 | 110 | 1100 |
| 125 | 125 | 1250 |

| TM230 - FTAM | | | | | | | | |
|--------------------|--------------------|--------------------|-----|-----|------|------|------|------|
| I _n (A) | I ₁ (A) | I ₂ (A) | | | | | | |
| 15 | 15 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 20 | 20 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 25 | 25 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 30 | 30 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 35 | 35 | 175 | 210 | 245 | 280 | 315 | 350 | 350 |
| 40 | 40 | 200 | 240 | 280 | 320 | 360 | 400 | 400 |
| 45 | 45 | 225 | 270 | 315 | 360 | 405 | 450 | 450 |
| 50 | 50 | 250 | 300 | 350 | 400 | 450 | 500 | 500 |
| 60 | 60 | 300 | 360 | 420 | 480 | 540 | 600 | 600 |
| 70 | 70 | 350 | 420 | 490 | 560 | 630 | 700 | 700 |
| 80 | 80 | 400 | 480 | 560 | 640 | 720 | 800 | 800 |
| 90 | 90 | 450 | 540 | 630 | 720 | 810 | 900 | 900 |
| 100 | 100 | 500 | 600 | 700 | 800 | 900 | 1000 | 1000 |
| 110 | 110 | 550 | 660 | 770 | 880 | 990 | 1100 | 1100 |
| 125 | 125 | 625 | 750 | 875 | 1000 | 1125 | 1250 | 1250 |

| TM240 - ATAM | | | | | | | | |
|--------------------|--------------------|--------------------|-----|-----|-----|-----|------|------|
| I _n (A) | I ₁ (A) | I ₂ (A) | | | | | | |
| 15 | 12 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 20 | 16 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 30 | 24 | 150 | 180 | 210 | 240 | 270 | 300 | 300 |
| 40 | 32 | 200 | 240 | 280 | 320 | 360 | 400 | 400 |
| 50 | 40 | 250 | 300 | 350 | 400 | 450 | 500 | 500 |
| 60 | 48 | 300 | 360 | 420 | 480 | 540 | 600 | 600 |
| 70 | 56 | 350 | 420 | 490 | 560 | 630 | 700 | 700 |
| 80 | 64 | 400 | 480 | 560 | 640 | 720 | 800 | 800 |
| 100 | 80 | 500 | 600 | 700 | 800 | 900 | 1000 | 1000 |

Connectors for 75C Wire for 3VA51

| Type | Min. cable size | Max. cable size | Catalog No. (kit of 3 lugs) | Catalog No. (kit of 4 lugs) |
|--------------------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------------------|-----------------------------|
| Steel wrap around (Cu cable only), 1 cable lugs | AWG 14 | 3/0 | 3VA9133-0JA11 | 3VA9134-0JA11 |
| Aluminum body lug small (Cu/Al cable), 1 cable lug | AWG 14 | AWG 10 | 3VA9133-0JB10 | 3VA9134-0JB10 |
| Aluminum body lug (Cu/Al cable), 1 cable lugs | AWG 14 | 3/0 | 3VA9133-0JB11 | 3VA9134-0JB11 |
| Aluminum body lug small with control wire tap (Cu/Al cable), 1 cable lug | AWG 14 | AWG 10 | 3VA9133-0JG10 | 3VA9134-0JG10 |
| Aluminum body lug with control wire tap (Cu/Al cable), 1 cable lugs | AWG 14 | 3/0 | 3VA9133-0JG11 | 3VA9134-0JG11 |
| Aluminum body lug large (Cu/Al cable), 1 cable lugs with 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9133-0JJ12 | |
| Aluminum body lug large with control wire tap (Cu/Al cable), 1 cable lug and 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9133-0JC12 | |
| Distribution lug, 6 cables (Cu/Al cable), 1 cable lugs with 1 extended terminal cover | AWG 14 | AWG 2 | 3VA9133-0JF60 | 3VA9134-0JF60 |
| Copper body lug small (Cu cable only), 1 cable lugs | AWG 14 | AWG 10 | 3VA9133-0JD10 | 3VA9134-0JD10 |
| Copper body lug (Cu cable only), 1 cable lugs | AWG 14 | 2/0 | 3VA9133-0JD11 | 3VA9134-0JD11 |
| Copper body lug small with control wire tap (Cu cable only), 1 cable lugs | AWG 14 | AWG 10 | 3VA9133-0JK10 | 3VA9134-0JK10 |
| Copper body lug with control wire tap (Cu cable only), 1 cable lugs | AWG 14 | 2/0 | 3VA9133-0JK11 | 3VA9134-0JK11 |

| Internal accessories configuration | 3VA4/3VA5 125 A 1 in 2-pole /2-pole | | | | 3VA5 125 A 3 & 4-pole | | | | | | | |
|------------------------------------|-------------------------------------|----|----|-------|-----------------------|----|----|-------|----|----|----|--|
| | 23 | 22 | 21 | 125 A | 23 | 22 | 21 | 125 A | 11 | 12 | 13 | |
| Auxiliary switch | Type | | | | | | | | | | | |
| Auxiliary switch | AUX_HQ | | | | x | x | x | | x | x | x | |
| | AUX_HQ_el | | | | x | x | x | | x | x | x | |
| | AUX_HP | | | | x | | | | | | | |
| Leading changeover switch | LCS_HQ | | | | | | | | | | | |
| | LCS_HQ_el | | | | | | | | | | | |
| | LCS_HP | | | | | | | | | | | |
| Auxiliary switch | Type | | | | | | | | | | | |
| Trip alarm switch | TAS_HQ | | | | x | x | | | x | x | | |
| | TAS_HQ_el | | | | x | x | | | x | x | | |
| | TAS_HP | | | | x | | | | | | | |
| Short circuit alarm switch | SAS_HQ | | | | | | | | | | | |
| | SAS_HQ_el | | | | | | | | | | | |
| Auxiliary switch | Type | | | | | | | | | | | |
| Shunt trip flexible | STF | | | | x | | | | x | | | |
| Shunt trip left | STL | | | | x | | | | | | | |
| | STL_el | | | | | | | | | | | |
| Residual current release | RCR | | | | | | | | | | | |
| Undervoltage release | UVR | | | | x | | | | x | | | |
| Universal release | UVI | | | | x | | | | x | | | |
| Other | | | | | | | | | | | | |
| Cylinder lock (type Ronis) | | | | | | | | | | | x | |

Molded Case Circuit Breakers

3VA61 150A Electronic Trip Circuit Breakers

Selection



3VA61 150A 3-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA61 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

All 3VA61 electronic trip circuit breakers are available with 100% ratings.

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 40A, 3-pole, 100% rated 3VA61 would be catalog number 3VA6140-5HL31-**2**AA0)

Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No. 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA61 150A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MDAE) | H-Interrupting Class (HDAE) | C-Interrupting Class (CDAE) | L-Interrupting Class (LDAE) |
|-------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| ETU320 LI with dials | | | | |
| 40 | 3VA6140-5HL31-0AA0 | 3VA6140-6HL31-0AA0 | 3VA6140-7HL31-0AA0 | 3VA6140-8HL31-0AA0 |
| 100 | 3VA6110-5HL31-0AA0 | 3VA6110-6HL31-0AA0 | 3VA6110-7HL31-0AA0 | 3VA6110-8HL31-0AA0 |
| 150 | 3VA6115-5HL31-0AA0 | 3VA6115-6HL31-0AA0 | 3VA6115-7HL31-0AA0 | 3VA6115-8HL31-0AA0 |
| ETU330 LIG with dials | | | | |
| 40 | 3VA6140-5HM31-0AA0 | 3VA6140-6HM31-0AA0 | 3VA6140-7HM31-0AA0 | 3VA6140-8HM31-0AA0 |
| 100 | 3VA6110-5HM31-0AA0 | 3VA6110-6HM31-0AA0 | 3VA6110-7HM31-0AA0 | 3VA6110-8HM31-0AA0 |
| 150 | 3VA6115-5HM31-0AA0 | 3VA6115-6HM31-0AA0 | 3VA6115-7HM31-0AA0 | 3VA6115-8HM31-0AA0 |
| ETU350 LSI with dials | | | | |
| 40 | 3VA6140-5HN31-0AA0 | 3VA6140-6HN31-0AA0 | 3VA6140-7HN31-0AA0 | 3VA6140-8HN31-0AA0 |
| 100 | 3VA6110-5HN31-0AA0 | 3VA6110-6HN31-0AA0 | 3VA6110-7HN31-0AA0 | 3VA6110-8HN31-0AA0 |
| 150 | 3VA6115-5HN31-0AA0 | 3VA6115-6HN31-0AA0 | 3VA6115-7HN31-0AA0 | 3VA6115-8HN31-0AA0 |
| ETU550 LSI with LCD | | | | |
| 40 | 3VA6140-5JP31-0AA0 | 3VA6140-6JP31-0AA0 | 3VA6140-7JP31-0AA0 | 3VA6140-8JP31-0AA0 |
| 100 | 3VA6110-5JP31-0AA0 | 3VA6110-6JP31-0AA0 | 3VA6110-7JP31-0AA0 | 3VA6110-8JP31-0AA0 |
| 150 | 3VA6115-5JP31-0AA0 | 3VA6115-6JP31-0AA0 | 3VA6115-7JP31-0AA0 | 3VA6115-8JP31-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 40 | 3VA6140-5JT31-0AA0 | 3VA6140-6JT31-0AA0 | 3VA6140-7JT31-0AA0 | 3VA6140-8JT31-0AA0 |
| 100 | 3VA6110-5JT31-0AA0 | 3VA6110-6JT31-0AA0 | 3VA6110-7JT31-0AA0 | 3VA6110-8JT31-0AA0 |
| 150 | 3VA6115-5JT31-0AA0 | 3VA6115-6JT31-0AA0 | 3VA6115-7JT31-0AA0 | 3VA6115-8JT31-0AA0 |
| ETU560 LSI(G) with LCD | | | | |
| 40 | 3VA6140-5JQ31-0AA0 | 3VA6140-6JQ31-0AA0 | 3VA6140-7JQ31-0AA0 | 3VA6140-8JQ31-0AA0 |
| 100 | 3VA6110-5JQ31-0AA0 | 3VA6110-6JQ31-0AA0 | 3VA6110-7JQ31-0AA0 | 3VA6110-8JQ31-0AA0 |
| 150 | 3VA6115-5JQ31-0AA0 | 3VA6115-6JQ31-0AA0 | 3VA6115-7JQ31-0AA0 | 3VA6115-8JQ31-0AA0 |
| ETU820 LI LCD with Metering | | | | |
| 40 | 3VA6140-5KL31-0AA0 | 3VA6140-6KL31-0AA0 | 3VA6140-7KL31-0AA0 | 3VA6140-8KL31-0AA0 |
| 100 | 3VA6110-5KL31-0AA0 | 3VA6110-6KL31-0AA0 | 3VA6110-7KL31-0AA0 | 3VA6110-8KL31-0AA0 |
| 150 | 3VA6115-5KL31-0AA0 | 3VA6115-6KL31-0AA0 | 3VA6115-7KL31-0AA0 | 3VA6115-8KL31-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 40 | 3VA6140-5KM31-0AA0 | 3VA6140-6KM31-0AA0 | 3VA6140-7KM31-0AA0 | 3VA6140-8KM31-0AA0 |
| 100 | 3VA6110-5KM31-0AA0 | 3VA6110-6KM31-0AA0 | 3VA6110-7KM31-0AA0 | 3VA6110-8KM31-0AA0 |
| 150 | 3VA6115-5KM31-0AA0 | 3VA6115-6KM31-0AA0 | 3VA6115-7KM31-0AA0 | 3VA6115-8KM31-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 40 | 3VA6140-5KP31-0AA0 | 3VA6140-6KP31-0AA0 | 3VA6140-7KP31-0AA0 | 3VA6140-8KP31-0AA0 |
| 100 | 3VA6110-5KP31-0AA0 | 3VA6110-6KP31-0AA0 | 3VA6110-7KP31-0AA0 | 3VA6110-8KP31-0AA0 |
| 150 | 3VA6115-5KP31-0AA0 | 3VA6115-6KP31-0AA0 | 3VA6115-7KP31-0AA0 | 3VA6115-8KP31-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 40 | 3VA6140-5KT31-0AA0 | 3VA6140-6KT31-0AA0 | 3VA6140-7KT31-0AA0 | 3VA6140-8KT31-0AA0 |
| 100 | 3VA6110-5KT31-0AA0 | 3VA6110-6KT31-0AA0 | 3VA6110-7KT31-0AA0 | 3VA6110-8KT31-0AA0 |
| 150 | 3VA6115-5KT31-0AA0 | 3VA6115-6KT31-0AA0 | 3VA6115-7KT31-0AA0 | 3VA6115-8KT31-0AA0 |
| ETU860 LSI(G) with LCD and Metering | | | | |
| 40 | 3VA6140-5KQ31-0AA0 | 3VA6140-6KQ31-0AA0 | 3VA6140-7KQ31-0AA0 | 3VA6140-8KQ31-0AA0 |
| 100 | 3VA6110-5KQ31-0AA0 | 3VA6110-6KQ31-0AA0 | 3VA6110-7KQ31-0AA0 | 3VA6110-8KQ31-0AA0 |
| 150 | 3VA6115-5KQ31-0AA0 | 3VA6115-6KQ31-0AA0 | 3VA6115-7KQ31-0AA0 | 3VA6115-8KQ31-0AA0 |

Molded Case Circuit Breakers

3VA61 150A Electronic Trip Circuit Breakers

Selection



3VA61 150A 4-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA61 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

All 3VA61 electronic trip circuit breakers are available with 100% ratings.

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 40A, 3-pole, 100% rated 3VA61 would be catalog number 3VA6140-5HL31-**2**AA0) Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 listed Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA61 150A Frame 4-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MDAE) Catalog Number | H-Interrupting Class (HDAE) Catalog Number | C-Interrupting Class (CDAE) Catalog Number | L-Interrupting Class (LDAE) Catalog Number |
|-------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| ETU320 LI with dials | | | | |
| 40 | 3VA6140-5HL41-0AA0 | 3VA6140-6HL41-0AA0 | 3VA6140-7HL41-0AA0 | 3VA6140-8HL41-0AA0 |
| 100 | 3VA6110-5HL41-0AA0 | 3VA6110-6HL41-0AA0 | 3VA6110-7HL41-0AA0 | 3VA6110-8HL41-0AA0 |
| 150 | 3VA6115-5HL41-0AA0 | 3VA6115-6HL41-0AA0 | 3VA6115-7HL41-0AA0 | 3VA6115-8HL41-0AA0 |
| ETU330 LIG with dials | | | | |
| 40 | 3VA6140-5HM41-0AA0 | 3VA6140-6HM41-0AA0 | 3VA6140-7HM41-0AA0 | 3VA6140-8HM41-0AA0 |
| 100 | 3VA6110-5HM41-0AA0 | 3VA6110-6HM41-0AA0 | 3VA6110-7HM41-0AA0 | 3VA6110-8HM41-0AA0 |
| 150 | 3VA6115-5HM41-0AA0 | 3VA6115-6HM41-0AA0 | 3VA6115-7HM41-0AA0 | 3VA6115-8HM41-0AA0 |
| ETU350 LSI with dials | | | | |
| 40 | 3VA6140-5HN41-0AA0 | 3VA6140-6HN41-0AA0 | 3VA6140-7HN41-0AA0 | 3VA6140-8HN41-0AA0 |
| 100 | 3VA6110-5HN41-0AA0 | 3VA6110-6HN41-0AA0 | 3VA6110-7HN41-0AA0 | 3VA6110-8HN41-0AA0 |
| 150 | 3VA6115-5HN41-0AA0 | 3VA6115-6HN41-0AA0 | 3VA6115-7HN41-0AA0 | 3VA6115-8HN41-0AA0 |
| ETU550 LSI with LCD | | | | |
| 40 | 3VA6140-5JP41-0AA0 | 3VA6140-6JP41-0AA0 | 3VA6140-7JP41-0AA0 | 3VA6140-8JP41-0AA0 |
| 100 | 3VA6110-5JP41-0AA0 | 3VA6110-6JP41-0AA0 | 3VA6110-7JP41-0AA0 | 3VA6110-8JP41-0AA0 |
| 150 | 3VA6115-5JP41-0AA0 | 3VA6115-6JP41-0AA0 | 3VA6115-7JP41-0AA0 | 3VA6115-8JP41-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 40 | 3VA6140-5JT41-0AA0 | 3VA6140-6JT41-0AA0 | 3VA6140-7JT41-0AA0 | 3VA6140-8JT41-0AA0 |
| 100 | 3VA6110-5JT41-0AA0 | 3VA6110-6JT41-0AA0 | 3VA6110-7JT41-0AA0 | 3VA6110-8JT41-0AA0 |
| 150 | 3VA6115-5JT41-0AA0 | 3VA6115-6JT41-0AA0 | 3VA6115-7JT41-0AA0 | 3VA6115-8JT41-0AA0 |
| ETU560 LSI(G) with LCD | | | | |
| 40 | 3VA6140-5JQ41-0AA0 | 3VA6140-6JQ41-0AA0 | 3VA6140-7JQ41-0AA0 | 3VA6140-8JQ41-0AA0 |
| 100 | 3VA6110-5JQ41-0AA0 | 3VA6110-6JQ41-0AA0 | 3VA6110-7JQ41-0AA0 | 3VA6110-8JQ41-0AA0 |
| 150 | 3VA6115-5JQ41-0AA0 | 3VA6115-6JQ41-0AA0 | 3VA6115-7JQ41-0AA0 | 3VA6115-8JQ41-0AA0 |
| ETU820 LI LCD with Metering | | | | |
| 40 | 3VA6140-5KL41-0AA0 | 3VA6140-6KL41-0AA0 | 3VA6140-7KL41-0AA0 | 3VA6140-8KL41-0AA0 |
| 100 | 3VA6110-5KL41-0AA0 | 3VA6110-6KL41-0AA0 | 3VA6110-7KL41-0AA0 | 3VA6110-8KL41-0AA0 |
| 150 | 3VA6115-5KL41-0AA0 | 3VA6115-6KL41-0AA0 | 3VA6115-7KL41-0AA0 | 3VA6115-8KL41-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 40 | 3VA6140-5KM41-0AA0 | 3VA6140-6KM41-0AA0 | 3VA6140-7KM41-0AA0 | 3VA6140-8KM41-0AA0 |
| 100 | 3VA6110-5KM41-0AA0 | 3VA6110-6KM41-0AA0 | 3VA6110-7KM41-0AA0 | 3VA6110-8KM41-0AA0 |
| 150 | 3VA6115-5KM41-0AA0 | 3VA6115-6KM41-0AA0 | 3VA6115-7KM41-0AA0 | 3VA6115-8KM41-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 40 | 3VA6140-5KP41-0AA0 | 3VA6140-6KP41-0AA0 | 3VA6140-7KP41-0AA0 | 3VA6140-8KP41-0AA0 |
| 100 | 3VA6110-5KP41-0AA0 | 3VA6110-6KP41-0AA0 | 3VA6110-7KP41-0AA0 | 3VA6110-8KP41-0AA0 |
| 150 | 3VA6115-5KP41-0AA0 | 3VA6115-6KP41-0AA0 | 3VA6115-7KP41-0AA0 | 3VA6115-8KP41-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 40 | 3VA6140-5KT41-0AA0 | 3VA6140-6KT41-0AA0 | 3VA6140-7KT41-0AA0 | 3VA6140-8KT41-0AA0 |
| 100 | 3VA6110-5KT41-0AA0 | 3VA6110-6KT41-0AA0 | 3VA6110-7KT41-0AA0 | 3VA6110-8KT41-0AA0 |
| 150 | 3VA6115-5KT41-0AA0 | 3VA6115-6KT41-0AA0 | 3VA6115-7KT41-0AA0 | 3VA6115-8KT41-0AA0 |
| ETU860 LSI(G) with LCD and Metering | | | | |
| 40 | 3VA6140-5KQ41-0AA0 | 3VA6140-6KQ41-0AA0 | 3VA6140-7KQ41-0AA0 | 3VA6140-8KQ41-0AA0 |
| 100 | 3VA6110-5KQ41-0AA0 | 3VA6110-6KQ41-0AA0 | 3VA6110-7KQ41-0AA0 | 3VA6110-8KQ41-0AA0 |
| 150 | 3VA6115-5KQ41-0AA0 | 3VA6115-6KQ41-0AA0 | 3VA6115-7KQ41-0AA0 | 3VA6115-8KQ41-0AA0 |

Molded Case Circuit Breakers

3VA61 150A Electronic Trip Circuit Breakers

Technical information

Connectors for 75C wire for 3VA61

| Type | Minimum cable size | Maximum cable size | Part Number (kit of 3 lugs) | Part Number (kit of 4 lugs) |
|---------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------------------|-----------------------------|
| Steel Wrap around (Cu cable only) single cable lugs | AWG 10 | 3/0 | 3VA9143-0JA12 | 3VA9144-0JA12 |
| | AWG 4 | 350 kcmil | 3VA9243-0JA12 | 3VA9244-0JA12 |
| Aluminum Body Lug (Cu/Al cable) single cable lugs | AWG 14 | 1/0 | 3VA9143-0JB11 | 3VA9144-0JB11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JB12 | 3VA9244-0JB12 |
| Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs | AWG 14 | 1/0 | 3VA9143-0JG11 | 3VA9144-0JG11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JG12 | 3VA9244-0JG12 |
| Aluminum body lug large (Cu/Al cable) single cable lugs and 1 ext'd terminal cover | AWG 2 | 350 kcmil | 3VA9243-0JJ13 | 3VA9244-0JJ13 |
| Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs and 1 extended terminal cover | AWG 2 | 350 kcmil | 3VA9243-0JC13 | 3VA9244-0JC13 |
| Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9243-0JJ22 | 3VA9244-0JJ22 |
| Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9243-0JC22 | 3VA9244-0JC22 |
| Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover | AWG 14 | AWG 2 | 3VA9243-0JF60 | 3VA9244-0JF60 |
| Copper body lug (Cu cable only) single cable lugs kit of 3 single lugs (meets requirements for 100% rated breakers) | AWG 14 | 1/0 | 3VA9143-0JD11 | 3VA9144-0JD11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JD12 | 3VA9244-0JD12 |
| Copper body lug (Cu cable only) with control wire tap single cable lugs | AWG 14 | 1/0 | 3VA9143-0JK11 | 3VA9144-0JK11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JK12 | 3VA9244-0JK12 |

Interrupting Ratings for 3VA61

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | |
|--------------------|--------------|------------------------------|-----------|-----|-----|
| | | Volts AC (50/60 Hz) | | | |
| | | 240 | 480Y/277V | 480 | 600 |
| M | MDAE | 100 | 35 | 35 | 18 |
| H | HDAE | 100 | 65 | 65 | 22 |
| C | CDAE | 200 | 100 | 100 | 35 |
| L | LDAE | 200 | 150 | 150 | 50 |

Dimensions

Shipping Weight

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA61 | 3 | 4.1 (105) | 7.8 (198) | 3.4 (86) | 5.5 | 2.5 |
| 3VA61 | 4 | 5.5 (140) | 7.8 (198) | 3.4 (86) | 7.1 | 3.2 |

5

MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

3VA61 150A Electronic Trip Circuit Breakers

Technical information

Trip Settings for 3VA61

ETU320-LI, ETU330-LIG, ETU350-LSI

| Continuous Amperage | LI, LIG, LSI | | | LSI | | LIG | LI, LIG, LSI 4P only |
|---------------------|-----------------|--------------------|------------------|---------------------------|--------------------|-----------------|----------------------|
| I_n (Amp) | I_n (Amp) (L) | t_{sd} (sec) (L) | I_n (Amp) (I)Ⓣ | $I_{sd} = xI_n$ (Amp) (S) | t_{sd} (sec) (S) | I_n (Amp) (G) | $I_n = xI_n$ (Amp) |
| 40 | 15 - 40 | 0.5 - 17 | 60-480 | 1.5 - 10 | 0.08 - 0.4 | 15 - 40 | 1 / OFF |
| 100 | 40 - 100 | 0.5 - 17 | 150-1200 | 1.5 - 10 | | 20 - 100 | 0.5 - 1 / OFF |
| 150 | 60 - 150 | 0.5 - 17 | 225-1500 | 1.5 - 10 | | 30 - 150 | 0.5 - 1 / OFF |

Ⓣ I_n for ETU350 is fixed at 12X I_n

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

| Continuous Amperage | LI, LIG, LSI, LSIG, LSI(G) | | | LSI, LSIG, LSI(G) | | LIG, LSIG, LSI(G) | | LSI 3P with External CT | LI, LIG, LSI, LSIG, LSI(G) 4P only |
|---------------------|----------------------------|--------------------|-----------------|--------------------|--------------------|-------------------|--------------|-------------------------|------------------------------------|
| I_n (Amp) | I_n (Amp) (L) | t_{sd} (sec) (L) | I_n (Amp) (I) | I_{sd} (Amp) (S) | t_{sd} (sec) (S) | I_n (Amp) (G) | t_{sd} (G) | $I_n = xI_n$ (Amp) | I_n (Amp) |
| 40 | 15 - 40 | 0.5 - 25 | 60-480 | 24 - 400 | 0.05 - 0.5 | 15 - 40 | 0.05 - 0.8 | 15 - 64 / OFF | 15 - 64 / OFF |
| 100 | 40 - 100 | 0.5 - 25 | 150-1200 | 60 - 1000 | | 20 - 100 | | 20 - 160 / OFF | 20 - 150 / OFF |
| 150 | 60 - 150 | 0.5 - 20 | 225-1500 | 90 - 1500 | | 30 - 150 | | 30 - 240 / OFF | 30 - 150 / OFF |

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at https://www.siemens.com/download?BTLV_50412.

| Internal accessories Optional equipment | Slot No.: | 3VA6 150/250 A 3-pole | | | | | | | 3VA6 150/250 A 4-pole | | | | | | | | | | |
|--------------------------------------------|-----------|-----------------------------|----|----|----|-------|----|----|-----------------------------|----|----|----|----|----|-------|----|----|----|----|
| | | 24 | 23 | 24 | 21 | 250 A | 11 | 12 | 13 | 14 | 24 | 23 | 22 | 21 | 250 A | 11 | 12 | 13 | 14 |
| Auxiliary switch | Type | | | | | | | | | | | | | | | | | | |
| Auxiliary switch | AUX_HQ | x | x | x | x | | x | x | x | x | x | x | x | x | | x | x | x | x |
| | AUX_HQ_el | x | x | x | x | | x | x | x | x | x | x | x | x | | x | x | x | x |
| | AUX_HP | x | | x | | | x | | x | | x | | x | | | x | | x | |
| Leading changeover switch | LCS_HQ | | | | | | x | | | | | | | | | x | | | |
| | LCS_HQ_el | | | | | | x | | | | | | | | | x | | | |
| | LCS_HP | | | | | | x | | | | | | | | | x | | | |
| Auxiliary switch | Type | | | | | | | | | | | | | | | | | | |
| Trip alarm switch | TAS_HQ | | x | x | | | x | x | | | | x | x | | | x | x | | |
| | TAS_HQ_el | | x | x | | | x | x | | | | x | x | | | x | x | | |
| | TAS_HP | | x | | | | x | | | | | x | | | | x | | | |
| Electrical alarm switch | EAS_HQ | | | | | | | | | x | | | | | | | | | x |
| | EAS_HQ_el | | | | | | | | | x | | | | | | | | | x |
| Auxiliary switch | Type | | | | | | | | | | | | | | | | | | |
| Shunt trip flexible | STF | | x | | | | x | | | | | x | | | | x | | | |
| Shunt trip left | STL | | x | | | | | | | | | x | | | | | | | |
| Undervoltage release | UVR | | x | | | | | | | | | x | | | | | | | |
| Universal release | UVI | | x | | | | | | | | | x | | | | | | | |
| ETU/communication | Type | | | | | | | | | | | | | | | | | | |
| Communication module | COM060 | | | | | | | x | | | | | | | | | | x | |
| Breaker data server | | | | | | | | | x | | | | | | | | | | x |
| 24 V module | | | | | | | | | x | | | | | | | | | | x |
| Other | | | | | | | | | | | | | | | | | | | |
| Cylinder lock (type Ronis) | | | | | | | | x | | | | | | | | | | | x |

See page 5-59 for internal accessory part numbers.

Molded Case Circuit Breakers

3VA52 250A Thermal-magnetic Trip Circuit Breakers

Selection

3VA52 250 A Frame, 2-(3)Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MFAS) | H-Interrupting Class (HFAS) | C-Interrupting Class (CFAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| TM210 FTFM | | | |
| 40 | 3VA5240-5ED61-0AA0 | 3VA5240-6ED61-0AA0 | 3VA5240-7ED61-0AA0 |
| 45 | 3VA5245-5ED61-0AA0 | 3VA5245-6ED61-0AA0 | 3VA5245-7ED61-0AA0 |
| 50 | 3VA5250-5ED61-0AA0 | 3VA5250-6ED61-0AA0 | 3VA5250-7ED61-0AA0 |
| 60 | 3VA5260-5ED61-0AA0 | 3VA5260-6ED61-0AA0 | 3VA5260-7ED61-0AA0 |
| 70 | 3VA5270-5ED61-0AA0 | 3VA5270-6ED61-0AA0 | 3VA5270-7ED61-0AA0 |
| 80 | 3VA5280-5ED61-0AA0 | 3VA5280-6ED61-0AA0 | 3VA5280-7ED61-0AA0 |
| 90 | 3VA5290-5ED61-0AA0 | 3VA5290-6ED61-0AA0 | 3VA5290-7ED61-0AA0 |
| 100 | 3VA5210-5ED61-0AA0 | 3VA5210-6ED61-0AA0 | 3VA5210-7ED61-0AA0 |
| 110 | 3VA5211-5ED61-0AA0 | 3VA5211-6ED61-0AA0 | 3VA5211-7ED61-0AA0 |
| 125 | 3VA5212-5ED61-0AA0 | 3VA5212-6ED61-0AA0 | 3VA5212-7ED61-0AA0 |
| 150 | 3VA5215-5ED61-0AA0 | 3VA5215-6ED61-0AA0 | 3VA5215-7ED61-0AA0 |
| 175 | 3VA5217-5ED61-0AA0 | 3VA5217-6ED61-0AA0 | 3VA5217-7ED61-0AA0 |
| 200 | 3VA5220-5ED61-0AA0 | 3VA5220-6ED61-0AA0 | 3VA5220-7ED61-0AA0 |
| 225 | 3VA5222-5ED61-0AA0 | 3VA5222-6ED61-0AA0 | 3VA5222-7ED61-0AA0 |
| 250 | 3VA5225-5ED61-0AA0 | 3VA5225-6ED61-0AA0 | 3VA5225-7ED61-0AA0 |

| | | | |
|------------|--------------------|--------------------|--------------------|
| TM230 FTAM | | | |
| 70 | 3VA5270-5EC61-0AA0 | 3VA5270-6EC61-0AA0 | 3VA5270-7EC61-0AA0 |
| 80 | 3VA5280-5EC61-0AA0 | 3VA5280-6EC61-0AA0 | 3VA5280-7EC61-0AA0 |
| 90 | 3VA5290-5EC61-0AA0 | 3VA5290-6EC61-0AA0 | 3VA5290-7EC61-0AA0 |
| 100 | 3VA5210-5EC61-0AA0 | 3VA5210-6EC61-0AA0 | 3VA5210-7EC61-0AA0 |
| 110 | 3VA5211-5EC61-0AA0 | 3VA5211-6EC61-0AA0 | 3VA5211-7EC61-0AA0 |
| 125 | 3VA5212-5EC61-0AA0 | 3VA5212-6EC61-0AA0 | 3VA5212-7EC61-0AA0 |
| 150 | 3VA5215-5EC61-0AA0 | 3VA5215-6EC61-0AA0 | 3VA5215-7EC61-0AA0 |
| 175 | 3VA5217-5EC61-0AA0 | 3VA5217-6EC61-0AA0 | 3VA5217-7EC61-0AA0 |
| 200 | 3VA5220-5EC61-0AA0 | 3VA5220-6EC61-0AA0 | 3VA5220-7EC61-0AA0 |
| 225 | 3VA5222-5EC61-0AA0 | 3VA5222-6EC61-0AA0 | 3VA5222-7EC61-0AA0 |
| 250 | 3VA5225-5EC61-0AA0 | 3VA5225-6EC61-0AA0 | 3VA5225-7EC61-0AA0 |

Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|------------|------------|------------|------------|------|-----|
| 3VA52 | 2(3-) pole | 4.1 (105) | 7.3 (185) | 3.3 (83) | 4.1 | 1.9 |
| 3VA52 | 3-pole | 4.1 (105) | 7.3 (185) | 3.3 (83) | 4.5 | 2.1 |

Shipping Weight



3VA52 250A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA52 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 150A, 3-pole, NAVAL rated 3VA52 would be catalog number 3VA5215-5ED31-1AA0)

Enclosures (3-pole only)

| Nema Type | Catalogue Number |
|--------------|------------------|
| 1 surface | 3VAE250N1S |
| 1 flush | 3VAE250N1F |
| 3R | 3VAE250N3R |
| 12 | 3VAE250N12 |
| 4X (304) | 3VAE250N4X |
| 4X (316) | 3VAE250N4X316 |
| Neutral | N250X |
| 200% Neutral | N2250X |

Molded Case Circuit Breakers

3VA52 250A Thermal-magnetic Trip Circuit Breakers

Selection

3VA52 250 A Frame, 3-Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MFAS) | H-Interrupting Class (HFAS) | C-Interrupting Class (CFAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |

TM210 FTFM[Ⓞ]

| | | | |
|-----|--------------------|--------------------|--------------------|
| 40 | 3VA5240-5ED31-0AA0 | 3VA5240-6ED31-0AA0 | 3VA5240-7ED31-0AA0 |
| 45 | 3VA5245-5ED31-0AA0 | 3VA5245-6ED31-0AA0 | 3VA5245-7ED31-0AA0 |
| 50 | 3VA5250-5ED31-0AA0 | 3VA5250-6ED31-0AA0 | 3VA5250-7ED31-0AA0 |
| 60 | 3VA5260-5ED31-0AA0 | 3VA5260-6ED31-0AA0 | 3VA5260-7ED31-0AA0 |
| 70 | 3VA5270-5ED31-0AA0 | 3VA5270-6ED31-0AA0 | 3VA5270-7ED31-0AA0 |
| 80 | 3VA5280-5ED31-0AA0 | 3VA5280-6ED31-0AA0 | 3VA5280-7ED31-0AA0 |
| 90 | 3VA5290-5ED31-0AA0 | 3VA5290-6ED31-0AA0 | 3VA5290-7ED31-0AA0 |
| 100 | 3VA5210-5ED31-0AA0 | 3VA5210-6ED31-0AA0 | 3VA5210-7ED31-0AA0 |
| 110 | 3VA5211-5ED31-0AA0 | 3VA5211-6ED31-0AA0 | 3VA5211-7ED31-0AA0 |
| 125 | 3VA5212-5ED31-0AA0 | 3VA5212-6ED31-0AA0 | 3VA5212-7ED31-0AA0 |
| 150 | 3VA5215-5ED31-0AA0 | 3VA5215-6ED31-0AA0 | 3VA5215-7ED31-0AA0 |
| 175 | 3VA5217-5ED31-0AA0 | 3VA5217-6ED31-0AA0 | 3VA5217-7ED31-0AA0 |
| 200 | 3VA5220-5ED31-0AA0 | 3VA5220-6ED31-0AA0 | 3VA5220-7ED31-0AA0 |
| 225 | 3VA5222-5ED31-0AA0 | 3VA5222-6ED31-0AA0 | 3VA5222-7ED31-0AA0 |
| 250 | 3VA5225-5ED31-0AA0 | 3VA5225-6ED31-0AA0 | 3VA5225-7ED31-0AA0 |

TM230 FTAM[Ⓞ]

| | | | |
|-----|--------------------|--------------------|--------------------|
| 70 | 3VA5270-5EC31-0AA0 | 3VA5270-6EC31-0AA0 | 3VA5270-7EC31-0AA0 |
| 80 | 3VA5280-5EC31-0AA0 | 3VA5280-6EC31-0AA0 | 3VA5280-7EC31-0AA0 |
| 90 | 3VA5290-5EC31-0AA0 | 3VA5290-6EC31-0AA0 | 3VA5290-7EC31-0AA0 |
| 100 | 3VA5210-5EC31-0AA0 | 3VA5210-6EC31-0AA0 | 3VA5210-7EC31-0AA0 |
| 110 | 3VA5211-5EC31-0AA0 | 3VA5211-6EC31-0AA0 | 3VA5211-7EC31-0AA0 |
| 125 | 3VA5212-5EC31-0AA0 | 3VA5212-6EC31-0AA0 | 3VA5212-7EC31-0AA0 |
| 150 | 3VA5215-5EC31-0AA0 | 3VA5215-6EC31-0AA0 | 3VA5215-7EC31-0AA0 |
| 175 | 3VA5217-5EC31-0AA0 | 3VA5217-6EC31-0AA0 | 3VA5217-7EC31-0AA0 |
| 200 | 3VA5220-5EC31-0AA0 | 3VA5220-6EC31-0AA0 | 3VA5220-7EC31-0AA0 |
| 225 | 3VA5222-5EC31-0AA0 | 3VA5222-6EC31-0AA0 | 3VA5222-7EC31-0AA0 |
| 250 | 3VA5225-5EC31-0AA0 | 3VA5225-6EC31-0AA0 | 3VA5225-7EC31-0AA0 |

TM240 ATAM

| | | | |
|-----|--------------------|--------------------|--------------------|
| 70 | 3VA5270-5EF31-0AA0 | 3VA5270-6EF31-0AA0 | 3VA5270-7EF31-0AA0 |
| 80 | 3VA5280-5EF31-0AA0 | 3VA5280-6EF31-0AA0 | 3VA5280-7EF31-0AA0 |
| 100 | 3VA5210-5EF31-0AA0 | 3VA5210-6EF31-0AA0 | 3VA5210-7EF31-0AA0 |
| 125 | 3VA5212-5EF31-0AA0 | 3VA5212-6EF31-0AA0 | 3VA5212-7EF31-0AA0 |
| 150 | 3VA5215-5EF31-0AA0 | 3VA5215-6EF31-0AA0 | 3VA5215-7EF31-0AA0 |
| 175 | 3VA5217-5EF31-0AA0 | 3VA5217-6EF31-0AA0 | 3VA5217-7EF31-0AA0 |
| 200 | 3VA5220-5EF31-0AA0 | 3VA5220-6EF31-0AA0 | 3VA5220-7EF31-0AA0 |
| 250 | 3VA5225-5EF31-0AA0 | 3VA5225-6EF31-0AA0 | 3VA5225-7EF31-0AA0 |

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA52 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 150A, 3-pole, NAVAL rated 3VA52 would be catalog number 3VA5215-5ED31-**1**AA0)

Enclosures (3-pole only)

| Nema Type | Catalog Number |
|--------------|----------------|
| 1 surface | 3VAE250N1S |
| 1 flush | 3VAE250N1F |
| 3R | 3VAE250N3R |
| 12 | 3VAE250N12 |
| 4X (304) | 3VAE250N4X |
| 4X (316) | 3VAE250N4X316 |
| Neutral | N250X |
| 200% Neutral | N2250X |

Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|------------|------------|------------|------------|------|-----|
| 3VA52 | 2(3-) pole | 4.1 (105) | 7.3 (185) | 3.3 (83) | 4.1 | 1.9 |
| 3VA52 | 3-pole | 4.1 (105) | 7.3 (185) | 3.3 (83) | 4.5 | 2.1 |

Shipping Weight

[Ⓞ] Available with NAVAL/50C ratings.

Molded Case Circuit Breakers

3VA52 250A Thermal-magnetic Trip Circuit Breakers

Selection

3VA52 250A Frame, 4-pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MFAS) | H-Interrupting Class (HFAS) | C-Interrupting Class (CFAS) |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM210 FTFM | | | |
| 40 | 3VA5240-5ED41-0AA0 | 3VA5240-6ED41-0AA0 | 3VA5240-7ED41-0AA0 |
| 45 | 3VA5245-5ED41-0AA0 | 3VA5245-6ED41-0AA0 | 3VA5245-7ED41-0AA0 |
| 50 | 3VA5250-5ED41-0AA0 | 3VA5250-6ED41-0AA0 | 3VA5250-7ED41-0AA0 |
| 60 | 3VA5260-5ED41-0AA0 | 3VA5260-6ED41-0AA0 | 3VA5260-7ED41-0AA0 |
| 70 | 3VA5270-5ED41-0AA0 | 3VA5270-6ED41-0AA0 | 3VA5270-7ED41-0AA0 |
| 80 | 3VA5280-5ED41-0AA0 | 3VA5280-6ED41-0AA0 | 3VA5280-7ED41-0AA0 |
| 90 | 3VA5290-5ED41-0AA0 | 3VA5290-6ED41-0AA0 | 3VA5290-7ED41-0AA0 |
| 100 | 3VA5210-5ED41-0AA0 | 3VA5210-6ED41-0AA0 | 3VA5210-7ED41-0AA0 |
| 110 | 3VA5211-5ED41-0AA0 | 3VA5211-6ED41-0AA0 | 3VA5211-7ED41-0AA0 |
| 125 | 3VA5212-5ED41-0AA0 | 3VA5212-6ED41-0AA0 | 3VA5212-7ED41-0AA0 |
| 150 | 3VA5215-5ED41-0AA0 | 3VA5215-6ED41-0AA0 | 3VA5215-7ED41-0AA0 |
| 175 | 3VA5217-5ED41-0AA0 | 3VA5217-6ED41-0AA0 | 3VA5217-7ED41-0AA0 |
| 200 | 3VA5220-5ED41-0AA0 | 3VA5220-6ED41-0AA0 | 3VA5220-7ED41-0AA0 |
| 225 | 3VA5222-5ED41-0AA0 | 3VA5222-6ED41-0AA0 | 3VA5222-7ED41-0AA0 |
| 250 | 3VA5225-5ED41-0AA0 | 3VA5225-6ED41-0AA0 | 3VA5225-7ED41-0AA0 |
| TM210 FTFM 100% Neutral | | | |
| 90 | 3VA5290-5GD41-0AA0 | 3VA5290-6GD41-0AA0 | 3VA5290-7GD41-0AA0 |
| 100 | 3VA5210-5GD41-0AA0 | 3VA5210-6GD41-0AA0 | 3VA5210-7GD41-0AA0 |
| 110 | 3VA5211-5GD41-0AA0 | 3VA5211-6GD41-0AA0 | 3VA5211-7GD41-0AA0 |
| 125 | 3VA5212-5GD41-0AA0 | 3VA5212-6GD41-0AA0 | 3VA5212-7GD41-0AA0 |
| 150 | 3VA5215-5GD41-0AA0 | 3VA5215-6GD41-0AA0 | 3VA5215-7GD41-0AA0 |
| 175 | 3VA5217-5GD41-0AA0 | 3VA5217-6GD41-0AA0 | 3VA5217-7GD41-0AA0 |
| 200 | 3VA5220-5GD41-0AA0 | 3VA5220-6GD41-0AA0 | 3VA5220-7GD41-0AA0 |
| 225 | 3VA5222-5GD41-0AA0 | 3VA5222-6GD41-0AA0 | 3VA5222-7GD41-0AA0 |
| 250 | 3VA5225-5GD41-0AA0 | 3VA5225-6GD41-0AA0 | 3VA5225-7GD41-0AA0 |
| TM230 FTAM | | | |
| 70 | 3VA5270-5EC41-0AA0 | 3VA5270-6EC41-0AA0 | 3VA5270-7EC41-0AA0 |
| 80 | 3VA5280-5EC41-0AA0 | 3VA5280-6EC41-0AA0 | 3VA5280-7EC41-0AA0 |
| 90 | 3VA5290-5EC41-0AA0 | 3VA5290-6EC41-0AA0 | 3VA5290-7EC41-0AA0 |
| 100 | 3VA5210-5EC41-0AA0 | 3VA5210-6EC41-0AA0 | 3VA5210-7EC41-0AA0 |
| 110 | 3VA5211-5EC41-0AA0 | 3VA5211-6EC41-0AA0 | 3VA5211-7EC41-0AA0 |
| 125 | 3VA5212-5EC41-0AA0 | 3VA5212-6EC41-0AA0 | 3VA5212-7EC41-0AA0 |
| 150 | 3VA5215-5EC41-0AA0 | 3VA5215-6EC41-0AA0 | 3VA5215-7EC41-0AA0 |
| 175 | 3VA5217-5EC41-0AA0 | 3VA5217-6EC41-0AA0 | 3VA5217-7EC41-0AA0 |
| 200 | 3VA5220-5EC41-0AA0 | 3VA5220-6EC41-0AA0 | 3VA5220-7EC41-0AA0 |
| 225 | 3VA5222-5EC41-0AA0 | 3VA5222-6EC41-0AA0 | 3VA5222-7EC41-0AA0 |
| 250 | 3VA5225-5EC41-0AA0 | 3VA5225-6EC41-0AA0 | 3VA5225-7EC41-0AA0 |
| TM230 FTAM 100% Neutral | | | |
| 90 | 3VA5290-5GC41-0AA0 | 3VA5290-6GC41-0AA0 | 3VA5290-7GC41-0AA0 |
| 100 | 3VA5210-5GC41-0AA0 | 3VA5210-6GC41-0AA0 | 3VA5210-7GC41-0AA0 |
| 110 | 3VA5211-5GC41-0AA0 | 3VA5211-6GC41-0AA0 | 3VA5211-7GC41-0AA0 |
| 125 | 3VA5212-5GC41-0AA0 | 3VA5212-6GC41-0AA0 | 3VA5212-7GC41-0AA0 |
| 150 | 3VA5215-5GC41-0AA0 | 3VA5215-6GC41-0AA0 | 3VA5215-7GC41-0AA0 |
| 175 | 3VA5217-5GC41-0AA0 | 3VA5217-6GC41-0AA0 | 3VA5217-7GC41-0AA0 |
| 200 | 3VA5220-5GC41-0AA0 | 3VA5220-6GC41-0AA0 | 3VA5220-7GC41-0AA0 |
| 225 | 3VA5222-5GC41-0AA0 | 3VA5222-6GC41-0AA0 | 3VA5222-7GC41-0AA0 |
| 250 | 3VA5225-5GC41-0AA0 | 3VA5225-6GC41-0AA0 | 3VA5225-7GC41-0AA0 |
| TM240 ATAM | | | |
| 70 | 3VA5270-5EF41-0AA0 | 3VA5270-6EF41-0AA0 | 3VA5270-7EF41-0AA0 |
| 80 | 3VA5280-5EF41-0AA0 | 3VA5280-6EF41-0AA0 | 3VA5280-7EF41-0AA0 |
| 100 | 3VA5210-5EF41-0AA0 | 3VA5210-6EF41-0AA0 | 3VA5210-7EF41-0AA0 |
| 125 | 3VA5212-5EF41-0AA0 | 3VA5212-6EF41-0AA0 | 3VA5212-7EF41-0AA0 |
| 150 | 3VA5215-5EF41-0AA0 | 3VA5215-6EF41-0AA0 | 3VA5215-7EF41-0AA0 |
| 175 | 3VA5217-5EF41-0AA0 | 3VA5217-6EF41-0AA0 | 3VA5217-7EF41-0AA0 |
| 200 | 3VA5220-5EF41-0AA0 | 3VA5220-6EF41-0AA0 | 3VA5220-7EF41-0AA0 |
| 250 | 3VA5225-5EF41-0AA0 | 3VA5225-6EF41-0AA0 | 3VA5225-7EF41-0AA0 |
| TM240 ATAM 100% Neutral | | | |
| 100 | 3VA5210-5GF41-0AA0 | 3VA5210-6GF41-0AA0 | 3VA5210-7GF41-0AA0 |
| 125 | 3VA5212-5GF41-0AA0 | 3VA5212-6GF41-0AA0 | 3VA5212-7GF41-0AA0 |
| 150 | 3VA5215-5GF41-0AA0 | 3VA5215-6GF41-0AA0 | 3VA5215-7GF41-0AA0 |
| 175 | 3VA5217-5GF41-0AA0 | 3VA5217-6GF41-0AA0 | 3VA5217-7GF41-0AA0 |
| 200 | 3VA5220-5GF41-0AA0 | 3VA5220-6GF41-0AA0 | 3VA5220-7GF41-0AA0 |
| 250 | 3VA5225-5GF41-0AA0 | 3VA5225-6GF41-0AA0 | 3VA5225-7GF41-0AA0 |

Molded Case Circuit Breakers

3VA52 250A Thermal-magnetic Trip Circuit Breakers

Technical information

Interrupting Ratings for 3VA52

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | | | | |
|--------------------|--------------|------------------------------|-----------|-----|-----------|-----|----------|-----|----------|
| | | Volts AC (50/60 Hz) | | | | | Volts DC | | |
| | | 240 | 480Y/277V | 480 | 600Y/347V | 600 | 250 | 500 | 600 (3P) |
| M | MFAS | 85 | 35 | 35 | 18 | 18 | 50 | 50 | 50 |
| H | HFAS | 100 | 65 | 65 | 25 | 25 | 85 | 85 | 85 |
| C | CFAS | 200 | 100 | 100 | 35 | 35 | 100 | 100 | 100 |

Trip Settings for 3VA52

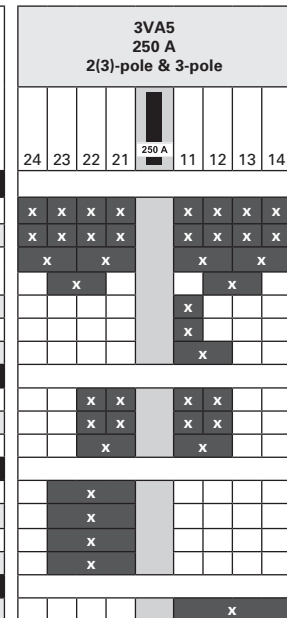
| TM210 - FTFM | | |
|--------------------|--------------------|--------------------|
| I _n (A) | I _n (A) | I _n (A) |
| 100 | 100 | 1000 |
| 110 | 110 | 1100 |
| 125 | 125 | 1250 |
| 150 | 150 | 1500 |
| 175 | 175 | 1750 |
| 200 | 200 | 2000 |
| 225 | 225 | 2250 |
| 250 | 250 | 2500 |

| TM230 - FTAM | | | | | | | | |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| I _n (A) | I _n (A) | I _n (A) | I _n (A) | I _n (A) | I _n (A) | I _n (A) | I _n (A) | I _n (A) |
| 100 | 100 | 500 | 600 | 700 | 800 | 900 | 1000 | |
| 110 | 110 | 550 | 660 | 770 | 880 | 990 | 1100 | |
| 125 | 125 | 625 | 750 | 875 | 1000 | 1125 | 1250 | |
| 150 | 150 | 750 | 900 | 1050 | 1200 | 1350 | 1500 | |
| 175 | 175 | 875 | 1050 | 1225 | 1400 | 1575 | 1750 | |
| 200 | 200 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | |
| 225 | 225 | 1125 | 1350 | 1575 | 1800 | 2025 | 2250 | |
| 250 | 250 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | |

Connectors for 75C Wire for 3VA52

| Type | Minimum cable size | Maximum cable size | Part Number (kit of 3 lugs) |
|-------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------------------|
| Steel wrap around (Cu cable only), single cable lugs | AWG 10 | 3/0 | 3VA9233-0JA11 |
| | AWG 4 | 350 kcmil | 3VA9233-0JA12 |
| Aluminum body lug (Cu/Al cable), single cable lugs | AWG 6 | 350 kcmil | 3VA9233-0JB12 |
| Aluminum body lug (Cu/Al cable) with control wire tap, single cable lugs | AWG 6 | 350 kcmil | 3VA9233-0JG12 |
| Aluminum body lug large (Cu/Al cable) single cable lugs with 1 extended terminal cover | AWG 2 | 350 kcmil | 3VA9233-0JJ13 |
| Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs and 1 extended terminal cover | AWG 2 | 350 kcmil | 3VA9233-0JC13 |
| Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9233-0JJ22 |
| Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover | AWG 14 | AWG 2 | 3VA9233-0JF60 |
| Copper body lug (Cu cable only) single cable lugs | AWG 6 | 350 kcmil | 3VA9233-0JD12 |
| Copper body lug with control wire tap (Cu cable only) single cable lugs | AWG 6 | 350 kcmil | 3VA9233-0JK12 |

| Internal accessories | |
|----------------------------|-----------|
| Optional equipment | |
| Slot No.: | |
| Auxiliary switch | Type |
| Auxiliary switch | AUX_HQ |
| | AUX_HQ_el |
| | AUX_HP |
| Leading changeover switch | LCS_HQ |
| | LCS_HQ_el |
| | LCS_HP |
| Auxiliary switch | Type |
| Trip alarm switch | TAS_HQ |
| | TAS_HQ_el |
| | TAS_HP |
| Auxiliary switch | Type |
| Shunt trip flexible | STF |
| Shunt trip left | STL |
| Undervoltage release | UVR |
| Universal release | UVI |
| Other | |
| Cylinder lock (type Ronis) | |



See page 5-59 for internal accessory part numbers.

Molded Case Circuit Breakers

3VA62 250A Electronic Trip Circuit Breakers

Selection



3VA62 250A 3-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA62 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

All 3VA62 electronic trip circuit breakers are available with 100% ratings.

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 100A, 3-pole, 100% rated 3VA62 would be catalog number 3VA6210-5HL31-**2**AA0) Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA62 250A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MFAE-Y) | H-Interrupting Class (HFAE-Y) | C-Interrupting Class (CFAE-Y) | L-Interrupting Class (LFAE-Y) |
|-------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| ETU320 LI with dials | | | | |
| 100 | 3VA6210-5HL31-0AA0 | 3VA6210-6HL31-0AA0 | 3VA6210-7HL31-0AA0 | 3VA6210-8HL31-0AA0 |
| 250 | 3VA6225-5HL31-0AA0 | 3VA6225-6HL31-0AA0 | 3VA6225-7HL31-0AA0 | 3VA6225-8HL31-0AA0 |
| ETU330 LIG with dials | | | | |
| 100 | 3VA6210-5HM31-0AA0 | 3VA6210-6HM31-0AA0 | 3VA6210-7HM31-0AA0 | 3VA6210-8HM31-0AA0 |
| 250 | 3VA6225-5HM31-0AA0 | 3VA6225-6HM31-0AA0 | 3VA6225-7HM31-0AA0 | 3VA6225-8HM31-0AA0 |
| ETU350 LSI with dials | | | | |
| 100 | 3VA6210-5HN31-0AA0 | 3VA6210-6HN31-0AA0 | 3VA6210-7HN31-0AA0 | 3VA6210-8HN31-0AA0 |
| 250 | 3VA6225-5HN31-0AA0 | 3VA6225-6HN31-0AA0 | 3VA6225-7HN31-0AA0 | 3VA6225-8HN31-0AA0 |
| ETU550 LSI with LCD | | | | |
| 100 | 3VA6210-5JP31-0AA0 | 3VA6210-6JP31-0AA0 | 3VA6210-7JP31-0AA0 | 3VA6210-8JP31-0AA0 |
| 250 | 3VA6225-5JP31-0AA0 | 3VA6225-6JP31-0AA0 | 3VA6225-7JP31-0AA0 | 3VA6225-8JP31-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 100 | 3VA6210-5JT31-0AA0 | 3VA6210-6JT31-0AA0 | 3VA6210-7JT31-0AA0 | 3VA6210-8JT31-0AA0 |
| 250 | 3VA6225-5JT31-0AA0 | 3VA6225-6JT31-0AA0 | 3VA6225-7JT31-0AA0 | 3VA6225-8JT31-0AA0 |
| ETU560 LSIG with LCD | | | | |
| 100 | 3VA6210-5JQ31-0AA0 | 3VA6210-6JQ31-0AA0 | 3VA6210-7JQ31-0AA0 | 3VA6210-8JQ31-0AA0 |
| 250 | 3VA6225-5JQ31-0AA0 | 3VA6225-6JQ31-0AA0 | 3VA6225-7JQ31-0AA0 | 3VA6225-8JQ31-0AA0 |
| ETU820 LI with LCD and Metering | | | | |
| 100 | 3VA6210-5KL31-0AA0 | 3VA6210-6KL31-0AA0 | 3VA6210-7KL31-0AA0 | 3VA6210-8KL31-0AA0 |
| 250 | 3VA6225-5KL31-0AA0 | 3VA6225-6KL31-0AA0 | 3VA6225-7KL31-0AA0 | 3VA6225-8KL31-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 100 | 3VA6210-5KM31-0AA0 | 3VA6210-6KM31-0AA0 | 3VA6210-7KM31-0AA0 | 3VA6210-8KM31-0AA0 |
| 250 | 3VA6225-5KM31-0AA0 | 3VA6225-6KM31-0AA0 | 3VA6225-7KM31-0AA0 | 3VA6225-8KM31-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 100 | 3VA6210-5KP31-0AA0 | 3VA6210-6KP31-0AA0 | 3VA6210-7KP31-0AA0 | 3VA6210-8KP31-0AA0 |
| 250 | 3VA6225-5KP31-0AA0 | 3VA6225-6KP31-0AA0 | 3VA6225-7KP31-0AA0 | 3VA6225-8KP31-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 100 | 3VA6210-5KT31-0AA0 | 3VA6210-6KT31-0AA0 | 3VA6210-7KT31-0AA0 | 3VA6210-8KT31-0AA0 |
| 250 | 3VA6225-5KT31-0AA0 | 3VA6225-6KT31-0AA0 | 3VA6225-7KT31-0AA0 | 3VA6225-8KT31-0AA0 |
| ETU860 LSIG with LCD and Metering | | | | |
| 100 | 3VA6210-5KQ31-0AA0 | 3VA6210-6KQ31-0AA0 | 3VA6210-7KQ31-0AA0 | 3VA6210-8KQ31-0AA0 |
| 250 | 3VA6225-5KQ31-0AA0 | 3VA6225-6KQ31-0AA0 | 3VA6225-7KQ31-0AA0 | 3VA6225-8KQ31-0AA0 |

Molded Case Circuit Breakers

3VA62 250A Electronic Trip Circuit Breakers

Selection



3VA62 250A 4-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA62 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

All 3VA62 electronic trip circuit breakers are available with 100% ratings.

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 100A, 3-pole, 100% rated 3VA62 would be catalog number 3VA6210-5HL31-**2**AA0) Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA62 250A Frame 4-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MFAE-Y) | H-Interrupting Class (HFAE-Y) | C-Interrupting Class (CFAE-Y) | L-Interrupting Class (LFAE-Y) |
|-------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| ETU320 LI with dials | | | | |
| 100 | 3VA6210-5HL41-0AA0 | 3VA6210-6HL41-0AA0 | 3VA6210-7HL41-0AA0 | 3VA6210-8HL41-0AA0 |
| 250 | 3VA6225-5HL41-0AA0 | 3VA6225-6HL41-0AA0 | 3VA6225-7HL41-0AA0 | 3VA6225-8HL41-0AA0 |
| ETU330 LIG with dials | | | | |
| 100 | 3VA6210-5HM41-0AA0 | 3VA6210-6HM41-0AA0 | 3VA6210-7HM41-0AA0 | 3VA6210-8HM41-0AA0 |
| 250 | 3VA6225-5HM41-0AA0 | 3VA6225-6HM41-0AA0 | 3VA6225-7HM41-0AA0 | 3VA6225-8HM41-0AA0 |
| ETU350 LSI with dials | | | | |
| 100 | 3VA6210-5HN41-0AA0 | 3VA6210-6HN41-0AA0 | 3VA6210-7HN41-0AA0 | 3VA6210-8HN41-0AA0 |
| 250 | 3VA6225-5HN41-0AA0 | 3VA6225-6HN41-0AA0 | 3VA6225-7HN41-0AA0 | 3VA6225-8HN41-0AA0 |
| ETU550 LSI with LCD | | | | |
| 100 | 3VA6210-5JP41-0AA0 | 3VA6210-6JP41-0AA0 | 3VA6210-7JP41-0AA0 | 3VA6210-8JP41-0AA0 |
| 250 | 3VA6225-5JP41-0AA0 | 3VA6225-6JP41-0AA0 | 3VA6225-7JP41-0AA0 | 3VA6225-8JP41-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 100 | 3VA6210-5JT41-0AA0 | 3VA6210-6JT41-0AA0 | 3VA6210-7JT41-0AA0 | 3VA6210-8JT41-0AA0 |
| 250 | 3VA6225-5JT41-0AA0 | 3VA6225-6JT41-0AA0 | 3VA6225-7JT41-0AA0 | 3VA6225-8JT41-0AA0 |
| ETU560 LSI(G) with LCD | | | | |
| 100 | 3VA6210-5JQ41-0AA0 | 3VA6210-6JQ41-0AA0 | 3VA6210-7JQ41-0AA0 | 3VA6210-8JQ41-0AA0 |
| 250 | 3VA6225-5JQ41-0AA0 | 3VA6225-6JQ41-0AA0 | 3VA6225-7JQ41-0AA0 | 3VA6225-8JQ41-0AA0 |
| ETU820 LI with LCD and Metering | | | | |
| 100 | 3VA6210-5KL41-0AA0 | 3VA6210-6KL41-0AA0 | 3VA6210-7KL41-0AA0 | 3VA6210-8KL41-0AA0 |
| 250 | 3VA6225-5KL41-0AA0 | 3VA6225-6KL41-0AA0 | 3VA6225-7KL41-0AA0 | 3VA6225-8KL41-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 100 | 3VA6210-5KM41-0AA0 | 3VA6210-6KM41-0AA0 | 3VA6210-7KM41-0AA0 | 3VA6210-8KM41-0AA0 |
| 250 | 3VA6225-5KM41-0AA0 | 3VA6225-6KM41-0AA0 | 3VA6225-7KM41-0AA0 | 3VA6225-8KM41-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 100 | 3VA6210-5KP41-0AA0 | 3VA6210-6KP41-0AA0 | 3VA6210-7KP41-0AA0 | 3VA6210-8KP41-0AA0 |
| 250 | 3VA6225-5KP41-0AA0 | 3VA6225-6KP41-0AA0 | 3VA6225-7KP41-0AA0 | 3VA6225-8KP41-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 100 | 3VA6210-5KT41-0AA0 | 3VA6210-6KT41-0AA0 | 3VA6210-7KT41-0AA0 | 3VA6210-8KT41-0AA0 |
| 250 | 3VA6225-5KT41-0AA0 | 3VA6225-6KT41-0AA0 | 3VA6225-7KT41-0AA0 | 3VA6225-8KT41-0AA0 |
| ETU860 LSI(G) with LCD and Metering | | | | |
| 100 | 3VA6210-5KQ41-0AA0 | 3VA6210-6KQ41-0AA0 | 3VA6210-7KQ41-0AA0 | 3VA6210-8KQ41-0AA0 |
| 250 | 3VA6225-5KQ41-0AA0 | 3VA6225-6KQ41-0AA0 | 3VA6225-7KQ41-0AA0 | 3VA6225-8KQ41-0AA0 |

Molded Case Circuit Breakers

3VA62 250A Electronic Trip Circuit Breakers

Technical information

Connectors for 75C wire for 3VA62

| Type | Minimum cable size | Maximum cable size | Part Number (kit of 3 lugs) | Part Number (kit of 4 lugs) |
|-------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------------------|-----------------------------|
| Steel Wrap around (Cu cable only) single cable lugs | AWG 10 | 3/0 | 3VA9143-0JA12 | 3VA9144-0JA12 |
| | AWG 4 | 350 kcmil | 3VA9243-0JA12 | 3VA9244-0JA12 |
| Aluminum Body Lug (Cu/Al cable) single cable lugs | AWG 14 | 1/0 | 3VA9143-0JB11 | 3VA9144-0JB11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JB12 | 3VA9244-0JB12 |
| Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs | AWG 14 | 1/0 | 3VA9143-0JG11 | 3VA9144-0JG11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JG12 | 3VA9244-0JG12 |
| Aluminum body lug large (Cu/Al cable) single cable lugs and 1 ext'd terminal cover | AWG 2 | 350 kcmil | 3VA9243-0JJ13 | 3VA9244-0JJ13 |
| Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs and 1 extended terminal cover | AWG 2 | 350 kcmil | 3VA9243-0JC13 | 3VA9244-0JC13 |
| Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9243-0JJ22 | 3VA9244-0JJ22 |
| Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover | AWG 4 | 300 kcmil | 3VA9243-0JC22 | 3VA9244-0JC22 |
| Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover | AWG 14 | AWG 2 | 3VA9243-0JF60 | 3VA9244-0JF60 |
| Copper body lug (Cu cable only) single cable lugs (meets requirements for 100% rated breakers) | AWG 14 | 1/0 | 3VA9143-0JD11 | 3VA9144-0JD11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JD12 | 3VA9244-0JD12 |
| Copper body lug (Cu cable only) with control wire tap single cable lugs | AWG 14 | 1/0 | 3VA9143-0JK11 | 3VA9144-0JK11 |
| | AWG 6 | 350 kcmil | 3VA9243-0JK12 | 3VA9244-0JK12 |

Interrupting Ratings for 3VA62

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | |
|--------------------|--------------|------------------------------|-----------|-----|-----------|-----|
| | | Volts AC (50/60 Hz) | | | | |
| | | 240 | 480Y/277V | 480 | 600Y/347V | 600 |
| M | MFAE-Y | 100 | 35 | 35 | 18 | — |
| H | HFAE-Y | 100 | 65 | 65 | 22 | — |
| C | CFAE-Y | 200 | 100 | 100 | 35 | — |
| L | LFAE-Y | 200 | 150 | 150 | 50 | — |

Dimensions

Shipping Weight

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA62 | 3 | 4.1 (105) | 7.8 (198) | 3.4 (86) | 5.5 | 2.5 |
| 3VA62 | 4 | 5.5 (140) | 7.8 (198) | 3.4 (86) | 7.1 | 3.2 |

5

MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

3VA62 250A Electronic Trip Circuit Breakers

Technical information

Trip Settings for 3VA62

ETU320-LI, ETU330-LIG, ETU350-LSI

| Continuous Amperage | LI, LIG, LSI | | | LSI | | LIG | LI, LIG, LSI 4P only |
|---------------------|----------------------|---------------------------|---------------------------|--------------------------------------------|---------------------------|----------|----------------------|
| | I _n (Amp) | t _{in} (sec) (L) | I _n (Amp) (I)① | I _{sc} =xI _r (Amp) (S) | t _{in} (sec) (S) | | |
| 100 | 40 - 100 | 0.5 - 17 | 150-1200 | 1.5 - 10 | 0.08 - 0.4 | 20 - 100 | 0.5 - 1 / OFF |
| 250 | 100 - 250 | 0.5 - 13 | 375-2500 | 1.5 - 10 | | 50 - 250 | 0.5 - 1 / OFF |

① I_n for ETU350 is fixed at 12X I_n.

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

| Continuous Amperage | LI, LIG, LSI, LSIG, LSI(G) | | | LSI, LSIG, LSI(G) | | LIG, LSIG, LSI(G) | | LSI 3P with External CT | LI, LIG, LSI, LSIG, LSI(G) 4P only |
|---------------------|----------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------|---------------------------------------|------------------------------------|
| | I _n (Amp) | t _{in} (sec) (L) | I _n (Amp) (I) | I _{sc} (Amp) (S) | t _{in} (sec) (S) | I _n (Amp) (G) | t _{in} (G) | I _n =xI _n (Amp) | I _n (Amp) |
| 100 | 40 - 100 | 0.5 - 25 | 150-1200 | 60 - 1000 | 0.05 - 0.5 | 20 - 100 | 0.05 - 0.8 | 20 - 160 / OFF | 20 - 160 / OFF |
| 250 | 100 - 250 | 0.5 - 13 | 375-2500 | 150 - 2500 | | 50 - 250 | | 50 - 400 / OFF | 50 - 250 / OFF |

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at https://www.siemens.com/download?BTLV_50412

| Internal accessories Optional equipment | Slot No.: | 3VA6 150/250 A 3-pole | | | | | | | 3VA6 150/250 A 4-pole | | | | | | | | | | |
|---------------------------------------------|-------------|-----------------------|----|----|----|-------|----|----|-----------------------|----|----|----|----|----|-------|----|----|----|----|
| | | 24 | 23 | 22 | 21 | 250 A | 11 | 12 | 13 | 14 | 24 | 23 | 22 | 21 | 250 A | 11 | 12 | 13 | 14 |
| Auxiliary switch | Type | | | | | | | | | | | | | | | | | | |
| Auxiliary switch | AUX_HQ | x | x | x | x | | x | x | x | x | x | x | x | x | | x | x | x | x |
| | AUX_HQ_el | x | x | x | x | | x | x | x | x | x | x | x | x | | x | x | x | x |
| | AUX_HP | | | | | | | | | | | | | | | | | | |
| Leading changeover switch | LCS_HQ | | | | | | | | | | | | | | | | | | |
| | LCS_HQ_el | | | | | | | | | | | | | | | | | | |
| | LCS_HP | | | | | | | | | | | | | | | | | | |
| Auxiliary switch | Type | | | | | | | | | | | | | | | | | | |
| Trip alarm switch | TAS_HQ | | | x | x | | | x | x | | | | x | x | | | x | x | |
| | TAS_HQ_el | | | x | x | | | x | x | | | | x | x | | | x | x | |
| | TAS_HP | | | | | | | | | | | | | | | | | | |
| Electrical alarm switch | EAS_HQ | | | | | | | | | | | | | | | | | | x |
| | EAS_HQ_el | | | | | | | | | | | | | | | | | | x |
| Auxiliary switch | Type | | | | | | | | | | | | | | | | | | |
| Shunt trip flexible | STF | | | x | | | | | x | | | | x | | | | | | x |
| Shunt trip left | STL | | | x | | | | | | | | | x | | | | | | |
| Undervoltage release | UVR | | | x | | | | | | | | | x | | | | | | |
| Universal release | UVI | | | x | | | | | | | | | x | | | | | | |
| ETU/communication | Type | | | | | | | | | | | | | | | | | | |
| Communication module Breaker data server | COM060 | | | | | | | | | x | | | | | | | | | x |
| 24 V module | | | | | | | | | | x | | | | | | | | | x |
| Other | | | | | | | | | | | | | | | | | | | |
| Cylinder lock (type Ronis) | | | | | | | | | | x | | | | | | | | | x |

See page 59 for internal accessory part numbers.

Molded Case Circuit Breakers

3VA53 400A Thermal-magnetic Trip Circuit Breakers

Selection

3VA53 400A Frame, 2-(3)Pole Frame,
Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MJAS) | H-Interrupting Class (HJAS) | C-Interrupting Class (CJAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM230 FTAM | | | |
| 200 | 3VA5320-5EC61-0AA0 | 3VA5320-6EC61-0AA0 | 3VA5320-7EC61-0AA0 |
| 225 | 3VA5322-5EC61-0AA0 | 3VA5322-6EC61-0AA0 | 3VA5322-7EC61-0AA0 |
| 250 | 3VA5325-5EC61-0AA0 | 3VA5325-6EC61-0AA0 | 3VA5325-7EC61-0AA0 |
| 300 | 3VA5330-5EC61-0AA0 | 3VA5330-6EC61-0AA0 | 3VA5330-7EC61-0AA0 |
| 350 | 3VA5335-5EC61-0AA0 | 3VA5335-6EC61-0AA0 | 3VA5335-7EC61-0AA0 |
| 400 | 3VA5340-5EC61-0AA0 | 3VA5340-6EC61-0AA0 | 3VA5340-7EC61-0AA0 |

3VA53 400A Frame, 3-Pole Frame,
Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MJAS) | H-Interrupting Class (HJAS) | C-Interrupting Class (CJAS) |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM230 FTAM [Ⓞ] | | | |
| 200 | 3VA5320-5EC31-0AA0 | 3VA5320-6EC31-0AA0 | 3VA5320-7EC31-0AA0 |
| 225 | 3VA5322-5EC31-0AA0 | 3VA5322-6EC31-0AA0 | 3VA5322-7EC31-0AA0 |
| 250 | 3VA5325-5EC31-0AA0 | 3VA5325-6EC31-0AA0 | 3VA5325-7EC31-0AA0 |
| 300 | 3VA5330-5EC31-0AA0 | 3VA5330-6EC31-0AA0 | 3VA5330-7EC31-0AA0 |
| 350 | 3VA5335-5EC31-0AA0 | 3VA5335-6EC31-0AA0 | 3VA5335-7EC31-0AA0 |
| 400 | 3VA5340-5EC31-0AA0 | 3VA5340-6EC31-0AA0 | 3VA5340-7EC31-0AA0 |
| TM240 ATAM | | | |
| 200 | 3VA5320-5EF31-0AA0 | 3VA5320-6EF31-0AA0 | 3VA5320-7EF31-0AA0 |
| 225 | 3VA5322-5EF31-0AA0 | 3VA5322-6EF31-0AA0 | 3VA5322-7EF31-0AA0 |
| 250 | 3VA5325-5EF31-0AA0 | 3VA5325-6EF31-0AA0 | 3VA5325-7EF31-0AA0 |
| 300 | 3VA5330-5EF31-0AA0 | 3VA5330-6EF31-0AA0 | 3VA5330-7EF31-0AA0 |
| 350 | 3VA5335-5EF31-0AA0 | 3VA5335-6EF31-0AA0 | 3VA5335-7EF31-0AA0 |
| 400 | 3VA5340-5EF31-0AA0 | 3VA5340-6EF31-0AA0 | 3VA5340-7EF31-0AA0 |



3VA53 400A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA53 thermal-magnetic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA@480VAC, 400A, 3-pole, rated 3VA53 would be catalog number 3VA5340-5EC31-**1**AA0)

Dimensions

Shipping Weight

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA53 | 3 | 6.4 (162) | 10.3 (262) | 6.7 (170) | 11.5 | 5.2 |
| 3VA53 | 4 | 8.2 (208) | 10.3 (262) | 6.7 (170) | 15.0 | 6.8 |

Interrupting Ratings for 3VA53

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | | | | | | |
|--------------------|--------------|------------------------------|---------------|-----|---------------|-----|-------------|-------------|-------------|-------------|--------------|
| | | Volts AC (50/60 Hz) | | | | | Volts DC | | | | |
| | | 240 | 480Y/ 277V | 480 | 600Y/ 347V | 600 | 250 (2P) | 600 (3P) | 750 (3P) | 750 (4P) | 1000 (4P) |
| M | MJAS | 65 | 35 | 35 | 18 | 18 | 50 | 50 | 6 | 50 | 6 |
| H | HJAS | 100 | 65 | 65 | 25 | 25 | 85 | 85 | 6 | 85 | 6 |
| C | CJAS | 200 | 100 | 100 | 35 | 35 | 100 | 100 | 10 | 100 | 10 |

Ⓞ Available with NAVAL/50C ratings.

Molded Case Circuit Breakers

3VA53 400A Thermal-magnetic Trip Circuit Breakers

Selection

3VA53 400A Frame, 4-Pole Frame,
Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MJAS) | H-Interrupting Class (HJAS) | C-Interrupting Class (CJAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |

TM230 FTAM Unprotected Neutral

| | | | |
|-----|--------------------|--------------------|--------------------|
| 200 | 3VA5320-5EC41-0AA0 | 3VA5320-6EC41-0AA0 | 3VA5320-7EC41-0AA0 |
| 225 | 3VA5322-5EC41-0AA0 | 3VA5322-6EC41-0AA0 | 3VA5322-7EC41-0AA0 |
| 250 | 3VA5325-5EC41-0AA0 | 3VA5325-6EC41-0AA0 | 3VA5325-7EC41-0AA0 |
| 300 | 3VA5330-5EC41-0AA0 | 3VA5330-6EC41-0AA0 | 3VA5330-7EC41-0AA0 |
| 350 | 3VA5335-5EC41-0AA0 | 3VA5335-6EC41-0AA0 | 3VA5335-7EC41-0AA0 |
| 400 | 3VA5340-5EC41-0AA0 | 3VA5340-6EC41-0AA0 | 3VA5340-7EC41-0AA0 |

TM240 ATAM Unprotected Neutral

| | | | |
|-----|--------------------|--------------------|--------------------|
| 200 | 3VA5320-5EF41-0AA0 | 3VA5320-6EF41-0AA0 | 3VA5320-7EF41-0AA0 |
| 225 | 3VA5322-5EF41-0AA0 | 3VA5322-6EF41-0AA0 | 3VA5322-7EF41-0AA0 |
| 250 | 3VA5325-5EF41-0AA0 | 3VA5325-6EF41-0AA0 | 3VA5325-7EF41-0AA0 |
| 300 | 3VA5330-5EF41-0AA0 | 3VA5330-6EF41-0AA0 | 3VA5330-7EF41-0AA0 |
| 350 | 3VA5335-5EF41-0AA0 | 3VA5335-6EF41-0AA0 | 3VA5335-7EF41-0AA0 |
| 400 | 3VA5340-5EF41-0AA0 | 3VA5340-6EF41-0AA0 | 3VA5340-7EF41-0AA0 |

TM230 FTAM 100% Neutral

| | | | |
|-----|--------------------|--------------------|--------------------|
| 200 | 3VA5320-5GC41-0AA0 | 3VA5320-6GC41-0AA0 | 3VA5320-7GC41-0AA0 |
| 225 | 3VA5322-5GC41-0AA0 | 3VA5322-6GC41-0AA0 | 3VA5322-7GC41-0AA0 |
| 250 | 3VA5325-5GC41-0AA0 | 3VA5325-6GC41-0AA0 | 3VA5325-7GC41-0AA0 |
| 300 | 3VA5330-5GC41-0AA0 | 3VA5330-6GC41-0AA0 | 3VA5330-7GC41-0AA0 |
| 350 | 3VA5335-5GC41-0AA0 | 3VA5335-6GC41-0AA0 | 3VA5335-7GC41-0AA0 |
| 400 | 3VA5340-5GC41-0AA0 | 3VA5340-6GC41-0AA0 | 3VA5340-7GC41-0AA0 |

TM240 ATAM 100% Neutral

| | | | |
|-----|--------------------|--------------------|--------------------|
| 200 | 3VA5320-5GF41-0AA0 | 3VA5320-6GF41-0AA0 | 3VA5320-7GF41-0AA0 |
| 225 | 3VA5322-5GF41-0AA0 | 3VA5322-6GF41-0AA0 | 3VA5322-7GF41-0AA0 |
| 250 | 3VA5325-5GF41-0AA0 | 3VA5325-6GF41-0AA0 | 3VA5325-7GF41-0AA0 |
| 300 | 3VA5330-5GF41-0AA0 | 3VA5330-6GF41-0AA0 | 3VA5330-7GF41-0AA0 |
| 350 | 3VA5335-5GF41-0AA0 | 3VA5335-6GF41-0AA0 | 3VA5335-7GF41-0AA0 |
| 400 | 3VA5340-5GF41-0AA0 | 3VA5340-6GF41-0AA0 | 3VA5340-7GF41-0AA0 |



Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA53 | 3 | 6.4 (162) | 10.3 (262) | 6.7 (170) | 11.5 | 5.2 |
| 3VA53 | 4 | 8.2 (208) | 10.3 (262) | 6.7 (170) | 15.0 | 6.8 |

Shipping Weight

Interrupting Ratings for 3VA53

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | | | | |
|--------------------|--------------|------------------------------|-----------|-----|-----------|----------|-----|-----|----------|
| | | Volts AC (50/60 Hz) | | | | Volts DC | | | |
| | | 240 | 480Y/277V | 480 | 600Y/347V | 600 | 250 | 500 | 600 (3P) |
| M | MJAS | 65 | 35 | 35 | 18 | 18 | 50 | 50 | 50 |
| H | HJAS | 100 | 65 | 65 | 25 | 25 | 85 | 85 | 85 |
| C | CJAS | 200 | 100 | 100 | 35 | 35 | 100 | 100 | 100 |

| Internal accessories | | Slot No.: |
|----------------------------|----------------------|---------------------|
| Optional equipment | | Type |
| Auxiliary switch | AUX_HQ | x x x x x x x x x x |
| | AUX_HQ_el | x x x x x x x x x x |
| | AUX_HP | x x x x x x x x |
| Leading changeover switch | LCS_HQ | x x x x x |
| | LCS_HQ_el | x x x x x |
| | LCS_HP | x x x x x |
| Trip alarm switch | TAS_HQ | x x x x x |
| | TAS_HQ_el | x x x x x |
| | TAS_HP | x x x x x |
| Other | Shunt trip flexible | x x x x x |
| | Shunt trip left | x x x x x |
| | Undervoltage release | x x x x x |
| | Universal release | x x x x x |
| Cylinder lock (type Ronis) | | x x x x x |

| 3VA5 400/600 A 3 & 4-pole | | | | | | | | | | | | | | |
|---------------------------|----|----|----|----|----|----|----|----|----|---|---|---|---|---|
| 25 | 24 | 23 | 22 | 21 | 11 | 12 | 13 | 14 | 15 | | | | | |
| | | | | | | | | | | | | | | |
| x | x | x | x | x | | | | | | x | x | x | x | x |
| x | x | x | x | x | | | | | | x | x | x | x | x |
| | | | | | x | x | | | | x | x | | | |
| | | | | | | | | | | x | | | | |
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Molded Case Circuit Breakers

3VA63 400A Electronic Trip Circuit Breakers

Selection



3VA63 400A 3-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA63 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

3VA63 electronic trip circuit breakers are available with 100% ratings (250A only).

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 250A, 3-pole, 100% rated 3VA63 would be catalog number 3VA6325-5HL31-**2**AA0) Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA63 400A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MJAE) | H-Interrupting Class (HJAE) | C-Interrupting Class (CJAE) | L-Interrupting Class (LJAE) |
|-------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| ETU320 LI with dials | | | | |
| 250 | 3VA6325-5HL31-0AA0 | 3VA6325-6HL31-0AA0 | 3VA6325-7HL31-0AA0 | 3VA6325-8HL31-0AA0 |
| 400 | 3VA6340-5HL31-0AA0 | 3VA6340-6HL31-0AA0 | 3VA6340-7HL31-0AA0 | 3VA6340-8HL31-0AA0 |
| ETU330 LIG with dials | | | | |
| 250 | 3VA6325-5HM31-0AA0 | 3VA6325-6HM31-0AA0 | 3VA6325-7HM31-0AA0 | 3VA6325-8HM31-0AA0 |
| 400 | 3VA6340-5HM31-0AA0 | 3VA6340-6HM31-0AA0 | 3VA6340-7HM31-0AA0 | 3VA6340-8HM31-0AA0 |
| ETU350 LSI with dials | | | | |
| 250 | 3VA6325-5HN31-0AA0 | 3VA6325-6HN31-0AA0 | 3VA6325-7HN31-0AA0 | 3VA6325-8HN31-0AA0 |
| 400 | 3VA6340-5HN31-0AA0 | 3VA6340-6HN31-0AA0 | 3VA6340-7HN31-0AA0 | 3VA6340-8HN31-0AA0 |
| ETU550 LSI with LCD | | | | |
| 250 | 3VA6325-5JP31-0AA0 | 3VA6325-6JP31-0AA0 | 3VA6325-7JP31-0AA0 | 3VA6325-8JP31-0AA0 |
| 400 | 3VA6340-5JP31-0AA0 | 3VA6340-6JP31-0AA0 | 3VA6340-7JP31-0AA0 | 3VA6340-8JP31-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 250 | 3VA6325-5JT31-0AA0 | 3VA6325-6JT31-0AA0 | 3VA6325-7JT31-0AA0 | 3VA6325-8JT31-0AA0 |
| 400 | 3VA6340-5JT31-0AA0 | 3VA6340-6JT31-0AA0 | 3VA6340-7JT31-0AA0 | 3VA6340-8JT31-0AA0 |
| ETU560 LSI(G) with LCD | | | | |
| 250 | 3VA6325-5JQ31-0AA0 | 3VA6325-6JQ31-0AA0 | 3VA6325-7JQ31-0AA0 | 3VA6325-8JQ31-0AA0 |
| 400 | 3VA6340-5JQ31-0AA0 | 3VA6340-6JQ31-0AA0 | 3VA6340-7JQ31-0AA0 | 3VA6340-8JQ31-0AA0 |
| ETU820 LI with LCD and Metering | | | | |
| 250 | 3VA6325-5KL31-0AA0 | 3VA6325-6KL31-0AA0 | 3VA6325-7KL31-0AA0 | 3VA6325-8KL31-0AA0 |
| 400 | 3VA6340-5KL31-0AA0 | 3VA6340-6KL31-0AA0 | 3VA6340-7KL31-0AA0 | 3VA6340-8KL31-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 250 | 3VA6325-5KM31-0AA0 | 3VA6325-6KM31-0AA0 | 3VA6325-7KM31-0AA0 | 3VA6325-8KM31-0AA0 |
| 400 | 3VA6340-5KM31-0AA0 | 3VA6340-6KM31-0AA0 | 3VA6340-7KM31-0AA0 | 3VA6340-8KM31-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 250 | 3VA6325-5KP31-0AA0 | 3VA6325-6KP31-0AA0 | 3VA6325-7KP31-0AA0 | 3VA6325-8KP31-0AA0 |
| 400 | 3VA6340-5KP31-0AA0 | 3VA6340-6KP31-0AA0 | 3VA6340-7KP31-0AA0 | 3VA6340-8KP31-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 250 | 3VA6325-5KT31-0AA0 | 3VA6325-6KT31-0AA0 | 3VA6325-7KT31-0AA0 | 3VA6325-8KT31-0AA0 |
| 400 | 3VA6340-5KT31-0AA0 | 3VA6340-6KT31-0AA0 | 3VA6340-7KT31-0AA0 | 3VA6340-8KT31-0AA0 |
| ETU860 LSI(G) with LCD and Metering | | | | |
| 250 | 3VA6325-5KQ31-0AA0 | 3VA6325-6KQ31-0AA0 | 3VA6325-7KQ31-0AA0 | 3VA6325-8KQ31-0AA0 |
| 400 | 3VA6340-5KQ31-0AA0 | 3VA6340-6KQ31-0AA0 | 3VA6340-7KQ31-0AA0 | 3VA6340-8KQ31-0AA0 |

Molded Case Circuit Breakers

3VA63 400A Electronic Trip Circuit Breakers

Selection



3VA63 400A 4-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA63 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

3VA63 electronic trip circuit breakers are available with 100% ratings (250A only).

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 250A, 3-pole, 100% rated 3VA63 would be catalog number 3VA6325-5HL31-**2**AA0) Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA63 400A Frame 4-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MJAE) | H-Interrupting Class (HJAE) | C-Interrupting Class (CJAE) | L-Interrupting Class (LJAE) |
|-------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| ETU320 LI with dials | | | | |
| 250 | 3VA6325-5HL41-0AA0 | 3VA6325-6HL41-0AA0 | 3VA6325-7HL41-0AA0 | 3VA6325-8HL41-0AA0 |
| 400 | 3VA6340-5HL41-0AA0 | 3VA6340-6HL41-0AA0 | 3VA6340-7HL41-0AA0 | 3VA6340-8HL41-0AA0 |
| ETU330 LIG with dials | | | | |
| 250 | 3VA6325-5HM41-0AA0 | 3VA6325-6HM41-0AA0 | 3VA6325-7HM41-0AA0 | 3VA6325-8HM41-0AA0 |
| 400 | 3VA6340-5HM41-0AA0 | 3VA6340-6HM41-0AA0 | 3VA6340-7HM41-0AA0 | 3VA6340-8HM41-0AA0 |
| ETU350 LSI with dials | | | | |
| 250 | 3VA6325-5HN41-0AA0 | 3VA6325-6HN41-0AA0 | 3VA6325-7HN41-0AA0 | 3VA6325-8HN41-0AA0 |
| 400 | 3VA6340-5HN41-0AA0 | 3VA6340-6HN41-0AA0 | 3VA6340-7HN41-0AA0 | 3VA6340-8HN41-0AA0 |
| ETU550 LSI with LCD | | | | |
| 250 | 3VA6325-5JP41-0AA0 | 3VA6325-6JP41-0AA0 | 3VA6325-7JP41-0AA0 | 3VA6325-8JP41-0AA0 |
| 400 | 3VA6340-5JP41-0AA0 | 3VA6340-6JP41-0AA0 | 3VA6340-7JP41-0AA0 | 3VA6340-8JP41-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 250 | 3VA6325-5JT41-0AA0 | 3VA6325-6JT41-0AA0 | 3VA6325-7JT41-0AA0 | 3VA6325-8JT41-0AA0 |
| 400 | 3VA6340-5JT41-0AA0 | 3VA6340-6JT41-0AA0 | 3VA6340-7JT41-0AA0 | 3VA6340-8JT41-0AA0 |
| ETU560 LSI(G Alarm) with LCD | | | | |
| 250 | 3VA6325-5JQ41-0AA0 | 3VA6325-6JQ41-0AA0 | 3VA6325-7JQ41-0AA0 | 3VA6325-8JQ41-0AA0 |
| 400 | 3VA6340-5JQ41-0AA0 | 3VA6340-6JQ41-0AA0 | 3VA6340-7JQ41-0AA0 | 3VA6340-8JQ41-0AA0 |
| ETU820 LI with LCD and Metering | | | | |
| 250 | 3VA6325-5KL41-0AA0 | 3VA6325-6KL41-0AA0 | 3VA6325-7KL41-0AA0 | 3VA6325-8KL41-0AA0 |
| 400 | 3VA6340-5KL41-0AA0 | 3VA6340-6KL41-0AA0 | 3VA6340-7KL41-0AA0 | 3VA6340-8KL41-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 250 | 3VA6325-5KM41-0AA0 | 3VA6325-6KM41-0AA0 | 3VA6325-7KM41-0AA0 | 3VA6325-8KM41-0AA0 |
| 400 | 3VA6340-5KM41-0AA0 | 3VA6340-6KM41-0AA0 | 3VA6340-7KM41-0AA0 | 3VA6340-8KM41-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 250 | 3VA6325-5KP41-0AA0 | 3VA6325-6KP41-0AA0 | 3VA6325-7KP41-0AA0 | 3VA6325-8KP41-0AA0 |
| 400 | 3VA6340-5KP41-0AA0 | 3VA6340-6KP41-0AA0 | 3VA6340-7KP41-0AA0 | 3VA6340-8KP41-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 250 | 3VA6325-5KT41-0AA0 | 3VA6325-6KT41-0AA0 | 3VA6325-7KT41-0AA0 | 3VA6325-8KT41-0AA0 |
| 400 | 3VA6340-5KT41-0AA0 | 3VA6340-6KT41-0AA0 | 3VA6340-7KT41-0AA0 | 3VA6340-8KT41-0AA0 |
| ETU860 LSI(G Alarm) with LCD and Metering | | | | |
| 250 | 3VA6325-5KQ41-0AA0 | 3VA6325-6KQ41-0AA0 | 3VA6325-7KQ41-0AA0 | 3VA6325-8KQ41-0AA0 |
| 400 | 3VA6340-5KQ41-0AA0 | 3VA6340-6KQ41-0AA0 | 3VA6340-7KQ41-0AA0 | 3VA6340-8KQ41-0AA0 |

Molded Case Circuit Breakers

3VA63 400A Electronic Trip Circuit Breakers

Technical information

Connectors for 75C wire for 3VA63

| Type | Minimum cable size | Maximum cable size | Part Number (kit of 3 lugs) | Part Number (kit of 4 lugs) |
|-----------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------------------|-----------------------------|
| Steel wrap around (Cu cable only) single cable lugs | 1/0 | 500 kcmil | 3VA9473-0JA13 | 3VA9474-0JA13 |
| Aluminum body lug (Cu/Al cable) single cable lugs | AWG 1 | 600 kcmil | 3VA9373-0JB13 | 3VA9374-0JB13 |
| Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs | AWG 1 | 600 kcmil | 3VA9373-0JG13 | 3VA9374-0JG13 |
| Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover | 2/0 | 600 kcmil | 3VA9473-0JJ23 | 3VA9474-0JJ23 |
| Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover | 2/0 | 600 kcmil | 3VA9473-0JC23 | 3VA9474-0JC23 |
| Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover | AWG 14 | AWG 2 | 3VA9373-0JF60 | 3VA9374-0JF60 |
| Copper body lug (Cu cable only) single cable lugs (meets requirements for 100% rated breakers) | AWG 1 | 600 kcmil | 3VA9373-0JD13 | 3VA9374-0JD13 |
| Copper body lug (Cu cable only) with control wire tap single cable lugs | AWG 1 | 600 kcmil | 3VA9373-0JK13 | 3VA9374-0JK13 |
| Copper body lug, 2 cables (Cu cable only) with 1 extended terminal cover (meets requirements for 100% rated breakers) | 2/0 | 600 kcmil | 3VA9473-0JE23 | 3VA9474-0JE23 |
| Copper body lug, 2 cables (Cu cable only) with control wire tap and 1 extended terminal cover | 2/0 | 600 kcmil | 3VA9473-0JL23 | 3VA9474-0JL23 |

Interrupting Ratings for 3VA63

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | |
|--------------------|--------------|------------------------------|-----------|-----|-----------|-----|
| | | Volts AC (50/60 Hz) | | | | |
| | | 240 | 480Y/277V | 480 | 600Y/347V | 600 |
| M | MJAE | 100 | 35 | 35 | 18 | 18 |
| H | HJAE | 100 | 65 | 65 | 22 | 22 |
| C | CJAE | 200 | 100 | 100 | 35 | 35 |
| L | LJAE | 200 | 150 | 150 | 50 | 50 |

Dimensions

Shipping Weight

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA63 | 3 | 5.4 (138) | 9.7 (248) | 4.3 (110) | 9.9 | 4.5 |
| 3VA63 | 4 | 7.2 (184) | 9.7 (248) | 4.3 (110) | 15.2 | 6.9 |

5

MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

3VA63 400A Electronic Trip Circuit Breakers

Technical information

Trip Settings for 3VA63

ETU320-LI, ETU330-LIG, ETU350-LSI

| Continuous Amperage | LI, LIG, LSI | | | LSI | | LIG | LI, LIG, LSI 4P only |
|---------------------|----------------------|--------------------------|---------------------------|---------------------------------------|---------------------------------------------|----------|----------------------|
| | I _n (Amp) | I _n (Amp) (L) | t _{sd} (sec) (L) | I _n (Amp) (I) [Ⓞ] | I _{sd} = xI _r (Amp) (S) | | |
| 250 | 100 - 250 | 0.5 - 17 | 375-3000 | 1.5 - 10 | 0.08 - 0.4 | 50 - 250 | 0.5 - 1 / OFF |
| 400 | 150 - 400 | 0.5 - 17 | 600-4000 | 1.5 - 10 | | 80 - 400 | 0.5 - 1 / OFF |

Ⓞ I_n for ETU350 is fixed at 12X I_n

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

| Continuous Amperage | LI, LIG, LSI, LSIG, LSI(G) | | | LSI, LSIG, LSI(G) | | LIG, LSIG, LSI(G) | | LSI 3P with External CT | LI, LIG, LSI, LSIG, LSI(G) 4P only |
|---------------------|----------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|-------------------------|---------------------------------------|
| | I _n (Amp) | I _n (Amp) (L) | t _{sd} (sec) (L) | I _n (Amp) (I) | I _{sd} (Amp) (S) | t _{sd} (sec) (S) | I _n (Amp) (G) | t _n (G) | I _n =xI _r (Amp) |
| 250 | 100 - 250 | 0.5 - 25 | 375-3000 | 150 - 2500 | 0.05 - 0.5 | 50 - 250 | 0.05 - 0.8 | 50 - 400 / OFF | 50 - 400 / OFF |
| 400 | 150 - 400 | 0.5 - 17 | 600-4000 | 240 - 4000 | | 80 - 400 | | 80 - 640 / OFF | 80 - 400 / OFF |

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at https://www.siemens.com/download?BTLV_50412

Molded Case Circuit Breakers

3VA54 600A Thermal-magnetic Trip Circuit Breakers

Selection

3VA54 600A Frame, 2-(3)Pole Frame,
Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MLAS) | H-Interrupting Class (HLAS) | C-Interrupting Class (CLAS) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM230 FTAM | | | |
| 450 | — | 3VA5445-6EC61-0AA0 | 3VA5445-7EC61-0AA0 |
| 500 | 3VA5450-5EC61-0AA0 | 3VA5450-6EC61-0AA0 | 3VA5450-7EC61-0AA0 |
| 600 | 3VA5460-5EC61-0AA0 | 3VA5460-6EC61-0AA0 | 3VA5460-7EC61-0AA0 |

3VA54 600A Frame, 3-Pole Frame,
Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MLAS) | H-Interrupting Class (HLAS) | C-Interrupting Class (CLAS) |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM230 FTAM [Ⓞ] | | | |
| 450 | 3VA5445-5EC31-0AA0 | 3VA5445-6EC31-0AA0 | 3VA5445-7EC31-0AA0 |
| 500 | 3VA5450-5EC31-0AA0 | 3VA5450-6EC31-0AA0 | 3VA5450-7EC31-0AA0 |
| 600 | 3VA5460-5EC31-0AA0 | 3VA5460-6EC31-0AA0 | 3VA5460-7EC31-0AA0 |
| TM240 ATAM | | | |
| 450 | 3VA5445-5EF31-0AA0 | 3VA5445-6EF31-0AA0 | 3VA5445-7EF31-0AA0 |
| 500 | 3VA5450-5EF31-0AA0 | 3VA5450-6EF31-0AA0 | 3VA5450-7EF31-0AA0 |
| 600 | 3VA5460-5EF31-0AA0 | 3VA5460-6EF31-0AA0 | 3VA5460-7EF31-0AA0 |

3VA54 600A Frame, 4-Pole Frame,
Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MLAS) | H-Interrupting Class (HLAS) | C-Interrupting Class (CLAS) |
|--------------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM230 FTAM Unprotected Neutral | | | |
| 450 | 3VA5445-5EC41-0AA0 | 3VA5445-6EC41-0AA0 | 3VA5445-7EC41-0AA0 |
| 500 | 3VA5450-5EC41-0AA0 | 3VA5450-6EC41-0AA0 | 3VA5450-7EC41-0AA0 |
| 600 | 3VA5460-5EC41-0AA0 | 3VA5460-6EC41-0AA0 | 3VA5460-7EC41-0AA0 |
| TM240 ATAM Unprotected Neutral | | | |
| 450 | 3VA5445-5EF41-0AA0 | 3VA5445-6EF41-0AA0 | 3VA5445-7EF41-0AA0 |
| 500 | 3VA5450-5EF41-0AA0 | 3VA5450-6EF41-0AA0 | 3VA5450-7EF41-0AA0 |
| 600 | 3VA5460-5EF41-0AA0 | 3VA5460-6EF41-0AA0 | 3VA5460-7EF41-0AA0 |
| TM230 FTFM 100% Neutral | | | |
| 450 | 3VA5445-5GC41-0AA0 | 3VA5445-6GC41-0AA0 | 3VA5445-7GC41-0AA0 |
| 500 | 3VA5450-5GC41-0AA0 | 3VA5450-6GC41-0AA0 | 3VA5450-7GC41-0AA0 |
| 600 | 3VA5460-5GC41-0AA0 | 3VA5460-6GC41-0AA0 | 3VA5460-7GC41-0AA0 |
| TM240 ATAM 100% Neutral | | | |
| 450 | 3VA5445-5GF41-0AA0 | 3VA5445-6GF41-0AA0 | 3VA5445-7GF41-0AA0 |
| 500 | 3VA5450-5GF41-0AA0 | 3VA5450-6GF41-0AA0 | 3VA5450-7GF41-0AA0 |
| 600 | 3VA5460-5GF41-0AA0 | 3VA5460-6GF41-0AA0 | 3VA5460-7GF41-0AA0 |



3VA54 600A 3-Pole



3VA54 600A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA54 thermal-magnetic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA@480VAC, 600A, 3-pole, rated 3VA54 would be catalog number 3VA5460-5EC31-**1**AA0)

Ⓞ Available with NAVAL/50C ratings.

Molded Case Circuit Breakers

3VA54 600A Thermal-magnetic Trip Circuit Breakers

Selection

Dimensions

Shipping Weight

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA54 | 3 | 6.4 (162) | 10.3 (262) | 6.7 (170) | 11.5 | 5.2 |
| 3VA54 | 4 | 8.2 (208) | 10.3 (262) | 6.7 (170) | 15.0 | 6.8 |

Interrupting Ratings for 3VA54

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | | | | | | |
|--------------------|--------------|------------------------------|---------------|-----|---------------|-----|-------------|-------------|-------------|-------------|--------------|
| | | Volts AC (50/60 Hz) | | | | | | Volts DC | | | |
| | | 240 | 480Y/ 277V | 480 | 600Y/ 347V | 600 | 250 (2P) | 600 (3P) | 750 (3P) | 750 (4P) | 1000 (4P) |
| M | MLAS | 65 | 35 | 35 | 20 | 20 | 50 | 50 | 6 | 50 | 6 |
| H | HLAS | 100 | 65 | 65 | 25 | 25 | 85 | 85 | 6 | 85 | 6 |
| C | CLAS | 200 | 100 | 100 | 35 | 35 | 100 | 100 | 10 | 100 | 10 |

| Internal accessories Optional equipment | | 3VA5 400/600 A 3 & 4-pole | | | | | | | | | | |
|--------------------------------------------|-------------|---------------------------------|----|----|----|----|-------|----|----|----|----|----|
| Slot No.: | | 25 | 24 | 23 | 22 | 21 | 600 A | 11 | 12 | 13 | 14 | 15 |
| Auxiliary switch | Type | | | | | | | | | | | |
| Auxiliary switch | AUX_HQ | x | x | x | x | x | | x | x | x | x | x |
| | AUX_HQ_el | x | x | x | x | x | | x | x | x | x | x |
| | AUX_HP | | | x | x | | | | x | | x | |
| Leading changeover switch | LCS_HQ | | | | | | | x | | | | |
| | LCS_HQ_el | | | | | | | x | | | | |
| | LCS_HP | | | | | | | | x | | | |
| Auxiliary switch | Type | | | | | | | | | | | |
| Trip alarm switch | TAS_HQ | | | | x | x | | x | x | | | |
| | TAS_HQ_el | | | | x | x | | x | x | | | |
| | TAS_HP | | | | | x | | | x | | | |
| Auxiliary switch | Type | | | | | | | | | | | |
| Shunt trip flexible | STF | | | | x | | | | x | | | |
| Shunt trip left | STL | | | | x | | | | | | | |
| Undervoltage release | UVR | | | | x | | | | | | | |
| Universal release | UVI | | | | x | | | | | | | |
| Other | | | | | | | | | | | | |
| Cylinder lock (type Ronis) | | | | | | | | | x | | | |

Molded Case Circuit Breakers

3VA64 600A Thermal-magnetic Trip Circuit Breakers

Selection



3VA64 600A 3-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA64 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

3VA64 electronic trip circuit breakers are available with 100% ratings (400A only).

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 400A, 3-pole, 100% rated 3VA64 would be catalog number 3VA6440-5HL31-**2**AA0)

Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA64 600A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MLAE) | H-Interrupting Class (HLAE) | C-Interrupting Class (CLAE) | L-Interrupting Class (LLAE) |
|-------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| ETU320 LI with dials | | | | |
| 400 | 3VA6440-5HL31-0AA0 | 3VA6440-6HL31-0AA0 | 3VA6440-7HL31-0AA0 | 3VA6440-8HL31-0AA0 |
| 600 | 3VA6460-5HL31-0AA0 | 3VA6460-6HL31-0AA0 | 3VA6460-7HL31-0AA0 | 3VA6460-8HL31-0AA0 |
| ETU330 LIG with dials | | | | |
| 400 | 3VA6440-5HM31-0AA0 | 3VA6440-6HM31-0AA0 | 3VA6440-7HM31-0AA0 | 3VA6440-8HM31-0AA0 |
| 600 | 3VA6460-5HM31-0AA0 | 3VA6460-6HM31-0AA0 | 3VA6460-7HM31-0AA0 | 3VA6460-8HM31-0AA0 |
| ETU350 LSI with dials | | | | |
| 400 | 3VA6440-5HN31-0AA0 | 3VA6440-6HN31-0AA0 | 3VA6440-7HN31-0AA0 | 3VA6440-8HN31-0AA0 |
| 600 | 3VA6460-5HN31-0AA0 | 3VA6460-6HN31-0AA0 | 3VA6460-7HN31-0AA0 | 3VA6460-8HN31-0AA0 |
| ETU550 LSI with LCD | | | | |
| 400 | 3VA6440-5JP31-0AA0 | 3VA6440-6JP31-0AA0 | 3VA6440-7JP31-0AA0 | 3VA6440-8JP31-0AA0 |
| 600 | 3VA6460-5JP31-0AA0 | 3VA6460-6JP31-0AA0 | 3VA6460-7JP31-0AA0 | 3VA6460-8JP31-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 400 | 3VA6440-5JT31-0AA0 | 3VA6440-6JT31-0AA0 | 3VA6440-7JT31-0AA0 | 3VA6440-8JT31-0AA0 |
| 600 | 3VA6460-5JT31-0AA0 | 3VA6460-6JT31-0AA0 | 3VA6460-7JT31-0AA0 | 3VA6460-8JT31-0AA0 |
| ETU560 LSI(G) with LCD | | | | |
| 400 | 3VA6440-5JQ31-0AA0 | 3VA6440-6JQ31-0AA0 | 3VA6440-7JQ31-0AA0 | 3VA6440-8JQ31-0AA0 |
| 600 | 3VA6460-5JQ31-0AA0 | 3VA6460-6JQ31-0AA0 | 3VA6460-7JQ31-0AA0 | 3VA6460-8JQ31-0AA0 |
| ETU820 LI with LCD and Metering | | | | |
| 400 | 3VA6440-5KL31-0AA0 | 3VA6440-6KL31-0AA0 | 3VA6440-7KL31-0AA0 | 3VA6440-8KL31-0AA0 |
| 600 | 3VA6460-5KL31-0AA0 | 3VA6460-6KL31-0AA0 | 3VA6460-7KL31-0AA0 | 3VA6460-8KL31-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 400 | 3VA6440-5KM31-0AA0 | 3VA6440-6KM31-0AA0 | 3VA6440-7KM31-0AA0 | 3VA6440-8KM31-0AA0 |
| 600 | 3VA6460-5KM31-0AA0 | 3VA6460-6KM31-0AA0 | 3VA6460-7KM31-0AA0 | 3VA6460-8KM31-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 400 | 3VA6440-5KP31-0AA0 | 3VA6440-6KP31-0AA0 | 3VA6440-7KP31-0AA0 | 3VA6440-8KP31-0AA0 |
| 600 | 3VA6460-5KP31-0AA0 | 3VA6460-6KP31-0AA0 | 3VA6460-7KP31-0AA0 | 3VA6460-8KP31-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 400 | 3VA6440-5KT31-0AA0 | 3VA6440-6KT31-0AA0 | 3VA6440-7KT31-0AA0 | 3VA6440-8KT31-0AA0 |
| 600 | 3VA6460-5KT31-0AA0 | 3VA6460-6KT31-0AA0 | 3VA6460-7KT31-0AA0 | 3VA6460-8KT31-0AA0 |
| ETU860 LSI(G) with LCD and Metering | | | | |
| 400 | 3VA6440-5KQ31-0AA0 | 3VA6440-6KQ31-0AA0 | 3VA6440-7KQ31-0AA0 | 3VA6440-8KQ31-0AA0 |
| 600 | 3VA6460-5KQ31-0AA0 | 3VA6460-6KQ31-0AA0 | 3VA6460-7KQ31-0AA0 | 3VA6460-8KQ31-0AA0 |

Molded Case Circuit Breakers

3VA64 600A Electronic Trip Circuit Breakers

Selection



3VA64 600A 4-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA64 electronic trip circuit breakers are CSA approved and UL listed for reverse feed applications.

3VA64 electronic trip circuit breakers are available with 100% ratings (400A only).

For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 400A, 3-pole, 100% rated 3VA64 would be catalog number 3VA6440-5HL31-2AA0)

Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to CSA C22.2 No 5, and UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA64 600A Frame 4-Pole Electronic Trip Unit

| Continuous Ampere | M-Interrupting Class (MLAE) | H-Interrupting Class (HLAE) | C-Interrupting Class (CLAE) | L-Interrupting Class (LLAE) |
|-------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| ETU320 LI with dials | | | | |
| 400 | 3VA6440-5HL41-0AA0 | 3VA6440-6HL41-0AA0 | 3VA6440-7HL41-0AA0 | 3VA6440-8HL41-0AA0 |
| 600 | 3VA6460-5HL41-0AA0 | 3VA6460-6HL41-0AA0 | 3VA6460-7HL41-0AA0 | 3VA6460-8HL41-0AA0 |
| ETU330 LIG with dials | | | | |
| 400 | 3VA6440-5HM41-0AA0 | 3VA6440-6HM41-0AA0 | 3VA6440-7HM41-0AA0 | 3VA6440-8HM41-0AA0 |
| 600 | 3VA6460-5HM41-0AA0 | 3VA6460-6HM41-0AA0 | 3VA6460-7HM41-0AA0 | 3VA6460-8HM41-0AA0 |
| ETU350 LSI with dials | | | | |
| 400 | 3VA6440-5HN41-0AA0 | 3VA6440-6HN41-0AA0 | 3VA6440-7HN41-0AA0 | 3VA6440-8HN41-0AA0 |
| 600 | 3VA6460-5HN41-0AA0 | 3VA6460-6HN41-0AA0 | 3VA6460-7HN41-0AA0 | 3VA6460-8HN41-0AA0 |
| ETU550 LSI with LCD | | | | |
| 400 | 3VA6440-5JP41-0AA0 | 3VA6440-6JP41-0AA0 | 3VA6440-7JP41-0AA0 | 3VA6440-8JP41-0AA0 |
| 600 | 3VA6460-5JP41-0AA0 | 3VA6460-6JP41-0AA0 | 3VA6460-7JP41-0AA0 | 3VA6460-8JP41-0AA0 |
| ETU556 LSI(G Alarm) with LCD | | | | |
| 400 | 3VA6440-5JT41-0AA0 | 3VA6440-6JT41-0AA0 | 3VA6440-7JT41-0AA0 | 3VA6440-8JT41-0AA0 |
| 600 | 3VA6460-5JT41-0AA0 | 3VA6460-6JT41-0AA0 | 3VA6460-7JT41-0AA0 | 3VA6460-8JT41-0AA0 |
| ETU560 LSIG with LCD | | | | |
| 400 | 3VA6440-5JQ41-0AA0 | 3VA6440-6JQ41-0AA0 | 3VA6440-7JQ41-0AA0 | 3VA6440-8JQ41-0AA0 |
| 600 | 3VA6460-5JQ41-0AA0 | 3VA6460-6JQ41-0AA0 | 3VA6460-7JQ41-0AA0 | 3VA6460-8JQ41-0AA0 |
| ETU820 LI with LCD and Metering | | | | |
| 400 | 3VA6440-5KL41-0AA0 | 3VA6440-6KL41-0AA0 | 3VA6440-7KL41-0AA0 | 3VA6440-8KL41-0AA0 |
| 600 | 3VA6460-5KL41-0AA0 | 3VA6460-6KL41-0AA0 | 3VA6460-7KL41-0AA0 | 3VA6460-8KL41-0AA0 |
| ETU830 LIG with LCD and Metering | | | | |
| 400 | 3VA6440-5KM41-0AA0 | 3VA6440-6KM41-0AA0 | 3VA6440-7KM41-0AA0 | 3VA6440-8KM41-0AA0 |
| 600 | 3VA6460-5KM41-0AA0 | 3VA6460-6KM41-0AA0 | 3VA6460-7KM41-0AA0 | 3VA6460-8KM41-0AA0 |
| ETU850 LSI with LCD and Metering | | | | |
| 400 | 3VA6440-5KP41-0AA0 | 3VA6440-6KP41-0AA0 | 3VA6440-7KP41-0AA0 | 3VA6440-8KP41-0AA0 |
| 600 | 3VA6460-5KP41-0AA0 | 3VA6460-6KP41-0AA0 | 3VA6460-7KP41-0AA0 | 3VA6460-8KP41-0AA0 |
| ETU856 LSI(G Alarm) with LCD and Metering | | | | |
| 400 | 3VA6440-5KT41-0AA0 | 3VA6440-6KT41-0AA0 | 3VA6440-7KT41-0AA0 | 3VA6440-8KT41-0AA0 |
| 600 | 3VA6460-5KT41-0AA0 | 3VA6460-6KT41-0AA0 | 3VA6460-7KT41-0AA0 | 3VA6460-8KT41-0AA0 |
| ETU860 LSIG with LCD and Metering | | | | |
| 400 | 3VA6440-5KQ41-0AA0 | 3VA6440-6KQ41-0AA0 | 3VA6440-7KQ41-0AA0 | 3VA6440-8KQ41-0AA0 |
| 600 | 3VA6460-5KQ41-0AA0 | 3VA6460-6KQ41-0AA0 | 3VA6460-7KQ41-0AA0 | 3VA6460-8KQ41-0AA0 |

Molded Case Circuit Breakers

3VA64 600A Electronic Trip Circuit Breakers

Technical information

Connectors for 75C wire for 3VA64

| Type | Minimum cable size | Maximum cable size | Part Number (kit of 3 lugs) | Part Number (kit of 4 lugs) |
|-----------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------------------|-----------------------------|
| Steel Wrap around (Cu cable only) single cable lugs | 1/0 | 500 kcmil | 3VA9473-0JA13 | 3VA9474-0JA13 |
| Aluminum Body Lug (Cu/Al cable) single cable lugs | AWG 1 | 600 kcmil | 3VA9373-0JB13 | 3VA9374-0JB13 |
| Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs | AWG 1 | 600 kcmil | 3VA9373-0JG13 | 3VA9374-0JG13 |
| Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover | 2/0 | 600 kcmil | 3VA9473-0JJ23 | 3VA9474-0JJ23 |
| Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover | 2/0 | 600 kcmil | 3VA9473-0JC23 | 3VA9474-0JC23 |
| Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover | AWG 14 | AWG 2 | 3VA9373-0JF60 | 3VA9374-0JF60 |
| Copper body lug (Cu cable only) single cable lugs (meets requirements for 100% rated breakers) | AWG 1 | 600 kcmil | 3VA9373-0JD13 | 3VA9374-0JD13 |
| Copper body lug (Cu cable only) with control wire tap single cable lugs | AWG 1 | 600 kcmil | 3VA9373-0JK13 | 3VA9374-0JK13 |
| Copper body lug, 2 cables (Cu cable only) with 1 extended terminal cover (meets requirements for 100% rated breakers) | 2/0 | 600 kcmil | 3VA9473-0JE23 | 3VA9474-0JE23 |
| Copper body lug, 2 cables (Cu cable only) with control wire tap and 1 extended terminal cover | 2/0 | 600 kcmil | 3VA9473-0JL23 | 3VA9474-0JL23 |

Interrupting Ratings for 3VA64

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (kA) | | | | |
|--------------------|--------------|------------------------------|-----------|-----|-----------|-----|
| | | Volts AC (50/60 Hz) | | | | |
| | | 240 | 480Y/277V | 480 | 600Y/347V | 600 |
| M | MLAE | 100 | 35 | 35 | 18 | 18 |
| H | HLAE | 100 | 65 | 65 | 22 | 22 |
| C | CLAE | 200 | 100 | 100 | 35 | 35 |
| L | LLAE | 200 | 150 | 150 | 50 | 50 |

Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|-------|------------|------------|------------|------|-----|
| 3VA64 | 3 | 5.4 (138) | 9.7 (248) | 4.3 (110) | 11.7 | 5.3 |
| 3VA64 | 4 | 7.2 (184) | 9.7 (248) | 4.3 (110) | 15.2 | 6.9 |

Shipping Weight

Molded Case Circuit Breakers

3VA64 600A Electronic Trip Circuit Breakers

Technical information

Trip Settings for 3VA64

ETU320-LI, ETU330-LIG, ETU350-LSI

| Continuous Amperage | LI, LIG, LSI | | | LSI | | LIG | LI, LIG, LSI 4P only |
|---------------------|----------------------|--------------------------|---------------------------|---------------------------|---------------------------------------------|-----------|----------------------|
| | I _n (Amp) | I _n (Amp) (L) | t _{sd} (sec) (L) | I _n (Amp) (I)Ⓣ | I _{sc} = xI _r (Amp) (S) | | |
| 400 | 150 - 400 | 0.5 - 17 | 600-4800 | 1.5 - 10 | 0.08 - 0.4 | 80 - 400 | 0.5 - 1 / OFF |
| 600 | 250 - 600 | 0.5 - 15 | 900-5400 | 1.5 - 9 | | 120 - 600 | 0.5 - 1 / OFF |

Ⓣ I_n for ETU350 is fixed at 12X I_n.

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

| Continuous Amperage | LI, LIG, LSI, LSIG, LSI(G) | | | LSI, LSIG, LSI(G) | | LIG, LSIG, LSI(G) | | LSI 3P with External CT | LI, LIG, LSI, LSIG, LSI(G) 4P only |
|---------------------|----------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|-------------------------|----------------------------------------|
| | I _n (Amp) | I _n (Amp) (L) | t _{sd} (sec) (L) | I _n (Amp) (I) | I _{sc} (Amp) (S) | t _{sd} (sec) (S) | I _n (Amp) (G) | t _{sd} (G) | I _{sc} =xI _r (Amp) |
| 400 | 150 - 400 | 0.5 - 25 | 600-4800 | 240 - 4000 | 0.05 - 0.5 | 0.05 - 0.8 | 80 - 400 | 80 - 640 / OFF | 80 - 600 / OFF |
| 600 | 250 - 600 | 0.5 - 15 | 900-5400 | 360 - 5400 | | | 120 - 600 | | |

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at https://www.siemens.com/download?BTLV_50412

| Internal accessories Optional equipment | 3VA6 400/600 A 3-pole | | | | | | | | | | | 3VA6 400/600 A 4-pole | | | | | | | | | | |
|--------------------------------------------|-----------------------------|---|---|---|---|---|---|---|---|---|---|-----------------------------|---|---|---|---|---|---|---|---|---|---|
| | Slot No.: | | | | | | | | | | | Slot No.: | | | | | | | | | | |
| Auxiliary switch | Type | | | | | | | | | | | Type | | | | | | | | | | |
| AUX_HQ | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| AUX_HQ_el | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| AUX_HP | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| LCS_HQ | | | | | | | | | | | | | | | | | | | | | | |
| LCS_HQ_el | | | | | | | | | | | | | | | | | | | | | | |
| LCS_HP | | | | | | | | | | | | | | | | | | | | | | |
| Auxiliary switch | Type | | | | | | | | | | | Type | | | | | | | | | | |
| TAS_HQ | | | x | x | | | | x | x | | | | | | | | | x | x | | | |
| TAS_HQ_el | | | x | x | | | | x | x | | | | | | | | | x | x | | | |
| TAS_HP | | | x | | | | | x | | | | | | | | | | x | | | | |
| EAS_HQ | | | | | | | | | | | x | | | | | | | | | | | x |
| EAS_HQ_el | | | | | | | | | | | x | | | | | | | | | | | x |
| Auxiliary switch | Type | | | | | | | | | | | Type | | | | | | | | | | |
| Shunt trip flexible | | | x | | | | | | x | | | | | | | | | x | | | | x |
| Shunt trip left | | | x | | | | | | | | | | | | | | | x | | | | |
| Undervoltage release | | | x | | | | | | | | | | | | | | | x | | | | |
| Universal release | | | x | | | | | | | | | | | | | | | x | | | | |
| ETU/communication | Type | | | | | | | | | | | Type | | | | | | | | | | |
| Communication module | | | | | | | | | | | | | | | | | | | | | | |
| Breaker data server | | | | | | | | | | | x | | | | | | | | | | | x |
| 24 V module | | | | | | | | | | | x | | | | | | | | | | | x |
| Other | | | | | | | | | | | | | | | | | | | | | | |
| Cylinder lock (type Ronis) | | | | | | | | | | | x | | | | | | | | | | | x |

See page 5-59 for internal accessory part numbers.

Molded Case Circuit Breakers

3VA Molded Case Switch and Motor Circuit Protector

Selection

Breaking capacity (the SCCR rating) is the maximum permissible short circuit current at the installation location of the MCS in combination with an appropriate overload protective device.

Molded Case Switch Magnetic

| Frame (Breaker Type) | Max. Ampere Rating | 2-Pole | 3-Pole | Short-Circuit Current Rating | | | Instantaneous short circuit protection |
|----------------------|--------------------|--------------------|--------------------|------------------------------|------|------------------|----------------------------------------|
| | | Catalog Number | Catalog Number | 240V | 480V | 600V | |
| 3VA51 (HEAS) | 100 | 3VA5110-1BB21-0AA0 | 3VA5110-1BB31-0AA0 | 100k | 65k | 14k [Ⓞ] | 1600 A |
| 3VA52 (HFAS) | 150 | 3VA5215-0BB61-0AA0 | 3VA5215-0BB31-0AA0 | 100k | 65k | 25k | 2400 A |
| | 250 | 3VA5225-0BB61-0AA0 | 3VA5225-0BB31-0AA0 | 100k | 65k | 25k | 2500 A |

| | | | | | | | |
|--------------|-----|--------------------|--------------------|------|------|-----|--------|
| 3VA52 (CFAS) | 100 | 3VA5210-1BB61-0AA0 | 3VA5210-1BB31-0AA0 | 200k | 100k | 35k | 2500 A |
| | 150 | 3VA5215-1BB61-0AA0 | 3VA5215-1BB31-0AA0 | 200k | 100k | 35k | 2400 A |
| | 250 | 3VA5225-1BB61-0AA0 | 3VA5225-1BB31-0AA0 | 200k | 100k | 35k | 2500 A |

Molded Case Switch Electronic

| Frame (Breaker Type) | Max. Ampere Rating | 2-Pole | 3-Pole | Short-Circuit Current Rating | | | Instantaneous short circuit protection |
|----------------------|--------------------|----------------|--------------------|------------------------------|------|------|----------------------------------------|
| | | Catalog Number | Catalog Number | 240V | 480V | 600V | |
| 3VA63 (CJAE) | 400 | — | 3VA6340-1BB31-0AA0 | 200k | 100k | 35k | 5600 A |
| 3VA64 (CLAE) | 600 | — | 3VA6460-1BB31-0AA0 | 200k | 100k | 35k | 5400 A |



Magnetic switch



Electronic Trip Unit switch

5

MOLDED CASE
CIRCUIT BREAKERS

[Ⓞ] Rated at 600 Y/347 V AC.

Molded Case Circuit Breakers

3VA Molded Case Switch and Motor Circuit Protector

Selection

Motor circuit protector TM120M AM^③

| Frame (Breaker Type) | Maximum Ampere Rating | 3-Pole Catalog Number | Instantaneous short circuit protection |
|----------------------|-----------------------|-----------------------|----------------------------------------|
| 3VA51 (HEAP) | 1 | 3VA5181-1MU31-0AA0 | 3 ... 7 |
| | | 3VA5181-1MH31-0AA0 | 5 ... 12 |
| | 2 | 3VA5102-1MU31-0AA0 | 6 ... 14 |
| | | 3VA5102-1MH31-0AA0 | 10 ... 24 |
| | 3 | 3VA5103-1MU31-0AA0 | 9 ... 21 |
| | | 3VA5103-1MH31-0AA0 | 15 ... 36 |
| | 5 | 3VA5105-1MU31-0AA0 | 15 ... 35 |
| | | 3VA5105-1MH31-0AA0 | 25 ... 60 |
| | 7 | 3VA5107-1MU31-0AA0 | 21 ... 49 |
| | | 3VA5107-1MH31-0AA0 | 35 ... 84 |
| | 10 | 3VA5191-1MU31-0AA0 | 30 ... 70 |
| | | 3VA5191-1MH31-0AA0 | 50 ... 120 |
| | 15 | 3VA5195-1MU31-0AA0 | 45 ... 105 |
| | | 3VA5195-1MH31-0AA0 | 75 ... 180 |
| | 25 | 3VA5125-1MU31-0AA0 | 75 ... 175 |
| | | 3VA5125-1MH31-0AA0 | 125 ... 300 |
| | 30 | 3VA5130-1MU31-0AA0 | 90 ... 210 |
| | | 3VA5130-1MH31-0AA0 | 150 ... 360 |
| | 40 | 3VA5140-1MU31-0AA0 | 120 ... 280 |
| | | 3VA5140-1MH31-0AA0 | 200 ... 480 |
| 50 | 3VA5150-1MU31-0AA0 | 150 ... 350 | |
| | 3VA5150-1MH31-0AA0 | 250 ... 600 | |
| 70 | 3VA5170-1MU31-0AA0 | 210 ... 490 | |
| | 3VA5170-1MH31-0AA0 | 350 ... 840 | |
| 80 | 3VA5180-1MU31-0AA0 | 240 ... 560 | |
| | 3VA5180-1MH31-0AA0 | 400 ... 960 | |
| 90 | 3VA5190-1MU31-0AA0 | 270 ... 630 | |
| | 3VA5190-1MH31-0AA0 | 450 ... 1080 | |
| 100 | 3VA5110-1MU31-0AA0 | 300 ... 700 | |
| | 3VA5110-1MH31-0AA0 | 500 ... 1200 | |
| 110 | 3VA5111-1MU31-0AA0 | 330 ... 770 | |
| | 3VA5111-1MH31-0AA0 | 550 ... 1320 | |
| 125 | 3VA5112-1MU31-0AA0 | 375 ... 875 | |
| | 3VA5112-1MH31-0AA0 | 625 ... 1500 | |
| 3VA52 (HFAP) | 150 | 3VA5215-0MU31-0AA0 | 450 ... 900 |
| | | 3VA5215-0MH31-0AA0 | 900 ... 1800 |
| 200 | 3VA5220-0MU31-0AA0 | 600 ... 1200 | |
| | 3VA5220-0MH31-0AA0 | 1200 ... 2400 | |



Motor Circuit Protector

Motor circuit protector ETU310M^②

| Frame (Breaker Type) | Maximum Ampere Rating | 3-Pole Catalog Number | Instantaneous short circuit protection |
|----------------------|-----------------------|-----------------------|----------------------------------------|
| 3VA61 (CDAR) | 25 | 3VA6125-1MS31-0AA0 | 75 ... 375 |
| | 30 | 3VA6130-1MS31-0AA0 | 90 ... 450 |
| | 40 | 3VA6140-1MS31-0AA0 | 120 ... 600 |
| | 50 | 3VA6150-1MS31-0AA0 | 150 ... 750 |
| | 70 | 3VA6170-1MS31-0AA0 | 210 ... 1050 |
| | 80 | 3VA6180-1MS31-0AA0 | 240 ... 1200 |
| | 90 | 3VA6190-1MS31-0AA0 | 270 ... 1350 |
| 3VA62 (CFAR-Y) | 100 | 3VA6110-1MS31-0AA0 | 300 ... 1500 |
| | 110 | 3VA6211-1MS31-0AA0 | 330 ... 1650 |
| | 125 | 3VA6212-1MS31-0AA0 | 375 ... 1875 |
| | 150 | 3VA6215-1MS31-0AA0 | 450 ... 2250 |
| 3VA63 (CJAR) | 200 | 3VA6220-1MS31-0AA0 | 600 ... 2400 |
| | 250 | 3VA6325-1MS31-0AA0 | 750 ... 3750 |
| 3VA64 (CLAR) | 400 | 3VA6440-1MS31-0AA0 | 1200 ... 5200 |
| | 500 | 3VA6450-1MS31-0AA0 | 1500 ... 6000 |

Motor circuit protector TM120M AM^②

| Frame (Breaker Type) | Maximum Ampere Rating | 3-Pole Catalog Number | Instantaneous short circuit protection |
|----------------------|-----------------------|-----------------------|----------------------------------------|
| 3VA52 (CFAP) | 150 | 3VA5215-1MU31-0AA0 | 450 ... 900 |
| | | 3VA5215-1MH31-0AA0 | 900 ... 1800 |
| 200 | 3VA5220-1MU31-0AA0 | 600 ... 1200 | |
| | 3VA5220-1MH31-0AA0 | 1200 ... 2400 | |

Interrupting Ratings

| Frame | Breaker Type | RMS Symmetrical Amperes (kA) | | | | | | | |
|-------|--------------|------------------------------|-----|-----------|-----|----------|----------|-----------------------|----------|
| | | Volts AC (50/60 Hz) | | | | Volts DC | | | |
| | | 240 | 480 | 600Y/347V | 600 | 125 (1P) | 250 (2P) | 500 ^④ (3P) | 600 (3P) |
| 3VA51 | HEAP | 150 | 65 | 25 | — | 30 | 100 | 100 | — |
| 3VA52 | HFAP | 100 | 65 | 25 | 25 | | | 85 | 85 |
| | CFAP | 200 | 100 | 35 | 35 | | | 100 | 100 |
| 3VA61 | CDAR | 200 | 100 | 35 | 35 | — | — | — | — |
| 3VA62 | CFAR | 200 | 100 | 35 | — | — | — | — | — |
| 3VA63 | CJAR | 200 | 100 | 35 | 35 | — | — | — | — |
| 3VA64 | CLAR | 200 | 100 | 35 | 35 | — | — | — | — |

① Rated at 600 Y/347 V AC.

② SCCR is 100kA at 480 V. SCCR rating is the maximum permissible short circuit current of the MCP in combination with an appropriate overload protection device.

③ SCCR is 65kA at 480 V. SCCR rating is the maximum permissible short circuit current of the MCP in combination with an appropriate overload protection device.

④ 2 poles required for 500VDC for breaker types HFAP and CFAP.

Molded Case Circuit Breakers

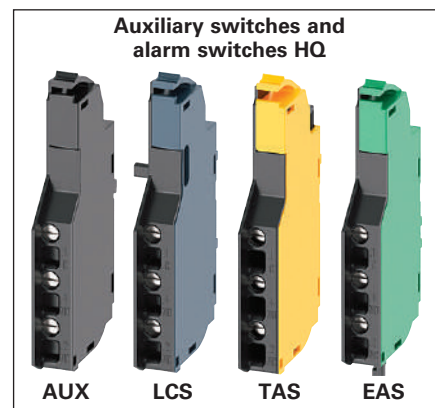
3VA Internal Accessories

Selection

Internal Accessories

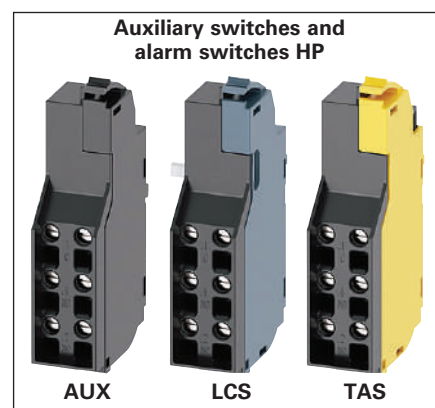
Auxiliary and Alarm Switches

| Switch Type | Catalog Number | | |
|---------------------------------|-------------------------|---------------------|-------------------------------------|
| | HP High Power (2 slots) | HQ Compact (1 slot) | HQ Electronic ^① (1 slot) |
| Auxiliary Switch (AUX) | 3VA9978-0AA11 | 3VA9978-0AA12 | 3VA9978-0AA13 |
| Leading Changeover Switch (LCS) | 3VA9978-0AA21 | 3VA9978-0AA22 | 3VA9978-0AA23 |
| Trip Alarm Switch (TAS) | 3VA9978-0AB11 | 3VA9978-0AB12 | 3VA9978-0AB13 |
| Electronic Alarm (EAS) | — | 3VA9978-0AB22 | 3VA9978-0AB23 |



Shunt Trips

| Type | VAC 50/60 Hz | VDC | Catalog Number (3 slots) |
|----------------------------------------|--------------|-------------|--------------------------|
| Shunt Trip Left (STL) | 380 ... 600 | — | 3VA9978-0BL20 |
| | — | 12 | 3VA9978-0BL10 |
| | 24 | 24 ... 30 | 3VA9978-0BL30 |
| | 48 ... 60 | — | 3VA9978-0BL31 |
| | 110 ... 127 | 110 ... 127 | 3VA9978-0BL32 |
| | 208 ... 277 | 220 ... 250 | 3VA9978-0BL33 |
| Shunt Trip Flexible (STF) ^② | 24 | — | 3VA9978-0BA20 |
| | 48 ... 60 | — | 3VA9978-0BA21 |
| | 110 ... 127 | — | 3VA9978-0BA22 |
| | 208 ... 277 | — | 3VA9978-0BA23 |
| | 380 ... 500 | — | 3VA9978-0BA24 |
| | 600 | — | 3VA9978-0BA25 |



Undervoltage Release

| | | | |
|----------------------------|-------------|-------------|---------------|
| Undervoltage Release (UVR) | — | 12 | 3VA9978-0BB10 |
| | — | 24 | 3VA9978-0BB11 |
| | — | 48 | 3VA9978-0BB12 |
| | — | 125 ... 127 | 3VA9978-0BB14 |
| | — | 250 | 3VA9978-0BB16 |
| | 24 | — | 3VA9978-0BB20 |
| | 120 ... 127 | — | 3VA9978-0BB24 |
| | 208 ... 230 | — | 3VA9978-0BB25 |
| | 440 ... 480 | — | 3VA9978-0BB27 |

Universal Release (Undervoltage and Shunt trip)

| | | | |
|-------------------------|---|----|---------------|
| Universal Release (UNI) | — | 12 | 3VA9978-0BD11 |
| | — | 24 | 3VA9978-0BD12 |
| | — | 48 | 3VA9978-0BD13 |

Time-delay Device for Undervoltage Release

| Type | VAC 50/60 Hz | VDC | Delay Time | Catalog Number |
|-------------------|--------------|-----|-----------------------|----------------|
| Time-delay Device | 230 | 230 | Fixed – 100ms minimum | 3VA9978-0BF22 |
| | — | 24 | Fixed – 100ms minimum | 3VA9978-0BF23 |



① Use only with 3VA6.

② Shunt trip flexible can be used in the left pocket of the 3VA5 breakers. They can be used in the left or right pocket of the 3VA6 breakers.

Molded Case Circuit Breakers

3VA Manual Operators

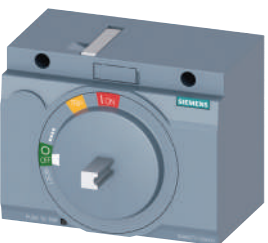
Selection

Front Mounted Rotary Operator



Degree of protection NEMA 1

| Type | Color | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA6 400A 600A | Catalog Number |
|--------------------------------------------------------------------------------------------|------------|--------------|--------------|----------------------|----------------------|----------------|
| Standard without illumination kit | Gray | ✓ | — | — | — | 3VA9137-0EK11 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK11 |
| | | — | — | — | ✓ | 3VA9447-0EK11 |
| Standard with illumination kit | Gray | ✓ | — | — | — | 3VA9137-0EK13 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK13 |
| | | — | — | — | ✓ | 3VA9447-0EK13 |
| EMERGENCY-OFF without illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0EK15 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK15 |
| | | — | — | — | ✓ | 3VA9447-0EK15 |
| EMERGENCY-OFF with illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0EK17 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK17 |
| | | — | — | — | ✓ | 3VA9447-0EK17 |
| Standard with door interlock | Gray | ✓ | — | — | — | 3VA9137-0EK21 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK21 |
| | | — | — | — | ✓ | 3VA9447-0EK21 |
| Standard with door interlock, with illumination kit | Gray | ✓ | — | — | — | 3VA9137-0EK23 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK23 |
| | | — | — | — | ✓ | 3VA9447-0EK23 |
| EMERGENCY-OFF with door interlock | Yellow-Red | ✓ | — | — | — | 3VA9137-0EK25 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK25 |
| | | — | — | — | ✓ | 3VA9447-0EK25 |
| EMERGENCY-OFF with door interlock, with illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0EK27 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK27 |
| | | — | — | — | ✓ | 3VA9447-0EK27 |
| Standard with door interlock, with door open function | Gray | ✓ | — | — | — | 3VA9137-0EK31 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK31 |
| | | — | — | — | ✓ | 3VA9447-0EK31 |
| Standard with door interlock, with door open function, with illumination kit | Gray | ✓ | — | — | — | 3VA9137-0EK33 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK33 |
| | | — | — | — | ✓ | 3VA9447-0EK33 |
| EMERGENCY-OFF with door interlock, with door open function | Yellow-Red | ✓ | — | — | — | 3VA9137-0EK35 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK35 |
| | | — | — | — | ✓ | 3VA9447-0EK35 |
| EMERGENCY-OFF with door interlock, with door open function, with illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0EK37 |
| | | — | ✓ | ✓ | — | 3VA9277-0EK37 |
| | | — | — | — | ✓ | 3VA9447-0EK37 |
| Without handle, with shaft stub, without door interlock For retrofit with 3VL handle | Gray | ✓ | — | — | — | 3VA9137-0GK00 |
| | | — | ✓ | ✓ | — | 3VA9277-0GK00 |
| | | — | — | — | ✓ | 3VA9447-0GK00 |

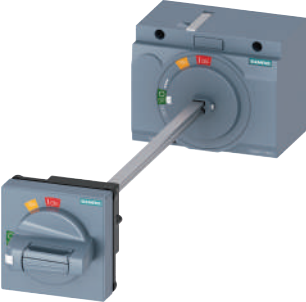


Molded Case Circuit Breakers

3VA Manual Operators

Selection

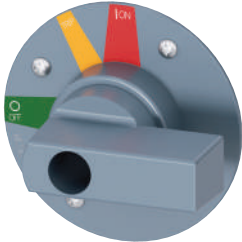
Door Mounted Rotary Operator^①



Degree of protection
Type 1, 12, 3R and 4X

| Type | Color | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | Catalog Number |
|-----------------------------------------------------------------------------------|------------|--------------|--------------|----------------------|------------------------------|----------------|
| Standard | Gray | ✓ | — | — | — | 3VA9137-0FK21 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK21 |
| | | — | — | — | ✓ | 3VA9447-0FK21 |
| Standard with illumination kit | Gray | ✓ | — | — | — | 3VA9137-0FK23 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK23 |
| | | — | — | — | ✓ | 3VA9447-0FK23 |
| EMERGENCY-OFF | Yellow-Red | ✓ | — | — | — | 3VA9137-0FK25 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK25 |
| | | — | — | — | ✓ | 3VA9447-0FK25 |
| EMERGENCY-OFF with illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0FK27 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK27 |
| | | — | — | — | ✓ | 3VA9447-0FK27 |
| Standard with door interlock, with open door function | Gray | ✓ | — | — | — | 3VA9137-0FK31 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK31 |
| | | — | — | — | ✓ | 3VA9447-0FK31 |
| Standard with door interlock, with open door function with illumination kit | Gray | ✓ | — | — | — | 3VA9137-0FK33 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK33 |
| | | — | — | — | ✓ | 3VA9447-0FK33 |
| EMERGENCY-OFF with door interlock, with open door function | Yellow-Red | ✓ | — | — | — | 3VA9137-0FK35 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK35 |
| | | — | — | — | ✓ | 3VA9447-0FK35 |
| EMERGENCY-OFF with door interlock, with open door function, with illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0FK37 |
| | | — | ✓ | ✓ | — | 3VA9277-0FK37 |
| | | — | — | — | ✓ | 3VA9447-0FK37 |

Supplementary Handle for Door Mounted Rotary Operator (NFPA-79 compliant)



| Type | Color | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | Catalog Number |
|---------------|------------|--------------|--------------|----------------------|------------------------------|----------------|
| Standard | Gray | ✓ | — | — | — | 3VA9137-0GC01 |
| | | — | ✓ | ✓ | — | 3VA9477-0GC01 |
| | | — | — | — | ✓ | 3VA9477-0GC11 |
| EMERGENCY-OFF | Yellow-Red | ✓ | — | — | — | 3VA9137-0GC05 |
| | | — | ✓ | ✓ | — | 3VA9477-0GC05 |
| | | — | — | — | ✓ | 3VA9477-0GC15 |



① Lockable with up to three padlock hasps.

Molded Case Circuit Breakers

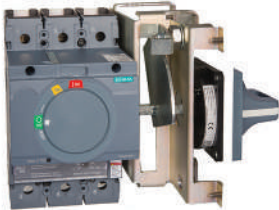
3VA Manual Operators

Selection


Side Mounted Rotary Operator^①

|  <ul style="list-style-type: none"> ■ Without mounting plate ■ Rotary operator with shaft 300 mm ■ Handle with masking plate 75 x 75 mm ■ Degree of protection Type 1, 12, 3R and 4X | Type | Color | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | Catalog Number | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------|--------------|----------------------|------------------------------|----------------|---------------|
| |  <ul style="list-style-type: none"> ■ With mounting plate ■ Rotary operator with short shaft ■ Handle with masking plate 75 x 75 mm ■ Degree of protection Type 1, 12, 3R and 4X | Standard | Gray | ✓ | — | — | — | 3VA9137-0PK11 |
| Standard with illumination kit | | Gray | — | ✓ | — | — | 3VA9137-0PK13 | |
| | | | — | — | ✓ | — | 3VA9277-0PK13 | |
| EMERGENCY-OFF | | Yellow-Red | ✓ | — | — | — | 3VA9137-0PK15 | |
| | | | — | ✓ | ✓ | — | 3VA9277-0PK15 | |
| EMERGENCY-OFF with illumination kit | | Yellow-Red | ✓ | — | — | — | 3VA9137-0PK17 | |
| | | | — | ✓ | ✓ | — | 3VA9277-0PK17 | |
| Standard with mounting plate | | Gray | ✓ | — | — | — | 3VA9137-0PK51 | |
| | | | — | ✓ | ✓ | — | 3VA9277-0PK51 | |
| | | Standard with mounting plate, with illumination kit | Gray | ✓ | — | — | — | 3VA9137-0PK53 |
| | | | | — | ✓ | ✓ | — | 3VA9277-0PK53 |
| | | EMERGENCY-OFF with mounting plate | Yellow-Red | ✓ | — | — | — | 3VA9137-0PK55 |
| | — | | | ✓ | ✓ | — | 3VA9277-0PK55 | |
| EMERGENCY-OFF with mounting plate, with illumination kit | Yellow-Red | ✓ | — | — | — | 3VA9137-0PK57 | | |
| | | — | ✓ | ✓ | — | 3VA9277-0PK57 | | |

Door Interlock Side Mounted Rotary Operator^①

|  <ul style="list-style-type: none"> ■ Without mounting plate | Type | Color | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | Catalog Number |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------|--------------|--------------|----------------------|------------------------------|----------------|
| | Standard for use with the side wall mounted rotary operators | Gray | ✓ | — | — | — | — |
| | | | — | ✓ | ✓ | — | 3VA9277-0VF40 |

Motor Operator without Stored Energy Feature^①

|  | Type | 3VA5 125 A | 3VA5 250 A | 3VA6 150 A 250 A | 3VA5 3VA6 400A 600A | Part Number |
|-------------------------------------------------------------------------------------|----------------|---------------|---------------|------------------------|------------------------------|---------------|
| | 24 ... 60 V DC | | ✓ | — | — | — |
| | | — | ✓ | ✓ | — | 3VA9277-0HA10 |
| | | — | — | — | ✓ | 3VA9447-0HA10 |
| 110 ... 230 V AC 110 ... 250 V DC | | ✓ | — | — | — | 3VA9137-0HA20 |
| | | — | ✓ | ✓ | — | 3VA9277-0HA20 |
| | | — | — | — | ✓ | 3VA9447-0HA20 |


^① Lockable with up to three padlock hasps.

Molded Case Circuit Breakers






3VA Manual Operators

Selection

Handles with Masking Plate

|  Degree of protection Type 1, 12, 3R and 4X | Type | Color | Tolerance Compensation | Door Open Function | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | Catalog Number | |
|------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------------------------|--------------------|-----------|-----------|----------------|---------------------|----------------|---------------|
| | Standard | Gray | Without | Without | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AB11 |
| With | | | Without | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AB21 | |
| Without | | | Without | Without | — | — | — | ✓ | 8UD1731-0AB11 | |
| With | | | Without | Without | — | — | — | ✓ | 8UD1731-0AB21 | |
| Without | | | With | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AC11 | |
| With | | | With | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AC21 | |
| Without | | | With | With | — | — | — | ✓ | 8UD1731-0AC11 | |
| With | | | With | With | — | — | — | ✓ | 8UD1731-0AC21 | |
| EMERGENCY-OFF | | Yellow-Red | Without | Without | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AB15 |
| | | | With | Without | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AB25 |
| | | | Without | Without | Without | — | — | — | ✓ | 8UD1731-0AB15 |
| | | | With | Without | Without | — | — | — | ✓ | 8UD1731-0AB25 |
| | | | Without | With | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AC15 |
| | | | With | With | Without | ✓ | ✓ | ✓ | — | 8UD1721-0AC25 |
| Without | With | With | — | — | — | ✓ | 8UD1731-0AC15 | | | |
| With | With | With | — | — | — | ✓ | 8UD1731-0AC25 | | | |

Door Mounted Rotary Operator Accessories







|  | Type | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | Catalog Number |
|-------------------------------------------------------------------------------------|---------------------------------------------|-----------|-----------|----------------|---------------------|----------------|
| | 8 mm Shaft 300 mm long | | ✓ | ✓ | ✓ | ✓ |
| 8 mm Shaft 600 mm long | | ✓ | ✓ | ✓ | ✓ | 8UD1900-2WB00 |
|  | Adapter for Shaft for door mounted operator | ✓ | ✓ | ✓ | ✓ | 8UD1900-2DA00 |
|  | Door Coupling 8 mm x 8 mm | ✓ | ✓ | ✓ | ✓ | 8UD1900-2HA00 |
|  | Fixing bracket for Shaft | ✓ | — | — | — | 3VA9137-0GA80 |
| | | — | ✓ | ✓ | ✓ | 3VA9477-0GA80 |
|  | Variable depth adapter 8 x 8 mm | ✓ | ✓ | ✓ | ✓ | 3VA9487-0GB10 |
|  | Mounting tolerance compensation 8 x 8 mm | ✓ | ✓ | ✓ | ✓ | 8UD1900-2GA00 |

Molded Case Circuit Breakers

3VA Manual Operators

Selection

General Accessories for Manual Operators

| | Type | Details | Part Number | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|-------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  | Labeling plate for manual operators | — | 3VA9087-0SX10 | | | | | | | | | | | | | | | | |
|  | Illumination kit for manual operators 24 V DC voltage | <table border="1"> <thead> <tr> <th colspan="2">For Molded Case Circuit Breakers</th> </tr> </thead> <tbody> <tr> <td>3VA5, 125...250 A</td> <td>Front mounted rotary operators</td> </tr> <tr> <td>3VA6, 150...600 A</td> <td>Front mounted rotary operators</td> </tr> <tr> <td>3VA5, 3VA6, 125...600 A</td> <td>Door mounted rotary operators</td> </tr> </tbody> </table> | For Molded Case Circuit Breakers | | 3VA5, 125...250 A | Front mounted rotary operators | 3VA6, 150...600 A | Front mounted rotary operators | 3VA5, 3VA6, 125...600 A | Door mounted rotary operators | <table border="1"> <tbody> <tr> <td>8UD1900-0KA10</td> </tr> <tr> <td>8UD1900-0KA20</td> </tr> <tr> <td>8UD1900-0KA20</td> </tr> </tbody> </table> | 8UD1900-0KA10 | 8UD1900-0KA20 | 8UD1900-0KA20 | | | | | |
| For Molded Case Circuit Breakers | | | | | | | | | | | | | | | | | | | |
| 3VA5, 125...250 A | Front mounted rotary operators | | | | | | | | | | | | | | | | | | |
| 3VA6, 150...600 A | Front mounted rotary operators | | | | | | | | | | | | | | | | | | |
| 3VA5, 3VA6, 125...600 A | Door mounted rotary operators | | | | | | | | | | | | | | | | | | |
| 8UD1900-0KA10 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0KA20 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0KA20 | | | | | | | | | | | | | | | | | | | |
|  | Cylinder Lock (type Kaba) <ul style="list-style-type: none"> For door mounted rotary operator (in masking plate) Standard masking plate Cylinder Lock (type Kaba) [Ⓞ] <ul style="list-style-type: none"> For door mounted rotary operator (in masking plate) Standard masking plate | <table border="1"> <tbody> <tr><td>Key 1</td></tr> <tr><td>Key 2</td></tr> <tr><td>Key 3</td></tr> <tr><td>Key 4</td></tr> <tr><td>Key 1</td></tr> <tr><td>Key 2</td></tr> <tr><td>Key 3</td></tr> <tr><td>Key 4</td></tr> </tbody> </table> | Key 1 | Key 2 | Key 3 | Key 4 | Key 1 | Key 2 | Key 3 | Key 4 | <table border="1"> <tbody> <tr><td>8UD1900-0MB01</td></tr> <tr><td>8UD1900-0NB01</td></tr> <tr><td>8UD1900-0PB01</td></tr> <tr><td>8UD1900-0QB01</td></tr> <tr><td>8UD1900-0MC01</td></tr> <tr><td>8UD1900-0NC01</td></tr> <tr><td>8UD1900-0PC01</td></tr> <tr><td>8UD1900-0QC01</td></tr> </tbody> </table> | 8UD1900-0MB01 | 8UD1900-0NB01 | 8UD1900-0PB01 | 8UD1900-0QB01 | 8UD1900-0MC01 | 8UD1900-0NC01 | 8UD1900-0PC01 | 8UD1900-0QC01 |
| Key 1 | | | | | | | | | | | | | | | | | | | |
| Key 2 | | | | | | | | | | | | | | | | | | | |
| Key 3 | | | | | | | | | | | | | | | | | | | |
| Key 4 | | | | | | | | | | | | | | | | | | | |
| Key 1 | | | | | | | | | | | | | | | | | | | |
| Key 2 | | | | | | | | | | | | | | | | | | | |
| Key 3 | | | | | | | | | | | | | | | | | | | |
| Key 4 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0MB01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0NB01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0PB01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0QB01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0MC01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0NC01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0PC01 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0QC01 | | | | | | | | | | | | | | | | | | | |
|  | Cylinder Lock (type Kaba) <ul style="list-style-type: none"> For door mounted rotary operator (in masking plate) EMERGENCY-OFF masking plate Cylinder Lock (type Kaba) [Ⓞ] <ul style="list-style-type: none"> For door mounted rotary operator (in masking plate) EMERGENCY-OFF masking plate | <table border="1"> <tbody> <tr><td>Key 1</td></tr> <tr><td>Key 2</td></tr> <tr><td>Key 3</td></tr> <tr><td>Key 4</td></tr> <tr><td>Key 1</td></tr> <tr><td>Key 2</td></tr> <tr><td>Key 3</td></tr> <tr><td>Key 4</td></tr> </tbody> </table> | Key 1 | Key 2 | Key 3 | Key 4 | Key 1 | Key 2 | Key 3 | Key 4 | <table border="1"> <tbody> <tr><td>8UD1900-0MB05</td></tr> <tr><td>8UD1900-0NB05</td></tr> <tr><td>8UD1900-0PB05</td></tr> <tr><td>8UD1900-0QB05</td></tr> <tr><td>8UD1900-0MC05</td></tr> <tr><td>8UD1900-0NC05</td></tr> <tr><td>8UD1900-0PC05</td></tr> <tr><td>8UD1900-0QC05</td></tr> </tbody> </table> | 8UD1900-0MB05 | 8UD1900-0NB05 | 8UD1900-0PB05 | 8UD1900-0QB05 | 8UD1900-0MC05 | 8UD1900-0NC05 | 8UD1900-0PC05 | 8UD1900-0QC05 |
| Key 1 | | | | | | | | | | | | | | | | | | | |
| Key 2 | | | | | | | | | | | | | | | | | | | |
| Key 3 | | | | | | | | | | | | | | | | | | | |
| Key 4 | | | | | | | | | | | | | | | | | | | |
| Key 1 | | | | | | | | | | | | | | | | | | | |
| Key 2 | | | | | | | | | | | | | | | | | | | |
| Key 3 | | | | | | | | | | | | | | | | | | | |
| Key 4 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0MB05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0NB05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0PB05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0QB05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0MC05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0NC05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0PC05 | | | | | | | | | | | | | | | | | | | |
| 8UD1900-0QC05 | | | | | | | | | | | | | | | | | | | |
|  | Cylinder Lock (type Ronis) <ul style="list-style-type: none"> includes 2 keys for locking or interlocking installation in all rotary operators w/ shaft stub | <table border="1"> <tbody> <tr><td>Key 1</td></tr> <tr><td>Key 3</td></tr> <tr><td>Key 4</td></tr> </tbody> </table> | Key 1 | Key 3 | Key 4 | <table border="1"> <tbody> <tr><td>3VA9980-0VL10</td></tr> <tr><td>3VA9980-0VL30</td></tr> <tr><td>3VA9980-0VL40</td></tr> </tbody> </table> | 3VA9980-0VL10 | 3VA9980-0VL30 | 3VA9980-0VL40 | | | | | | | | | | |
| Key 1 | | | | | | | | | | | | | | | | | | | |
| Key 3 | | | | | | | | | | | | | | | | | | | |
| Key 4 | | | | | | | | | | | | | | | | | | | |
| 3VA9980-0VL10 | | | | | | | | | | | | | | | | | | | |
| 3VA9980-0VL30 | | | | | | | | | | | | | | | | | | | |
| 3VA9980-0VL40 | | | | | | | | | | | | | | | | | | | |
|  | Cylinder lock adapter for rotary operator <ul style="list-style-type: none"> to mount in rotary operator | 3VA9980-0LF20 | | | | | | | | | | | | | | | | | |

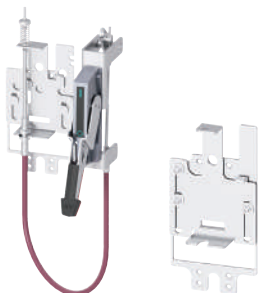



Ⓞ With door open function

Molded Case Circuit Breakers

3VA Manual Operators


Selection

Max Flex Operator

| | Type | 3VA5 | 3VA5 | 3VA6 | 3VA5 | Catalog Number |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|--------------|----------------------|----------------|
| | | 125A | 250A | 150A 250A | 3VA6 400A 600A | |
|  <p>Complete kit and spare mechanism</p> | Complete Kit <ul style="list-style-type: none"> Switching mechanism Plastic handle, NEMA 1/12, black=OFF, green=ON Bowden Cable 36 inches (0.9m) long | ✓ | — | — | — | 3VA9137-0CK12 |
| | | — | ✓ | ✓ | — | 3VA9277-0CK12 |
| | | — | — | — | ✓ | 3VA9477-0CK12 |
| | Complete Kit <ul style="list-style-type: none"> Switching mechanism Steel handle, epoxy coated NEMA 1/3R/12, black=OFF, red=ON, Bowden Cable 36 inches (0.9m) long | ✓ | — | — | — | 3VA9137-0CK72 |
| | | — | ✓ | ✓ | — | 3VA9277-0CK72 |
| | | — | — | — | ✓ | 3VA9477-0CK72 |
|  | Operating Mechanism (spare) | ✓ | — | — | — | 3VA9137-0CB10 |
| | | — | ✓ | ✓ | — | 3VA9277-0CB10 |
| | | — | — | — | ✓ | 3VA9477-0CB10 |
| | Handle - Plastic, NEMA 1/12, black = OFF, green = ON | ✓ | ✓ | ✓ | ✓ | 3VA9977-0CH12 |
| | Handle - Steel, Epoxy coated, NEMA 1/3R/12, black = OFF, red = ON | ✓ | ✓ | ✓ | ✓ | 3VA9977-0CH72 |
| Handle - Steel, Epoxy coated, NEMA 1/3R/12, black = OFF, black = ON | ✓ | ✓ | ✓ | ✓ | 3VA9977-0CH74 | |
| Handle - Steel, chrome-plated, NEMA 4/4X, black = OFF, red = ON | ✓ | ✓ | ✓ | ✓ | 3VA9977-0CH82 | |
| Handle - Steel, chrome-plated, NEMA 4/4X, black = OFF, black = ON | ✓ | ✓ | ✓ | ✓ | 3VA9977-0CH84 | |
|  | Bowden Cable, 36 inches (0.9m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC10 |
| | Bowden Cable, 48 inches (1.2m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC20 |
| | Bowden Cable, 60 inches (1.5m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC30 |
| | Bowden Cable, 72 inches (1.8m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC40 |
| | Bowden Cable, 84 inches (2.1m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC50 |
| | Bowden Cable, 96 inches (2.4m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC60 |
| | Bowden Cable, 120 inches (3.0m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC70 |
| | Bowden Cable, 144 inches (3.6m) | ✓ | ✓ | ✓ | — | 3VA9278-0CC80 |
| | Bowden Cable, 36 inches (0.9m) | — | — | — | ✓ | 3VA9578-0CC10 |
| | Bowden Cable, 48 inches (1.2m) | — | — | — | ✓ | 3VA9578-0CC20 |
| | Bowden Cable, 60 inches (1.5m) | — | — | — | ✓ | 3VA9578-0CC30 |
| | Bowden Cable, 72 inches (1.8m) | — | — | — | ✓ | 3VA9578-0CC40 |
| | Bowden Cable, 84 inches (2.1m) | — | — | — | ✓ | 3VA9578-0CC50 |
| | Bowden Cable, 96 inches (2.4m) | — | — | — | ✓ | 3VA9578-0CC60 |
| Bowden Cable, 120 inches (3.0m) | — | — | — | ✓ | 3VA9578-0CC70 | |
| Bowden Cable, 144 inches (3.6m) | — | — | — | ✓ | 3VA9578-0CC80 | |
|  | MaxFlex Auxiliary switch (leading from On to Off) <ul style="list-style-type: none"> 1 CO | ✓ | ✓ | ✓ | ✓ | 3VA9478-0CX10 |
| | MaxFlex Auxiliary switch (leading from On to Off) <ul style="list-style-type: none"> 2 CO | ✓ | ✓ | ✓ | ✓ | 3VA9478-0CX20 |

5 MOLDED CASE CIRCUIT BREAKERS

Variable depth flange mounted operator kit



| | Type | 3VA5 | 3VA5 | 3VA6 | 3VA5 | Catalog Number |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|--------------|----------------------|----------------|
| | | 125A | 250A | 150A 250A | 3VA6 400A 600A | |
|  | Complete kit comprising: <ul style="list-style-type: none"> Switching mechanism adjustable depth 200mm to 400mm Epoxy coated steel handle, NEMA 1/3R/12, black = OFF, red = ON | ✓ | — | — | — | 3VA9138-0DK72 |
| | | — | ✓ | ✓ | — | 3VA9278-0DK72 |
| | | — | — | — | ✓ | 3VA9478-0DK72 |
| | Complete kit comprising: <ul style="list-style-type: none"> Switching mechanism adjustable depth 200mm to 400mm Stainless steel handle, chrome-plated NEMA 4/4X, black=OFF, red=ON | ✓ | — | — | — | 3VA9138-0DK82 |
| | | — | ✓ | ✓ | — | 3VA9278-0DK82 |
| | | — | — | — | ✓ | 3VA9478-0DK82 |
| | Complete kit comprising: <ul style="list-style-type: none"> Switching mechanism adjustable depth 200mm to 400mm Handle stainless steel, chrome-plated NEMA 4/4X, black=OFF, black=ON | ✓ | — | — | — | 3VA9138-0DK84 |
| | | — | ✓ | ✓ | — | 3VA9278-0DK84 |
| | | — | — | — | ✓ | 3VA9478-0DK84 |

Molded Case Circuit Breakers









3VA Connection Technology

Selection

Box Terminals

| | Type | Minimum cable cross-section (standard) Class B | Maximum cable cross-section (standard) Class B | For molded case circuit breakers/ rated current | | | | Part Number |
|-----------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-------------------------------------------------|-----------|----------------|---------------------|---------------|
| | | | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Steel wrap-around lug (Cu cable only) kit of 3 single lugs | AWG 14 | 3/0 | ✓ | — | — | — | 3VA9133-0JA11 |
| | | AWG 10 | 3/0 | — | ✓ | — | — | 3VA9233-0JA11 |
| | | AWG 4 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JA12 |
| | | AWG 10 | 3/0 | — | — | ✓ | — | 3VA9143-0JA12 |
| | | AWG 4 | 350 kcmil | — | — | ✓ | — | 3VA9243-0JA12 |
|  | Steel wrap-around lug (Cu cable only) kit of 4 single lugs | 1/0 | 500 kcmil | — | — | — | ✓ | 3VA9473-0JA13 |
| | | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9134-0JA11 |
| | | AWG 10 | 3/0 | — | — | ✓ | — | 3VA9144-0JA12 |
| | | AWG 4 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JA12 |
| | | 1/0 | 500 kcmil | — | — | — | ✓ | 3VA9474-0JA13 |

Aluminum Wire Connectors

| | Type | Minimum cable cross-section (standard) Class B | Maximum cable cross-section (standard) Class B | For molded case circuit breakers/ rated current | | | | Part Number |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-------------------------------------------------|-----------|----------------|---------------------|----------------------------|
| | | | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Aluminum body lug small (Cu/Al cable) kit of 3 single lugs | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9133-0JB10 |
|  | Aluminum body lug (Cu/Al cable) kit of 3 single lugs | AWG 14 | 3/0 | ✓ | — | — | — | 3VA9133-0JB11 |
| | | AWG 6 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JB12 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9143-0JB11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9243-0JB12 |
|  | Aluminum body lug small (Cu/Al cable) kit of 4 single lugs | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9373-0JB13 ^① |
| | | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9134-0JB10 |
|  | Aluminum body lug (Cu/Al cable) kit of 4 single lugs | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9134-0JB11 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9144-0JB11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JB12 |
| | | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9374-0JB13 ^① |
|  | Aluminum body lug small with control wire tap (Cu/Al cable) | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9133-0JG10 |
|  | Aluminum body lug with control wire tap (Cu/Al cable) kit of 3 single lugs | AWG 14 | 3/0 | ✓ | — | — | — | 3VA9133-0JG11 |
| | | AWG 6 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JG12 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9143-0JG11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9243-0JG12 |
|  | Aluminum body lug small with control wire tap (Cu/Al cable) kit of 4 single lugs | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9373-0JG13 ^① |
| | | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9134-0JG10 |
|  | Aluminum body lug with control wire tap (Cu/Al cable) kit of 4 single lugs | AWG 14 | AWG 10 | ✓ | — | — | — | 3VA9134-0JG11 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9144-0JG11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JG12 |
| | | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9374-0JG13 ^① |

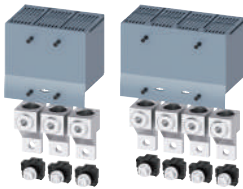
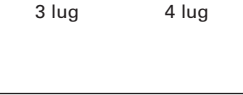
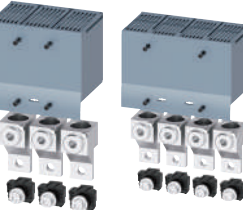
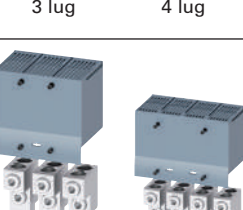
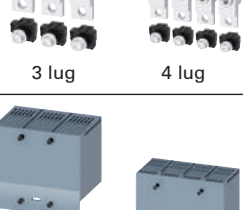
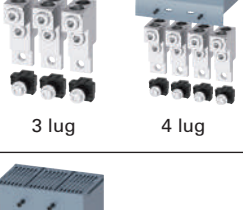
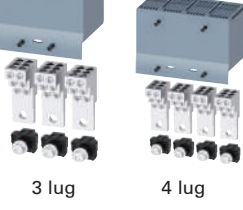


^①This conductor is ampere-rated at 380A with copper wire and 310A with aluminum wire.

Molded Case Circuit Breakers

3VA Connection Technology

Selection

Aluminum Wire Connectors (cont.)

| | Type | Minimum cable cross-section (standard) Class B | Maximum cable cross-section (standard) Class B | For molded case circuit breakers/ rated current | | | | Part Number | |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------|-----------|----------------|---------------------|---------------|---------------|
| | | | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | | |
|  <p>3 lug 4 lug</p> | Aluminum body lug large (Cu/Al cable) kit of 3 single lugs and 1 extended terminal cover | AWG 4 | 350 kcmil | ✓ | — | — | — | 3VA9133-0JJ12 | |
| | | AWG 2 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JJ13 | |
| | | AWG 2 | 350 kcmil | — | — | — | ✓ | 3VA9243-0JJ13 | |
|  <p>3 lug 4 lug</p> | Aluminum body lug large (Cu/Al cable) kit of 4 single lugs and 1 extended terminal cover | AWG 2 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JJ13 | |
| |  <p>3 lug 4 lug</p> | Aluminum body lug large with control wire tap (Cu/Al cable) kit of 3 single lugs and 1 extended terminal cover | AWG 4 | 350 kcmil | ✓ | — | — | — | 3VA9133-0JC12 |
| | | | AWG 2 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JC13 |
| | | AWG 2 | 350 kcmil | — | — | ✓ | — | 3VA9243-0JC13 | |
|  <p>3 lug 4 lug</p> | Aluminum body lug large with control wire tap (Cu/Al cable) kit of 4 single lugs and 1 extended terminal cover | AWG 4 | 300 kcmil | ✓ | — | — | — | 3VA9134-0JC12 | |
| | | AWG 2 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JC13 | |
| |  <p>3 lug 4 lug</p> | Aluminum body lug, 2 Cables (Cu/Al cable) kit of 3 single lugs and 1 extended terminal cover | AWG 4 | 300 kcmil | — | ✓ | — | — | 3VA9233-0JJ22 |
| | | AWG 4 | 300 kcmil | — | — | ✓ | — | 3VA9243-0JJ22 | |
| | | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9473-0JJ23 | |
|  <p>3 lug 4 lug</p> | Aluminum body lug, 2 Cables (Cu/Al cable) kit of 4 single lugs and 1 extended terminal cover | AWG 4 | 300 kcmil | — | — | ✓ | — | 3VA9244-0JJ22 | |
| | | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9474-0JJ23 | |
| |  <p>3 lug 4 lug</p> | Aluminum body lug, 2 Cables with control wire tap (Cu/Al cable) kit of 3 single lugs and 1 extended terminal cover | AWG 4 | 300 kcmil | — | ✓ | — | — | 3VA9233-0JC22 |
| | | AWG 4 | 300 kcmil | — | — | ✓ | — | 3VA9243-0JC22 | |
| | | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9473-0JC23 | |
|  <p>3 lug 4 lug</p> | Aluminum body lug, 2 Cables with control wire tap (Cu/Al cable) kit of 4 single lugs and 1 extended terminal cover | AWG 4 | 300 kcmil | — | — | ✓ | — | 3VA9244-0JC22 | |
| | | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9474-0JC23 | |
| |  <p>3 lug 4 lug</p> | Distribution lug, 6 Cables (Cu/Al cable) kit of 3 single lugs and 1 extended terminal cover | AWG 14 | AWG 2 | ✓ | — | — | — | 3VA9133-0JF60 |
| | | | AWG 2 | — | ✓ | — | — | 3VA9233-0JF60 | |
| | | | AWG 2 | — | — | ✓ | — | 3VA9243-0JF60 | |
| | | | AWG 2 | — | — | — | ✓ | 3VA9373-0JF60 | |
| <p>3 lug 4 lug</p> | Distribution lug, 6 Cables (Cu/Al cable) kit of 4 single lugs and 1 extended terminal cover | AWG 14 | AWG 2 | ✓ | — | — | — | 3VA9134-0JF60 | |
| | | | AWG 2 | — | — | ✓ | — | 3VA9244-0JF60 | |
| | | | AWG 2 | — | — | — | ✓ | 3VA9374-0JF60 | |

5
MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

3VA Connection Technology

Selection

Copper Wire Connectors



| | Type | Minimum cable cross-section (standard) Class B | Maximum cable cross-section (standard) Class B | For molded case circuit breakers/ rated current | | | | Part Number |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-------------------------------------------------|-----------|----------------|---------------------|---------------|
| | | | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Copper body lug small (Cu cable only) kit of 3 single lugs | AWG 14 | AWG 10 | ✓ | | — | — | 3VA9133-0JD10 |
|  | Copper body lug (Cu cable only) kit of 3 single lugs | AWG 14 | 2/0 | ✓ | | — | — | 3VA9133-0JD11 |
| | | AWG 6 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JD12 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9143-0JD11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9243-0JD12 |
|  | Copper body lug small (Cu cable only) kit of 4 single lugs | AWG 14 | AWG 10 | ✓ | | — | — | 3VA9373-0JD13 |
| | | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9134-0JD10 |
|  | Copper body lug (Cu cable only) kit of 4 single lugs | AWG 14 | AWG 10 | ✓ | | — | — | 3VA9134-0JD11 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9144-0JD11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JD12 |
| | | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9374-0JD13 |
|  | Copper body lug small with control wire tap (Cu cable only) kit of 3 single lugs | AWG 14 | AWG 10 | ✓ | | — | — | 3VA9133-0JK10 |
|  | Copper body lug with control wire tap (Cu cable only) kit of 3 single lugs | AWG 14 | 2/0 | ✓ | | — | — | 3VA9133-0JK11 |
| | | AWG 6 | 350 kcmil | — | ✓ | — | — | 3VA9233-0JK12 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9143-0JK11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9243-0JK12 |
|  | Copper body lug small with control wire tap (Cu cable only) kit of 4 single lugs | AWG 14 | AWG 10 | ✓ | | — | — | 3VA9134-0JK10 |
| | | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9374-0JK13 |
|  | Copper body lug with control wire tap (Cu cable only) kit of 4 single lugs | AWG 14 | AWG 10 | ✓ | | — | — | 3VA9134-0JK11 |
| | | AWG 14 | 1/0 | — | — | ✓ | — | 3VA9144-0JK11 |
| | | AWG 6 | 350 kcmil | — | — | ✓ | — | 3VA9244-0JK12 |
| | | AWG 1 | 600 kcmil | — | — | — | ✓ | 3VA9374-0JK13 |
|  | Copper body lug 2 Cables (Cu cable only) kit of 3 single lugs and 1 extended terminal cover | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9473-0JE23 |
|  | Copper body lug 2 Cables (Cu cable only) kit of 4 single lugs and 1 extended terminal cover | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9474-0JE23 |
| | Copper body lug 2 Cables with control wire tap (Cu cable only) kit of 3 single lugs and 1 extended terminal cover | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9473-0JL23 |
| | Copper body lug 2 Cables with control wire tap (Cu cable only) kit of 4 single lugs and 1 extended terminal cover | 2/0 | 600 kcmil | — | — | — | ✓ | 3VA9474-0JL23 |

Molded Case Circuit Breakers








3VA Connection Technology

Selection

Nut Keeper Kits

| | Type | Maximum terminal width | Maximum terminal thickness | For molded case circuit breakers/ rated current | | | | Part Number |
|-----------------------------------------------------------------------------------|----------------------------------------|------------------------|----------------------------|----------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Nut keeper kit kit of 3 single lugs | 6.5 mm / 0.25 inch | 17 mm / 0.7 inch | ✓ | — | — | — | 3VA9133-0QA00 |
| | | 8 mm / 0.3 inch | 25 mm / 1 inch | — | ✓ | — | — | 3VA9233-0QA00 |
| | | 8 mm / 0.3 inch | 25 mm / 1 inch | — | — | ✓ | — | 3VA9243-0QA00 |
| | | 10 mm / 0.4 inch | 35 mm / 1.4 inch | — | — | — | ✓ | 3VA9473-0QA00 |
|  | Nut keeper kit kit of 4 single lugs | 6.5 mm / 0.25 inch | 17 mm / 0.7 inch | ✓ | — | — | — | 3VA9134-0QA00 |
| | | 8 mm / 0.3 inch | 25 mm / 1 inch | — | — | ✓ | — | 3VA9244-0QA00 |
| | | 10 mm / 0.4 inch | 35 mm / 1.4 inch | — | — | — | ✓ | 3VA9474-0QA00 |

Bus Connector Extensions

| | Type | Maximum terminal width | Maximum terminal thickness | For molded case circuit breakers/ rated current | | | | Part Number |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------|----------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Front bus connectors extended 1 single connector | 22 mm / 0.9 inch | 8 mm / 0.3 inch | ✓ | — | — | — | 3VA9131-0QB00 |
|  | Front bus connectors extended kit of 3 single connectors, 2 phase barriers, and 1 insulating plate | 22 mm / 0.9 inch | 8 mm / 0.3 inch | ✓ | — | — | — | 3VA9133-0QB00 |
|  | Front bus connectors extended kit of 4 single connectors, 3 phase barriers, and 1 insulating plate | 22 mm / 0.9 inch | 8 mm / 0.3 inch | ✓ | — | — | — | 3VA9133-0QB00 |
|  | Front bus connectors extended kit of 3 single connectors and 1 insulating plate | 32 mm / 1.3 inch | 10 mm / 0.4 inch | — | ✓ | ✓ | — | 3VA9273-0QB00 |
| | | 40 mm / 1.6 inch | 12.5 mm / 0.5 inch | — | — | — | ✓ | 3VA9473-0QB00 |
|  | Front bus connectors extended kit of 4 single connectors and 1 insulating plate | 32 mm / 1.3 inch | 10 mm / 0.4 inch | — | — | ✓ | — | 3VA9274-0QB00 |
| | | 40 mm / 1.6 inch | 12.5 mm / 0.5 inch | — | — | — | ✓ | 3VA9474-0QB00 |
|  | Front bus connectors offset kit of 3 single connectors 1 insulating plate Distance between pole centers: 400/600 A = 70 mm / 2.76 inches | 60 mm / 2.4 inch | 12.5 mm / 0.5 inch | — | — | — | ✓ | 3VA9473-0QC00 |
|  | Front bus connectors offset kit of 4 single connectors 1 insulating plate Distance between pole centers: 400/600 A = 70 mm / 2.76 inches | 60 mm / 2.4 inch | 12.5 mm / 0.5 inch | — | — | — | ✓ | 3VA9474-0QC00 |

5





MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers





3VA Connection Technology

Selection

Rear connection studs flat

| | Type | For molded case circuit breakers / rated current | | | | Part Number |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Rear connection studs flat kit of 2 short flat studs and 1 long flat stud | ✓ | — | — | — | 3VA9133-0QE00 |
| | | — | ✓ | — | — | 3VA9233-0QE00 |
| | | — | — | ✓ | — | 3VA9243-0QE00 |
| | | — | — | — | ✓ | 3VA9473-0QE00 |
|  | Rear connection studs flat kit of 2 short flat studs and 2 long flat studs | ✓ | — | — | — | 3VA9134-0QE00 |
| | | — | — | ✓ | — | 3VA9244-0QE00 |
| | | — | — | — | ✓ | 3VA9474-0QE00 |
|  | Rear connection studs flat 1 short flat stud | ✓ | — | — | — | 3VA9131-0QE10 |
| | | — | ✓ | — | — | 3VA9231-0QE10 |
| | | — | — | ✓ | — | 3VA9241-0QE10 |
| | | — | — | — | ✓ | 3VA9471-0QE10 |
|  | Rear connection studs flat 1 long flat stud | ✓ | — | — | — | 3VA9131-0QE20 |
| | | — | ✓ | — | — | 3VA9231-0QE20 |
| | | — | — | ✓ | — | 3VA9241-0QE20 |
| | | — | — | — | ✓ | 3VA9471-0QE20 |

Rear connection studs round




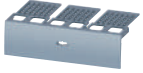
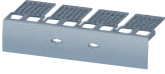




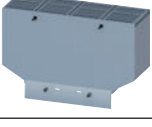
| | | | | | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---|---|---|---|---------------|
|  | Rear connection studs round kit of 1 long round stud and 2 short round studs | ✓ | — | — | — | 3VA9133-0QF00 |
| | | — | ✓ | — | — | 3VA9233-0QF00 |
| | | — | — | ✓ | — | 3VA9243-0QF00 |
| | | — | — | — | ✓ | 3VA9473-0QF00 |
|  | Rear connection studs round kit of 2 long round studs and 2 short round studs | ✓ | — | — | — | 3VA9134-0QF00 |
| | | — | — | ✓ | — | 3VA9244-0QF00 |
| | | — | — | — | ✓ | 3VA9474-0QF00 |
|  | Rear connection studs round 1 short round studs | ✓ | — | — | — | 3VA9131-0QF10 |
| | | — | ✓ | — | — | 3VA9231-0QF10 |
| | | — | — | ✓ | — | 3VA9241-0QF10 |
| | | — | — | — | ✓ | 3VA9471-0QF10 |
|  | Rear connection studs round 1 long round stud | ✓ | — | — | — | 3VA9131-0QF20 |
| | | — | ✓ | — | — | 3VA9231-0QF20 |
| | | — | — | ✓ | — | 3VA9241-0QF20 |
| | | — | — | — | ✓ | 3VA9471-0QF20 |

Molded Case Circuit Breakers

3VA Connection Technology

Selection

Phase barriers, terminal covers, and insulating plates

| | Type | For molded case circuit breakers / rated current | | | | Part Number |
|-------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Phase barriers kit of 2 phase barriers | ✓ | – | – | – | 3VA9132-0WA00 |
| | | – | ✓ | ✓ | – | 3VA9272-0WA00 |
| | | – | – | – | ✓ | 3VA9472-0WA00 |
|  | Terminal cover for 1-pole breakers | ✓ | – | – | – | 3VA9131-0WD10 |
|  | Terminal cover for 2-pole breakers | ✓ | – | – | – | 3VA9131-0WD20 |
|  | Terminal cover for 3-pole breakers | ✓ | – | – | – | 3VA9131-0WD30 |
| | | – | ✓ | ✓ | – | 3VA9271-0WD30 |
| | | – | – | – | ✓ | 3VA9471-0WD30 |
|  | Terminal cover for 4-pole breakers | ✓ | – | – | – | 3VA9131-0WD40 |
| | | – | – | ✓ | – | 3VA9271-0WD40 |
| | | – | – | – | ✓ | 3VA9471-0WD40 |
|  | Terminal cover extended for 2-pole breakers | ✓ | – | – | – | 3VA9131-0WF20 |
|  | Terminal cover extended for 3-pole breakers | ✓ | – | – | – | 3VA9131-0WF30 |
| | | – | ✓ | ✓ | – | 3VA9271-0WF30 |
| | | – | – | – | ✓ | 3VA9471-0WF30 |
|  | Terminal cover extended for 4-pole breakers | ✓ | – | – | – | 3VA9131-0WF40 |
| | | – | – | ✓ | – | 3VA9271-0WF40 |
| | | – | – | – | ✓ | 3VA9471-0WF40 |
|  | Terminal cover offset for 3-pole breakers | – | – | – | ✓ | 3VA9471-0WG30 |
|  | Terminal cover offset for 4-pole breakers | – | – | – | ✓ | 3VA9471-0WG40 |







5
MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

3VA Connection Technology

Selection

Phase barriers, terminal covers, and insulating plates

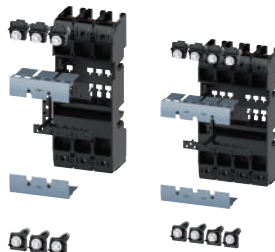
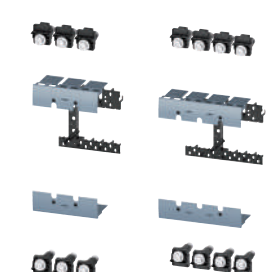
| | Type | For molded case circuit breakers / rated current | | | | Part Number |
|-------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Rear insulating plate extended for 2-pole breakers | ✓ | — | — | — | 3VA9131-0WJ20 |
|  | Rear insulating plate extended for 3-pole breakers | ✓ | — | — | — | 3VA9131-0WJ30 |
| | | — | ✓ | ✓ | — | 3VA9271-0WJ30 |
| | | — | — | — | ✓ | 3VA9471-0WJ30 |
|  | Rear insulating plate extended for 4-pole breakers | ✓ | — | — | — | 3VA9131-0WJ40 |
| | | — | — | ✓ | — | 3VA9271-0WJ40 |
| | | — | — | — | ✓ | 3VA9471-0WJ40 |
|  | Rear insulating plate offset for 3-pole breakers | — | — | — | ✓ | 3VA9471-0WK30 |
|  | Rear insulating plate offset for 4-pole breakers | — | — | — | ✓ | 3VA9471-0WK40 |
|  | Control wire tap for busbar (for fixed mounting) | — | ✓ | ✓ | — | 3VA9270-0WC00 |
| | | — | — | — | ✓ | 3VA9470-0WC00 |

Molded Case Circuit Breakers



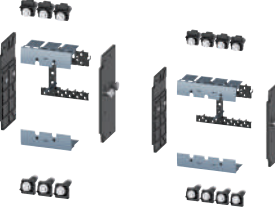
3VA Plug-in and Draw-out Technology

Selection

Plug-in socket

| | Type | For molded case circuit breakers / rated current | | | Part Number |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------|---------------|---------------|
| | | 3VA61/62 150A/250A | 3VA63 400A | 3VA64 600A | |
|  <p>3 pole 4 pole</p> | Plug-in unit, 3-pole, complete kit Consists of: Plug-in socket, Plug-in unit, conversion kit, Mounting screw kit | ✓ | — | — | 3VA9143-0KP00 |
| | | — | ✓ | — | 3VA9343-0KP00 |
| | | — | — | ✓ | 3VA9443-0KP00 |
| | Plug-in unit, 4-pole, complete kit Consists of: Plug-in socket, Plug-in unit, conversion kit, Mounting screw kit | ✓ | — | — | 3VA9144-0KP00 |
| | | — | ✓ | — | 3VA9344-0KP00 |
| | | — | — | ✓ | 3VA9444-0KP00 |
|  <p>3 pole 4 pole</p> | Plug-in unit, 3-pole, conversion kit Consists of: Screw-fastened terminal covers for molded case circuit breakers, Plug-in contacts, Cable cage, Autotrip plunger | ✓ | — | — | 3VA9143-0KP10 |
| | | — | ✓ | ✓ | 3VA9343-0KP10 |
| | Plug-in unit, 4-pole, conversion kit Consists of: Screw-fastened terminal covers for molded case circuit breakers, Plug-in contacts, Cable cage, Autotrip plunger | ✓ | — | — | 3VA9144-0KP10 |
| | | — | ✓ | ✓ | 3VA9344-0KP10 |

Draw-out units

| | Type | For molded case circuit breakers / rated current | | | Part Number |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------|---------------|---------------|
| | | 3VA61/62 150A/250A | 3VA63 400A | 3VA64 600A | |
|  | Draw-out unit, 3-pole, complete kit Consists of: Draw-out socket, Draw-out unit, conversion kit, Mounting screw kit | ✓ | — | — | 3VA9143-0KD00 |
| | | — | ✓ | — | 3VA9343-0KD00 |
| | | — | — | ✓ | 3VA9443-0KD00 |
|  | Draw-out unit, 4-pole, complete kit Consists of: Draw-out socket, Draw-out unit, conversion kit, Mounting screw kit | ✓ | — | — | 3VA9144-0KD00 |
| | | — | ✓ | — | 3VA9344-0KD00 |
| | | — | — | ✓ | 3VA9444-0KD00 |
|  <p>3 pole 4 pole</p> | Draw-out unit, 3-pole, conversion kit Consists of: Screw-fastened terminal covers, Side wall, Plug-in contacts, Cable cage, Autotrip plunger | ✓ | — | — | 3VA9143-0KD10 |
| | | — | ✓ | ✓ | 3VA9343-0KD10 |
| | Draw-out unit, 4-pole, conversion kit Consists of: Screw-fastened terminal covers, Side wall, Plug-in contacts, Cable cage, Autotrip plunger | ✓ | — | — | 3VA9144-0KD10 |
| | | — | ✓ | ✓ | 3VA9344-0KD10 |

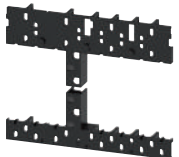





Note: Crank handle for the drawout unit must be ordered separately.

Molded Case Circuit Breakers

3VA Plug-in and Draw-out Technology

Selection

Accessories







| | Type | For molded case circuit breakers / rated current | | Part Number |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------|---------------|
| | | 3VA61/62 150A/250A | 3VA63/64 400A/600A | |
|  | | ✓ | — | 3VA9167-0KB02 |
| | | — | ✓ | 3VA9367-0KB02 |
|  | Door feedthrough | ✓ | — | 3VA9147-0KT00 |
| | | — | ✓ | 3VA9347-0KT00 |
|  | Autotrip plunger Plug-in unit | ✓ | — | 3VA9267-0KP81 |
| | | — | ✓ | 3VA9457-0KP81 |
| | Autotrip plunger Draw-out unit | ✓ | — | 3VA9267-0KD81 |
| | | — | ✓ | 3VA9457-0KD81 |
|  | Terminal cover for plug-in/draw-out unit, 3-pole (spare part) To provide circuit breaker touch protection, for mounting on the molded case circuit breaker | ✓ | — | 3VA9143-0KB01 |
| | | — | ✓ | 3VA9343-0KB01 |
|  | Terminal cover for plug-in/draw-out unit, 4-pole (spare part) To provide circuit breaker touch protection, for mounting on the molded case circuit breaker | ✓ | — | 3VA9144-0KB01 |
| | | — | ✓ | 3VA9344-0KB01 |
|  | Crank handle for draw-out unit Insulated, including crank holder | | | 3VA9987-0KD81 |

Molded Case Circuit Breakers

3VA Plug-in and Draw-out Technology

Selection

Other Accessories

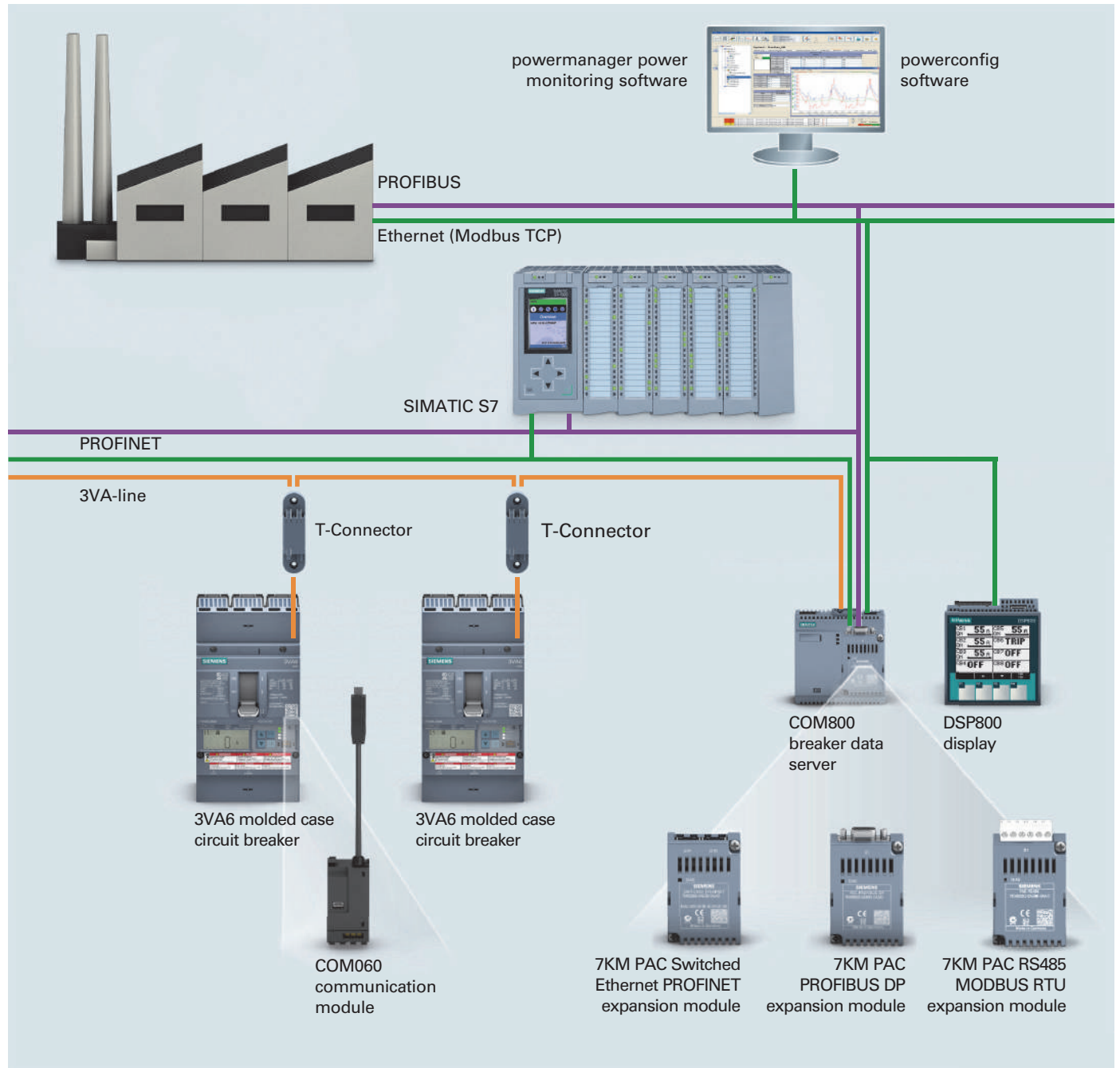
| | Type | Part Number |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
|  | Communication link for draw-out unit Consists of: Cable kit with 3 special position signaling switches, connecting cable 3VA9987-0KC10 | 3VA9977-0KC00 |
|  | Position signaling switches For draw-out unit | 3VA9977-0KB00 |
|  | Spare connecting cable To connect the position signaling switches for communication with the COM060 | 3VA9987-0KC10 |
|  | Auxiliary circuit connector <ul style="list-style-type: none"> ■ For draw-out units | 3VA9977-0KD80 |
|  | Auxiliary circuit connector <ul style="list-style-type: none"> ■ For plug-in units | 3VA9977-0KP80 |
|  | Cylinder lock (type Ronis) <ul style="list-style-type: none"> ■ Includes a lock with 2 keys ■ For locking ■ For installation in all rotary operators with shaft stub ■ For mounting in the adapter kit for the accessories component | 3VA9980-0VL10 3VA9980-0VL30 3VA9980-0VL40 |
|  | Cylinder lock adapter for draw-out unit <ul style="list-style-type: none"> ■ For fitting a cylinder lock in the right-hand side wall of the draw-out unit ■ To prevent unauthorized withdrawal or insertion of the circuit breaker; ■ Circuit breaker can be locked in the CONNECT, TEST, or DISCONNECT position | 3VA9970-0LF40 |

Molded Case Circuit Breakers

3VA Communication and Testing/Commissioning Devices

Selection

Communications overview







Molded Case Circuit Breakers






3VA Communication and Testing/Commissioning Devices

Selection

Modules

| | Type | For molded case circuit breakers / rated current | | Part Number |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------|---------------|
| | | 3VA61/62 150A/250 A | 3VA63/64 400A/600A | |
|  | 24 V Module <ul style="list-style-type: none"> 24 V DC For mounting in the right-hand accessories compartment of the 3VA6 Optional energy supply for the ETU, also includes continuous operation of the ETU display and the metering function of the ETU 8-series | ✓ | — | 3VA9177-0TB50 |
| | | — | ✓ | 3VA9377-0TB50 |
|  | COM060 communication module <ul style="list-style-type: none"> For mounting in the right-hand accessories compartment of the 3VA6 molded case circuit breaker (including ETU power supply) Communication with the COM800/COM100 breaker data server via the 3VA-line Including a T-Connector | ✓ | — | 3VA9177-0TB10 |
| | | — | ✓ | 3VA9377-0TB10 |
|  | Spare SLC adapter COM060, 24 V module accessory for: <ul style="list-style-type: none"> 3VA61/62 100/150/250 | ✓ | — | 3VA9187-0TB60 |
|  | Spare SLC adapter COM060, 24 V module accessory for: <ul style="list-style-type: none"> 3VA63/64 400/600 | — | ✓ | 3VA9387-0TB60 |

Breaker data server

| | Type | Part Number |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|  | COM800 breaker data server <ul style="list-style-type: none"> 2 terminating resistors Central communication module for connecting up to eight 3VA6 molded case circuit breakers via the 3VA-line Ethernet 10/100 Mbit/s interface Module slot for plugging on an optional PROFIBUS DP, PROFINET or RS485 module | 3VA9977-0TA10 |
|  | COM100 breaker data server <ul style="list-style-type: none"> 2 terminating resistors Central communication module for connecting one 3VA6 molded case circuit breaker Ethernet 10/100 Mbit/s interface Module slot for plugging on an optional PROFIBUS DP, PROFINET or RS485 module | 3VA9977-0TA20 |
|  | 7KM PAC PROFIBUS DP expansion module <ul style="list-style-type: none"> The 7KM PAC PROFIBUS DP expansion module is used for connecting the COM800/COM100 breaker data server, and the 3VA molded case circuit breakers connected to it, to PROFIBUS DPV1 The 7KM PAC PROFIBUS DP expansion module provides the status and measured quantities of the 3VA molded case circuit breaker for the PROFIBUS DP master. It receives information (e.g. commands) from the PROFIBUS DP master, and forwards this information to the 3VA molded case circuit breaker | 7KM9300-0AB01-0AA0 |
|  | 7KM PAC Switched Ethernet PROFINET expansion module <ul style="list-style-type: none"> The 7KM PAC Switched Ethernet PROFINET expansion module is used to connect the COM800/COM100 breaker data server, and the connected 3VA molded case circuit breaker, to PROFINET via two Ethernet interfaces The 7KM PAC Switched Ethernet PROFINET expansion module provides the status and measured quantities of the 3VA molded case circuit breaker to PROFINET via the PROFINET IO, PROFINET and Modbus TCP protocols | 7KM9300-0AE01-0AA0 |
|  | 7KM PAC RS485 Modbus RTU expansion module <ul style="list-style-type: none"> The 7KM PAC RS485 Modbus expansion module is used to connect the COM800/COM100 breaker data server, and the 3VA molded case circuit breaker connected to it, to Modbus RTU The 7KM PAC RS485 Modbus expansion module provides the status and measured quantities of the 3VA molded case circuit breaker for the Modbus RTU master. It receives information (e.g. commands) from the Modbus RTU master, and forwards this information to the 3VA molded case circuit breaker | 7KM9300-0AM00-0AA0 |

5

MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

3VA Communication and Testing/Commissioning Devices

Selection

Accessories for Communication



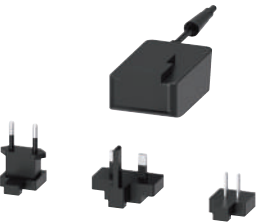

| | Type | Part Number |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|  | T-Connector <ul style="list-style-type: none"> ■ Spare part ■ Provides spur line feeder to COM060 and loops to the next circuit breaker ■ Includes a connection adapter for mounting on the 3VA6 breaker enclosure | 3VA9987-0TG10 |
|  | DIN rail adapter For snapping the T-Connector onto a DIN rail | 3VA9987-0TG11 |
|  | Preassembled T-Connector-to-T-Connector or T-Connector-to-COM800/ COM100 connecting cable <ul style="list-style-type: none"> ■ 0.4 m long | 3VA9987-0TC10 |
| | <ul style="list-style-type: none"> ■ 1 m long | 3VA9987-0TC20 |
| | <ul style="list-style-type: none"> ■ 2 m long | 3VA9987-0TC30 |
| | <ul style="list-style-type: none"> ■ 4 m long | 3VA9987-0TC40 |
|  | Preassembled connecting cable for extending the COM060-to-T-Connector spur line connection <ul style="list-style-type: none"> ■ 0.4 m long | 3VA9987-0TF20 |
| | <ul style="list-style-type: none"> ■ 0.8 m long | 3VA9987-0TF10 |
|  | Additional bus terminating resistors | 3VA9987-0TE10 |
|  | Voltage tap to external N conductor Cable for connecting the neutral point for the metering function of the 8-Series ETU, length 1.5 m | 3VA9987-0UC10 |
|  | External current transformer as straight-through transformer. Connection of an external current transformer for the N conductor for 3-pole 3VA6 molded case circuit breakers for 5-series and 8-series ETUs (ETU850, ETU856, ETU860), including connecting cable | 3VA9077-0NA10 |
| | <ul style="list-style-type: none"> ■ In = 25 ... 150A | 3VA9177-0NA10 |
| | <ul style="list-style-type: none"> ■ In = 160 ... 350 A | 3VA9377-0NA10 |
|  | DSP800 display <ul style="list-style-type: none"> ■ For displaying the status, measured values and parameters of up to 8 3VA6 molded cases circuit breakers ■ Connection to the COM800/COM100 via Ethernet for displaying information of the COM800/COM100 and the connected 3VA6 molded case circuit breaker | 3VA9977-0TD10 |
|  | EFB300 <ul style="list-style-type: none"> ■ External function box for connection to the ETU of the 3VA6 molded case circuit breaker ■ 4 digital outputs for information output, 1 digital input ■ ZSI functionality ■ S0 interface ■ Including cable 1.5 m in length | 3VA9977-0UA10 |
| | Connecting cable for EFB300 and MMB300. Spare part <ul style="list-style-type: none"> ■ 1.5 m long | 3VA9987-0UB10 |
| | <ul style="list-style-type: none"> ■ 3.0 m long | 3VA9987-0UB20 |
| | <ul style="list-style-type: none"> ■ 3.0 m long for 3VA with EFB and RCD820 | 3VA9987-0UB30 |

Molded Case Circuit Breakers


3VA Communication and Testing/Commissioning Devices

Selection

Test devices

| | Type | Part Number |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|  | <p>TD300</p> <ul style="list-style-type: none"> ■ Connection to the front interface of the ETU ■ Test device for activating the ETU and triggering a test trip | <p>3VA9977-0MA10</p> |
|  | <p>TD500</p> <ul style="list-style-type: none"> ■ Connection to the front interface of the ETU ■ Initiation of various test trips (LSING) ■ USB interface for connection of a PC using powerconfig ■ ETU parameterization ■ Including external power supply unit with adapter for Europe, UL and GB ■ Including connecting cable to the 3VA6 molded case circuit breaker | <p>3VA9977-0MB10</p> |
|  | <p>Spare part: External power supply for TD500 110 ... 240 V AC</p> | <p>3VA9987-0MX10</p> |
|  | <p>Spare part: Cable for connecting to the TD500 to the 3VA6 molded case circuit breaker</p> | <p>3VA9977-0MY10</p> |

Maintenance Mode Box








| | | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|  | <p>MMB300</p> <ul style="list-style-type: none"> ■ Realization of the NEC 240.87 (Arc Energy Reduction) -> personal protection during maintenance work ■ Switch into maintenance mode by changing the I- and G-protection to the lowest possible value through an external signal (e.g. door contact) ■ Available for all 3VA6 circuit breakers with electronic trip unit ■ Daisy chain up to 8 circuit breakers equipped with MMB300 ■ Additional digital output (D01) for ETU signals available ■ Capable of DIN rail mounting ■ Includes cable 1.5m in length | <p>3VA9977-0UF10</p> |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|

Molded Case Circuit Breakers

3VA Accessories for Locking, Blocking and Interlocking

Selection

Locking, Blocking, & Interlocking



| | Type | For molded case circuit breakers/rated current | | | | Part Number | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------|----------------------|------------------------------|---------------|---------------|
| | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | | |
|  | Blocking device for the handle | ✓ | — | — | — | 3VA9038-0LB10 | |
| | | — | ✓ | ✓ | ✓ | 3VA9378-0LB10 | |
|  | Adapter kit for mounting the cylinder lock (type Ronis) in the accessories compartment of the molded case circuit breaker Comprising 2 cylinder lock casings (one for locking and one for interlocking) and the appropriate mounting module <ul style="list-style-type: none"> To implement an interlock or a lock: select suitable cylinder lock(s) For an interlock: select the same cylinder lock number | ✓ | — | — | — | 3VA9137-0LF10 | |
| | | — | ✓ | — | — | 3VA9237-0LF10 | |
| | | — | — | ✓ | — | 3VA9147-0LF10 | |
| | | — | — | — | ✓ | 3VA9347-0LF10 | |
|  | Cylinder lock (type Ronis) <ul style="list-style-type: none"> Includes a lock with 2 keys For locking or interlocking For installation in all rotary operators with shaft stub For mounting in the adapter kit for the accessories compartment | | | | | | |
| | | <ul style="list-style-type: none"> Key 1 (lock number 1) | ✓ | ✓ | ✓ | ✓ | 3VA9980-0VL10 |
| | | <ul style="list-style-type: none"> Key 3 (lock number 3) | ✓ | ✓ | ✓ | ✓ | 3VA9980-0VL30 |
| | | <ul style="list-style-type: none"> Key 4 (lock number 4) | ✓ | ✓ | ✓ | ✓ | 3VA9980-0VL40 |
|  | Sliding bar Complete kit for interlocking 2 circuit breakers <ul style="list-style-type: none"> The article number must be ordered 2X to implement an interlock between 3 breakers of the same size | ✓ | — | — | — | 3VA9138-0VF30 | |
| | | — | ✓ | — | — | 3VA9238-0VF30 | |
| | | — | — | ✓ | — | 3VA9148-0VF30 | |
| | | — | — | — | ✓ | 3VA9348-0VF30 | |
|  | Module for handle interlock using a bowden cable <ul style="list-style-type: none"> A separate handle interlock module is required for each switching device A Bowden cable must be ordered separately | ✓ | — | — | — | 3VA9137-0VF10 | |
| | | — | ✓ | — | — | 3VA9237-0VF10 | |
| | | — | — | ✓ | — | 3VA9147-0VF10 | |
| | | — | — | — | ✓ | 3VA9347-0VF10 | |
|  | Rear interlock with rod Complete Kit <ul style="list-style-type: none"> Mounting frames are not included in scope of supply | ✓ | ✓ | ✓ | ✓ | 3VA9078-0VM10 | |
|  | Rear interlock with rod Complete Kit for plug-in/draw-out unit <ul style="list-style-type: none"> Mounting frames are not included in scope of supply | ✓ | ✓ | ✓ | ✓ | 3VA9078-0VM30 | |

Molded Case Circuit Breakers



3VA Accessories for Locking, Blocking and Interlocking

Selection

Locking, Blocking, & Interlocking

| | Type | For molded case circuit breakers/rated current | | | | Part Number |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Bowden cable | | | | | |
| | ▪ Length 0.6 m | ✓ | ✓ | ✓ | ✓ | 3VA9980-0VC10 |
| | ▪ Length 1.0 m | ✓ | ✓ | ✓ | ✓ | 3VA9980-0VC20 |
| | ▪ Length 1.5 m | ✓ | ✓ | ✓ | ✓ | 3VA9980-0VC30 |
|  | Mounting frame for rear interlock with rod ^② The following are required for the complete mounting frame kit: | | | | | |
| | ▪ Profile poles | ✓ | ✓ | ✓ | ✓ | 3VA9078-0VK10 |
| | ▪ Mounting Plates | ✓ | — | — | — | 3VA9138-0VK20 |
| | | — | ✓ | — | — | 3VA9238-0VK20 |
| | | — | — | ✓ | — | 3VA9248-0VK20 |
| | | — | — | — | ✓ | 3VA9448-0VK20 |

Cover frame for door cut-out

| | | | | | | |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---|---|---|---------------|---------------|
|  | Cover frame for door cut-out for molded case circuit breaker ▪ 3-pole, door cut-out without trip unit | ✓ | — | — | — | 3VA9033-0SB10 |
| | | — | ✓ | ✓ | — | 3VA9143-0SB10 |
| | | — | — | — | ✓ | 3VA9373-0SB10 |
| | Cover frame for door cut-out for molded case circuit breaker ▪ 3-pole, door cut-out with trip unit | ✓ | — | — | — | 3VA9033-0SB20 |
| | | — | ✓ | — | — | 3VA9233-0SB20 |
| | | — | — | ✓ | — | 3VA9143-0SB20 |
| | | — | — | — | ✓ | 3VA9343-0SB20 |
| | Cover frame for door cut-out for molded case circuit breaker ▪ 4-pole, door cut-out without trip unit | ✓ | — | — | — | 3VA9034-0SB10 |
| | | — | ✓ | ✓ | — | 3VA9144-0SB10 |
| | | — | — | — | ✓ | 3VA9374-0SB10 |
| | Cover frame for door cut-out for molded case circuit breaker ▪ 4-pole, door cut-out with trip unit | ✓ | — | — | — | 3VA9034-0SB20 |
| | | — | ✓ | — | — | 3VA9234-0SB20 |
| | | — | — | ✓ | — | 3VA9144-0SB20 |
| | | — | — | — | ✓ | 3VA9344-0SB20 |
| | Cover frame for door cut-out for MO320 motor operators | ✓ | — | — | — | 3VA9033-0SB10 |
| — | | ✓ | ✓ | — | 3VA9237-0SB30 | |
| — | | — | — | ✓ | 3VA9377-0SB30 | |
| Cover frame for door cut-out for front mounted rotary operators | ✓ | — | — | — | 3VA9033-0SB10 | |
| | — | ✓ | ✓ | — | 3VA9143-0SB10 | |
| | — | — | — | ✓ | 3VA9373-0SB10 | |
| | — | — | — | ✓ | 3VA9377-0SB30 | |
| Cover frame for door cut-out for front mounted rotary operator with door interlock | — | — | — | ✓ | 3VA9377-0SB30 | |
| | — | ✓ | ✓ | — | 3VA9233-0SB20 | |
| Cover frame for door cut-out for door feedthrough | — | — | — | ✓ | 3VA9333-0SB20 | |
| | — | — | — | — | 3VA9333-0SB20 | |
|  | Labeling plate for cover frame | | | | | 3VA9087-0SX10 |

① 2 mounting plates are required. They are screwed onto the profile rail that can be ordered above. Different breakers can be mutually interlocked.




② Breakers with plug-in unit can be mounted on the mounting plates, but the profile rails cannot be used.

Molded Case Circuit Breakers

3VA Accessories and Spare Parts

Selection

Other accessories

| | Type | For molded case circuit breakers/rated current | | | | Part Number |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------|----------------------|------------------------------|---------------|
| | | 3VA5 125A | 3VA5 250A | 3VA6 150A 250A | 3VA5 3VA6 400A 600A | |
|  | Busbar adapter system with 60 mm busbar center-to-center spacing 3-pole | ✓ | — | — | — | 8US1211-4SS00 |
| | | — | ✓ | ✓ | — | 8US1213-4AP03 |
| | | — | — | — | ✓ | 8US1213-4AH04 |
|  | Busbar adapter system with 60 mm busbar center to center spacing, bottom fed, 3-pole | ✓ | — | — | — | 8US1215-4SS00 |
|  | Metric mounting screw kit For fixed mounted breakers 1-pole | ✓ | — | — | — | 3VA9151-0SS10 |
| | Metric mounting screw kit (2 pcs) For fixed mounted breakers 2-pole | ✓ | — | — | — | 3VA9116-0SS10 |
| | Metric mounting screw kit (4 pcs) For fixed mounted breakers 3-,4-pole | ✓ | ✓ | — | — | 3VA9114-0SS10 |
| | Metric mounting screw kit For fixed mounted breakers 3-pole | — | — | ✓ | — | 3VA9126-0SS10 |
| | Metric mounting screw kit For fixed mounted breakers 4-pole | — | — | ✓ | — | 3VA9124-0SS10 |
| | Metric mounting screw kit For fixed mounted breakers 3-,4-pole | — | — | — | ✓ | 3VA9328-0SS10 |
| | Metric mounting screw kit For plug-in and draw-out unit | — | — | ✓ | — | 3VA9124-0SS10 |
| | SAE mounting screw kit (2 pcs) For fixed mounted breakers 1-pole | ✓ | | | | 3VA9151-0SS00 |
| | SAE Mounting screw kit (2 pcs) For fixed mounted breakers 2-,3-pole | ✓ | | | | 3VA9156-0SS00 |
| | SAE Mounting screw kit (4 pcs) For fixed mounting breakers 4-pole | ✓ | | | | 3VA9154-0SS00 |
| | SAE Mounting screw kit (4 pcs) For fixed mounted breakers 3-,4-pole and 3VA6 150/250 plug-in and draw-out units | | ✓ | ✓ | | 3VA9164-0SS00 |
| | SAE Mounting screw kit (2 pcs) For fixed mounted breakers 2-,3-pole | | ✓ | ✓ | | 3VA9166-0SS00 |
| | SAE Mounting screw kit (4 pcs) For fixed mounted breakers 2-,3-,4-pole and 3VA6 400/600 plug-in and draw-out units | | | | ✓ | 3VA9368-0SS00 |

Molded Case Circuit Breakers

3VA Accessory Electrical Requirements

Technical data

Auxiliary switches electrical requirements

| | | | | Auxiliary switches and alarm switches HQ | | | | Auxiliary switches and alarm switches HQ_electronic | | | | Auxiliary switches and alarm switches HP | | | |
|-------------------------------------------|------------------------------|----------------|------|------------------------------------------|-----|-----|-----|-----------------------------------------------------|-----|-----|------|------------------------------------------|-----|-----|--|
| | | | | AUX | LCS | TAS | EAS | AUX | LCS | TAS | EAS | AUX | LCS | TAS | |
| Rated operational voltage | U_e | V AC 50 Hz | | 240 | | | | 24 | | | | 600 | | | |
| | | V DC | | 250 | | | | 24 | | | | 250 | | | |
| Conventional free-air thermal current | | $I_{th} = I_e$ | A | 6 | | | | 0.3 | | | | 10 | | | |
| IEC Ratings Listed | AC-12 | 12 V | A | 6 | | | | 0.3 | | | | 10 | | | |
| | | 24 V | A | 6 | | | | 0.3 | | | | 10 | | | |
| | | 48 V | A | 6 | | | | — | | | | 10 | | | |
| | | 125 V | A | 6 | | | | — | | | | 10 | | | |
| | | 220/240 V | A | 6 | | | | — | | | | 10 | | | |
| | | 380/440 V | A | — | | | | — | | | | 6 | | | |
| | | 600 V | A | — | | | | — | | | | 2 | | | |
| | | AC-15 | 12 V | A | 3 | | | | 0.3 | | | | 6 | | |
| | | 2/4 V | A | 3 | | | | 0.3 | | | | 6 | | | |
| | | 48 V | A | 3 | | | | — | | | | 6 | | | |
| | | 125 V | A | 3 | | | | — | | | | 6 | | | |
| | | 220/240 V | A | 3 | | | | — | | | | 6 | | | |
| | | 380/440 V | A | — | | | | — | | | | 2 | | | |
| | | 600 V | A | — | | | | — | | | | 0.6 | | | |
| | | DC-12 | 12 V | A | 6 | | | | 0.1 | | | | 6 | | |
| | | | 24 V | A | 4 | | | | 0.1 | | | | 6 | | |
| | | 48 V | A | 2 | | | | — | | | | 2 | | | |
| | | 110 V | A | 0.5 | | | | — | | | | 0.6 | | | |
| | | 250 V | A | 0.25 | | | | — | | | | 0.3 | | | |
| | DC-13 | 12 V | A | 1 | | | | 0.07 | | | | 3 | | | |
| | | 24 V | A | 0.8 | | | | 0.07 | | | | 3 | | | |
| | | 48 V | A | 0.4 | | | | — | | | | 0.8 | | | |
| | | 110 V | A | 0.2 | | | | — | | | | 0.2 | | | |
| | | 250 V | A | 0.1 | | | | — | | | | 0.1 | | | |
| Max. Rated current (UL/CSA) | Inductive load (0.75-0.8 AC) | 24 V | A | 3 | | | | 0.3 | | | | 6 | | | |
| | | 300 V | A | 3 | | | | — | | | | 6 | | | |
| | | 600 V | A | — | | | | — | | | | 6 | | | |
| | Pilot duty (AC) | 24 V | A | 3 | | | | — | | | | 6 | | | |
| | | 127 V | A | 3 | | | | — | | | | 6 | | | |
| | | 240 V | A | 3 | | | | — | | | | 3 | | | |
| | | 480 V | A | — | | | | — | | | | 1.5 | | | |
| | | 600 V | A | — | | | | — | | | | 1.2 | | | |
| Resistive load (DC) | 24 V | A | 0.25 | | | | 0.1 | | | | 0.3 | | | | |
| | 250 V | A | 0.25 | | | | — | | | | 0.3 | | | | |
| Resistive load - pilot duty sequence (DC) | 125 V | A | 0.6 | | | | — | | | | 0.9 | | | | |
| | 250 V | A | 0.3 | | | | — | | | | 0.55 | | | | |
| Minimum Load | At 24 V DC | mA | 70 | | | | 0.5 | | | | 70 | | | | |
| | At 5 V DC | mA | — | | | | 1 | | | | — | | | | |

Molded Case Circuit Breakers

3VA Accessory Electrical Requirements

Technical data

Shunt trip/undervoltage electrical requirements

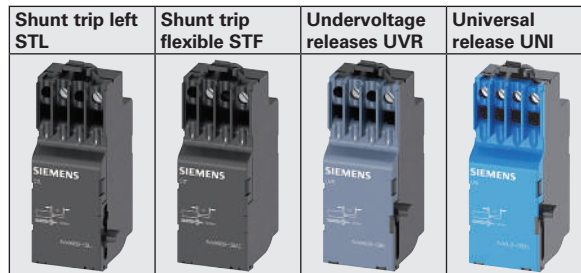
| | | | | Shunt trip left STL | Shunt trip flexible STF | Undervoltage releases UVR | Universal release UNI |
|-------------------------|-----------------------------|-----------------------------|----|------------------------|----------------------------|------------------------------|--------------------------|
| Power consumption U_e | 12 | V DC | W | 50 | — | — | — |
| | 24 | 50 V AC/60 Hz | VA | 50 | — | — | — |
| | 24 ... 30 | V DC | W | 7 ... 50 | — | — | — |
| | 48 ... 60 | 50 V AC/60 Hz | VA | 15 ... 20 | — | — | — |
| | 48 ... 60 | V DC | W | 20 ... 30 | — | — | — |
| | 110 ... 127 | 50 V AC/60 Hz | VA | 30 ... 40 | — | — | — |
| | 110 ... 127 | V DC | W | 30 ... 40 | — | — | — |
| | 208 ... 277 | 50 V AC/60 Hz | VA | 16 ... 35 | — | — | — |
| | 220 ... 250 | V DC | W | 28 ... 35 | — | — | — |
| | 380 ... 600 | 50 V AC/60 Hz | VA | 10 ... 30 | — | — | — |
| | 24 | 50 V AC/60 Hz | VA | — | 300 | — | — |
| | 48 ... 60 | 50 V AC/60 Hz | VA | — | 340 ... 600 | — | — |
| | 110 ... 127 | 50 V AC/60 Hz | VA | — | 500 ... 650 | — | — |
| | 208 ... 277 | 50 V AC/60 Hz | VA | — | 360 ... 650 | — | — |
| | 380 ... 500 | 50 V AC/60 Hz | VA | — | 330 ... 600 | — | — |
| | 600 | 50 V AC/60 Hz | VA | — | 300 | — | — |
| | 12 | V DC | W | — | — | < 2.5 | — |
| | 24 | V DC | W | — | — | < 2.5 | — |
| | 48 | V DC | W | — | — | < 2.5 | — |
| | 60 | V DC | W | — | — | < 2.5 | — |
| | 125 ... 127 | V DC | W | — | — | < 2.5 | — |
| | 220 ... 230 | V DC | W | — | — | < 2.5 | — |
| | 250 | V DC | W | — | — | < 2.5 | — |
| | 24 | 50 V AC/60 Hz | VA | — | — | < 2 | — |
| | 48 | 50 V AC/60 Hz | VA | — | — | < 2 | — |
| | 60 | 50 V AC/60 Hz | VA | — | — | < 2 | — |
| | 110 | 50 V AC/60 Hz | VA | — | — | < 2 | — |
| | 120 ... 127 | 50 V AC/60 Hz | VA | — | — | < 2 | — |
| | 208 ... 230 | 50 V AC/60 Hz | VA | — | — | < 2 | — |
| | 380 ... 400 | 50 V AC/60 Hz | VA | — | — | < 2.5 | — |
| | 440 ... 480 | 50 V AC/60 Hz | VA | — | — | < 2.5 | — |
| | 12 | V DC (Cat II; PELV/SELV) | W | — | — | — | UVR: < 2.5□ SHT: 20 |
| | 24 | V DC (Cat II; PELV/SELV) | W | — | — | — | UVR: < 2.5□ SHT: 20 |
| 48 | V DC (Cat II; PELV/SELV) | W | — | — | — | UVR: < 2.5□ SHT: 20 | |

Molded Case Circuit Breakers

3VA Accessory Electrical Requirements

Technical data

Shunt trip/undervoltage electrical requirements



| | | | | Shunt trip left STL | Shunt trip flexible STF | Undervoltage releases UVR | Universal release UNI |
|--------------------------------------------------------------------------------|----------------------------------------------------|---------|---|---------------------|-------------------------|---------------------------|-----------------------|
| Rated impulse withstand voltage | U_{imp} | kV | | 6 | | 4 | 0.5 |
| Making current | I_{max} | at V | | 1.5 A/24 V AC | 18 A/24 V AC | 5 mA/480 V | 1.5 A/24 V |
| Maximum tripping time | | ms | | < 10 | | | |
| Service life | Electrical trips | | | 8500 | | | |
| | Mechanical switching cycles of the circuit breaker | | | 25000 | | | |
| Priority over other control signals | | | | Given | | | |
| Degree of protection | Lid of the accessories compartment closed | | | IP40 | | | |
| | Lid of the accessories compartment open | | | IP 20 | | | |
| Minimum signal duration | | ms | | 40 | 40 | — | 40 |
| Response voltage shunt trip | Pick-up (circuit breaker trips) | U_s/V | % | 70 ... 110 | | — | 70 ... 110 |
| Undervoltage release response voltage | Pick-up (circuit breaker can be switched on) | U_s/V | % | — | — | 85 ... 110 | |
| | Pick-up (circuit breaker trips) | U_s/V | % | — | — | 35 ... 70 | |
| Tripping frequency | Trips per hour | | | Unlimited | 120 | Unlimited | |
| Can be used for electrical interlocking of molded case circuit breakers | | | | No | No | Yes | |

Motor operator electrical requirements

| MO320 motor operator | 3VA5 | 3VA5 | 3VA5/ 3VA6 | 3VA5/ 3VA6 |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------|-------------|-------------|
| | 125 A | 250 A | 150 A/250 A | 400 A/600 A |
| Degree of protection | NEMA 1 | | | |
| Rated control supply voltage (operating range of control supply voltage) | 24 V ... 60 V DC (0.85 ... 1.26) 110 V ... 230 V AC/ 110 V ... 250 V DC (0.85 ... 1.1)" | | | |
| Rating | 250 W, max. 500 W (60 ms) | | | |
| Make time, typically | < 800 ms | < 1000 ms | < 1700 ms | |
| Break time, typically | < 800 ms | < 1000 ms | < 1400 ms | |



Molded Case Circuit Breakers

ED 125A Frame Sentron Series

Selection

Ordering Instructions

- All ED Frame Sentron circuit breakers are supplied with load side lugs. If line side lugs are required, add "L" suffix to catalogue number. Consult Siemens sales office for any additional charge.
- 50°C Calibration, 400HZ - see page 5-67. All ED frame circuit breakers may be reverse connected.

Type ED2⁵

Blue Label

| Continuous Current Rating @ 40°C | 1-Pole | | 2-Pole | | 3-Pole |
|----------------------------------|-----------------------|---------|------------------|--------------------|------------------|
| | 120V AC | 125V DC | 240V AC | 125V DC 250V DC | 240V AC |
| | Catalogue Number | | Catalogue Number | | Catalogue Number |
| 15 | ED21B015 ^④ | | — | | ED23B015 |
| 20 | ED21B020 ^④ | | ED22B020 | | ED23B020 |
| 25 | ED21B025 | | ED22B025 | | ED23B025 |
| 30 | ED21B030 | | ED22B030 | | ED23B030 |
| 35 | ED21B035 | | ED22B035 | | ED23B035 |
| 40 | ED21B040 | | ED22B040 | | ED23B040 |
| 45 | ED21B045 | | ED22B045 | | ED23B045 |
| 50 | ED21B050 | | ED22B050 | | ED23B050 |
| 60 | ED21B060 | | ED22B060 | | ED23B060 |
| 70 | ED21B070 | | ED22B070 | | ED23B070 |
| 80 | ED21B080 | | ED22B080 | | ED23B080 |
| 90 | ED21B090 | | ED22B090 | | ED23B090 |
| 100 | ED21B100 | | ED22B100 | | ED23B100 |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|----------------------------|-------------------|------------------------|
| ED2, ED4, ED6, HED4 | | |
| 1 | 30 | 38 |
| 2 | 10 | 25 |
| 3 | 10 | 38 |
| CED6 | | |
| 2 | 5 | 20 |
| 3 | 5 | 30 |

Lugs

| Ampere Rating | No. of Poles | Catalogue Number | Wire Range |
|-------------------------------|--------------|-------------------------------------------|--------------------------------|
| Aluminum Body Lugs | | | |
| All 15–25A | 1, 2, 3 | Line/Load SA1E025 | #14–#10 Cu #12–#10 Al |
| All 30–100A | 1, 2, 3 | Line Side LN1E100 | #10–1/0 Cu/Al |
| ED2, 4, CED6 30–60A | 1 | Load Side LD1E060 | #10–#4 Cu/Al |
| ED2, 4, CED6 70–100A | 1 | Load Side LD1E100 | #6–#1/0 Cu/Al |
| ED2, 4, 6, HED4 30–100A | 2, 3 | Load Side LN1E100 | #10–1/0 Cu/Al |
| All 110, 125A | 2, 3 | Line/Load TA1E6125 | #3–3/0 Cu #1–2/0 Al |
| Copper Body Lugs | | | |
| All 30–125A only | 1, 2, 3 | Line/Load TC1ED6150^⑤ | #10–1/0 Cu |
| Compression Lugs | | | |
| All ED, CED | | CCE125 | 2/0 |

Type ED4⁵

Blue Label

| Continuous Current Rating @ 40°C | 1-Pole | | 2-Pole | | 3-Pole |
|----------------------------------|-----------------------|---------|------------------|---------|------------------|
| | 120V AC | 125V DC | 480V AC | 250V DC | 480V AC |
| | Catalogue Number | | Catalogue Number | | Catalogue Number |
| 15 | ED41B015 ^④ | | — | | ED43B015 |
| 20 | ED41B020 ^④ | | ED42B020 | | ED43B020 |
| 25 | ED41B025 | | ED42B025 | | ED43B025 |
| 30 | ED41B030 | | ED42B030 | | ED43B030 |
| 35 | ED41B035 | | ED42B035 | | ED43B035 |
| 40 | ED41B040 | | ED42B040 | | ED43B040 |
| 45 | ED41B045 | | ED42B045 | | ED43B045 |
| 50 | ED41B050 | | ED42B050 | | ED43B050 |
| 60 | ED41B060 | | ED42B060 | | ED43B060 |
| 70 | ED41B070 | | ED42B070 | | ED43B070 |
| 80 | ED41B080 | | ED42B080 | | ED43B080 |
| 90 | ED41B090 | | ED42B090 | | ED43B090 |
| 100 | ED41B100 | | ED42B100 | | ED43B100 |
| 110 | — | | ED42B110 | | ED43B110 |
| 125 | — | | ED42B125 | | ED43B125 |

Type ED6⁵

Blue Label

| Continuous Current Rating @ 40°C | 1-Pole | | 2-Pole | | 3-Pole | |
|----------------------------------|------------------|--|------------------|---------|------------------|---------|
| | 347V AC | | 600V AC | 250V DC | 600V AC | 500V DC |
| | Catalogue Number | | Catalogue Number | | Catalogue Number | |
| 15 | ED61B015 | | — | | ED63B015 | |
| 20 | ED61B020 | | ED62B020 | | ED63B020 | |
| 25 | ED61B025 | | ED62B025 | | ED63B025 | |
| 30 | ED61B030 | | ED62B030 | | ED63B030 | |
| 35 | ED61B035 | | ED62B035 | | ED63B035 | |
| 40 | ED61B040 | | ED62B040 | | ED63B040 | |
| 45 | ED61B045 | | ED62B045 | | ED63B045 | |
| 50 | ED61B050 | | ED62B050 | | ED63B050 | |
| 60 | ED61B060 | | — | | ED63B060 | |
| 70 | ED61B070 | | — | | ED63B070 | |
| 80 | ED61B080 | | — | | ED63B080 | |
| 90 | ED61B090 | | — | | ED63B090 | |
| 100 | ED61B100 | | — | | ED63B100 | |
| 110 | — | | — | | ED63B110 | |
| 125 | — | | — | | ED63B125 | |

Note: ED frame circuit breakers qualified to UL 489 Supplement SB "Naval" – See page 5-79 for additional information

①CSA Certified only (Not UL)

②For CED types and all 110–125 ampere ED frames.

③See Note: A, page 5-64.

④SWD rated.
⑤HACR rated.

Modifications page 5-137
Accessories page 5-138

Molded Case Circuit Breakers

ED 125A Frame Sentron Series

Selection

Type HED4^④

Black Label

| Continuous Current Rating @ 40°C | 1-Pole | | 2-Pole | | 3-Pole |
|----------------------------------|------------------------|---------|------------------|---------|------------------|
| | 277V AC | 125V DC | 480V AC | 250V DC | 480V AC |
| | Catalogue Number | | Catalogue Number | | Catalogue Number |
| 15 | HED41B015 ^① | | HED42B015 | | HED43B015 |
| 20 | HED41B020 ^① | | HED42B020 | | HED43B020 |
| 25 | HED41B025 | | HED42B025 | | HED43B025 |
| 30 | HED41B030 | | HED42B030 | | HED43B030 |
| 35 | HED41B035 | | HED42B035 | | HED43B035 |
| 40 | HED41B040 | | HED42B040 | | HED43B040 |
| 45 | HED41B045 | | HED42B045 | | HED43B045 |
| 50 | HED41B050 | | HED42B050 | | HED43B050 |
| 60 | HED41B060 | | HED42B060 | | HED43B060 |
| 70 | HED41B070 | | HED42B070 | | HED43B070 |
| 80 | HED41B080 | | HED42B080 | | HED43B080 |
| 90 | HED41B090 | | HED42B090 | | HED43B090 |
| 100 | HED41B100 | | HED42B100 | | HED43B100 |
| 110 | — | | HED42B110 | | HED43B110 |
| 125 | — | | HED42B125 | | HED43B125 |

Fuseless Current Limiting

Type CED6

Red Label

| Continuous Current Rating @ 40°C | 2-Pole | | 3-Pole |
|----------------------------------|------------------|--|-------------------------------|
| | 600V AC, 250V DC | | 600V AC, 500V DC ^② |
| | Catalogue Number | | Catalogue Number |
| 15 | — | | CED63B015 |
| 20 | CED62B020 | | CED63B020 |
| 25 | — | | — |
| 30 | CED62B030 | | CED63B030 |
| 35 | — | | — |
| 40 | CED62B040 | | CED63B040 |
| 45 | — | | — |
| 50 | CED62B050 | | CED63B050 |
| 60 | CED62B060 | | CED63B060 |
| 70 | CED62B070 | | CED63B070 |
| 80 | CED62B080 | | CED63B080 |
| 90 | CED62B090 | | CED63B090 |
| 100 | CED62B100 | | CED63B100 |
| 110 | — | | CED63B110 |
| 125 | CED62B125 | | CED63B125 |

Interrupting Ratings

| Breaker Type | CSA C22.2 No.5-02 / UL 489 AIR (File #E10848) | | | | | | | | | IEC 947-2 | | | | | |
|---------------------------------------------------------------------------------|-----------------------------------------------|-----|-----|-----------------|-----|-----|-----|----------|------------------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | RMS Symmetrical Amperes (KA) | | | | | | | | | Volts AC (50/60Hz) | | | | | |
| | Volts AC | | | Volts DC | | | | | | 220/240 | | 380/415 | | 500 | |
| | 120 | 240 | 277 | 347 | 480 | 600 | 125 | 250 | 500 ^③ | I _{cu} | I _{cs} | I _{cu} | I _{cs} | I _{cu} | I _{cs} |
| ED2 (1-P) ED2 (2, 3-P) | 10 | — | — | — | — | — | 5 | — | — | — | — | — | — | — | — |
| ED4 (1-P) ED4 (2, 3-P) | 65 | — | 22 | — | — | 18 | 30 | — | — | — | — | — | — | — | — |
| ED6 (1P) ED6 (2, 3-P) | — | — | — | 30 ^④ | — | — | — | — | — | — | — | — | — | — | — |
| HED4 (1-P) (15-30A) HED4 (1-P) (35-100A) HED4 (2, 3-P) ^⑤ | 100 | — | 65 | — | — | — | 30 | — | — | — | — | — | — | — | — |
| CED6 (2, 3-P) | — | 200 | — | — | 200 | 100 | — | 30 (2-P) | 50 (3-P) | — | — | — | — | — | — |

① SWD rated.

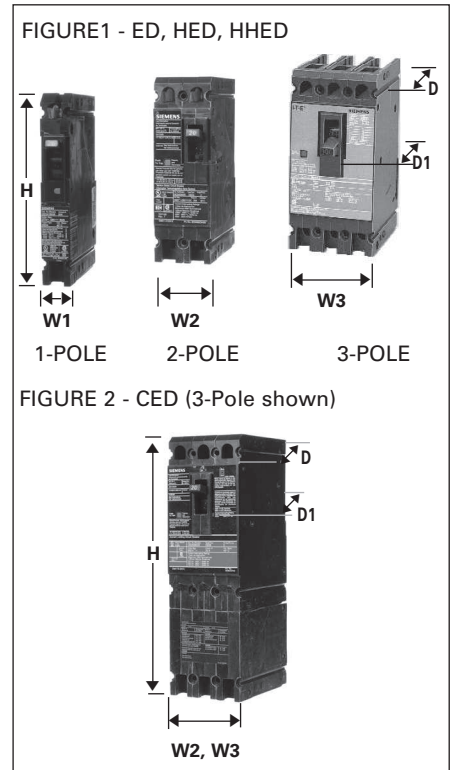
② When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL listed and rated for use on 500V DC ungrounded UPS systems.

③ HED4 type circuit breakers meet the CSA / UL criteria for "current limiting" at 240V AC.

④ ED6-ETI, CED6-ETI, see page 5-59 for ordering information.

⑤ Single Pole 15-30A 30KA @ 347V CSA only. 35-100A 18KA @ 347V CSA only.

⑥ HACR rated.



Dimensions (in inches)

| Breaker Type | W1 | W2 | W3 | H | D | D1 |
|---------------------------------------------|----|----|----|------|------|------|
| Figure 1 ED2, ED4, ED6, HED4, ED6 ETI | 1 | 2 | 3 | 6.35 | 3.92 | 4.56 |
| Figure 2 CED6, CED6 ETI | — | 2 | 3 | 9.58 | 3.92 | 4.56 |

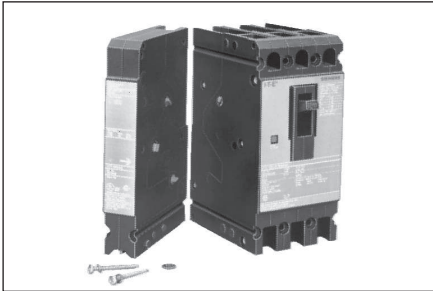
Molded Case Circuit Breakers

Accessories

Selection

Accessories for:

ED 125A Frame



Combinations

Available only when ordered together.

Only one module can be added to a breaker. Additional accessories, which always attach to the left pole, cannot be added to the combination later. Adds 1 inch pole space.

Equipment Ground Sensing

A field addable kit containing 30mA or 5 mA ground fault accessory module, current transformer with 24 inch leads, and current transformer mounting equipment. Current transformer to mount in gutter of lighting panel or any control panel. **Accessory module operates from separate 120V control power source.**

Both 30MA and 5MA devices are equipment protection devices only. **Do not use for personnel protection.**



Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch | 1 Shunt Trip and 1 Auxiliary Switch and 1 Alarm Switch | 1 Shunt Trip and 1 Alarm Switch | 1 Shunt Trip and 2 Auxiliary Switches |
|-----------------|-----|------------------|-------------------------------------|--------------------------------------------------------|---------------------------------|---------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| 24 | — | S17ED60 | — | — | — | — |
| 48 | — | S18ED60 | — | — | — | — |
| 120 | — | S01ED60 | S01ED62A | S01ED62AB | S01ED62B | S01ED62AA |
| 208 | — | — | S02ED62A | S02ED62AB | S02ED62B | S02ED62AA |
| 240 | — | S03ED60 | S03ED62A | S03ED62AB | S03ED62B | S03ED62AA |
| 277 | — | S15ED60 | S15ED64A | S15ED64AB | S15ED64B | — |
| 480 | — | S04ED60 | S04ED64A | S04ED64AB | S04ED64B | — |
| — | 12 | S16ED60 | S16ED62A | — | — | — |
| — | 24 | S07ED60 | S07ED62A | S07ED62AB | S07ED62B | S07ED62AA |
| — | 48 | S09ED60 | S09ED62A | S09ED62AB | S09ED62B | S09ED62AA |
| — | 125 | S11ED60 | S11ED62A | S11ED62AB | S11ED62B | S11ED62AA |
| — | 250 | S13ED60 | S13ED62A | S13ED62AB | S13ED62B | S13ED62AA |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 1 Auxiliary Switch and 1 Alarm Switch | 1 Undervoltage Trip and 1 Alarm Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|---------------------------------------------------------------|----------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01ED60 | U01ED62A | U01ED62AB | U01ED62B | U01ED62AA |
| 208 | — | U02ED60 | U02ED62A | U02ED62AB | U02ED62B | U02ED62AA |
| 240 | — | U03ED60 | U03ED62A | U03ED62AB | U03ED62B | U03ED62AA |
| 277 | — | U16ED60 | U16ED64A | U16ED64AB | U16ED64B | — |
| 480 | — | U06ED60 | U06ED64A | U06ED64AB | U06ED64B | — |
| 600 | — | U08ED60 | — | — | — | — |
| — | 24 | U13ED60 | U13ED62A | U13ED62AB | U13ED62B | U13ED62AA |
| — | 48 | U14ED60 | U14ED62A | U14ED62AB | U14ED62B | U14ED62AA |
| — | 125 | U10ED60 | U10ED62A | U10ED62AB | U10ED62B | U10ED62AA |
| — | 250 | U12ED60 | U12ED62A | — | — | U12ED62AA |

Auxiliary and Alarm Switch Combinations

| Maximum Voltage | | 1 Auxiliary Switch* | 1 Alarm Switch | Alarm Switch and 1 Auxiliary Switch | 2 Auxiliary Switches | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|---------------------|------------------|-------------------------------------|------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| 240 | 250 | A01ED62 | B00ED62 | A01ED62B | A02ED62 | A02ED62B |
| 480 | — | A01ED64 | B00ED64 | A01ED64B | — | — |
| — | 12 | A01EDLV* | | | Gold Plated Contacts — for PLC use | |

Alarm Switch Only

| Maximum Voltage | | 1 Alarm Switch |
|-----------------|-----|------------------|
| AC | DC | Catalogue Number |
| 240 | 250 | B00ED62 |
| 480 | — | B00ED64 |

Ground Fault Sensing Relay Kit — Equipment Protection Only

| For Use With Breaker Frame | Number of Poles | Description | Catalogue Number | |
|----------------------------|-----------------|-------------------------------------------|------------------|------------|
| | | | 30mA | 5mA |
| ED2, ED4, ED6, HED4, CED6 | 1, 2, 3 | Basic Kit | GF01ED60 | GF01ED65 |
| | | Basic Kit with Normally Open Bell Alarm | GF01ED60B0 | GF01ED65B0 |
| | | Basic Kit with Normally Closed Bell Alarm | GF01ED60BC | GF01ED65BC |

Molded Case Circuit Breakers

FD 250A Frame Sentron Series

Selection

Type FXD6-A^{①②}

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker – Without Lugs) | | | |
|---------------------------------------------------------------------|---------------------|-----------|------------------|
| Continuous Current Rating @ 40°C | 2-Pole ^③ | | 3-Pole |
| | Catalogue Number | | Catalogue Number |
| 70 | FXD62B070 | FXD63B070 | FXD63B070 |
| 80 | FXD62B080 | FXD63B080 | FXD63B080 |
| 90 | FXD62B090 | FXD63B090 | FXD63B090 |
| 100 | FXD62B100 | FXD63B100 | FXD63B100 |
| 110 | FXD62B110 | FXD63B110 | FXD63B110 |
| 125 | FXD62B125 | FXD63B125 | FXD63B125 |
| 150 | FXD62B150 | FXD63B150 | FXD63B150 |
| 175 | FXD62B175 | FXD63B175 | FXD63B175 |
| 200 | FXD62B200 | FXD63B200 | FXD63B200 |
| 225 | FXD62B225 | FXD63B225 | FXD63B225 |
| 250 | FXD62B250 | FXD63B250 | FXD63B250 |

Type FD6-A^②

Blue Label

| Interchangeable Trip | | | |
|----------------------------------|----------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC^②

| Continuous Current Rating @ 40°C | Catalogue Number | Frame Only Catalogue Number | Trip Unit Only Catalogue Number |
|----------------------------------|------------------|-----------------------------|---------------------------------|
| 70 | FD62B070 | FD62F250 | FD62T070 |
| 80 | FD62B080 | | FD62T080 |
| 90 | FD62B090 | | FD62T090 |
| 100 | FD62B100 | | FD62T100 |
| 110 | FD62B110 | | FD62T110 |
| 125 | FD62B125 | | FD62T125 |
| 150 | FD62B150 | | FD62T150 |
| 175 | FD62B175 | | FD62T175 |
| 200 | FD62B200 | | FD62T200 |
| 225 | FD62B225 | | FD62T225 |
| 250 | FD62B250 | | FD62T250 |

3-Pole 600V AC, 500V DC^③

| Continuous Current Rating @ 40°C | Catalogue Number | Frame Only Catalogue Number | Trip Unit Only Catalogue Number |
|----------------------------------|------------------|-----------------------------|---------------------------------|
| 70 | FD63B070 | FD63F250 | FD63T070 |
| 80 | FD63B080 | | FD63T080 |
| 90 | FD63B090 | | FD63T090 |
| 100 | FD63B100 | | FD63T100 |
| 110 | FD63B110 | | FD63T110 |
| 125 | FD63B125 | | FD63T125 |
| 150 | FD63B150 | | FD63T150 |
| 175 | FD63B175 | | FD63T175 |
| 200 | FD63B200 | | FD63T200 |
| 225 | FD63B225 | | FD63T225 |
| 250 | FD63B250 | | FD63T250 |

Interrupting Ratings

| Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|------------------------------------------|--------------------------------|-----|-----|----------|------------------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | CSA / UL 489 AIR (File E10848) | | | | | IEC 947-2 | | | | | |
| | Volts AC (50/60Hz) | | | Volts DC | | Volts AC (50/60Hz) | | | | | |
| | 240 | 480 | 600 | 250 | 500 ^④ | 220/240 | | 380/415 | | 500 | |
| | | | | | | l _{cu} | l _{cs} | l _{cu} | l _{cs} | l _{cu} | l _{cs} |
| FXD6-A, FD6-A | 65 | 35 | 22 | 30 (2-P) | 18 (3-P) | 65 | 33 | 35 | 9 | 20 | 10 |
| HFXD6 ^⑤ , HFD6 ^⑤ | 100 | 65 | 25 | 30 (2-P) | 25 (3-P) | 100 | 50 | 65 | 33 | 42 | 21 |
| HHFD6 ^⑤ , HHFXD6 ^⑤ | 200 | 100 | 25 | — | — | 200 | 100 | 100 | 50 | 65 | 33 |
| CFD6 | 200 | 200 | 100 | 50 (2-P) | 50 (3-P) | — | — | — | — | — | — |

Instantaneous Adjustment Trip Range

| Breaker Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|-----------------------|------------------------------|------|------|------|------|------|------|-------------------|
| | Low ^⑦ | 2 | 3 | 4 | 5 | 6 | 7 | High ^⑦ |
| 70-90 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 |
| 100-110 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 |
| 125-150 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| 175-200 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 |
| 225-250 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 |

Note: FD frame qualified to UL489 supplement SB "NAVAL"
See page 5-79 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of FD6, HFD6, and HHFD6 breakers includes frame, trip and both line and load lugs (TA1FD350A). When ordered by these catalogue numbers, the customer will receive the frame, trip, and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of FXD6, HFXD6, HHFXD6, and CFD6 includes frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA1FD350A) installed, add suffix "L" to catalogue number (add 2 times list price of lugs for each pole).

50°C Applications see page 5-67.

400 Hz Applications see page 5-67.

Lugs For 75°C Wire^④

| Catalogue Number | Wire Range |
|------------------|-------------------|
| TA1FD350A | #6 – 350 kcmil Cu |
| TC1FD350 | #4 – 350 kcmil Al |
| Compression Lug | |
| CCF250 | 350 kcmil Cu/Al |

① Type FXD6-A circuit breakers are UL Listed for reverse fed applications.

② 2-pole units are 3-pole width.

③ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL 489 listed and rated for use on 500V DC ungrounded UPS systems only.

④ See Note A, page 5-76.

⑤ HFD6 and HHFD6 type circuit breakers meet the UL criteria for "current limiting" at 240 and 480V AC.

⑥ HACR rated.

⑦ +/- 20% Tolerance.

Modifications page 5-137
Accessories page 5-138

Molded Case Circuit Breakers

FD 250A Frame Sentron Series

Selection/Dimensions

Type HFD6^③, Type HFXD6^{③④⑤⑥}

Black Label

| Interchangeable Trip | | | |
|----------------------------------|----------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC (3 Pole Width)

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
|----------------------------------|----------------------------------------|------------|----------------|
| 70 | HFD62B070 | HFD62F250 | FD62T070 |
| 80 | HFD62B080 | | FD62T080 |
| 90 | HFD62B090 | | FD62T090 |
| 100 | HFD62B100 | | FD62T100 |
| 110 | HFD62B110 | | FD62T110 |
| 125 | HFD62B125 | | FD62T125 |
| 150 | HFD62B150 | | FD62T150 |
| 175 | HFD62B175 | | FD62T175 |
| 200 | HFD62B200 | | FD62T200 |
| 225 | HFD62B225 | | FD62T225 |
| 250 | HFD62B250 | | FD62T250 |

3-Pole 600V AC, 500V DC^①

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
|----------------------------------|----------------------------------------|------------|----------------|
| 70 | HFD63B070 | HFD63F250 | FD63T070 |
| 80 | HFD63B080 | | FD63T080 |
| 90 | HFD63B090 | | FD63T090 |
| 100 | HFD63B100 | | FD63T100 |
| 110 | HFD63B110 | | FD63T110 |
| 125 | HFD63B125 | | FD63T125 |
| 150 | HFD63B150 | | FD63T150 |
| 175 | HFD63B175 | | FD63T175 |
| 200 | HFD63B200 | | FD63T200 |
| 225 | HFD63B225 | | FD63T225 |
| 250 | HFD63B250 | | FD63T250 |

Type HHFD^④, HHFXD6^{②③④⑥}

3-Pole 600V AC, Extra High Interrupting

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
|----------------------------------|----------------------------------------|------------|----------------|
| 70 | HHFD63B070 | HHFD63F250 | FD63T070 |
| 80 | HHFD63B080 | | FD63T080 |
| 90 | HHFD63B090 | | FD63T090 |
| 100 | HHFD63B100 | | FD63T100 |
| 110 | HHFD63B110 | | FD63T110 |
| 125 | HHFD63B125 | | FD63T125 |
| 150 | HHFD63B150 | | FD63T150 |
| 175 | HHFD63B175 | | FD63T175 |
| 200 | HHFD63B200 | | FD63T200 |
| 225 | HHFD63B225 | | FD63T225 |
| 250 | HHFD63B250 | | FD63T250 |

Type CFD6^{③⑥}

Fuseless Current Limiting

Red Label

| Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs) | |
|-------------------------------------------------------------------|------------------|
| Continuous Current Rating @ 40°C | 3-Pole |
| | 600V AC/500V DC |
| | Catalogue Number |
| 70 | CFD63B070 |
| 80 | CFD63B080 |
| 90 | CFD63B090 |
| 100 | CFD63B100 |
| 110 | CFD63B110 |
| 125 | CFD63B125 |
| 150 | CFD63B150 |
| 175 | CFD63B175 |
| 200 | CFD63B200 |
| 225 | CFD63B225 |
| 250 | CFD63B250 |

① When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL listed and rated for use on 500V DC ungrounded UPS systems.

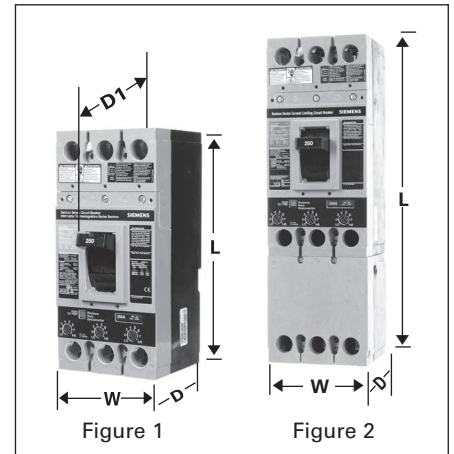
② For non-interchangeable trip 3-pole HFD6 type circuit breaker, change prefix identifier from HFD6 to HFXD6. Price equals frame and trip prices combined, e.g. price of HFXD63B250 equals price of HFD63F250 plus price of FD63T250. Order lugs separately.

③ Type HFXD6, HHFXD6, CFD6 are CSA Certified / UL Listed for reverse feed applications.

④ Type HFXD6, HFD6, HHFD6, HHFXD6 meet the CSA Certified / UL criteria for "Current Limiting" at 240 VAC and 480V AC.

⑤ FXD6, ETI, CFD6, ETI — See page 5-59 for ordering information.

⑥ HACR rated.



Dimensions (in inches)

| Breaker Type | W | L | D | D1 (to handle) |
|---------------------------------------------------------------------------|------|-------|---|----------------|
| Figure 1 FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, FD6-ETI ^⑤ | 4.50 | 9.50 | 4 | 5.25 |
| Figure 2 CFD6, CFD6-ETI ^⑤ | 4.50 | 14.25 | 4 | 5.25 |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|-------------------------------------------------------------------------------|-------------------|------------------------|
| FD6-A, HFD6, HHFD6, FXD6-A Assembled Circuit Breaker (less connectors) | | |
| 2 | 1 | 8.6 |
| 3 | 1 | 10 |
| FD6-A, HFD6, HHFD6 Frame Only | | |
| 2 | 1 | 7.5 |
| 3 | 1 | 8.7 |
| FD6 Trip Unit Only | | |
| 2 | 1 | 1.1 |
| 3 | 1 | 1.3 |
| CFD6 Assembled Circuit Breaker (less terminals) | | |
| 2 | 1 | 31 |
| 3 | 1 | 34 |

Molded Case Circuit Breakers

Internal Accessories

Selection

Accessories:
FD 250A Frame



Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip |
|-----------------|-----|------------------|
| AC | DC | Catalogue Number |
| 24 | — | S17FD60 |
| 120 | — | S01FD60 |
| 240 | — | S03FD60 |
| 277 | — | S15FD60 |
| 480 | — | S04FD60 |
| 600 | — | S06FD60 |
| — | 12 | S16FD60 |
| — | 24 | S07FD60 |
| — | 48 | S09FD60 |
| — | 125 | S11FD60 |
| — | 250 | S13FD60 |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch |
|-----------------|-----|---------------------|--------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 120 | — | U01FD60 | W01FD64 |
| 208 | — | U02FD60 | W02FD64 |
| 240 | — | U03FD60 | W03FD64 |
| 277 | — | U16FD60 | W16FD64 |
| 480 | — | U06FD60 | W06FD64 |
| 600 | — | U08FD60 | W08FD64 |
| — | 24 | U13FD60 | W13FD64 |
| — | 48 | U14FD60 | W14FD64 |
| — | 125 | U10FD60 | W10FD64 |
| — | 250 | U12FD60 | W12FD64 |

Auxiliary Switch Combinations

| Voltage | | 1 Auxiliary Switch | 2 Auxiliary Switches |
|---------|----|--------------------|------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 240 | — | A01FD62 | A02FD62 |
| 480 | — | A01FD64 | A02FD64 |
| — | 12 | A01FDLV | Gold Plated Contacts - for PLC use |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch |
|-----------------|-----|------------------|---------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | B00FD64 | C01FD64 |

©Auxiliary switch application is for 480V AC maximum.
Note: Old F-frame accessories cannot be used in new Sentron line. Likewise, new FD-frame accessories cannot be used on old F-frame circuit breakers.

Molded Case Circuit Breakers

JD 400A Frame Sentron Series

Selection

Type JXD2-A^⑤

240V AC, 2-pole 250V DC only

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs) | | |
|-------------------------------------------------------------------|-----------------------|------------------|
| Continuous Current Rating @ 40°C | 2-Pole (3 Pole Width) | |
| | Catalogue Number | Catalogue Number |
| 200 | JXD22B200 | JXD23B200 |
| 225 | JXD22B225 | JXD23B225 |
| 250 | JXD22B250 | JXD23B250 |
| 300 | JXD22B300 | JXD23B300 |
| 350 | JXD22B350 | JXD23B350 |
| 400 | JXD22B400 | JXD23B400 |

Type JXD6-A^{①⑤}

600V AC, 2-pole 250V DC, 3-pole 500V DC

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs) | | |
|-------------------------------------------------------------------|-----------------------|------------------|
| Continuous Current Rating @ 40°C | 2-Pole (3 Pole Width) | |
| | Catalogue Number | Catalogue Number |
| 200 | JXD62B200 | JXD63B200 |
| 225 | JXD62B225 | JXD63B225 |
| 250 | JXD62B250 | JXD63B250 |
| 300 | JXD62B300 | JXD63B300 |
| 350 | JXD62B350 | JXD63B350 |
| 400 | JXD62B400 | JXD63B400 |

Type JD6-A^⑥

Blue Label

| Interchangeable Trip | | | |
|----------------------------------|----------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 200 | JD62B200 | JD62F400 | JD62T200 |
| 225 | JD62B225 | | JD62T225 |
| 250 | JD62B250 | | JD62T250 |
| 300 | JD62B300 | | JD62T300 |
| 350 | JD62B350 | | JD62T350 |
| 400 | JD62B400 | | JD62T400 |

2-Pole 600V AC, 250V DC (3 Pole Width)

| | | | |
|-----|----------|----------|----------|
| 200 | JD62B200 | JD62F400 | JD62T200 |
| 225 | JD62B225 | | JD62T225 |
| 250 | JD62B250 | | JD62T250 |
| 300 | JD62B300 | | JD62T300 |
| 350 | JD62B350 | | JD62T350 |
| 400 | JD62B400 | | JD62T400 |

3-Pole 600V AC, 500V DC^②

| | | | |
|-----|----------|----------|----------|
| 200 | JD63B200 | JD63F400 | JD63T200 |
| 225 | JD63B225 | | JD63T225 |
| 250 | JD63B250 | | JD63T250 |
| 300 | JD63B300 | | JD63T300 |
| 350 | JD63B350 | | JD63T350 |
| 400 | JD63B400 | | JD63T400 |

Interrupting Ratings

| Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|------------------------------|---------------------------------------------|-----|-----|----------|------------------|---------|--------------------|-----|-----|-----|-----|
| | CSA 22.2 No.5-02 / UL 489 AIR (File E10848) | | | | | | IEC 947-2 | | | | |
| | Volts AC (50/60Hz) | | | Volts DC | | | Volts AC (50/60Hz) | | | | |
| | 240 | 480 | 600 | 250 | 500 ^③ | 220/240 | 380/415 | 500 | lcs | lcs | lcs |
| JXD2-2 | 65 | — | — | 30 (2-P) | — | — | — | — | — | — | — |
| JXD6-2, JD6-A | 65 | 35 | 25 | 30 (2-P) | 25 (3-P) | 65 | 33 | 40 | 20 | 30 | 15 |
| HJD6-A, HJXD6-A | 100 | 65 | 35 | 30 (2-P) | 35 (3-P) | 100 | 50 | 65 | 33 | 42 | 21 |
| HHJD6-A, HHJXD6 ^④ | 200 | 100 | 50 | — | — | 200 | 100 | 100 | 50 | 65 | 33 |
| CJD6 | 200 | 150 | 100 | 50 (2-P) | 50 (3-P) | — | — | — | — | — | — |

Instantaneous Adjustment Trip Range

| Breaker Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|-----------------------|------------------------------|------|------|------|------|------|------|-------------------|
| | Low ^⑤ | 2 | 3 | 4 | 5 | 6 | 7 | High ^⑥ |
| 200-300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 |
| 350-400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 |

⑤ Type JXD2 and JXD6 circuit breakers are CSA Certified / UL Listed for reverse feed applications.

⑥ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

⑦ See Note: A, page 5-76.

⑧ HHJD6 type circuit breakers meet the CSA / UL criteria for "current limiting" at 240 and 480V AC.

⑨ HACR rated.

⑩ +/- 20% Tolerance.

Note: JD frame qualified to UL489 supplement B "NAVAL." See page 5-79 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of JD6, HJD6, and HHJD6 breakers include frame, trip and both line and load lugs (TA2J6500). When ordered by these catalogue numbers, the customer will receive the frame, trip, and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of JXD6, HJXD6, HHJXD6, and CJD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA2J6500) installed, add suffix "L" to catalogue number (add 2 times list price of lugs for each pole).

100% Rated

Types JXD6 and HJXD6 breakers are available with 100% ratings. To order add suffix "H" to catalogue number, and 10% to list price.

100% rated JD breakers require the use of 90°C Cu cable and lugs TC1J6600 or TC2J6500.

50°C Applications see page 5-79.

400Hz Applications see page 5-79.

Lugs For 75°C Wire^③

| Catalogue Number | Cables per Lug | Wire Range |
|------------------|----------------|----------------------------------------|
| TA2J6500 | 1, 2 | #3/0-500 kcmil Cu #4/0-500 kcmil Al |
| TA1L6750 | 1 | 500-750 kcmil Al 500-600 kcmil Cu |
| TC1J6600 | 1 | #3/0-600 kcmil Cu |
| TC2J6500 | 1, 2 | #3/0-500 kcmil Cu |
| Compression Lug | | |
| CCL600 | 1 | 500 kcmil Cu/Al |

Modifications page 5-137
Accessories page 5-138

Molded Case Circuit Breakers

JD 400A Frame Sentron Series

Selection

Type HJD6-A, HJXD6-A^{②④⑥}

Black Label

| Interchangeable Trip | | | |
|----------------------------------|----------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC (3 Pole Width)

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 200 | HJD62B200 | HJD62F400 | JD62T200 |
| 225 | HJD62B225 | | JD62T225 |
| 250 | HJD62B250 | | JD62T250 |
| 300 | HJD62B300 | | JD62T300 |
| 350 | HJD62B350 | | JD62T350 |
| 400 | HJD62B400 | | JD62T400 |

3-Pole 600V AC, 500V DC^{①②⑤}

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 200 | HJD63B200 | HJD63F400 | JD63T200 |
| 225 | HJD63B225 | | JD63T225 |
| 250 | HJD63B250 | | JD63T250 |
| 300 | HJD63B300 | | JD63T300 |
| 350 | HJD63B350 | | JD63T350 |
| 400 | HJD63B400 | | JD63T400 |

Type HHJD6, HHJXD6-A^{②④⑥}

2-Pole 600V AC (3 Pole Width)

Black Label

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 200 | HHJD62B200 | HHJD62F400 | JD62T200 |
| 225 | HHJD62B225 | | JD62T225 |
| 250 | HHJD62B250 | | JD62T250 |
| 300 | HHJD62B300 | | JD62T300 |
| 350 | HHJD62B350 | | JD62T350 |
| 400 | HHJD62B400 | | JD62T400 |

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 200 | HHJD63B200 | HHJD63F400 | JD63T200 |
| 225 | HHJD63B225 | | JD63T225 |
| 250 | HHJD63B250 | | JD63T250 |
| 300 | HHJD63B300 | | JD63T300 |
| 350 | HHJD63B350 | | JD63T350 |
| 400 | HHJD63B400 | | JD63T400 |

Type CJD6^⑥

Fuseless Current Limiting

Red Label

| Non-Interchangeable Trip (Assembled Circuit Breakers Without Lugs) | | |
|--------------------------------------------------------------------|--------------------------------------------------------------------|-----------------|
| Continuous Current Rating @ 40°C | 2-Pole | 3-Pole |
| | 600V AC/250V DC | 600V AC/500V DC |
| 200 | For 2-pole application use outside poles of 3-pole circuit breaker | CJD63B200 |
| 225 | | CJD63B225 |
| 250 | | CJD63B250 |
| 300 | | CJD63B300 |
| 350 | | CJD63B350 |
| 400 | | CJD63B400 |

For inches / millimeters conversion, see Technical section.

2-pole units available in 3-pole construction.

① When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

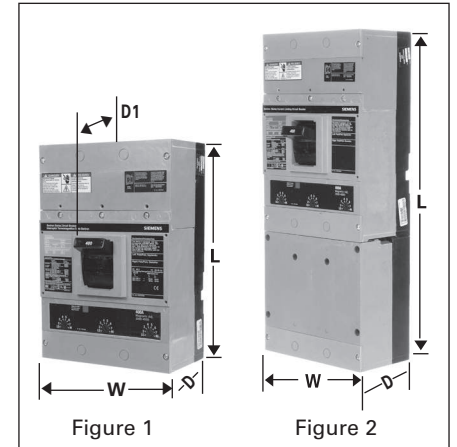
② For non-interchangeable 3-pole HJD6 or HHJD6 type circuit breaker change the prefix identifier to HJXD6 or HHJXD6. Order lugs separately.

③ JXD6-ETI, CJD6-ETI see page 5-59 for ordering information.

④ Type HJXD6, HHJXD6 Circuit Breakers are CSA Certified / UL Listed for reverse fed applications.

⑤ CE applies to non-interchangeable type HJXD6 only.

⑥ HACR rated.



Dimensions (in inches)

| Breaker Type | W | L | D | To Handle D1 |
|---------------------------------------------------------------------------------------------------------------|-----|-------|---|--------------|
| Figure 1 JXD2-A, JXD6-A, JD6-A HJD6-A, HJXD6-A, HHJD6, HJD6, HJXD6, HHJXD6, JXD6-ETI ^③ | 7.5 | 11 | 4 | 5.44 |
| Figure 2 CJD6, CJD6-ETI ^③ | 7.5 | 17.86 | 4 | 5.44 |

Enclosures (Except SCJD6)

| Type | Catalogue Number |
|-----------------|------------------|
| 1 | J6N1 |
| 3R | J6N3R |
| 12 | J6N12 |
| 4X | LD6SS4 |
| 7, 9 (200-250A) | EC4 |
| 7, 9 (300-400A) | EE |
| Neutral | W60992 |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|------------------------------------------------------------------------|-------------------|------------------------|
| JXD2, JXD6, JD6, HJD6, HHJD6 Assembled Breaker (less terminals) | | |
| 2 | 1 | 17.5 |
| 3 | 1 | 19.5 |
| JD6, HJD6, HHJD6 Frame Only | | |
| 2 | 1 | 14 |
| 3 | 1 | 15.5 |
| JD6 Trip Unit Only | | |
| 2 | 1 | 3.5 |
| 3 | 1 | 4 |
| CJD6 Complete Assembled Breaker (less terminals) | | |
| 2 | 1 | 29.5 |
| 3 | 1 | 31.5 |

Molded Case Circuit Breakers

SJD 400A Frame Digital Solid State Sentron Sensitrip IV Series

Selection

Type SJD6-B

Blue Label

Type SHJD6-B

Black Label

Current Limiting

Type SCJD6-B

Red Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) |
| 200 | SJD6A200LI | SJD6B200LI | SHJD6A200LI | SHJD6B200LI | SCJD6A200LI | SCJD6B200LI |
| 300 | SJD6A300LI | SJD6B300LI | SHJD6A300LI | SHJD6B300LI | SCJD6A300LI | SCJD6B300LI |
| 400 | SJD6A400LI | SJD6B400LI | SHJD6A400LI | SHJD6B400LI | SCJD6A400LI | SCJD6B400LI |
| 200 | SJD6A200LIG | SJD6B200LIG | SHJD6A200LIG | SHJD6B200LIG | SCJD6A200LIG | SCJD6B200LIG |
| 300 | SJD6A300LIG | SJD6B300LIG | SHJD6A300LIG | SHJD6B300LIG | SCJD6A300LIG | SCJD6B300LIG |
| 400 | SJD6A400LIG | SJD6B400LIG | SHJD6A400LIG | SHJD6B400LIG | SCJD6A400LIG | SCJD6B400LIG |
| 200 | SJD6A200LSI | SJD6B200LSI | SHJD6A200LSI | SHJD6B200LSI | SCJD6A200LSI | SCJD6B200LSI |
| 300 | SJD6A300LSI | SJD6B300LSI | SHJD6A300LSI | SHJD6B300LSI | SCJD6A300LSI | SCJD6B300LSI |
| 400 | SJD6A400LSI | SJD6B400LSI | SHJD6A400LSI | SHJD6B400LSI | SCJD6A400LSI | SCJD6B400LSI |
| 200 | SJD6A200LSIG | SJD6B200LSIG | SHJD6A200LSIG | SHJD6B200LSIG | SCJD6A200LSIG | SCJD6B200LSIG |
| 300 | SJD6A300LSIG | SJD6B300LSIG | SHJD6A300LSIG | SHJD6B300LSIG | SCJD6A300LSIG | SCJD6B300LSIG |
| 400 | SJD6A400LSIG | SJD6B400LSIG | SHJD6A400LSIG | SHJD6B400LSIG | SCJD6A400LSIG | SCJD6B400LSIG |

SJD 400A Frame – 100% Rated^②

Blue Label

Black Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) |
| 200 | SJD6A200LIH | SJD6B200LIH | SHJD6A200LIH | SHJD6B200LIH |
| 300 | SJD6A300LIH | SJD6B300LIH | SHJD6A300LIH | SHJD6B300LIH |
| 400 | SJD6A400LIH | SJD6B400LIH | SHJD6A400LIH | SHJD6B400LIH |
| 200 | SJD6A200LIGH | SJD6B200LIGH | SHJD6A200LIGH | SHJD6B200LIGH |
| 300 | SJD6A300LIGH | SJD6B300LIGH | SHJD6A300LIGH | SHJD6B300LIGH |
| 400 | SJD6A400LIGH | SJD6B400LIGH | SHJD6A400LIGH | SHJD6B400LIGH |
| 200 | SJD6A200LSIH | SJD6B200LSIH | SHJD6A200LSIH | SHJD6B200LSIH |
| 300 | SJD6A300LSIH | SJD6B300LSIH | SHJD6A300LSIH | SHJD6B300LSIH |
| 400 | SJD6A400LSIH | SJD6B400LSIH | SHJD6A400LSIH | SHJD6B400LSIH |
| 200 | SJD6A200LSIGH | SJD6B200LSIGH | SHJD6A200LSIGH | SHJD6B200LSIGH |
| 300 | SJD6A300LSIGH | SJD6B300LSIGH | SHJD6A300LSIGH | SHJD6B300LSIGH |
| 400 | SJD6A400LSIGH | SJD6B400LSIGH | SHJD6A400LSIGH | SHJD6B400LSIGH |

Ordering Information

Pricing information for all Digital Sentron Series SJD Frames is for complete breaker only - price required lugs as separate items - lugs are suitable for 75°C Wire.

Shipping Weights

| Breaker Type | Number per Carton | Shipping Weight (lbs) |
|--------------|-------------------|-----------------------|
| SJD6-B | 1 | 20 |
| SHJD6-B | 1 | 20 |
| SCJD6-B | 1 | 33 |

Lugs for 75°C Wire^①

| Catalogue Number | No. of cables per connector | Wire Range |
|------------------|-----------------------------|----------------------|
| TA2J6500 | 2 | #3/0-500 kcmil Cu |
| | 2 | #4/0-500 kcmil Al |
| TA1L6750 | 1 | 500-750 kcmil Al |
| | 1 | 500-600 kcmil Cu |
| TC1J6600 | 1 | #3/0-600 kcmil Cu |
| TC2J6500 | 2 | #3/0-500 kcmil Cu |
| TA2J630 | 2 | #4-#3/0 Cu/Al |
| Compression Lug | | |
| CCL600 | 1 (pc.) | #1/0-500 kcmil Cu/Al |

Trip Unit Adjustable Functions

| Suffix Letter Code | Trip Type | Cont Current Setting | Long Time Delay | Instantaneous Pick Up | Short Time Pick Up | Short Time Fixed Delay | Short Time In't Delay | Ground Fault Pick Up | Ground Fault Delay |
|--------------------|-----------|----------------------|-----------------|-----------------------|--------------------|------------------------|-----------------------|----------------------|--------------------|
| LI | LI | ✓ | ✓ | ✓ | | | | | |
| LIG | LIG | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| LSI | LSI | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| LSIG | LSIG | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Interrupting Ratings

| Breaker Type | RMS Symmetrical kA UL 489 (File E10848) | | |
|--------------|-----------------------------------------|---------|---------|
| | 240V AC | 480V AC | 600V AC |
| SJD6-B | 65 | 35 | 25 |
| SHJD6-B | 100 | 65 | 35 |
| SCJD6-B | 200 | 150 | 100 |

Neutral Transformers

| Ampere Rating | Catalogue Number |
|---------------|------------------|
| 200 | N02SJD |
| 300 | N03SJD |
| 400 | N04SJD |

Note: "G" suffix in catalog number denotes circuit breaker for 3-phase, 3-wire systems.
For 3-phase, 4-wire, order correct 4th wire (neutral) transformer as separate and additional item.

All breakers built to order. Allow 2-3 weeks for delivery.

① For additional information, see Note: A, page 5-76.

② Refer to the NEC for proper application of 100% rated devices.

③ Advanced trip unit equipped with DAS / Maintenance Mode. Requires customer-supplied 24V external power supply, maintenance switch and light.

Enclosures page 5-126
Accessories pages 5-138 - 5-146

Molded Case Circuit Breakers

Internal Accessories

Selection

Accessories for:

JD 400A Frame
LD 600A Frame
LMD 800A Frame
SJD 400A Frame
SLD 600A Frame



Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch |
|-----------------|-----|------------------|-------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 24 | — | S17JLD6 | — |
| 48 | — | S18JLD6 | — |
| 120 | — | S01JLD6 | S01JLD62A |
| 240 | — | S03JLD6 | S03JLD62A |
| 277 | — | S15JLD6 | S15JLD64A |
| 480 | — | S04JLD6 | — |
| — | 12 | S16JLD6 | S16JLD62A |
| — | 24 | S07JLD6 | S07JLD62A |
| — | 48 | S09JLD6 | S09JLD62A |
| — | 125 | S11JLD6 | S11JLD62A |
| — | 250 | S13JLD6 | S13JLD62A |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01JLD6 | U01JLD62A | U01JLD62AA |
| 208 | — | U02JLD6 | U02JLD62A | U02JLD62AA |
| 240 | — | U03JLD6 | U03JLD62A | U03JLD62AA |
| 480 | — | U06JLD6 | U06JLD64A | U06JLD64AA |
| — | 24 | U13JLD6 | U13JLD62A | U13JLD62AA |
| — | 48 | U14JLD6 | U14JLD62A | U14JLD62AA |
| — | 125 | U10JLD6 | U10JLD62A | U10JLD62AA |
| — | 250 | U12JLD6 | U12JLD62A | U12JLD62AA |

Auxiliary Switch Combinations

| Maximum Voltage | | 1 Form C | 2 Form C |
|-----------------|-----|------------------|------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | A01JLD64 | A02JLD64 |
| — | 12 | A01JLDLV | A02JLDLV |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|------------------|---------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 480 | 250 | B01JLD64 | A01JLD64B | A02JLD64B |

ETU Testing Unit

| Breaker Type | Description | Catalogue Number |
|-------------------------|-----------------------------|------------------|
| SJD, SLD, SMD, SND, SPD | Power Stick | EPSP18V |
| | Spare cable for Power Stick | COMPCA |

The EPSP18V Power Stick is a hand-held, battery-operated power supply that can be used for trip testing the Sensitrip IV electronic trip units. Requires two 9V batteries.

Note: Accessory modules can only be added to right side pole of solid state SJD and SLD frame circuit breakers. All accessories on this page are useable on superseded JD2, JJ6, JL6, HJ6, SJL, LJ6, LL6, HL6 and SLL circuit breakers.

No accessories can be added if mechanical interlock is used.

Molded Case Circuit Breakers

LD 600A Frame Sentron Series

Selection

Type LXD6-A^{①④}

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs) | | | | |
|-------------------------------------------------------------------|-----------------------|---------|------------------|---------|
| Continuous Current Rating @ 40°C | 2-Pole (3 Pole Width) | | 3-Pole | |
| | 600V AC | 250V DC | 600V AC | 500V DC |
| | Catalogue Number | | Catalogue Number | |
| 450 | LXD62B450 | | LXD63B450 | |
| 500 | LXD62B500 | | LXD63B500 | |
| 600 | LXD62B600 | | LXD63B600 | |

Type LD6-A^④

Blue Label

| Interchangeable Trip | | | |
|----------------------------------|-------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled w/Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC (3 Pole Width)

| Continuous Current Rating @ 40°C | Catalogue Number | Frame Only Catalogue Number | Trip Unit Only Catalogue Number |
|----------------------------------|------------------|-----------------------------|---------------------------------|
| 250 | LD62B250 | LD62F600 | JD62T250 |
| 300 | LD62B300 | | JD62T300 |
| 350 | LD62B350 | | JD62T350 |
| 400 | LD62B400 | | JD62T400 |
| 450 | LD62B450 | | LD62T450 |
| 500 | LD62B500 | | LD62T500 |
| 600 | LD62B600 | LD62T600 | |

3-Pole 600V AC, 500V DC^②

| Continuous Current Rating @ 40°C | Catalogue Number | Frame Only Catalogue Number | Trip Unit Only Catalogue Number |
|----------------------------------|------------------|-----------------------------|---------------------------------|
| 250 | LD63B250 | LD63F600 | JD63T250 |
| 300 | LD63B300 | | JD63T300 |
| 350 | LD63B350 | | JD63T350 |
| 400 | LD63B400 | | JD63T400 |
| 450 | LD63B450 | | LD63T450 |
| 500 | LD63B500 | | LD63T500 |
| 600 | LD63B600 | LD63T600 | |

Interrupting Ratings

| Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------|--------------------------------|-----|-----|----------|------------------|--------------------|-------|---------|-------|-------|-------|
| | CSA / UL 489 AIR (File E10848) | | | | | IEC 947-2 | | | | | |
| | Volts AC (50/60Hz) | | | Volts DC | | Volts AC (50/60Hz) | | | | | |
| | 240 | 480 | 600 | 250 | 500 ^③ | 220/240 | | 380/415 | | 500 | |
| | | | | | | (lcu) | (lcs) | (lcu) | (lcs) | (lcu) | (lcs) |
| LXD6, LD6 | 65 | 35 | 25 | 30 (2-P) | 25 (3-P) | 65 | 33 | 40 | 20 | 30 | 15 |
| HLD6, HLXD6 | 100 | 65 | 35 | 30 (2-P) | 35 (3-P) | 100 | 50 | 65 | 33 | 42 | 21 |
| HHL6, HHLXD6 | 200 | 100 | 50 | — | — | 200 | 100 | 100 | 50 | 65 | 33 |
| CLD6 | 200 | 150 | 100 | 30 (2-P) | 50 (3-P) | — | — | — | — | — | — |

Instantaneous Adjustment Trip Range

| Breaker Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|-----------------------|------------------------------|------|------|------|------|------|------|-------------------|
| | Low ^③ | 2 | 3 | 4 | 5 | 6 | 7 | High ^③ |
| 250-300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 |
| 350-450 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 |
| 500-600 | 3000 | 3430 | 3800 | 4290 | 4710 | 5140 | 5570 | 6000 |

① Type LXD6A circuit breakers are CSA Certified / UL Listed for reverse fed applications.

② When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

③ See Note: A, page 5-76.

④ HACR rated.

⑤ +/- 20% Tolerance

Note: LD frame qualified to UL489 supplement SB "NAVAL" See page 5-79 for additional information.

Modifications page 5-137
Accessories page 5-138

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of LD6, HLD6, and HHL6 breakers include frame, trip, and both line and load lugs (TA2J6500). When ordered by these catalogue numbers, the customer will receive the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of LXD6, HLXD6, HHLXD6, and CLD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA2J6500) installed, add suffix "L" to catalogue number (add 2 times list price of lugs for each pole).

100% Rated (3-pole only)

Types, LXD6 and HLXD6 breakers are available with 100% ratings. To order add suffix "H" to catalogue number, and 10% to list price. 100% rated LD breakers require the use of 90°C Cu cable and lugs TC1J6600 or TC2J6500.

50°C Applications see page 5-79.

400Hz Applications see page 5-79.

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|-----------------------------------------------------------------|-------------------|------------------------|
| LXD6, LD6, HLD6, HHL6 Assembled Breaker (less terminals) | | |
| 2 | 1 | 17.5 |
| 3 | 1 | 19.5 |
| LD6, HLD6, HHL6 Frame Only | | |
| 2 | 1 | 14 |
| 3 | 1 | 15.5 |
| LD6, HHL6 Trip Unit Only | | |
| 2 | 1 | 3.5 |
| 3 | 1 | 4 |
| CLD6 Complete Assembled Breaker (less terminals) | | |
| 2 | 1 | 29.5 |
| 3 | 1 | 31.5 |

Lugs For 75°C Wire^③

| Catalogue Number | Cables per Lug | Wire Range |
|------------------------|----------------|----------------------------------------|
| TA2J6500 | 1, 2 2 | #3/0 500 kcmil Cu #4/0 500 kcmil Al |
| TC2J6500 | 2 | #3/0-500 kcmil Cu |
| TA1L6750 | 1 | 500-750 kcmil Al 500-600 kcmil Cu |
| TC1J6600 | 1 | #3/0-600 kcmil Cu |
| Compression Lug | | |
| CCL600 | 1 | 500 kcmil Cu/Al |

Molded Case Circuit Breakers

LD 600A Frame Sentron Series

Selection

Type HLD6-A, HLXD6^{②③④}

Black Label

| Interchangeable Trip | | | |
|----------------------------------|-------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled w/Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC (3 Pole Width)

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 250 | HLD62B250 | HLD62F600 | JD62T250 |
| 300 | HLD62B300 | | JD62T300 |
| 350 | HLD62B350 | | JD62T350 |
| 400 | HLD62B400 | | JD62T400 |
| 450 | HLD62B450 | | LD62T450 |
| 500 | HLD62B500 | | LD62T500 |
| 600 | HLD62B600 | | LD62T600 |

3-Pole 600V AC, 500V DC^{①⑤}

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 250 | HLD63B250 | HLD63F600 | JD63T250 |
| 300 | HLD63B300 | | JD63T300 |
| 350 | HLD63B350 | | JD63T350 |
| 400 | HLD63B400 | | JD63T400 |
| 450 | HLD63B450 | | LD63T450 |
| 500 | HLD63B500 | | LD63T500 |
| 600 | HLD63B600 | | LD63T600 |

Type HHL6, HHLXD6^{②⑤⑥}

2-Pole 600V AC (3 Pole Width)

Black Label

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 250 | HHL62B250 | HHL62F600 | JD62T250 |
| 300 | HHL62B300 | | JD62T300 |
| 350 | HHL62B350 | | JD62T350 |
| 400 | HHL62B400 | | JD62T400 |
| 450 | HHL62B450 | | HHL62T450 |
| 500 | HHL62B500 | | HHL62T500 |
| 600 | HHL62B600 | | HHL62T600 |

3-Pole 600V AC

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 250 | HHL63B250 | HHL63F600 | JD63T250 |
| 300 | HHL63B300 | | JD63T300 |
| 350 | HHL63B350 | | JD63T350 |
| 400 | HHL63B400 | | JD63T400 |
| 450 | HHL63B450 | | HHL63T450 |
| 500 | HHL63B500 | | HHL63T500 |
| 600 | HHL63B600 | | HHL63T600 |

Type CLD6^⑥

Fuseless Current Limiting

Red Label

| Continuous Current Rating @ 40°C | Non-Interchangeable Trip (Assembled Circuit Breaker) | |
|----------------------------------|--------------------------------------------------------------------|-----------------|
| | 2-Pole | 3-Pole |
| | 600V AC/250V DC | 600V AC/500V DC |
| 450 | For 2-pole application use outside poles of 3-pole circuit breaker | CLD63B450 |
| 500 | | CLD63B500 |
| 600 | | CLD63B600 |

For inches / millimeters conversion, see Technical section

①When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

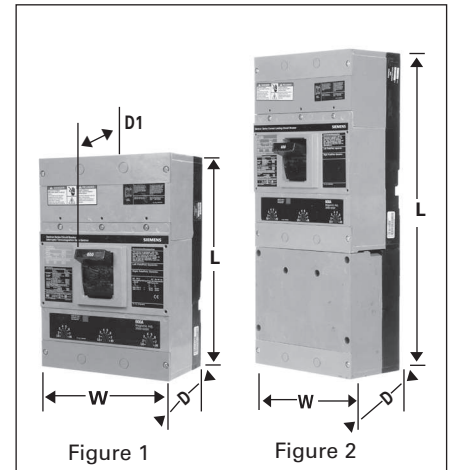
②For complete assembled 3 pole HLD6 or HHL6 type circuit breaker change the prefix identifier HLD6 or HHL6 to HLXD6 or HHLXD6. Price is sum of frame and trip units prices, e.g. price of HLXD63B400 is the price of HLD63F600 plus the price of LD63T600. Order the terminal connectors separately.

③Type HLXD6, HHLXD6 Circuit Breakers are CSA Certified / UL Listed for reverse feed applications.

④LXD6-ETI, CLD6-ETI see page 5-59 for ordering information.

⑤CE Applies to non-interchangeable type HLXD only.

⑥HACR rated.



Dimensions (in inches)

| Breaker Type | W | L | D | To Handle D1 |
|-------------------------------------------------------------------------------|-----|-------|---|--------------|
| Figure 1 LXD6-A, LD6-A HLD6-A HHL6, HHLXD6, LXD6-ETI ^④ | 7.5 | 11 | 4 | 5.44 |
| Figure 2 CLD6, CLD6-ETI ^④ | 7.5 | 17.86 | 4 | 5.44 |

Enclosures: (except SCLD6)

| Type | Catalogue Number |
|---------|------------------|
| 1 | LD6N1 |
| 3R | LD6N3R |
| 12 | LD6N12 |
| 4X | LD6SS4 |
| 7,9 | ED6 |
| Neutral | W60993 |

Molded Case Circuit Breakers

SLD 600A Frame Digital Solid State Sentron Sensitrip IV Series

Selection

Type SLD6-B

Blue Label

Type SHLD6-B

Black Label

Current Limiting

Type SCLD6-B

Red Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^① | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^① | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^① | Catalogue Number (Basic trip unit) |
| 300 | SLD6A300LI | SLD6B300LI | SHLD6A300LI | SHLD6B300LI | SCLD6A300LI | SCLD6B300LI |
| 400 | SLD6A400LI | SLD6B400LI | SHLD6A400LI | SHLD6B400LI | SCLD6A400LI | SCLD6B400LI |
| 500 | SLD6A500LI | SLD6B500LI | SHLD6A500LI | SHLD6B500LI | SCLD6A500LI | SCLD6B500LI |
| 600 | SLD6A600LI | SLD6B600LI | SHLD6A600LI | SHLD6B600LI | SCLD6A600LI | SCLD6B600LI |
| 300 | SLD6A300LIG | SLD6B300LIG | SHLD6A300LIG | SHLD6B300LIG | SCLD6A300LIG | SCLD6B300LIG |
| 400 | SLD6A400LIG | SLD6B400LIG | SHLD6A400LIG | SHLD6B400LIG | SCLD6A400LIG | SCLD6B400LIG |
| 500 | SLD6A500LIG | SLD6B500LIG | SHLD6A500LIG | SHLD6B500LIG | SCLD6A500LIG | SCLD6B500LIG |
| 600 | SLD6A600LIG | SLD6B600LIG | SHLD6A600LIG | SHLD6B600LIG | SCLD6A600LIG | SCLD6B600LIG |
| 300 | SLD6A300LSI | SLD6B300LSI | SHLD6A300LSI | SHLD6B300LSI | SCLD6A300LSI | SCLD6B300LSI |
| 400 | SLD6A400LSI | SLD6B400LSI | SHLD6A400LSI | SHLD6B400LSI | SCLD6A400LSI | SCLD6B400LSI |
| 500 | SLD6A500LSI | SLD6B500LSI | SHLD6A500LSI | SHLD6B500LSI | SCLD6A500LSI | SCLD6B500LSI |
| 600 | SLD6A600LSI | SLD6B600LSI | SHLD6A600LSI | SHLD6B600LSI | SCLD6A600LSI | SCLD6B600LSI |
| 300 | SLD6A300LSIG | SLD6B300LSIG | SHLD6A300LSIG | SHLD6B300LSIG | SCLD6A300LSIG | SCLD6B300LSIG |
| 400 | SLD6A400LSIG | SLD6B400LSIG | SHLD6A400LSIG | SHLD6B400LSIG | SCLD6A400LSIG | SCLD6B400LSIG |
| 500 | SLD6A500LSIG | SLD6B500LSIG | SHLD6A500LSIG | SHLD6B500LSIG | SCLD6A500LSIG | SCLD6B500LSIG |
| 600 | SLD6A600LSIG | SLD6B600LSIG | SHLD6A600LSIG | SHLD6B600LSIG | SCLD6A600LSIG | SCLD6B600LSIG |

Trip Unit Adjustable Functions

| Suffix Letter Code | Trip Type | Cont Current Setting | Long Time Delay | Instantaneous Pick Up | Short Time Pick Up | Short Time Fixed Delay | Short Time f't Delay | Ground Fault Pick Up | Ground Fault Delay |
|--------------------|-----------|----------------------|-----------------|-----------------------|--------------------|------------------------|----------------------|----------------------|--------------------|
| LI | LI | ✓ | ✓ | ✓ | | | | | |
| LIG | LIG | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| LSI | LSI | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| LSIG | LSIG | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Ordering Information

Pricing information for all Digital Sentron Series SLD Frames is for complete breaker only – price required lugs as separate items – lugs are suitable for 75°C Wire.

Interrupting Ratings

| Breaker Type | RMS Symmetrical kA UL 489 (File E10848) | | |
|--------------|-----------------------------------------|---------|---------|
| | 240V AC | 480V AC | 600V AC |
| SLD6-B | 65 | 35 | 25 |
| SHLD6-B | 100 | 65 | 35 |
| SCLD6-B | 200 | 150 | 100 |

Neutral Transformers

| Ampere Rating | Catalogue Number |
|---------------|------------------|
| 300 | N03SJD |
| 400 | N04SJD |
| 500 | N05SLD |
| 600 | N06SLD |

Shipping Weights

| Breaker Type | Number per Carton | Shipping Weight (lbs) |
|--------------|-------------------|-----------------------|
| SLD6-B | 1 | 20 |
| SHLD6-B | 1 | 20 |
| SCLD6-B | 1 | 33 |

Note: "G" suffix in catalog number denotes circuit breaker for 3-phase, 3-wire circuits. For 3-phase, 4-wire, order correct 4th wire (neutral) transformer as separate and additional item.

For ordering information and terminal connectors see page 5-49; for enclosures, see page 5-41.

100% Rated – Not available in SLD6 Frame.

All breakers built to order. Allow 2-3 weeks for delivery.

^① Advanced trip unit equipped with DAS / Maintenance Mode. Requires customer-supplied 24V external power supply, maintenance switch and light.

Molded Case Circuit Breakers

Internal Accessories

Selection

Accessories for:

JD 400A Frame
LD 600A Frame
LMD 800A Frame
SJD 400A Frame
SLD 600A Frame



Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch |
|-----------------|-----|------------------|-------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 24 | — | S17JLD6 | — |
| 48 | — | S18JLD6 | — |
| 120 | — | S01JLD6 | S01JLD62A |
| 240 | — | S03JLD6 | S03JLD62A |
| 277 | — | S15JLD6 | S15JLD64A |
| 480 | — | S04JLD6 | — |
| — | 12 | S16JLD6 | S16JLD62A |
| — | 24 | S07JLD6 | S07JLD62A |
| — | 48 | S09JLD6 | S09JLD62A |
| — | 125 | S11JLD6 | S11JLD62A |
| — | 250 | S13JLD6 | S13JLD62A |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01JLD6 | U01JLD62A | U01JLD62AA |
| 208 | — | U02JLD6 | U02JLD62A | U02JLD62AA |
| 240 | — | U03JLD6 | U03JLD62A | U03JLD62AA |
| 277 | — | U16JLD6 | U16JLD64A | U16JLD62AA |
| 480 | — | U06JLD6 | U06JLD64A | U06JLD64AA |
| 600 | — | U08JLD6 | — | — |
| — | 24 | U13JLD6 | U13JLD62A | U13JLD62AA |
| — | 48 | U14JLD6 | U14JLD62A | U14JLD62AA |
| — | 125 | U10JLD6 | U10JLD62A | U10JLD62AA |
| — | 250 | U12JLD6 | U12JLD62A | U12JLD62AA |

Auxiliary Switch Combinations

| Maximum Voltage | | 1 Form C | 2 Form C |
|-----------------|-----|------------------|------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | A01JLD64 | A02JLD64 |
| — | 12 | A01JLDLV | A02JLDLV |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|------------------|---------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 480 | 250 | B01JLD64 | A01JLD64B | A02JLD64B |

ETU Testing Unit

| Breaker Type | Description | Catalogue Number |
|-------------------------|-----------------------------|------------------|
| SJD, SLD, SMD, SND, SPD | Power Stick | EPSP18V |
| | Spare cable for Power Stick | COMPCA |

The EPSP18V Power Stick is a hand-held, battery-operated power supply that can be used for trip testing the Sensitrip IV electronic trip units. Requires two 9V batteries.

Note: Accessory modules can only be added to right side pole of solid state SJD and SLD frame circuit breakers. All accessories on this page are useable on superseded JD2, JJ6, JL6, HJ6, SJL, LJ6, LL6, HL6 and SLL circuit breakers.

No accessories can be added if mechanical interlock is used.

Molded Case Circuit Breakers

LMD 800A Frame Sentron Series

Selection

Type LMXD6^{①⑤}

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs) | | |
|-------------------------------------------------------------------|-----------------------|------------------|
| Continuous Current Rating @ 40°C | 2-Pole (3 Pole Width) | 3-Pole |
| | Catalogue Number | Catalogue Number |
| 500 | — | LMXD63B500 |
| 600 | LMXD62B600 | LMXD63B600 |
| 700 | LMXD62B700 | LMXD63B700 |
| 800 | LMXD62B800 | LMXD63B800 |

Type LMD6^⑤

Blue Label

| Interchangeable Trip | | | |
|----------------------------------|-------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled w/Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC (3 Pole Width)

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled w/Lugs | Frame Only | Trip Unit Only |
|----------------------------------|-------------------------------------|------------|----------------|
| 500 | LMD62B500 | LMD62F800 | LMD62T500 |
| 600 | LMD62B600 | | LMD62T600 |
| 700 | LMD62B700 | | LMD62T700 |
| 800 | LMD62B800 | | LMD62T800 |

3-Pole 600V AC, 500V DC^⑤

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled w/Lugs | Frame Only | Trip Unit Only |
|----------------------------------|-------------------------------------|------------|----------------|
| 500 | LMD63B500 | LMD63F800 | LMD63T500 |
| 600 | LMD63B600 | | LMD63T600 |
| 700 | LMD63B700 | | LMD63T700 |
| 800 | LMD63B800 | | LMD63T800 |

Instantaneous Adjustment Trip Range

| Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|---------------|------------------------------|------|------|------|------|------|------|-------------------|
| | Low ^⑥ | 2 | 3 | 4 | 5 | 6 | 7 | High ^⑥ |
| 500-600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 |
| 700-800 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 |

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of LMD6 and HLMD6 breakers include frame, trip, and both line and load lugs (TA3K500). These catalogue numbers include the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of LMXD6 and HLMXD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA3K500) installed, add suffix "L" to catalogue number (add 2 times list price of lugs for each pole).

50°C Applications see page 5-79.

400Hz Applications see page 5-79.

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|---------------------------------------------------------------------|-------------------|------------------------|
| LMD6, HLMD6, LMXD6, HLMXD6 Complete Breaker (less terminals) | | |
| 2 | 1 | 53 |
| 3 | 1 | 61.5 |
| LMD6, HLMD6 Frame Only | | |
| 2 | 1 | 42.25 |
| 3 | 1 | 46 |
| LMD6, HLMD6 Trip Unit Only | | |
| 2 | 1 | 4.5 |
| 3 | 1 | 6.5 |

Lugs^④ for 75°C Wire

| Catalogue Number | Cables per Lug | Wire Range |
|------------------|----------------|----------------------|
| TA2K500 | 1, 2 | #1-500 kcmil Cu/Al |
| TA3K500 | 1-3 | #1/0-500 kcmil Cu/Al |
| TA2N750 | 1, 2 | 500-750 kcmil Cu/Al |

① LMXD6 circuit breakers are CSA Certified / UL Listed for reverse connected applications.
② Use 6 lugs for 3-pole, use 4 connectors for 2-pole.

③ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500UDC ungrounded UPS systems only.
④ See **Note: A**, page 5-76.
⑤ HACR rated.
⑥ +/- 20% Tolerance

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Accessories page 5-138

Molded Case Circuit Breakers

LMD 800A Frame Sentron Series

Selection/Dimensions

Type HLMXD6^{①④}

Black Label

| Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs) | | |
|-------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------|
| Continuous Current Rating @ 40°C | 2-Pole 600V AC/ 250V DC | 3-Pole 600V AC/ 500V DC |
| | Catalogue Number | |
| 500 | For 2-Pole application use outside poles of 3-Pole circuit breaker. | HLMXD63B500 |
| 600 | | HLMXD63B600 |
| 700 | | HLMXD63B700 |
| 800 | | HLMXD63B800 |

Type HLMD6^④

Black Label

| Interchangeable Trip | | | |
|-----------------------------------------------|------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 2-Pole 600V AC, 250V DC (3 Pole Width) | | | |
| 500 | HLMD62B500 | HLMD62F800 | LMD62T500 |
| 600 | HLMD62B600 | | LMD62T600 |
| 700 | HLMD62B700 | | LMD62T700 |
| 800 | HLMD62B800 | | LMD62T800 |

3-Pole 600V AC, 500V DC^⑤

| | | | |
|-----|------------|------------|-----------|
| 500 | HLMD63B500 | HLMD63F800 | LMD63T500 |
| 600 | HLMD63B600 | | LMD63T600 |
| 700 | HLMD63B700 | | LMD63T700 |
| 800 | HLMD63B800 | | LMD63T800 |

Interrupting Ratings

| Breaker Type | UL 489A IR | | | | | IEC 947-2 | | | | | | |
|----------------|------------------------------|-----|-----|----------|------------------|-----------|--------------------|-------|---------|-------|-------|--|
| | RMS Symmetrical Amperes (KA) | | | | | | Volts AC (50/60HZ) | | | | | |
| | Volts AC | | | Volts DC | | | 220/240 | | 380/415 | | 500 | |
| | 240 | 480 | 600 | 250 | 500 ^⑥ | (Icu) | (Ics) | (Icu) | (Ics) | (Icu) | (Ics) | |
| LMD6, LMXD6 | 65 | 50 | 25 | 30 (2-P) | 25 (3-P) | 65 | 33 | 40 | 20 | 30 | 15 | |
| HLMXD6, HLMXD6 | 100 | 65 | 50 | 30 (2-P) | 50 (3-P) | 100 | 50 | 65 | 33 | 42 | 21 | |

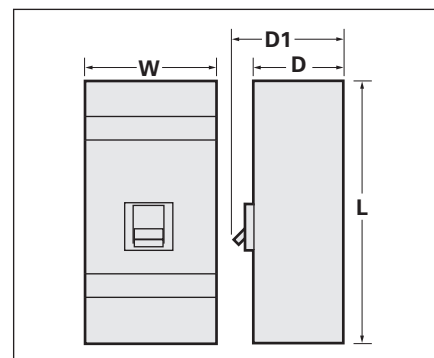
For inches / millimeters conversion, see Technical section.

① HLMXD6 circuit breakers are CSA Certified / UL Listed for reverse connection applications.

② LMXD6-ETI, see page 5-59 for catalogue information.

③ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500VDC ungrounded UPS systems only.

④ HACR rated.



Dimensions (in inches)

| Breaker Type | W | L | D | D1 |
|----------------------------------------------------|-----|----|-----|------|
| LMD6, LMXD6, HLMD6, HLMXD6, LMXD6-ETI ^② | 7.5 | 16 | 4.5 | 5.93 |

Enclosures

| Type | Catalogue Number |
|---------|------------------|
| 1 | LMD1 |
| 3R | LMD3R |
| 12 | LMD12■ |
| Neutral | W63623 |

Molded Case Circuit Breakers

Internal Accessories

Selection

Accessories for:

JD 400A Frame
LD 600A Frame
LMD 800A Frame
SJD 400A Frame
SLD 600A Frame



Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch |
|-----------------|-----|------------------|-------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 24 | — | S17JLD6 | — |
| 48 | — | S18JLD6 | — |
| 120 | — | S01JLD6 | S01JLD62A |
| 240 | — | S03JLD6 | S03JLD62A |
| 277 | — | S15JLD6 | S15JLD64A |
| 480 | — | S04JLD6 | — |
| — | 12 | S16JLD6 | S16JLD62A |
| — | 24 | S07JLD6 | S07JLD62A |
| — | 48 | S09JLD6 | S09JLD62A |
| — | 125 | S11JLD6 | S11JLD62A |
| — | 250 | S13JLD6 | S13JLD62A |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01JLD6 | U01JLD62A | U01JLD62AA |
| 208 | — | U02JLD6 | U02JLD62A | U02JLD62AA |
| 240 | — | U03JLD6 | U03JLD62A | U03JLD62AA |
| 277 | — | U16JLD6 | U16JLD64A | U16JLD62AA |
| 480 | — | U06JLD6 | U06JLD64A | U06JLD64AA |
| 600 | — | U08JLD6 | — | — |
| — | 24 | U13JLD6 | U13JLD62A | U13JLD62AA |
| — | 48 | U14JLD6 | U14JLD62A | U14JLD62AA |
| — | 125 | U10JLD6 | U10JLD62A | U10JLD62AA |
| — | 250 | U12JLD6 | U12JLD62A | U12JLD62AA |

Auxiliary Switch Combinations

| Maximum Voltage | | 1 Form C* | 2 Form C |
|-----------------|-----|------------------|------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | A01JLD64 | A02JLD64 |
| — | 12 | A01JLDLV | A02JLDLV |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|------------------|---------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 480 | 250 | B01JLD64 | A01JLD64B | A02JLD64B |

ETU Testing Unit

| Breaker Type | Description | Catalogue Number |
|-------------------------|-----------------------------|------------------|
| SJD, SLD, SMD, SND, SPD | Power Stick | EPSP18V |
| | Spare cable for Power Stick | COMPCA |

The EPSP18V Power Stick is a hand-held, battery-operated power supply that can be used for trip testing the Sensitrip IV electronic trip units. Requires two 9V batteries.

Note: Accessory modules can only be added to right side pole of solid state SJD and SLD frame circuit breakers. All accessories on this page are useable on superseded JD2, JJ6, JL6, HJ6, SJL, LJ6, LL6, HL6 and SLL circuit breakers.

No accessories can be added if mechanical interlock is used.

Molded Case Circuit Breakers

MD 800A Frame Sentron Series

Selection

Type MXD6^{①②}

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs) | | |
|-------------------------------------------------------------------|---------------------|------------------|
| Continuous Current Rating @ 40°C | 2-Pole ^② | 3-Pole |
| | Catalogue Number | Catalogue Number |
| 600 | MXD62B600 | MXD63B600 |
| 700 | MXD62B700 | MXD63B700 |
| 800 | MXD62B800 | MXD63B800 |

Type MD6^⑦

Blue Label

| Interchangeable Trip | | | |
|-----------------------------------|----------------------------------------|------------------|------------------|
| Continuous Current Setting @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 500 | MD62B500 | MD62F800 | MD62T500 |
| 600 | MD62B600 | | MD62T600 |
| 700 | MD62B700 | | MD62T700 |
| 800 | MD62B800 | | MD62T800 |

2-Pole 600V AC, 250V DC^②

| | | | |
|-----|----------|----------|----------|
| 500 | MD62B500 | MD62F800 | MD62T500 |
| 600 | MD62B600 | | MD62T600 |
| 700 | MD62B700 | | MD62T700 |
| 800 | MD62B800 | | MD62T800 |

3-Pole 600V AC, 500V DC^④

| | | | |
|-----|----------|----------|----------|
| 500 | MD63B500 | MD63F800 | MD63T500 |
| 600 | MD63B600 | | MD63T600 |
| 700 | MD63B700 | | MD63T700 |
| 800 | MD63B800 | | MD63T800 |

Lugs^⑤

| Catalogue Number | Cables Per Lug | Lugs Per Kit | Wire Range |
|------------------|----------------|--------------|---------------------|
| TA2K500 | 1-2 | 1 | #1-500 kcmil Cu/Al |
| TA3K500 | 1-3 | 1 | 1/0-500 kcmil Cu/Al |
| TC2K500 | 1-2 | 1 | #1-500 kcmil Cu |
| TC3K350 | 1-3 | 1 | #1-350 kcmil Cu |
| Kits | | | |
| 2TA2N8750 | 1-2 | 2 | 600-750 kcmil Cu/Al |
| 3TA2N8750 | | 3 | |
| 2TA3N8750 | 1-3 | 2 | 500-750 kcmil Cu/Al |
| 3TA3N8750 | | 3 | |
| 2TA4N8500 | 1-4 | 2 | 250-500 kcmil Cu/Al |
| 3TA4N8500 | | 3 | |
| 2TA4P8500 | 1-4 | 2 | 250-500 kcmil Cu/Al |
| 3TA4P8500 | | 3 | |

Instantaneous Adjustment Trip Range

| Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|---------------|------------------------------|------|------|------|------|------|------|-------------------|
| | Low ^⑧ | 2 | 3 | 4 | 5 | 6 | 7 | High ^⑧ |
| 500-600 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 |
| 700-800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 |

①MXD6 circuit breakers are CSA Certified / UL Listed for reverse connection applications.

②2-pole units available in 3-pole width only.

③Use 6 connectors for 3-pole, use 4 connectors for 2-pole.

④ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems.

⑤ See Note: A, page 5-76.

⑥80% rated breakers with the CE mark will also be marked in the 100% rated version.

⑦ HACR rated.

⑧ +/- 20% Tolerance.

Note: MD frame qualified to UL489 supplement B "NAVAL" See page 5-79 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs

Pricing information for MD6 and HMD6 breakers includes frame, trip, and both line and load lugs (TA3K500). When ordered by these catalogue numbers, the customer will receive the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of MXD6, HMXD6 and CMD6 include frame with non-interchangeable trip units installed only. Order required lugs separately. For line and load lugs (TA3K500) installed, add suffix "L" to catalogue number (add 2 times list price of lugs for each pole).

100% Rated^⑥

Types MXD6, HMXD6 and CMD6 breakers are available with 100% ratings. To order add suffix "H" to catalogue number, and 10% to list price. 100% rated MD breakers require the use of 90°C Cu cable and lugs 2TA4P8500 or 2TA2N8750 for 2-pole; 3TA4P8500 or 3TA2N8750 for 3-pole.

50°C Applications see page 5-79.

400Hz Applications see page 5-79.

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|---------------------------------------------------------------|-------------------|------------------------|
| MD6, HMD6, HMXD6, CMD6 Complete Breaker Assembled (less lugs) | | |
| 2 | 1 | 53 |
| 3 | 1 | 61.5 |
| MD6, HMD6 Frame Only | | |
| 2 | 1 | 42.25 |
| 3 | 1 | 46 |
| MD6, HMD6 Trip Unit Only | | |
| 2 | 1 | 4.5 |
| 3 | 1 | 6.5 |

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Accessories page 5-138

Molded Case Circuit Breakers

MD 800A Frame Sentron Series

Selection/Dimensions

Type HMXD6^{①③}

Black Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)

| Continuous Current Rating @ 40°C | 2-Pole 600V AC 250V DC | 3-Pole 600V AC 500V DC |
|----------------------------------|----------------------------------------|--------------------------------------------------------------------|
| | 600 700 800 | For 2-pole application use outside poles of 3-pole circuit breaker |
| | HMXD63B600 HMXD63B700 HMXD63B800 | |

Type HMD6^⑤

Black Label

Interchangeable Trip

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
|----------------------------------|----------------------------------------|------------------|------------------|
| | | Catalogue Number | Catalogue Number |

2-Pole 600V AC, 250V DC^②

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|--------------------------------------------------|------------------|----------------------------------------------|
| 500 600 700 800 | HMD62B500 HMD62B600 HMD62B700 HMD62B800 | HMD62F800 | MD62T500 MD62T600 MD62T700 MD62T800 |

3-Pole 600V AC, 500V DC^④

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|--------------------------------------------------|------------------|----------------------------------------------|
| 500 600 700 800 | HMD63B500 HMD63B600 HMD63B700 HMD63B800 | HMD63F800 | MD63T500 MD63T600 MD63T700 MD63T800 |

Type CMD6^⑤

Fuseless Current Limiting

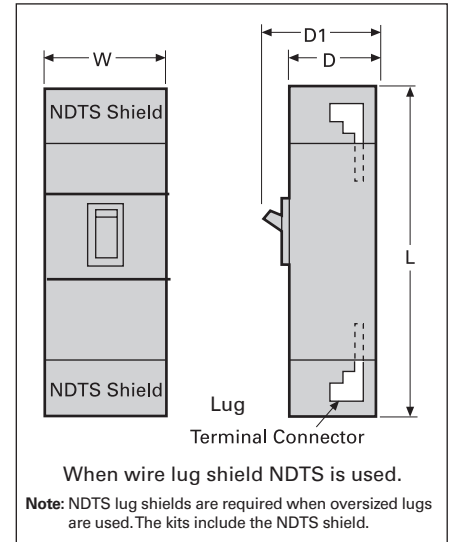
Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)

| Continuous Current Rating @ 40°C | 2-Pole 600V AC/250V DC | 3-Pole 600V AC/500V DC |
|----------------------------------|--------------------------------------------------|--------------------------------------------------------------------|
| | 500 600 700 800 | For 2-pole application use outside poles of 3-pole circuit breaker |
| | CMD63B500 CMD63B600 CMD63B700 CMD63B800 | |

Interrupting Ratings

| Breaker Type | UL 489 AIR – File E10848 | | | | | IEC 947-2 AIR | | | | | |
|--------------|------------------------------|-----|-----|----------|------------------|---------------|---------|-----|-------|-------|-------|
| | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
| | Volts AC | | | | | Volts DC | | | | | |
| | 240 | 480 | 600 | 250 | 500 ^⑤ | 220/240 | 380/415 | 500 | (Icu) | (Ics) | (Icu) |
| MD6, MXD6 | 65 | 50 | 25 | 30 (2-P) | 25 (3-P) | 65 | 33 | 40 | 20 | 30 | 15 |
| HMD6, HMXD6 | 100 | 65 | 50 | 30 (2-P) | 50 (3-P) | 100 | 50 | 65 | 33 | 42 | 21 |
| CMD6 | 200 | 100 | 65 | 30 (2-P) | 50 (3-P) | 200 | 100 | 100 | 50 | 65 | 33 |



Dimensions (in inches)

| Breaker Type | W | L | D | (To Handle) D1 |
|--------------------------------------------------|---|----|---|----------------|
| MD6, MXD6, HMD6, HMXD6, CMD6, MXD6-ETI, CMD6-ETI | 9 | 16 | 6 | 8.25 |
| with lug shields | 9 | 24 | 6 | 8.25 |

For inches / millimeters conversion, see Technical section.

①HMXD6 circuit breakers are CSA Certified / UL Listed for reverse connection applications.

②2-pole units available in 3-pole width only.

③MXD6-ETI, CMD6-ETI see page 5-59 for catalogue information.

④When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

⑤HACR rated.

Molded Case Circuit Breakers

SMD 800A Frame Digital Solid State Sentron Sensitrip IV Series

Selection

Type SMD6

Blue Label

Type SHMD6-B

Black Label

Current Limiting

Type SCMD6-B

Red Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) |
| 600 | SMD6A600LI | SMD6B600LI | SHMD6A600LI | SHMD6B600LI | SHMD6B600LI | SCMD6A600LI | SCMD6B600LI |
| 700 | SMD6A700LI | SMD6B700LI | SHMD6A700LI | SHMD6B700LI | SHMD6B700LI | SCMD6A700LI | SCMD6B700LI |
| 800 | SMD6A800LI | SMD6B800LI | SHMD6A800LI | SHMD6B800LI | SHMD6B800LI | SCMD6A800LI | SCMD6B800LI |
| 600 | SMD6A600LIG | SMD6B600LIG | SHMD6A600LIG | SHMD6B600LIG | SHMD6B600LIG | SCMD6A600LIG | SCMD6B600LIG |
| 700 | SMD6A700LIG | SMD6B700LIG | SHMD6A700LIG | SHMD6B700LIG | SHMD6B700LIG | SCMD6A700LIG | SCMD6B700LIG |
| 800 | SMD6A800LIG | SMD6B800LIG | SHMD6A800LIG | SHMD6B800LIG | SHMD6B800LIG | SCMD6A800LIG | SCMD6B800LIG |
| 600 | SMD6A600LSI | SMD6B600LSI | SHMD6A600LSI | SHMD6B600LSI | SHMD6B600LSI | SCMD6A600LSI | SCMD6B600LSI |
| 700 | SMD6A700LSI | SMD6B700LSI | SHMD6A700LSI | SHMD6B700LSI | SHMD6B700LSI | SCMD6A700LSI | SCMD6B700LSI |
| 800 | SMD6A800LSI | SMD6B800LSI | SHMD6A800LSI | SHMD6B800LSI | SHMD6B800LSI | SCMD6A800LSI | SCMD6B800LSI |
| 600 | SMD6A600LSIG | SMD6B600LSIG | SHMD6A600LSIG | SHMD6B600LSIG | SHMD6B600LSIG | SCMD6A600LSIG | SCMD6B600LSIG |
| 700 | SMD6A700LSIG | SMD6B700LSIG | SHMD6A700LSIG | SHMD6B700LSIG | SHMD6B700LSIG | SCMD6A700LSIG | SCMD6B700LSIG |
| 800 | SMD6A800LSIG | SMD6B800LSIG | SHMD6A800LSIG | SHMD6B800LSIG | SHMD6B800LSIG | SCMD6A800LSIG | SCMD6B800LSIG |

SMD 800A Frame – 100% Rated^①

Blue Label

Black Label

Current Limiting

Red Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) |
| 600 | SMD6A600LIH | SMD6B600LIH | SHMD6A600LIH | SHMD6B600LIH | SHMD6B600LIH | SCMD6A600LIH | SCMD6B600LIH |
| 700 | SMD6A700LIH | SMD6B700LIH | SHMD6A700LIH | SHMD6B700LIH | SHMD6B700LIH | SCMD6A700LIH | SCMD6B700LIH |
| 800 | SMD6A800LIH | SMD6B800LIH | SHMD6A800LIH | SHMD6B800LIH | SHMD6B800LIH | SCMD6A800LIH | SCMD6B800LIH |
| 600 | SMD6A600LIGH | SMD6B600LIGH | SHMD6A600LIGH | SHMD6B600LIGH | SHMD6B600LIGH | SCMD6A600LIGH | SCMD6B600LIGH |
| 700 | SMD6A700LIGH | SMD6B700LIGH | SHMD6A700LIGH | SHMD6B700LIGH | SHMD6B700LIGH | SCMD6A700LIGH | SCMD6B700LIGH |
| 800 | SMD6A800LIGH | SMD6B800LIGH | SHMD6A800LIGH | SHMD6B800LIGH | SHMD6B800LIGH | SCMD6A800LIGH | SCMD6B800LIGH |
| 600 | SMD6A600LSIH | SMD6B600LSIH | SHMD6A600LSIH | SHMD6B600LSIH | SHMD6B600LSIH | SCMD6A600LSIH | SCMD6B600LSIH |
| 700 | SMD6A700LSIH | SMD6B700LSIH | SHMD6A700LSIH | SHMD6B700LSIH | SHMD6B700LSIH | SCMD6A700LSIH | SCMD6B700LSIH |
| 800 | SMD6A800LSIH | SMD6B800LSIH | SHMD6A800LSIH | SHMD6B800LSIH | SHMD6B800LSIH | SCMD6A800LSIH | SCMD6B800LSIH |
| 600 | SMD6A600LSIGH | SMD6B600LSIGH | SHMD6A600LSIGH | SHMD6B600LSIGH | SHMD6B600LSIGH | SCMD6A600LSIGH | SCMD6B600LSIGH |
| 700 | SMD6A700LSIGH | SMD6B700LSIGH | SHMD6A700LSIGH | SHMD6B700LSIGH | SHMD6B700LSIGH | SCMD6A700LSIGH | SCMD6B700LSIGH |
| 800 | SMD6A800LSIGH | SMD6B800LSIGH | SHMD6A800LSIGH | SHMD6B800LSIGH | SHMD6B800LSIGH | SCMD6A800LSIGH | SCMD6B800LSIGH |

Ordering Information

Pricing information for all Digital Sentron Series MD frames is for complete breaker only. Price requires lugs or lug kits as separate items. Lugs are suitable for 75°C wire or as noted. Connector wire ranges and cavities are established in conjunction with Table 6.1.4.2.1 of UL 489 standards. Choose actual connector for circuit breakers based on customer requirements.

Recommended Terminal Connectors

| Breaker Frame | Ampere Rating | Connector or Connector Kit |
|---------------|---------------|----------------------------|
| MD | 500-600 | TA2K500 |
| MD | 700-800 | TA3K500 |

Types SMD6-B, SHMD6-B and SCMD6-B are acceptable for reverse connection applications

Lugs for 75°C Wire^②

| Catalogue Number | Cables per Lug | Wire Range | Each kit contains the following: |
|-------------------|----------------|---------------------|-------------------------------------------------|
| TA2K500 | 2 | #1-500 kcmil Cu/Al | 3TA4P8500 - 3 connectors plus 1 NDS end barrier |
| TA3K500 | 3 | #1-500 kcmil Cu/Al | 3TA3N8750 - 3 connectors plus 1 NDS end barrier |
| TC2K500 | 2 | #1-500 kcmil Cu | 3TA2N8750 - 3 connectors plus 1 NDS end barrier |
| TC3K350 | 3 | #1-350 kcmil Cu | 3TA2N8750 - 3 connectors plus 1 NDS end barrier |
| Kits (3 lugs/kit) | | | |
| 3TA4N8500 | 4 | 250-500 kcmil Cu/Al | |
| 3TA4P8500 | 4 | 250-500 kcmil Cu/Al | |
| 3TA2N8750 | 2 | 500-750 kcmil Cu/Al | |
| 3TA3N8750 | 3 | 500-750 kcmil Cu/Al | |

Trip Unit Adjustable Functions

| Suffix Letter Code | Trip Type | Cont Current Setting | Long Time Delay | Instantaneous Pick Up | Short Time Pick Up | Short Time Delay | Ground Fault Pick Up | Ground Fault Delay |
|--------------------|-----------|----------------------|-----------------|-----------------------|--------------------|------------------|----------------------|--------------------|
| LI | LI | ✓ | ✓ | ✓ | | | | |
| LIG | LIG | ✓ | ✓ | ✓ | | | ✓ | ✓ |
| LSI | LSI | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| LSIG | LSIG | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Interrupting Ratings

| Breaker Type | RMS Symmetrical kA UL 489 (File E10848) | | |
|--------------|-----------------------------------------|---------|---------|
| | 240V AC | 480V AC | 600V AC |
| SMD6-B | 65 | 50 | 25 |
| SHMD6-B | 100 | 65 | 50 |
| SCMD6-B | 200 | 100 | 65 |

Neutral Transformers

| Ampere Rating | Catalogue Number |
|---------------|------------------|
| 600 | N06SMDA |
| 700 | N07SMDA |
| 800 | N08SMDA |

Note: "G" suffix in catalog number denotes circuit breaker for 3-phase, 3-wire circuits. For 3-phase, 4-wire, order correct 4th wire (neutral) transformer as separate and additional item.

All breakers built to order. Allow 2-3 weeks for delivery.

① Use 2-3TA4P8500 for 3-pole. These kits are rated for 90°C wire. 90°C Cu only cable must be used, and sized per 75°C ampacity.

② For additional information, see Note: A, page 5-76.

③ Advanced trip unit equipped with DAS / Maintenance Mode. Requires customer-supplied 24V external power supply, maintenance switch and light.

Enclosures page 5-137
Accessories pages 5-138 - 5-146

Molded Case Circuit Breakers

Internal Accessories

Selection

Accessories for:

MD/SMD 800A Frame
ND/SND 1200A Frame
PD/SPD 1600A Frame
RD 2000A Frame



Accessory modules can mount in either left hand or right hand poles of all circuit breakers, including solid state. Exception: when mechanical interlock is used accessories cannot be mounted in left pole.

Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch |
|-----------------|-----|------------------|-------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 120 | — | S01MN6 | S01MN64A |
| 208 | — | S02MN6 | S02MN64A |
| 240 | — | S03MN6 | S03MN64A |
| 277 | — | S15MN6 | S15MN64A |
| 480 | — | S04MN6 | S04MN64A |
| 600 | — | S06MN6 | — |
| — | 12 | S16MN6 | S16MN64A |
| — | 24 | S07MN6 | S07MN64A |
| — | 48 | S09MN6 | — |
| — | 125 | S11MN6 | S11MN64A |
| — | 250 | S13MN6 | S13MN64A |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01MN6 | U01MN64A | U01MN64AA |
| 208 | — | U02MN6 | U02MN64A | U02MN64AA |
| 240 | — | U03MN6 | U03MN64A | U03MN64AA |
| 277 | — | U15MN6 | U15MN64A | U15MN64AA |
| 480 | — | U04MN6 | U04MN64A | U04MN64AA |
| 600 | — | U06MN6 | — | — |
| — | 24 | U07MN6 | U07MN64A | U07MN64AA |
| — | 48 | U09MN6 | U09MN64A | U09MN64AA |
| — | 125 | U11MN6 | U11MN64A | U11MN64AA |
| — | 250 | U13MN6 | U13MN64A | U13MN64AA |

Auxiliary Switch Combinations

| Maximum Voltage | | 1 Form C | 2 Form C |
|-----------------|-----|------------------|------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | A01MN64 | A02MN64 |
| — | 12 | A01MNDLV | A02MNDLV |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|------------------|---------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 480 | 250 | B00MN64 | A01MN64B | A02MN64B |

ETU Testing Unit

| Breaker Type | Description | Catalogue Number |
|-------------------------|-----------------------------|------------------|
| SJD, SLD, SMD, SND, SPD | Power Stick | EPSP18V |
| | Spare cable for Power Stick | COMPCA |

The EPSP18V Power Stick is a hand-held, battery-operated power supply that can be used for trip testing the Sensitrip IV electronic trip units. Requires two 9V batteries.

Molded Case Circuit Breakers

ND 1200A Frame Sentron Series

Selection

Type NXD6^①

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs) | | |
|-------------------------------------------------------------------|---------------------------|---------------------------|
| Continuous Current Rating @ 40°C | 2-Pole 600V AC 250V DC | 3-Pole 600V AC 500V DC |
| | Catalogue Number | Catalogue Number |
| 900 | NXD62B900 | NXD63B900 |
| 1000 | NXD62B100 | NXD63B100 |
| 1200 | NXD62B120 | NXD63B120 |

Type ND6^②

Blue Label

| Interchangeable Trip | | | |
|----------------------------------|----------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |
| | | | |

2-Pole 600V AC, 250V DC^②

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 800 | ND62B800 | ND62F120 | MD62T800 |
| 900 | ND62B900 | | ND62T900 |
| 1000 | ND62B100 | | ND62T100 |
| 1200 | ND62B120 | | ND62T120 |

3-Pole 600V AC, 500V DC^⑤

| Continuous Current Rating @ 40°C | Catalogue Number | Catalogue Number | Catalogue Number |
|----------------------------------|------------------|------------------|------------------|
| 800 | ND63B800 | ND63F120 | MD63T800 |
| 900 | ND63B900 | | ND63T900 |
| 1000 | ND63B100 | | ND63T100 |
| 1200 | ND63B120 | | ND63T120 |

Interrupting Ratings

| Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------|------------------------------|-----|-----|----------|------------------|--------------------|-------|---------|-------|-------|-------|
| | CSA / UL 489 A IR | | | | | IEC 947-2 | | | | | |
| | Volts AC | | | Volts DC | | Volts AC (50/60HZ) | | | | | |
| | 240 | 480 | 600 | 250 | 500 ^③ | 220/240 | | 380/415 | | 500 | |
| | | | | | | (lcu) | (lcs) | (lcu) | (lcs) | (lcu) | (lcs) |
| ND6, NXD6 | 65 | 50 | 25 | 30 (2-P) | 25 (3-P) | 65 | 33 | 40 | 20 | — | — |
| HND6, HNXD6 | 100 | 65 | 50 | 30 (2-P) | 50 (3-P) | 100 | 50 | 65 | 33 | — | — |
| CND6 | 200 | 100 | 65 | — | 50 (3-P) | — | — | — | — | — | — |

Instantaneous Adjustment Trip Range

| Breaker Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|-----------------------|------------------------------|------|------|------|------|------|------|-------------------|
| | Low ^④ | 2 | 3 | 4 | 5 | 6 | 7 | High ^④ |
| 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 |
| 900-1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 |

① NXD6 circuit breakers are CSA Certified / UL Listed for reverse connection applications.

② 2-pole units available in 3-pole width only.

③ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500VDC ungrounded UPS systems only.

④ Use 6 connectors for 3-pole, use 4 connectors for 2-pole.

⑤ Use 2 – 3TA4P8500 kits for 3-pole, or 2 – 2TA4P8500 kits for 2-pole. Rated for 90°C cable. Use for 100% rated breakers.

⑥ Use 2 – 3TA4N8500 for 3-pole or 2 – 2TA4N8500 for 2-pole. Rated for 75°C cable.

⑦ See **Note: A**, page 5-76.

⑧ 80% rated breakers with the CE mark will also be marked in the 100% rated version.

⑨ HACR rated.

⑩ +/- 20% Tolerance.

Note: ND frame qualified to UL489 supplement B "NAVAL" See page 5-79 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of ND6 and HND6 breakers include frame, trip, and both line and load lugs (3TA4N8500). These catalogue numbers are the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of NXD6, HNXD6, and CND6 include frame with non-interchangeable trip units installed only. Order required terminal connectors separately.

For line and load lugs (3TA4N8500) installed, add suffix "L" to catalogue number (add 2 times list price of lug kit).

100% Rated^⑧

Types NXD6, HNXD6 and CND6 breakers are available with 100% ratings. To order, suffix "H" to catalogue number, and add 10% to list price. 100% rated ND breakers require 90°C Cu cable and lug kit 3TA4P8500 or 3TA3N8750.

50°C Applications see page 5-79.

400Hz Applications see page 5-79.

Lugs^⑦

| Catalogue Number | Cables per Lug | Wire Range |
|--------------------------------------------------|----------------|---------------------|
| TA2K500 | 2 | #1-500 kcmil Cu/Al |
| TA3K500 | 3 | #1-500 kcmil Cu/Al |
| TC2K500 | 2 | #1-500 kcmil Cu |
| TC3K350 | 3 | #1-350 kcmil Cu |
| Kits (2 Kits required per breaker) | | |
| 2TA4P8500 ^⑤ 3TA4P8500 ^⑤ | 4 | 250-500 kcmil Cu/Al |
| 2TA4N8500 ^⑥ 3TA4N8500 ^⑥ | 4 | 250-500 kcmil Cu/Al |
| 2TA2N8750 3TA2N8750 | 2 | 500-750 kcmil Cu/Al |
| 2TA3N8750 3TA3N8750 | 3 | 500-750 kcmil Cu/Al |

Modifications page 5-137
Accessories page 5-138

Molded Case Circuit Breakers

ND 1200A Frame Sentron Series

Type HNXD6^{①④}

Black Label

| Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs) | | |
|-------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------|
| Continuous Current Rating @ 40°C | 2-Pole 600V AC 250V DC | 3-Pole 600V AC 500V DC |
| | Catalogue Number | |
| 900 | For 2-pole application use outside poles of 3-pole circuit breaker | HNXD63B900 |
| 1000 | | HNXD63B100 |
| 1200 | | HNXD63B120 |

Type HND6^④

Black Label

| Interchangeable Trip | | | |
|----------------------------------|--------------------------------------------------------------------|------------------|------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled with Lugs | Frame Only | Trip Unit Only |
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 800 | For 2-pole application use outside poles of 3-pole circuit breaker | HND63F120 | MD63T800 |
| 900 | | | ND63T900 |
| 1000 | | | ND63T100 |
| 1200 | | | ND63T120 |

2-Pole 600V AC, 250V DC^②

| | |
|------|--------------------------------------------------------------------|
| 800 | For 2-pole application use outside poles of 3-pole circuit breaker |
| 900 | |
| 1000 | |
| 1200 | |

3-Pole 600V AC, 500V DC^⑤

| | | | |
|------|-----------|-----------|----------|
| 800 | HND63B800 | HND63F120 | MD63T800 |
| 900 | HND63B900 | | ND63T900 |
| 1000 | HND63B100 | | ND63T100 |
| 1200 | HND63B120 | | ND63T120 |

Type CND6^{①④}

Fuseless Current Limiting

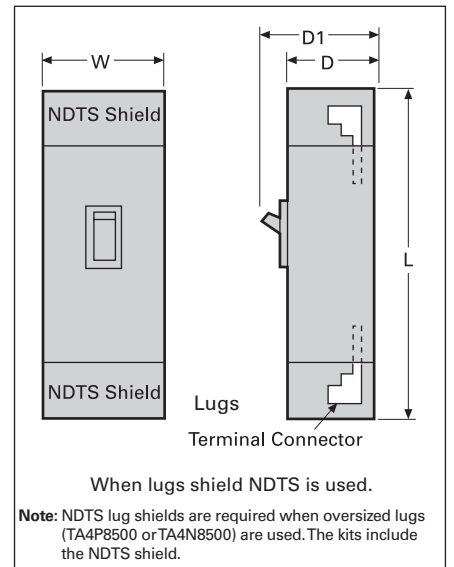
Red Label

| Non-Interchangeable Trip (Assembled Circuit Breaker) | | |
|------------------------------------------------------|---------------------------------------------------------------------|-----------|
| Continuous Current Rating @ 40°C | 2-Pole | 3-Pole |
| | Catalogue Number | |
| 900 | For 2-pole application, use outside poles of 3-pole circuit breaker | CND63B900 |
| 1000 | | CND63B100 |
| 1200 | | CND63B120 |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|------------------------------------------------------------------------|-------------------|------------------------|
| ND6, HND6, NXD6, HNXD6, CND6 Assembled Breaker (less terminals) | | |
| 2 | 1 | 53 |
| 3 | 1 | 61.5 |
| ND6, HND6 Frame Only | | |
| 2 | 1 | 42.25 |
| 3 | 1 | 46 |
| ND6, HND6 Trip Unit Only | | |
| 2 | 1 | 4.5 |
| 3 | 1 | 6.5 |

Selection/Dimensions



Dimensions (in inches)

| Breaker Type | W | L | D | D1 |
|------------------------------|---|----|---|------|
| ND6, NXD6, HND6, HNXD6, CND6 | 9 | 16 | 6 | 8.25 |
| with NDTS lug shield | 9 | 29 | 6 | 8.25 |

For inches / millimeters conversion, see Technical section.

① HNXD6 and CND6 circuit breakers are CSA Certified / UL Listed for reverse connection applications.
② 2-pole units available in 3-pole width only.

③ When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.
④ HACR rated.

Molded Case Circuit Breakers

SND 1200A Frame Digital Solid State Sentron Sensitrip IV Series^②

Selection

Type SND6-B

Blue Label

Type SHND6-B

Black Label

Current Limiting

Type SCND6-B

Red Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) |
| 800 | SND6A800LI | SND6B800LI | SHND6A800LI | SHND6B800LI | SCND6A800LI | SCND6B800LI |
| 1000 | SND6A100LI | SND6B100LI | SHND6A100LI | SHND6B100LI | SCND6A100LI | SCND6B100LI |
| 1200 | SND6A120LI | SND6B120LI | SHND6A120LI | SHND6B120LI | SCND6A120LI | SCND6B120LI |
| 800 | SND6A800LIG | SND6B800LIG | SHND6A800LIG | SHND6B800LIG | SCND6A800LIG | SCND6B800LIG |
| 1000 | SND6A100LIG | SND6B100LIG | SHND6A100LIG | SHND6B100LIG | SCND6A100LIG | SCND6B100LIG |
| 1200 | SND6A120LIG | SND6B120LIG | SHND6A120LIG | SHND6B120LIG | SCND6A120LIG | SCND6B120LIG |
| 800 | SND6A800LSI | SND6B800LSI | SHND6A800LSI | SHND6B800LSI | SCND6A800LSI | SCND6B800LSI |
| 1000 | SND6A100LSI | SND6B100LSI | SHND6A100LSI | SHND6B100LSI | SCND6A100LSI | SCND6B100LSI |
| 1200 | SND6A120LSI | SND6B120LSI | SHND6A120LSI | SHND6B120LSI | SCND6A120LSI | SCND6B120LSI |
| 800 | SND6A800LSIG | SND6B800LSIG | SHND6A800LSIG | SHND6B800LSIG | SCND6A800LSIG | SCND6B800LSIG |
| 1000 | SND6A100LSIG | SND6B100LSIG | SHND6A100LSIG | SHND6B100LSIG | SCND6A100LSIG | SCND6B100LSIG |
| 1200 | SND6A120LSIG | SND6B120LSIG | SHND6A120LSIG | SHND6B120LSIG | SCND6A120LSIG | SCND6B120LSIG |

SND 1200A Frame – 100% Rated^①

Type SND6-B

Blue Label

Type SHND6-B

Black Label

Current Limiting

Type SCND6-B

Red Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit) ^③ | Catalogue Number (Basic trip unit) |
| 800 | SND6A800LIH | SND6B800LIH | SHND6A800LIH | SHND6B800LIH | SCND6A800LIH | SCND6B800LIH |
| 1000 | SND6A100LIH | SND6B100LIH | SHND6A100LIH | SHND6B100LIH | SCND6A100LIH | SCND6B100LIH |
| 1200 | SND6A120LIH | SND6B120LIH | SHND6A120LIH | SHND6B120LIH | SCND6A120LIH | SCND6B120LIH |
| 800 | SND6A800LIGH | SND6B800LIGH | SHND6A800LIGH | SHND6B800LIGH | SCND6A800LIGH | SCND6B800LIGH |
| 1000 | SND6A100LIGH | SND6B100LIGH | SHND6A100LIGH | SHND6B100LIGH | SCND6A100LIGH | SCND6B100LIGH |
| 1200 | SND6A120LIGH | SND6B120LIGH | SHND6A120LIGH | SHND6B120LIGH | SCND6A120LIGH | SCND6B120LIGH |
| 800 | SND6A800LSIH | SND6B800LSIH | SHND6A800LSIH | SHND6B800LSIH | SCND6A800LSIH | SCND6B800LSIH |
| 1000 | SND6A100LSIH | SND6B100LSIH | SHND6A100LSIH | SHND6B100LSIH | SCND6A100LSIH | SCND6B100LSIH |
| 1200 | SND6A120LSIH | SND6B120LSIH | SHND6A120LSIH | SHND6B120LSIH | SCND6A120LSIH | SCND6B120LSIH |
| 800 | SND6A800LSIGH | SND6B800LSIGH | SHND6A800LSIGH | SHND6B800LSIGH | SCND6A800LSIGH | SCND6B800LSIGH |
| 1000 | SND6A100LSIGH | SND6B100LSIGH | SHND6A100LSIGH | SHND6B100LSIGH | SCND6A100LSIGH | SCND6B100LSIGH |
| 1200 | SND6A120LSIGH | SND6B120LSIGH | SHND6A120LSIGH | SHND6B120LSIGH | SCND6A120LSIGH | SCND6B120LSIGH |

5
MOLDED CASE
CIRCUIT BREAKERS

Trip Unit Adjustable Functions

| Suffix Letter Code | Trip Type | Cont Current Setting | Long Time Delay | Instantaneous Pick Up | Short Time Pick Up | Short Time Fixed Pick Up | Short Time 1st Delay | Ground Fault Pick Up | Ground Fault Delay |
|--------------------|-----------|----------------------|-----------------|-----------------------|--------------------|--------------------------|----------------------|----------------------|--------------------|
| LI | LI | ✓ | ✓ | ✓ | | | | | |
| LIG | LIG | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| LSI | LSI | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| LSIG | LSIG | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Interrupting Ratings

| Breaker Type | RMS Symmetrical kA UL 489 (File E10848) | | |
|--------------|-----------------------------------------|---------|---------|
| | 240V AC | 480V AC | 600V AC |
| SND6-B | 65 | 50 | 25 |
| SHND6-B | 100 | 65 | 50 |
| SCND6-B | 200 | 100 | 65 |

Neutral Transformers

| Ampere Rating | Catalogue Number |
|---------------|------------------|
| 800 | N08SMDA |
| 1000 | N10SNDA |
| 1200 | N12SNDA |

For inches / millimeters conversion, see Technical Data section.

For ordering information and terminal connectors, and enclosures, see page 5-109.

Note: "G" suffix in catalog number denotes circuit breaker for 3-phase, 3-wire circuits.

For 3-phase, 4-wire, order correct 4th wire (neutral) transformer as separate and additional item.

All breakers built to order. Allow 2-3 weeks for delivery.

① Use 2-3TA4P8500 for 3-pole. These kits are rated for 90°C wire. 90°C Cu only cable must be used, and sized per 75°C ampacity.

② SND6, SHND6 and SCND6 circuit breakers are UL Listed for reverse connection applications.

③ Advanced trip unit equipped with DAS / Maintenance

Mode. Requires customer-supplied 24V external power supply, maintenance switch and light.

Molded Case Circuit Breakers

Internal Accessories

Selection

Accessories for:

MD/SMD 800A Frame
ND/SND 1200A Frame
PD/SPD 1600A Frame
RD 2000A Frame



Accessory modules can mount in either left hand or right hand poles of all circuit breakers, including solid state. Exception: when mechanical interlock is used accessories cannot be mounted in left pole.

Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch |
|-----------------|-----|------------------|-------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 120 | — | S01MN6 | S01MN64A |
| 208 | — | S02MN6 | S02MN64A |
| 240 | — | S03MN6 | S03MN64A |
| 277 | — | S15MN6 | S15MN64A |
| 480 | — | S04MN6 | S04MN64A |
| 600 | — | S06MN6 | — |
| — | 12 | S16MN6 | S16MN64A |
| — | 24 | S07MN6 | S07MN64A |
| — | 48 | S09MN6 | — |
| — | 125 | S11MN6 | S11MN64A |
| — | 250 | S13MN6 | S13MN64A |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01MN6 | U01MN64A | U01MN64AA |
| 208 | — | U02MN6 | U02MN64A | U02MN64AA |
| 240 | — | U03MN6 | U03MN64A | U03MN64AA |
| 277 | — | U15MN6 | U15MN64A | U15MN64AA |
| 480 | — | U04MN6 | U04MN64A | U04MN64AA |
| 600 | — | U06MN6 | — | — |
| — | 24 | U07MN6 | U07MN64A | U07MN64AA |
| — | 48 | U09MN6 | U09MN64A | U09MN64AA |
| — | 125 | U11MN6 | U11MN64A | U11MN64AA |
| — | 250 | U13MN6 | U13MN64A | U13MN64AA |

Auxiliary Switch Combinations

| Maximum Voltage | | 1 Form C | 2 Form C |
|-----------------|-----|------------------|------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | A01MN64 | A02MN64 |
| — | 12 | A01MNDLV | A02MNDLV |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|------------------|---------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 480 | 250 | B00MN64 | A01MN64B | A02MN64B |

ETU Testing Unit

| Breaker Type | Description | Catalogue Number |
|-------------------------|-----------------------------|------------------|
| SJD, SLD, SMD, SND, SPD | Power Stick | EPSP18V |
| | Spare cable for Power Stick | COMPCA |

The EPSP18V Power Stick is a hand-held, battery-operated power supply that can be used for trip testing the Sensitrip IV electronic trip units. Requires two 9V batteries.

Molded Case Circuit Breakers

PD 1600A Frame Sentron Series

Selection

Type PXD6² Non-Interchangeable Trip⁵

3-Pole 600V AC, 250-500V DC¹

Blue Label

| Continuous Current Rating @ 40°C | Complete Breaker Assembled (Frame/Trip Unit Only) | Mounting Assembly | Lugs (6 required) |
|----------------------------------|---------------------------------------------------|-------------------|-------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| 1200 | PXD63B120 | MB9301 | TA5P600 |
| 1400 | PXD63B140 | -or- | |
| 1600 | PXD63B160 | MBR9302 | |

Type PD6 Interchangeable Trip⁵

3-Pole 600V AC, 250-500V DC¹

Blue Label

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled | Frame Only | Trip Unit Only | Mounting Assembly | Lugs (6 required) |
|----------------------------------|------------------------------|------------------|------------------|-------------------|-------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| 1200 | PD63B120 | PD63F160 | PD63T120 | MB9301 | TA5P600 |
| 1400 | PD63B140 | | PD63T140 | -or- | |
| 1600 | PD63B160 | | PD63T160 | MBR9302 | |

Type HPXD6² Non-Interchangeable Trip⁵

3-Pole 600V AC, 250-500V DC¹

Blue Label

| Continuous Current Rating @ 40°C | Complete Breaker Assembled (Frame/Trip Unit Only) |
|----------------------------------|---------------------------------------------------|
| | Catalogue Number |
| 1200 | HPXD63B120 |
| 1400 | HPXD63B140 |
| 1600 | HPXD63B160 |

Type HPD6 Interchangeable Trip⁵

3-Pole 600V AC, 250-500V DC¹

Black Label

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled | Frame Only | Trip Unit Only | Mounting Assembly | Lugs (6 required) |
|----------------------------------|------------------------------|------------------|------------------|-------------------|-------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| 1200 | HPD63B120 | HPD63F160 | PD63T120 | MB9301 | TA5P600 |
| 1400 | HPD63B140 | | PD63T140 | -or- | |
| 1600 | HPD63B160 | | PD63T160 | MBR9302 | |

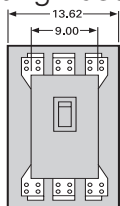
Type CPD6 Non-Interchangeable Trip⁵

Fuseless Current Limiting
3-Pole 600V AC, 250-500V DC¹

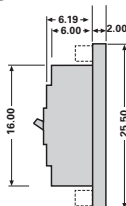
Red Label

| Continuous Current Rating @ 40°C | Complete Breaker Assembled (Frame/Trip Unit Only) |
|----------------------------------|---------------------------------------------------|
| | Catalogue Number |
| 1200 | CPD63B120 |
| 1400 | CPD63B140 |
| 1600 | CPD63B160 |

Mounting Bases for PD & RD



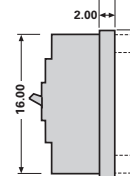
MB9301



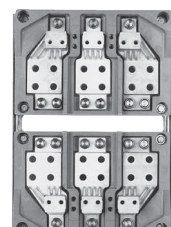
MB9301



MB9301



MBR9302



MBR9302

¹ Use two outside poles of a 3-pole circuit breaker for 250V
² When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

³ PXD6, HPXD6 and CPD6 type circuit breakers are CSA Certified / UL Listed for reverse feed applications.
⁴ For additional information See **Note: A**, page 5-76.
⁵ HACR rated.

Note: PD frame qualified to UL489 supplement B "NAVAL"
See page 5-79 for additional information.

Ordering Instructions

Complete Breaker Unassembled with Lugs

Prices of PD6, HPD6, RD6, and HRD6 type breakers include frame, trip, mounting base (MB9301), and both line and load lugs (PD Frame – TA5P600, RD Frame – TC5R600). When ordered by these catalogue numbers, the customer will receive the frame, trip, mounting assembly and lugs separately packaged. For applications requiring different mounting base or lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of PXD6, HPXD6, RXD6, HRXD6 and CPD6 type breakers include frame with non-interchangeable trip unit installed only. Order required mounting base and lugs separately.

100% Rated (3-Pole only)

Types PXD6, HPXD6 breakers are available with 100% ratings. To order add suffix "H" to catalogue number, and 10% to list price. 100% PD breakers require 90° C cable sized at 75° C ampacity and TC5R600 lugs. RD 2000A Frames not available with 100% ratings.

50°C Applications see page 5-79.

400HZ Applications see page 5-79.

Lugs (6 required per breaker)⁴

| Catalogue Number | No of Cables per Connector | Wire Range |
|------------------|----------------------------|-----------------------|
| TA5P600 | 1-5 | 300-600 kcmil Cu/Al |
| TC5R600 | 1-5 | 300-600 kcmil Cu only |
| TA4P750 | 1-4 | 500-750 kcmil Cu/Al |
| TA6R600 | 1-6 | 300-600 kcmil Cu/Al |

Interrupting Ratings

| Breaker Type | UL 489 A IR | | | | |
|--------------|--------------------|-----|-----|-----------------------|---------|
| | RMS Symmetrical KA | | | | |
| | Volts AC | | | Volts DC ¹ | |
| | 240 | 480 | 600 | 250 | 500 |
| PD6, PXD6 | 65 | 50 | 25 | 30 (2P) | 25 (3P) |
| HPD6, HPXD6 | 100 | 65 | 50 | 30 (2P) | 50 (3P) |
| CPD6 | 200 | 100 | 65 | 30 (2P) | 50 (3P) |

Molded Case Circuit Breakers

SPD 1600A Frame Digital Solid State Sentron Sensitrip IV Series

Selection/Dimensions

Type SPD6-B

Type SHPD6-B

Blue Label

Black Label

| Max Current Rating | 3-Pole, 600V AC | | 3-Pole, 600V AC | |
|--------------------|----------------------------------------|------------------------------------|----------------------------------------|------------------------------------|
| | Catalogue Number (Advanced trip unit)③ | Catalogue Number (Basic trip unit) | Catalogue Number (Advanced trip unit)③ | Catalogue Number (Basic trip unit) |
| 1400 | SPD6A140LI | SPD6B140LI | SHPD6A140LI | SHPD6B140LI |
| 1600 | SPD6A160LI | SPD6B160LI | SHPD6A160LI | SHPD6B160LI |
| 1400 | SPD6A140LIG | SPD6B140LIG | SHPD6A140LIG | SHPD6B140LIG |
| 1600 | SPD6A160LIG | SPD6B160LIG | SHPD6A160LIG | SHPD6B160LIG |
| 1400 | SPD6A140LSI | SPD6B140LSI | SHPD6A140LSI | SHPD6B140LSI |
| 1600 | SPD6A160LSI | SPD6B160LSI | SHPD6A160LSI | SHPD6B160LSI |
| 1400 | SPD6A140LSIG | SPD6B140LSIG | SHPD6A140LSIG | SHPD6B140LSIG |
| 1600 | SPD6A160LSIG | SPD6B160LSIG | SHPD6A160LSIG | SHPD6B160LSIG |

Ordering Information

Pricing information for all Digital Sentron Series PD frame unit is for breaker only. Price required mounting block assembly and necessary terminal connectors as separate items.

Lugs①

| Catalogue Number | No. of cables per connector | Wire Range |
|------------------|-----------------------------|-----------------------|
| TA5P600 | 1-5 pcs. | 300-600 kcmil Cu/Al |
| TC5R600 | 1-5 pcs. | 300-600 kcmil Cu Only |
| TA6R600 | 1-6 pcs. | 300-600 kcmil Cu/Al |

Trip Unit Adjustable Functions

| Suffix Letter Code | Trip Type | Cont Current Setting | Long Time Delay | Instantaneous Pick Up | Short Time Pick Up | Short Time Fixed Delay | Short Time f't Delay | Ground Fault Pick Up | Ground Fault Delay |
|--------------------|-----------|----------------------|-----------------|-----------------------|--------------------|------------------------|----------------------|----------------------|--------------------|
| LI | LI | ✓ | ✓ | ✓ | | | | | |
| LIG | LIG | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| LSI | LSI | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| LSIG | LSIG | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Neutral Transformers

| Ampere Rating | Catalogue Number |
|---------------|------------------|
| 1400 | N14SPD |
| 1600 | N16SPD |

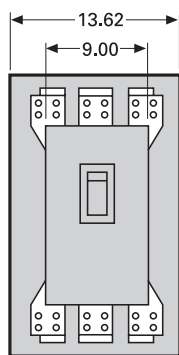
Interrupting Ratings

| Breaker Type | RMS Symmetrical kA UL 489 | | |
|--------------|---------------------------|---------|---------|
| | 240V AC | 480V AC | 600V AC |
| SPD6-B | 65 | 50 | 25 |
| SHPD6-B | 100 | 65 | 50 |

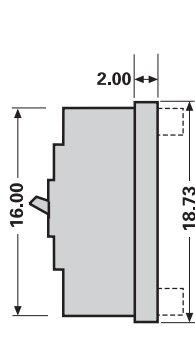
Mounting Block (Required)②

| Catalogue Number |
|------------------|
| MB9301 |
| MBR9302 |

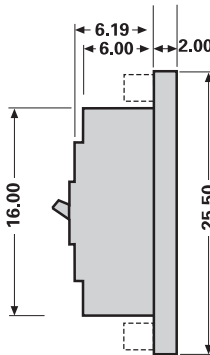
All PD, RD Frames:



MB9301 (shown)
MBR9302



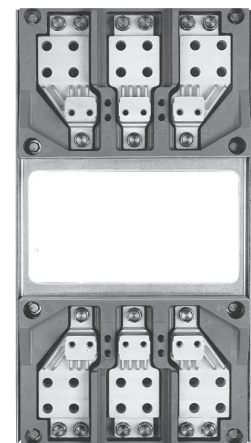
MBR9302



MB9301



MBR9302



MB9301

For inches / millimeters conversion, see Technical Data section.

Note: "G" suffix in catalog number denotes circuit breaker for 3-phase, 3-wire circuits. For 3-phase, 4-wire, order correct 4th wire (neutral) transformer as separate and additional item.

All breakers built to order. Allow 2-3 weeks for delivery.
① For additional information, see **Note: A**, page 5-76.
② The PD frame circuit breaker requires the use of a connect-all mounting assembly to allow for placing into service.

③ Advanced trip unit equipped with DAS / Maintenance Mode. Requires customer-supplied 24V external power supply, maintenance switch and light.

Molded Case Circuit Breakers

Internal Accessories

Selection/Dimensions

Accessories for:

MD/SMD 800A Frame
ND/SND 1200A Frame
PD/SPD 1600A Frame
RD 2000A Frame



Accessory modules can mount in either left hand or right hand poles of all circuit breakers, including solid state. Exception: when mechanical interlock is used accessories cannot be mounted in left pole.

Shunt Trip Combinations

| Control Voltage | | 1 Shunt Trip | 1 Shunt Trip and 1 Auxiliary Switch |
|-----------------|-----|------------------|-------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 120 | — | S01MN6 | S01MN64A |
| 208 | — | S02MN6 | S02MN64A |
| 240 | — | S03MN6 | S03MN64A |
| 277 | — | S15MN6 | S15MN64A |
| 480 | — | S04MN6 | S04MN64A |
| 600 | — | S06MN6 | — |
| — | 12 | S16MN6 | S16MN64A |
| — | 24 | S07MN6 | S07MN64A |
| — | 48 | S09MN6 | — |
| — | 125 | S11MN6 | S11MN64A |
| — | 250 | S13MN6 | S13MN64A |

Undervoltage Trip Combinations

| Control Voltage | | 1 Undervoltage Trip | 1 Undervoltage Trip and 1 Auxiliary Switch | 1 Undervoltage Trip and 2 Auxiliary Switches |
|-----------------|-----|---------------------|--------------------------------------------|----------------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 120 | — | U01MN6 | U01MN64A | U01MN64AA |
| 208 | — | U02MN6 | U02MN64A | U02MN64AA |
| 240 | — | U03MN6 | U03MN64A | U03MN64AA |
| 277 | — | U15MN6 | U15MN64A | U15MN64AA |
| 480 | — | U04MN6 | U04MN64A | U04MN64AA |
| 600 | — | U06MN6 | — | — |
| — | 24 | U07MN6 | U07MN64A | U07MN64AA |
| — | 48 | U09MN6 | U09MN64A | U09MN64AA |
| — | 125 | U11MN6 | U11MN64A | U11MN64AA |
| — | 250 | U13MN6 | U13MN64A | U13MN64AA |

Auxiliary Switch Combinations

| Maximum Voltage | | 1 Form C* | 2 Form C |
|-----------------|-----|------------------|------------------|
| AC | DC | Catalogue Number | Catalogue Number |
| 480 | 250 | A01MN64 | A02MN64 |
| — | 12 | A01MNDLV | A02MNDLV |

Alarm Switch Combinations

| Maximum Voltage | | 1 Alarm Switch | 1 Alarm Switch and 1 Auxiliary Switch | 1 Alarm Switch and 2 Auxiliary Switches |
|-----------------|-----|------------------|---------------------------------------|-----------------------------------------|
| AC | DC | Catalogue Number | Catalogue Number | Catalogue Number |
| 480 | 250 | B00MN64 | A01MN64B | A02MN64B |

ETU Testing Unit

| Breaker Type | Description | Catalogue Number |
|-------------------------|-----------------------------|------------------|
| SJD, SLD, SMD, SND, SPD | Power Stick | EPSP18V |
| | Spare cable for Power Stick | COMPCA |

The EPSP18V Power Stick is a hand-held, battery-operated power supply that can be used for trip testing the Sensitrip IV electronic trip units. Requires two 9V batteries.

Molded Case Circuit Breakers

RD 2000A Frame Sentron Series

Selection

Type RXD6^④

3-Pole 600V AC, 250-500V DC^①

Blue Label

| Non-Interchangeable Trip (Assembled Circuit Breaker Only Without Lugs) | | | |
|------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------|------------------------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Assembled (Frame/Trip Unit Only) Catalogue Number | Mounting Assembly Catalogue Number | Lugs (6 required) Catalogue Number |
| 1600 | RXD63B160 | MB9301 | TC5R600 |
| 1800 | RXD63B180 | -or- | |
| 2000 | RXD63B200 | MBR9302 | |

Type RD6^④

3-Pole 600V AC, 250-500V DC^①

Blue Label

| Interchangeable Trip (Unassembled Circuit Breaker with Lugs) | | | | | |
|--------------------------------------------------------------|-----------------------------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|
| Continuous Current Rating @ 40°C | Complete Breaker Unassembled Catalogue Number | Frame Only Catalogue Number | Trip Unit Only Catalogue Number | Mounting Assembly Catalogue Number | Lugs (6 required) Catalogue Number |
| 1600 | RD63B160 | RD63F200 | RD63T160 | MB9301 | TC5R600 |
| 1800 | RD63B180 | | RD63T180 | -or- | |
| 2000 | RD63B200 | | RD63T200 | MBR9302 | |

Type HRXD6^④

| Continuous Current Rating @ 40°C | Complete Breaker Assembled (Frame/Trip Unit Only) | |
|----------------------------------|---------------------------------------------------|--|
| | Catalogue Number | |
| 1600 | HRXD63B160 | |
| 1800 | HRXD63B180 | |
| 2000 | HRXD63B200 | |

Type HRD6^④

Black Label

| Continuous Current Rating @ 40°C | Complete Breaker Unassembled Catalogue Number | Frame Only Catalogue Number | Trip Unit Only Catalogue Number | Mounting Assembly Catalogue Number | Lugs (6 required) Catalogue Number |
|----------------------------------|-----------------------------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|
| 1600 | HRD63B160 | HRD63F200 | RD63T160 | MB9301 | TC5R600 |
| 1800 | HRD63B180 | | RD63T180 | -or- | |
| 2000 | HRD63B200 | | RD63T200 | MBR9302 | |

Interrupting Ratings

| Breaker Type | UL 489 A IR | | | | | |
|--------------|--------------------|-----|-----|-----------------------|---------|--|
| | RMS Symmetrical KA | | | | | |
| | Volts AC | | | Volts DC ^① | | |
| | 240 | 480 | 600 | 250 | 500 | |
| RD6, RXD6 | 65 | 50 | 25 | 30 (2P) | 25 (3P) | |
| HRD6, HRXD6 | 100 | 65 | 50 | 30 (2P) | 50 (3P) | |

Instantaneous Adjustment Trip Range (PD / RD Frames)

| Breaker Ampere Rating | Nominal Instantaneous Values | | | | | | | |
|-----------------------|------------------------------|------|------|------|------|------|------|---------------------|
| | ±25% Tolerance Low | 2 | 3 | 4 | 5 | 6 | 7 | ±20% Tolerance High |
| | | | | | | | | |
| 1200-2000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9790 | 10,000 |

① Use two outside poles of a 3-pole circuit breaker for 250V DC applications.

② When wired as shown on page 5-4, this circuit breaker is CSA Certified / UL Listed and rated for use on 500V DC ungrounded UPS systems only.

③ RXD6 and HRXD6 type circuit breakers are CSA Certified / UL Listed for reverse feed applications.

④ HACR rated.



RXD63B200

Mounting Block^⑥

| Catalogue Number | Connection Points |
|------------------|-------------------|
| MB9301 | Front |
| MBR9302 | Rear |

Shipping Weights

| Number of Poles | Number per Carton | Shipping Weight (lbs.) |
|----------------------------------------------------------|-------------------|------------------------|
| PXD6, HPXD6, RXD6, HRXD6, CPD6 Assembled Breakers | | |
| 3 | 1 | 61.5 |
| PD6, HPD6, RD6, HRD6 Frame Only | | |
| 3 | 1 | 55.0 |
| PD6, RD6 Trip Unit Only | | |
| 3 | 1 | 6.5 |
| Mounting Assembly | | |
| MB9301 | 1 | 53.0 |
| MBR9302 | 1 | 50.9 |

Lugs (6 required per breaker)^⑤

| Catalogue Number | No of Cables per Connector | Wire Range |
|------------------|----------------------------|-----------------------|
| TA5P600 | 1-5 | 300-600 kcmil Cu/Al |
| TC5R600 | 1-5 | 300-600 kcmil Cu only |
| TA6R600 | 1-6 | 300-600 kcmil Cu/Al |

⑤ For additional information See Note: A, page 5-76.

Note: RD frame qualified to UL489 supplement B "NAVAL". See page 5-79 for additional information.

⑥ For required mounting base (MB9301 or MBR9302) see page 5-59.

Molded Case Circuit Breakers

Magnetic Trip Only — ETI Motor Circuit Protector

Selection

| Breaker Type | Ampere Rating | Instantaneous Trip Range® | | Complete Circuit Breaker Without Lugs® | |
|--------------------------------------------|---------------|---------------------------|----------|----------------------------------------|-----------------------|
| | | Minimum® | Maximum® | Catalog Number 2-Pole | Catalog Number 3-Pole |
| HEM | 3 | 9 | 33 | — | HEM3M003L |
| | 7 | 21 | 77 | — | HEM3M007L |
| | 15 | 45 | 165 | — | HEM3M015L |
| | 30 | 90 | 330 | — | HEM3M030L |
| | 50 | 150 | 550 | — | HEM3M050L |
| | 70 | 210 | 770 | — | HEM3M070L |
| | 100 | 300 | 1100 | — | HEM3M100L |
| SHIPPING: | | | | | 3.7 lbs. each |
| ED6-A 600V AC 250V DC | 1 | 2.6 | 9 | — | ED63A001 |
| | 2 | 7 | 22 | — | ED63A002 |
| | 3 | 10 | 35 | — | ED63A003 |
| | 5 | 16 | 54 | — | ED63A005 |
| | 10 | 30 | 100 | — | ED63A010 |
| | 25 | 55 | 180 | — | ED63A025 |
| | 30 | 80 | 270 | — | ED63A030 |
| | 40 | 115 | 375 | — | ED63A040 |
| | 50 | 180 | 600 | — | ED63A050 |
| | 100 | 315 | 1000 | — | ED63A100 |
| | 125 | 500 | 1250 | — | ED63A125 |
| | SHIPPING: | | | | |
| CED6-A 600V AC 250V DC | 1 | 2.6 | 9 | — | CED63A001 |
| | 2 | 7 | 22 | — | CED63A002 |
| | 3 | 10 | 35 | — | CED63A003 |
| | 5 | 16 | 54 | — | CED63A005 |
| | 10 | 30 | 100 | — | CED63A010 |
| | 25 | 55 | 180 | — | CED63A025 |
| | 30 | 80 | 270 | — | CED63A030 |
| | 40 | 115 | 375 | — | CED63A040 |
| | 50 | 180 | 600 | — | CED63A050 |
| | 100 | 315 | 1000 | — | CED63A100 |
| | 125 | 500 | 1250 | — | CED63A125 |
| | SHIPPING: | | | | |
| FXD6 ^④ 600V AC 250V DC | 150 | 400 | 800 | — | FXD63L150 |
| | 150 | 800 | 1500 | — | FXD63A150 |
| | 150 | 1100 | 2500 | — | FXD63H150 |
| | 250 | 1100 | 2500 | — | FXD63A250 |
| SHIPPING: | | | | | 9 lbs. each |
| CFD6 ^④ 600V AC 250V DC | 150 | 400 | 800 | — | CFD63L150 |
| | 150 | 800 | 1500 | — | CFD63A150 |
| | 150 | 1100 | 2500 | — | CFD63H150 |
| | 250 | 1100 | 2500 | — | CFD63A250 |
| SHIPPING: | | | | | 12 lbs. each |
| JXD6(A) ^① 600V AC 250V DC | 400 | 1250 | 2500 | — | JXD63L400 |
| | 400 | 2000 | 4000 | JXD62H400 | JXD63H400 |
| SHIPPING: | | | | | 16 lbs. each |
| CJD6 ^① 600V AC 250V DC | 400 | 1250 | 2500 | — | CJD63L400 |
| | 400 | 2000 | 4000 | — | CJD63H400 |
| SHIPPING: | | | | | 29.5 lbs. each |
| LXD6(A) ^① 600V AC 250V DC | 600 | 2000 | 4000 | LXD62L600 | LXD63L600 |
| | 600 | 3000 | 6000 | — | LXD63H600 |
| SHIPPING: | | | | | 16 lbs. each |
| CLD6 ^① 600V AC 250V DC | 600 | 2000 | 4000 | — | CLD63L600 |
| | 600 | 3000 | 6000 | — | CLD63H600 |
| SHIPPING: | | | | | 31.5 lbs. each |
| LMXD6 ^④ 600V AC 250V DC | 800 | 2800 | 6000 | — | LMXD63L800 |
| | 800 | 3200 | 8000 | — | LMXD63A800 |
| SHIPPING: | | | | | 35 lbs. each |
| MXD6 ^④ 600V AC 250V DC | 800 | 3000 | 6000 | — | MXD63L800 |
| | 800 | 4000 | 8000 | — | MXD63A800 |
| | 800 | 5000 | 10000 | — | MXD63H800 |
| SHIPPING: | | | | | 33 lbs. each |
| CMD6 ^④ 600V AC 250V DC | 800 | 3000 | 6000 | — | CMD63L800 |
| | 800 | 4000 | 8000 | — | CMD63A800 |
| | 800 | 5000 | 10000 | — | CMD63H800 |
| SHIPPING: | | | | | 80 lbs. each |

5
MOLDED CASE
CIRCUIT BREAKERS

Important Information

ETI interrupting ratings are determined through combination tests with properly sized overload relays and contactors.

⑤ Connectors included when ordering by circuit breaker catalog number for HEM, ED and CED6 ETIs. Order ETI circuit breaker and lugs (2 per pole) separately for the FXD6, CFD6, MXD6, CMD6, JXD6, CJD6, LXD6 and CLD6 ETI's.

① 2-pole available in 3-pole width only.

② When applied on DC Circuits — Trip levels will increase approximately +15 to 20%.

③ Tolerance -20%/+30% for lowest setting. All other settings are -20%/+20%

④ For 2-pole application use outside poles of 3-pole circuit breaker.

Lug Information pages 5-134 - 5-136

Enclosures page 5-126

Accessories pages 5-138 - 5-146

Molded Case Circuit Breakers

Motor Circuits

Application

General

Protection of Motor Circuits

Molded case circuit breakers are used in motor circuits as a disconnecting means and for short-circuit protection. They should be used in conjunction with motor-running, over-current-protection devices, and should permit the motor to start without nuisance tripping from motor-inrush current. The circuit breaker should have a continuous-current rating of not less than 115% of the motor full-load current.

The recommended motor circuit protectors (Siemens ETI instantaneous only circuit breakers) listed have

continuous-current ratings of at least 115% of motor full-load currents. The trip-setting positions are approximately 11 times motor full-load currents. The suggested trip settings may have to be adjusted upward to no higher than 1300% of full-load current for non-design E type motors, and no greater than 1700% of full load current for design B & E energy efficient motors, to allow for motor start-up due to inrush currents.

Breaker Mounted Immediately Ahead of Motor Starter

Siemens ETI motor circuit protectors are recommended for use in combination motor starters to provide selective short-circuit protection for the motor branch

circuit. The adjustable instantaneous-trip feature of the Siemens ETI motor circuit protector provides for a trip setting slightly above the peak motor-inrush current. With this setting, no delay is introduced in opening the circuit when a fault occurs. This circuit breaker has no time-delay trip element. Therefore it must be used in conjunction with, and immediately ahead of, the motor-running overcurrent protective device.

Important: The information below does not apply to all motor applications: it is recommended that the user refer to the National Electrical Code (NEC) for specific needs.

Table 1 (When Breaker is Mounted Immediately Ahead of Motor Starter)

3 Phase Induction Type Motors (Siemens ETI motor circuit protectors for branch circuit use with alternating-current combination, full voltage motor starters).

| Motor Full Load Amperes | Catalogue Number | ETI Trip Setting | | Motor Full Load Amperes | Catalogue Number | ETI Trip Setting | | Motor Full Load Amperes | Catalogue Number | ETI Trip Setting | | |
|-----------------------------------------------------------------------------------|-----------------------|------------------|---------|-------------------------|------------------------|------------------|---------|-------------------------|------------------------|------------------|---------|--|
| | | Adjustment | Amperes | | | Adjustment | Amperes | | | Adjustment | Amperes | |
| .20 – .33 .34 – .45 .46 – .56 .57 – .68 .69 – .81 | ED63A001 CED63A001 | Low | 2.6 | 38.46 – 55.37 | ED63A125 CED63A125 | Low | 500 | 231.00 – 264.00 | LXD63H600 CLD63H600 | Low | 3000 | |
| | | 2 | 4.5 | 55.38 – 70.75 | | 2 | 720 | 264.00 – 292.00 | | 2 | 3430 | |
| | | 3 | 6 | 70.76 – 84.60 | | 3 | 920 | 330.00 – 362.00 | | 4 | 4290 | |
| | | 4 | 7.5 | 84.61 – 96.14 | | 4 | 1100 | 395.00 – 428.00 | | 6 | 5140 | |
| | | High | 9 | 96.15 – 113.60 | | High | 1250 | 428.99 – 462.00 | | 7 | 5570 | |
| | | | | | | | | 462.00 – 490.00 | High | 6000 | | |
| .53 – .83 .84 – 1.14 1.15 – 1.45 1.46 – 1.68 1.69 – 2.00 | ED63A002 CED63A002 | Low | 7 | 30.76 – 35.37 | FXD63L150 CFD63L150 | Low | 400 | 215.00 – 238.00 | LMXD63L800 | Low | 2800 | |
| | | 2 | 11 | 35.38 – 39.99 | | 2 | 460 | 238.00 – 261.00 | | 2 | 3100 | |
| | | 3 | 15 | 44.51 – 49.23 | | 4 | 580 | 261.00 – 284.00 | | 3 | 3400 | |
| | | 4 | 19 | 53.84 – 58.45 | | 6 | 700 | 308.00 – 369.00 | | 5 | 4000 | |
| | | High | 22 | 58.46 – 63.06 | | 7 | 760 | 369.00 – 423.00 | | 6 | 4800 | |
| | | | | | | | | 423.00 – 462.00 | 7 | 5500 | | |
| | | | | | | | | 462.00 – 490.00 | High | 6000 | | |
| .76 – 1.29 1.30 – 1.75 1.76 – 2.29 2.30 – 2.68 2.69 – 3.18 | ED63A003 CED63A003 | Low | 10 | 61.53 – 69.22 | FXD63A150 CFD63A150 | Low | 800 | 246.00 – 269.00 | LMXD63A800 | Low | 3200 | |
| | | 2 | 17 | 69.23 – 76.91 | | 2 | 900 | 269.00 – 284.00 | | 2 | 3500 | |
| | | 3 | 23 | 84.61 – 92.29 | | 4 | 1100 | 284.00 – 323.00 | | 3 | 3700 | |
| | | 4 | 30 | 100.00 – 108.00 | | 6 | 1300 | 362.00 – 492.00 | | 5 | 4700 | |
| | | High | 35 | 108.00 – 115.00 | | 7 | 1400 | 492.00 – 562.00 | | 6 | 6400 | |
| | | | | | | | | 562.00 – 616.00 | 7 | 7300 | | |
| | | | | | | | | 616.00 – 660.00 | High | 8000 | | |
| 1.23 – 1.99 2.00 – 2.75 2.76 – 3.52 3.53 – 4.14 4.15 – 4.90 | ED63A005 CED63A005 | Low | 16 | 85.00 – 100.00 | FXD63A250 CFD63A250 | Low | 1100 | 231.00 – 264.00 | MXD63L800 CMD63L800 | Low | 3000 | |
| | | 2 | 26 | 100.00 – 115.00 | | 2 | 1300 | 264.00 – 292.00 | | 2 | 3430 | |
| | | 3 | 36 | 131.00 – 146.00 | | 4 | 1700 | 292.00 – 330.00 | | 3 | 3800 | |
| | | 4 | 46 | 162.00 – 177.00 | | 6 | 2100 | 362.00 – 395.00 | | 5 | 4710 | |
| | | High | 54 | 177.00 – 192.00 | | 7 | 2300 | 428.00 – 462.00 | | 7 | 5570 | |
| | | | | | | | | 462.00 – 490.00 | High | 6000 | | |
| 2.30 – 3.83 3.84 – 5.37 5.38 – 6.52 6.53 – 7.68 7.69 – 9.10 | ED63A010 CED63A010 | Low | 30 | 95.00 – 110.00 | JXD63L400 CJD63L400 | Low | 1250 | 308.00 – 352.00 | MXD63A800 CMD63A800 | Low | 4000 | |
| | | 2 | 50 | 110.00 – 124.00 | | 2 | 1430 | 352.00 – 442.00 | | 2 | 4570 | |
| | | 3 | 70 | 138.00 – 151.00 | | 4 | 1790 | 442.00 – 447.00 | | 3 | 5740 | |
| | | 4 | 85 | 165.00 – 178.00 | | 6 | 2140 | 483.00 – 527.00 | | 5 | 6280 | |
| | | High | 100 | 178.00 – 192.00 | | 7 | 2320 | 571.00 – 616.00 | | 7 | 7240 | |
| | | | | | | | | 616.00 – 660.00 | High | 8000 | | |
| 4.23 – 6.91 6.92 – 9.61 9.62 – 11.91 11.92 – 13.83 13.84 – 16.40 | ED63A025 CED63A025 | Low | 55 | 154.00 – 176.00 | JXD63H400 CJD63H400 | Low | 2000 | 385.00 – 440.00 | MXD63H800 CMD63H800 | Low | 5000 | |
| | | 2 | 90 | 176.00 – 198.00 | | 2 | 2290 | 440.00 – 550.00 | | 3 | 6430 | |
| | | 3 | 125 | 220.00 – 242.00 | | 4 | 2860 | 605.00 – 660.00 | | 5 | 7860 | |
| | | 4 | 155 | 264.00 – 285.00 | | 6 | 3430 | | | 6 | 8575 | |
| | | High | 180 | 285.00 – 308.00 | | 7 | 3710 | | | | | |
| | | | | | | | | | High | 4000 | | |
| 6.15 – 10.37 10.38 – 14.22 14.23 – 18.06 18.07 – 20.75 20.76 – 24.50 | ED63A030 CED63A030 | Low | 80 | 155.00 – 176.00 | LXD63L600 CLD63L600 | Low | 2000 | | | | | |
| | | 2 | 135 | 176.00 – 198.00 | | 2 | 2290 | | | | | |
| | | 3 | 185 | 220.00 – 242.00 | | 4 | 2860 | | | | | |
| | | 4 | 235 | 264.00 – 285.00 | | 6 | 3430 | | | | | |
| | | High | 270 | 285.00 – 308.00 | | 7 | 3710 | | | | | |
| | | | | | | | | | | | | |
| 8.84 – 14.22 14.23 – 19.60 19.61 – 24.99 25.00 – 28.83 28.84 – 34.00 | ED63A040 CED63A040 | Low | 115 | 308.00 – 326.00 | | High | 4000 | | | | | |
| | | 2 | 185 | | | | | | | | | |
| | | 3 | 255 | | | | | | | | | |
| | | 4 | 325 | | | | | | | | | |
| | | High | 375 | | | | | | | | | |
| 13.84 – 23.06 23.07 – 31.52 31.53 – 39.99 40.00 – 46.14 46.15 – 54.50 | ED63A050 CED63A050 | Low | 180 | | | | | | | | | |
| | | 2 | 300 | | | | | | | | | |
| | | 3 | 410 | | | | | | | | | |
| | | 4 | 520 | | | | | | | | | |
| | | High | 600 | | | | | | | | | |
| 24.23 – 41.52 41.53 – 56.91 56.92 – 68.45 68.46 – 76.91 76.92 – 90.90 | ED63A100 CED63A100 | Low | 315 | | | | | | | | | |
| | | 2 | 540 | | | | | | | | | |
| | | 3 | 740 | | | | | | | | | |
| | | 4 | 890 | | | | | | | | | |
| | | High | 1000 | | | | | | | | | |

Note: Lowest instantaneous settings have a -20%/+30% tolerance and all other settings have a -20%/+20% tolerance.

Molded Case Circuit Breakers

Motor Circuits

Application

Breaker Mounted at a Distance From Motor Starter

ET thermal-magnetic circuit breakers conform to the National Electrical Code (2002) table 430-52 requirements for motor branch and feeder circuit protection when properly applied in conjunction with motor-running overcurrent protective devices. The

recommended circuit-breaker ratings in Table 2 provide adequate time delay for starting the majority of three-phase induction motors.

To determine the ampere ratings of the ET breaker to protect a motor feeder, add the rating of the ET breaker used to protect the largest motor branch circuit in the group to the full-load currents of

the remaining motors in the group.

Interrupt Ratings

For normal commercial purposes, available fault current can conveniently be obtained in the Interrupting Selector Tables.

Table 2 (When Breaker is Mounted at a Distance From Motor Starter)

3 Phase Induction Type Motors (EQ and ET circuit breakers (thermal-magnetic trip) for branch breaker use with alternating-current combination motor starters).

| Motor Horse-power Rating | 200 and 208V Motors | | | 230V Motors | | | 460V Motors | | | 575V Motors | | |
|--------------------------|----------------------------------------|--------------------------|---------------|----------------------------------------|--------------------------|---------------|----------------------------------------|--------------------------|---------------|----------------------------------------|--------------------------|---------------|
| | 240V Circuit Breaker Data ^① | | | 240V Circuit Breaker Data ^① | | | 480V Circuit Breaker Data ^① | | | 600V Circuit Breaker Data ^① | | |
| | Breaker Type | Catalogue Number | Ampere Rating | Breaker Type | Catalogue Number | Ampere Rating | Breaker Type | Catalogue Number | Ampere Rating | Breaker Type | Catalogue Number | Ampere Rating |
| 1/2 | BQ [®] | BQ3B015 | 15 | BQ [®] | BQ3B015 | 15 | ED4 | ED43B015 | 15 | ED6 | ED63B015 | 15 |
| 3/4 | | BQ3B015 | 15 | | BQ3B015 | 15 | | ED43B015 | 15 | | ED63B015 | 15 |
| 1 | | BQ3B015 | 15 | | BQ3B015 | 15 | | ED43B015 | 15 | | ED63B015 | 15 |
| 1 1/2 | | BQ3B015 | 15 | | BQ3B015 | 15 | | ED43B015 | 15 | | ED63B015 | 15 |
| 2 | | BQ3B020 | 20 | | BQ3B015 | 15 | | ED43B015 | 15 | | ED63B015 | 15 |
| 3 | | BQ3B030 | 30 | | BQ3B020 | 20 | | ED43B015 | 15 | | ED63B015 | 15 |
| 5 | BQ [®] | BQ3B040 | 40 | BQ [®] | BQ3B030 | 30 | ED4 | ED43B015 | 15 | ED6 | ED63B015 | 15 |
| 7 1/2 | | BQ3B060 | 60 | | BQ3B050 | 50 | | ED43B030 | 30 | | ED63B020 | 20 |
| 10 | | BQ3B070 | 70 | | BQ3B070 | 70 | | ED43B030 | 30 | | ED63B030 | 30 |
| 15 | | BQ3B100 | 100 | | BQ3B090 | 90 | | ED43B040 | 40 | | ED63B035 | 35 |
| 20 | | | | | BQ3B100 | 100 | | ED43B050 | 50 | | ED63B050 | 50 |
| 25 | FXD6 | FXD63B125 | 125 | FXD6 | FXD63B125 | 125 | FXD6 | FXD63B090 | 90 | FXD6 | FXD63B060 | 60 |
| 30 | | FXD63B150 | 150 | | FXD63B150 | 150 | | FXD63B100 | 100 | | FXD63B070 | 70 |
| 40 | | FXD63B175 | 175 | | FXD63B175 | 175 | | FXD63B125 | 125 | | FXD63B090 | 90 |
| 50 | | FXD63B200 | 200 | | FXD63B200 | 200 | | FXD63B150 | 150 | | FXD63B100 | 100 |
| | | FXD63B225 | 225 | | | | | | | | | |
| 60 | JXD2 | JXD23B300 | 300 | — | — | — | FXD6, FD6 | FXD63B150 | 150 | FXD6 | FXD63B100 | 100 |
| 75 | JXD2 | JXD23B400 | 400 | JXD2 | JXD23B350 | 350 | FXD6, FD6 | FXD63B200 | 200 | FXD6, FD6 | FXD63B125 | 125 |
| 100 | JXD2 | JXD23B400 | 400 | JXD2 | JXD23B400 | 400 | FD6 [®] JD6 [®] | FD63B250 JD63B250 | 250 250 | FXD6, FD6 | FD63B175 | 175 |
| 125 | LD6 [®] or LMD6 | LD63B600 LMD63B600 | 600 | LD6 [®] or LMD6 | LD63B500 or LMD63B500 | 500 | JD6 [®] | JD63B300 | 300 | FXD6, FD6 OR JD6 [®] | FXD63B200 JD63B200 | 200 200 |
| 150 | LD6 [®] or LMD6 | LD63B600 or LMD63B600 | 600 | LMD6 | LD63B600 or LMD63B600 | 600 | JD6 [®] | JD63B300 | 300 | FXD6 or JD6 [®] | FXD63B225 JD63B225 | 225 225 |
| 200 | LMD6 | LMD63B800 | 800 | LMD6 | LMD63B800 | 800 | JD6 [®] | JD63B350 | 350 | JD6 [®] | JD63B300 | 300 |
| 250 | — | — | — | — | — | — | JD6 [®] | JD63B400 | 400 | JD6 [®] | JD63B400 | 400 |
| 300 | — | — | — | — | — | — | LD6 [®] or LMD6 | LD63B600 or LMD63B600 | 600 | JD6 [®] | JD63B400 | 400 |
| 350 | — | — | — | — | — | — | LMD6 | LMD63B700 | 700 | LD6 [®] or LMD6 | LD63B500 or LMD63B500 | 500 |
| 400 | — | — | — | — | — | — | LMD6 | LMD63B800 | 800 | LD6 [®] or LMD6 | LD63B600 or LMD63B600 | 600 |
| 500 | — | — | — | — | — | — | — | — | — | LMD6 | LMD63B800 | 800 |

①The selection of breakers for this table is in accordance with Article 430, 2002 National Electric Code. The Canadian electrical code should also be referred to for rating information. Recommended circuit breakers are for full voltage starting, special consideration is necessary for reduced voltage starting.

②For panelboard applications, substitute the BL breaker for the BQ, ED2 circuit breakers may also be used.

③For non-interchangeable trip applications, substitute the FXD6 for the FD6, the JXD6 for the JD6, or the LXD6 for the LD6.

Molded Case Circuit Breakers

Adjustable Instantaneous Magnetic Trip Settings

Application

| Breaker Type | Maximum Continuous Amperes | Nominal AC Adjustable Trip Range | | | | | | | | ETI Motor Circuit Protector Catalog Number | Thermal Magnetic Catalog Number | | | | |
|--------------|----------------------------|----------------------------------|------|------|------|------|------|------|------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| | | Low | 2 | 3 | 4 | 5 | 6 | 7 | High | | 3-Pole | 2-Pole | 3-Pole | | |
| HEM | 3 | 9 | 15 | 21 | 27 | 30 | — | — | 33 | HEM3M003L HEM3M007L HEM3M015L HEM3M030L HEM3M050L HEM3M070L HEM3M100L | — | — | — | | |
| | 7 | 21 | 35 | 49 | 63 | 70 | — | — | 77 | | — | — | — | | |
| | 15 | 45 | 75 | 100 | 135 | 150 | — | — | 165 | | — | — | — | | |
| | 30 | 90 | 150 | 210 | 270 | 300 | — | — | 330 | | — | — | — | | |
| | 50 | 150 | 250 | 350 | 450 | 500 | — | — | 550 | | — | — | — | | |
| | 70 | 210 | 350 | 490 | 630 | 700 | — | — | 770 | | — | — | — | | |
| | 100 | 300 | 500 | 700 | 900 | 1000 | — | — | 1100 | | — | — | — | | |
| | | | | | | | | | | | | | | | |
| ED6 | 1 | 2.6 | 4.5 | 6 | 7.5 | — | — | — | 9 | ED63A001 ED63A002 ED63A003 ED63A005 ED63A010 ED63A010 ED63A025 ED63A030 ED63A040 ED63A050 ED63A100 ED63A125 | — | — | — | | |
| | 2 | 7 | 11 | 15 | 19 | — | — | — | 22 | | — | — | — | | |
| | 3 | 10 | 17 | 23 | 30 | — | — | — | 35 | | — | — | — | | |
| | 5 | 16 | 26 | 36 | 46 | — | — | — | 54 | | — | — | — | | |
| | 10 | 30 | 50 | 70 | 85 | — | — | — | 100 | | — | — | — | | |
| | 25 | 55 | 90 | 125 | 155 | — | — | — | 180 | | — | — | — | | |
| | 30 | 80 | 135 | 185 | 235 | — | — | — | 270 | | — | — | — | | |
| | 40 | 115 | 185 | 255 | 325 | — | — | — | 375 | | — | — | — | | |
| | 50 | 180 | 300 | 410 | 520 | — | — | — | 600 | | — | — | — | | |
| | 100 | 315 | 540 | 740 | 890 | — | — | — | 1000 | | — | — | — | | |
| | 125 | 500 | 720 | 920 | 1100 | — | — | — | 1250 | | — | — | — | | |
| | | | | | | | | | | | | | | | |
| | CED6 | 1 | 2.6 | 4.5 | 6 | 7.5 | — | — | — | | 9 | CED63A001 CED63A002 CED63A003 CED63A005 CED63A010 CED63A025 CED63A030 CED63A040 CED63A050 CED63A100 CED63A125 | — | — | — |
| 2 | | 7 | 11 | 15 | 19 | — | — | — | 22 | — | — | | — | | |
| 3 | | 10 | 17 | 23 | 30 | — | — | — | 35 | — | — | | — | | |
| 5 | | 16 | 26 | 36 | 46 | — | — | — | 54 | — | — | | — | | |
| 10 | | 30 | 50 | 70 | 85 | — | — | — | 100 | — | — | | — | | |
| 25 | | 55 | 90 | 125 | 155 | — | — | — | 180 | — | — | | — | | |
| 30 | | 80 | 135 | 185 | 235 | — | — | — | 270 | — | — | | — | | |
| 40 | | 115 | 185 | 255 | 325 | — | — | — | 375 | — | — | | — | | |
| 50 | | 180 | 300 | 410 | 520 | — | — | — | 600 | — | — | | — | | |
| 100 | | 315 | 540 | 740 | 890 | — | — | — | 1000 | — | — | | — | | |
| 125 | | 500 | 720 | 920 | 1100 | — | — | — | 1250 | — | — | | — | | |
| | | | | | | | | | | | | | | | |
| FXD6-A | | 70 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | | FXD62B070 FXD62B080 FXD62B090 FXD62B100 FXD62B110 FXD62B125 — FXD63L150 FXD63A150 FXD63H150 — FXD62B175 FXD62B200 FXD62B225 FXD62B250 FXD63A250 | FXD63B070 | FXD63B070 |
| | 80 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | FXD63B080 | FXD63B080 | | | |
| | 90 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | FXD63B090 | FXD63B090 | | | |
| | 100 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | FXD63B100 | FXD63B100 | | | |
| | 110 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | FXD63B110 | FXD63B110 | | | |
| | 125 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | FXD63B125 | FXD63B125 | | | |
| | 150 | 400 | 460 | 520 | 580 | 640 | 700 | 760 | 820 | — | — | — | | | |
| | 150 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | FXD62B150 | FXD63B150 | | | |
| | 150 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | — | — | | | |
| | 175 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | FXD62B175 | FXD63B175 | | | |
| | 200 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | FXD62B200 | FXD63B200 | | | |
| | 225 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | FXD62B225 | FXD63B225 | | | |
| | 250 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | FXD62B250 | FXD63B250 | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| FD6-A | 70 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | FD62B070 FD62B080 FD62B090 FD62B100 FD62B110 FD62B125 FD62B150 FD62B175 FD62B200 FD62B225 FD62B250 | FD63B070 | FD63B070 | | |
| | 80 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | | FD63B080 | FD63B080 | | |
| | 90 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | | FD63B090 | FD63B090 | | |
| | 100 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | | FD63B100 | FD63B100 | | |
| | 110 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | | FD63B110 | FD63B110 | | |
| | 125 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | | FD63B125 | FD63B125 | | |
| | 150 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | | FD63B150 | FD63B150 | | |
| | 175 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | | FD63B175 | FD63B175 | | |
| | 200 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | | FD63B200 | FD63B200 | | |
| | 225 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | | FD63B225 | FD63B225 | | |
| | 250 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | | FD63B250 | FD63B250 | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | HFD6 | 70 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | | — | HFD62B070 HFD62B080 HFD62B090 HFD62B100 HFD62B110 HFD62B125 HFD62B150 HFD62B175 HFD62B200 HFD62B225 HFD62B250 | HFD63B070 | HFD63B070 |
| | | 80 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | | — | | HFD63B080 | HFD63B080 |
| 90 | | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | HFD63B090 | HFD63B090 | | | |
| 100 | | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | HFD63B100 | HFD63B100 | | | |
| 110 | | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | HFD63B110 | HFD63B110 | | | |
| 125 | | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | HFD63B125 | HFD63B125 | | | |
| 150 | | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | HFD63B150 | HFD63B150 | | | |
| 175 | | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | HFD63B175 | HFD63B175 | | | |
| 200 | | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | HFD63B200 | HFD63B200 | | | |
| 225 | | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | HFD63B225 | HFD63B225 | | | |
| 250 | | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | HFD63B250 | HFD63B250 | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| HHFD6 | | 70 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | HHFD63B070 HHFD63B080 HHFD63B090 HHFD63B100 HHFD63B110 HHFD63B125 HHFD63B150 HHFD63B175 HHFD63B200 HHFD63B225 HHFD63B250 | | HHFD63B070 | HHFD63B070 |
| | | 80 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | | | HHFD63B080 | HHFD63B080 |
| | 90 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | HHFD63B090 | | HHFD63B090 | | |
| | 100 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | HHFD63B100 | | HHFD63B100 | | |
| | 110 | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | HHFD63B110 | | HHFD63B110 | | |
| | 125 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | HHFD63B125 | | HHFD63B125 | | |
| | 150 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | HHFD63B150 | | HHFD63B150 | | |
| | 175 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | HHFD63B175 | | HHFD63B175 | | |
| | 200 | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | HHFD63B200 | | HHFD63B200 | | |
| | 225 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | HHFD63B225 | | HHFD63B225 | | |
| | 250 | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | HHFD63B250 | | HHFD63B250 | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | CFD6 | 70 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | | CFD62B070 CFD62B080 CFD62B090 CFD62B100 CFD62B110 CFD62B125 — CFD63L150 CFD63A150 CFD63H150 — CFD62B175 CFD62B200 CFD62B225 CFD62B250 CFD63A250 | CFD63B070 | CFD63B070 |
| | | 80 | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | | | CFD63B080 | CFD63B080 |
| 90 | | 600 | 640 | 690 | 730 | 770 | 810 | 850 | 900 | — | CFD63B090 | CFD63B090 | | | |
| 100 | | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | CFD63B100 | CFD63B100 | | | |
| 110 | | 700 | 770 | 840 | 920 | 990 | 1060 | 1140 | 1200 | — | CFD63B110 | CFD63B110 | | | |
| 125 | | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | CFD63B125 | CFD63B125 | | | |
| 150 | | 400 | 460 | 520 | 580 | 640 | 700 | 760 | 820 | — | — | — | | | |
| 150 | | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | — | CFD62B150 | CFD63B150 | | | |
| 150 | | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | — | — | | | |
| 175 | | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | CFD62B175 | CFD63B175 | | | |
| 200 | | 900 | 1060 | 1210 | 1370 | 1520 | 1780 | 1930 | 2000 | — | CFD62B200 | CFD63B200 | | | |
| 225 | | 1100 | 1300 | 1500 | 1700 | 1900 | 2100 | 2300 | 2500 | — | CFD62B225 | CFD63B225 | | | |

Molded Case Circuit Breakers

Adjustable Instantaneous Magnetic Trip Settings

Application

| Breaker Type | Maximum Continuous Amperes | Nominal AC Adjustable Trip Range | | | | | | | | ETI Motor Circuit Protector Catalogue Number | | Thermal Magnetic Catalogue Number | | |
|--------------|----------------------------|----------------------------------|------|------|------|------|------|------|------|----------------------------------------------|---|-----------------------------------|-------------|--|
| | | Low | 2 | 3 | 4 | 5 | 6 | 7 | High | 3-Pole | | 2-Pole | 3-Pole | |
| JXD2(A) | 200 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD22B200 | JXD23B200 | |
| | 225 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD22B225 | JXD23B225 | |
| | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD22B250 | JXD23B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD22B300 | JXD23B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | JXD22B350 | JXD23B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | JXD22B400 | JXD23B400 | |
| JXD6(A) | 200 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD62B200 | JXD63B200 | |
| | 225 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD62B225 | JXD63B225 | |
| | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD62B250 | JXD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JXD62B300 | JXD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | JXD62B350 | JXD23B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | JXD62B400 | JXD23B400 | |
| JD6(A) | 200 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JD62B200 | JD63B200 | |
| | 225 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JD62B225 | JD63B225 | |
| | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JD62B250 | JD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | JD62B300 | JD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | JD62B350 | JD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | JXD63L400 JXD63H400 | — | JD62B400 | JD63B400 | |
| HJD6(A) | 200 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HJD62B200 | HJD63B200 | |
| | 225 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HJD62B225 | HJD63B225 | |
| | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HJD62B250 | HJD63H250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HJD62B300 | HJD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HJD62B350 | HJD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HJD62H400 | HJD63B400 | |
| HHJD6 | 200 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HHJD62B200 | HHJD63B200 | |
| | 225 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HHJD62B225 | HHJD63B225 | |
| | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HHJD62B250 | HHJD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HHJD62B300 | HHJD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HHJD62B350 | HHJD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HHJD62B400 | HHJD63B400 | |
| CJD6 | 200 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | — | CJD63B200 | |
| | 225 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | — | CJD63B225 | |
| | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | — | CJD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | — | CJD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | — | CJD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | CJD63H400 CJD63L400 | — | — | CHD63B400 | |
| LXD6(A) | 450 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | LXD62B450 | LXD63B450 | |
| | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | LXD62B500 | LXD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | LXD62B600 | LXD63B600 | |
| LD6(A) | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | LD62B250 | LD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | LD62B300 | LD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | LD62B350 | LD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | LD62B400 | LD63B400 | |
| | 450 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | LD62B450 | LD63B450 | |
| | 500 | 3000 | 3430 | 3800 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | LD62B500 | LD63B500 | |
| HLD6(A) | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HLD62B250 | HLD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HLD62B300 | HLD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HLD62B350 | HLD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HLD62B400 | HLD63B400 | |
| | 450 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HLD62B450 | HLD63B450 | |
| | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | HLD62B500 | HLD63B500 | |
| HHL D6 | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HHL D62B250 | HHL D63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | HHL D62B300 | HHL D63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HHL D62B350 | HHL D63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HHL D62B400 | HHL D63B400 | |
| | 450 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | HHL D62B450 | HHL D63B450 | |
| | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | HHL D62B500 | HHL D63B500 | |
| CLD6 | 250 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | — | CLD63B250 | |
| | 300 | 1250 | 1430 | 1610 | 1790 | 1960 | 2140 | 2320 | 2500 | — | — | — | CLD63B300 | |
| | 350 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | — | CLD63B350 | |
| | 400 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | — | CLD63B400 | |
| | 450 | 2000 | 2290 | 2570 | 2860 | 3140 | 3430 | 3710 | 4000 | — | — | — | CLD63B450 | |
| | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | CLD63L600 CLD63H600 | — | — | CLD63B500 | |
| LMXD6 | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | — | LMXD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | — | LMXD63B600 | |
| | 700 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | — | LMXD62B700 | LMXD63B700 | |
| | 800 | 2800 | 3100 | 3400 | 3700 | 4000 | 4800 | 5500 | 6000 | LMXD63L800 LMXD63A800 | — | — | — | |
| | 800 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | — | LMXD62B800 | LMXD63B800 | |
| LMD6 | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | LMD62B500 | LMD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | LMD62B600 | LMD63B600 | |
| | 700 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | — | LMD62B700 | LMD63B700 | |
| | 800 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | — | LMD62B800 | LMD63B800 | |

Molded Case Circuit Breakers

Adjustable Instantaneous Magnetic Trip Settings

Application

| Breaker Type | Maximum Continuous Amperes | Nominal AC Adjustable Trip Range | | | | | | | | ETI Motor Circuit Protector Catalogue Number | Thermal Magnetic Catalogue Number | | |
|--------------|----------------------------|----------------------------------|------|------|------|------|------|------|-------|----------------------------------------------|-----------------------------------|-------------|-----------|
| | | Low | 2 | 3 | 4 | 5 | 6 | 7 | High | 3-Pole | 2-Pole | 3-Pole | |
| HLMXD6 | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | HLMXD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | — | HLMXD63B600 | |
| | 700 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | — | HLMXD63B700 | |
| | 800 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | — | HLMXD63B800 | |
| HLMD6 | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | HLMD62B500 | HLMD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | HLMD62B600 | HLMD63B600 | |
| | 700 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | HLMD62B700 | HLMD63B700 | |
| | 800 | 3200 | 3500 | 3700 | 4200 | 4700 | 6400 | 7300 | 8000 | — | HLMD62B800 | HLMD63B800 | |
| MD6 | 500 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | MD62B500 | MD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4290 | 4710 | 5140 | 5570 | 6000 | — | MD62B600 | MD63B600 | |
| | 700 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | MD62B700 | MD63B700 | |
| | 800 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | MXD63L800 | — | — | |
| | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | MXD63A800 | MD62B800 | MD63B800 | |
| | 800 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | MXD63H800 | — | — | |
| MXD6 | 500 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | MXD62B500 | MXD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | MXD62B600 | MXD63B600 | |
| | 700 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | MXD62B700 | MXD63B700 | |
| | 800 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | MXD63L800 | — | — | |
| | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | MXD63A800 | MXD62B800 | MXD63B800 | |
| | 800 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | MXD63H800 | — | — | |
| HMD6 | 500 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | HMD62B500 | HMD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | HMD62B600 | HMD63B600 | |
| | 700 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | HMD62B700 | HMD63B700 | |
| | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | HMD62B800 | HMD63B800 | |
| HMXD6 | 500 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | — | HMXD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | — | HMXD63B600 | |
| | 700 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | — | HMXD63B700 | |
| | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | — | HMXD63B800 | |
| CMD6 | 400 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | — | CMD63B400 | |
| | 500 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | — | CMD63B500 | |
| | 600 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | — | — | CMD63B600 | |
| | 700 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | — | CMD63B700 | |
| | 800 | 3000 | 3430 | 3860 | 4280 | 4710 | 5140 | 5570 | 6000 | CMD63L800 | — | — | |
| | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | CMD63A800 | — | CMD63B800 | |
| ND6 | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | ND62B800 | ND63B800 | |
| | 900 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | ND62B900 | ND63B900 | |
| | 1000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | ND62B100 | ND63B100 | |
| | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | ND62B120 | ND63B120 | |
| | NXD6 | 900 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | NXD62B900 | NXD63B900 |
| | | 1000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | NXD62B100 | NXD63B100 |
| 1200 | | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | NXD62B120 | NXD63B120 | |
| HND6 | | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | HND62B800 | HND63B800 |
| | | 900 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | HND62B900 | HND63B900 |
| | | 1000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | HND62B100 | HND63B100 |
| | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | HND62B120 | HND63B120 | |
| HNXD6 | 900 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HNXD63B900 | |
| | 1000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HNXD63B100 | |
| | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HNXD63B120 | |
| CND6 | 800 | 4000 | 4570 | 5140 | 5710 | 6280 | 6850 | 7420 | 8000 | — | — | CND63B800 | |
| | 900 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | CND63B900 | |
| | 1000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | CND63B100 | |
| | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | CND63B120 | |
| PD6 | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | PD63B120 | |
| | 1400 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | PD63B140 | |
| | 1600 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | PD63B160 | |
| PXD6 | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | PXD63B120 | |
| | 1400 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | PXD63B140 | |
| | 1600 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | PXD63B160 | |
| HPD6 | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HPD63B120 | |
| | 1400 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HPD63B140 | |
| | 1600 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HPD63B160 | |
| HPXD6 | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HPXD63B120 | |
| | 1400 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HPXD63B140 | |
| | 1600 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HPXD63B160 | |
| CPD6 | 1200 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | CPD63B120 | |
| | 1400 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | CPD63B140 | |
| | 1600 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | CPD63B160 | |
| RD6 | 1800 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | RD63B180 | |
| | 2000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | RD63B200 | |
| RXD6 | 1800 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | RXD63B180 | |
| | 2000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | RXD63B200 | |
| HRD6 | 1800 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HRD63B180 | |
| | 2000 | 5000 | 5715 | 6430 | 7145 | 7860 | 8575 | 9290 | 10000 | — | — | HRD63B200 | |

5
MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

Molded Case Switch — Circuit Disconnect

Selection

| Maximum Frame Amp Rating | 2-Pole | 3-Pole | Self-Protective Instantaneous Override $\pm 20\%$ ® |
|--------------------------|------------------|-------------------------|-----------------------------------------------------|
| | Catalogue Number | Catalogue Number | |
| 100 | BQ2S060 | BQ3S060 | 1000 |
| | BQ2S100 | BQ3S100 | 1000 |
| 125 | ED22S100A | ED23S100A | 1000 |
| | ED42S100A | ED43S100A | 1000 |
| | ED42S125A | ED43S125A | 1000 |
| | ED62S100A | ED63S100A | 1000 |
| | — | ED63S125A | 1000 |
| | CED62S100A | CED63S100A | 1000 |
| | CED62S125A | CED63S125A | 1000 |
| 225 | QJ22S225A | QJ23S225A | 2000 |
| 250 | FXD62S250A | FXD63S250A | 3200 |
| | HFXD62S250A | HFXD63S250A | 3200 |
| | ① | CFD63S250A | 3200 |
| 400 | JXD22S400A | JXD23S400A | 6000 |
| | — | JXD63S400A | 6000 |
| | — | HJXD63S400A | 6000 |
| | ① | CJD63S400A | 6000 |
| 600 | — | LXD63S600A | 6000 |
| | — | HLXD63S600A | 6000 |
| | ① | CLD63S600A | 6000 |
| 800 | — | LMXD63S800A | 8000 |
| | — | MXD63S800A | 8000 |
| | ① | CMD63S800A | 8000 |
| 1200 | — | NXD63S120A | 10000 |
| | ① | CND63S120A | 10000 |
| 1600 | ① | PXD63S160A [®] | 10000 |
| 2000 | ① | RXD63S200A [®] | 10000 |

Ordering Information

Order by catalogue number. Switches include frame and self protective trip unit only. Order lugs separately from page 5-134 - 5-136.

① For 2-pole application use outside poles of 3-pole circuit breaker.

② For additional lugs see page 5-76.

③ Molded case switches up to R frame contain a self protecting instantaneous element, which may open circuit above their override set point.

④ Requires mounting block MB9301 or MBR9302.

Lugs pages 5-134 - 5-136
Accessories page 5-138 - 5-146

Molded Case Circuit Breakers

Digital Solid State Sentron Sensitrip IV Series

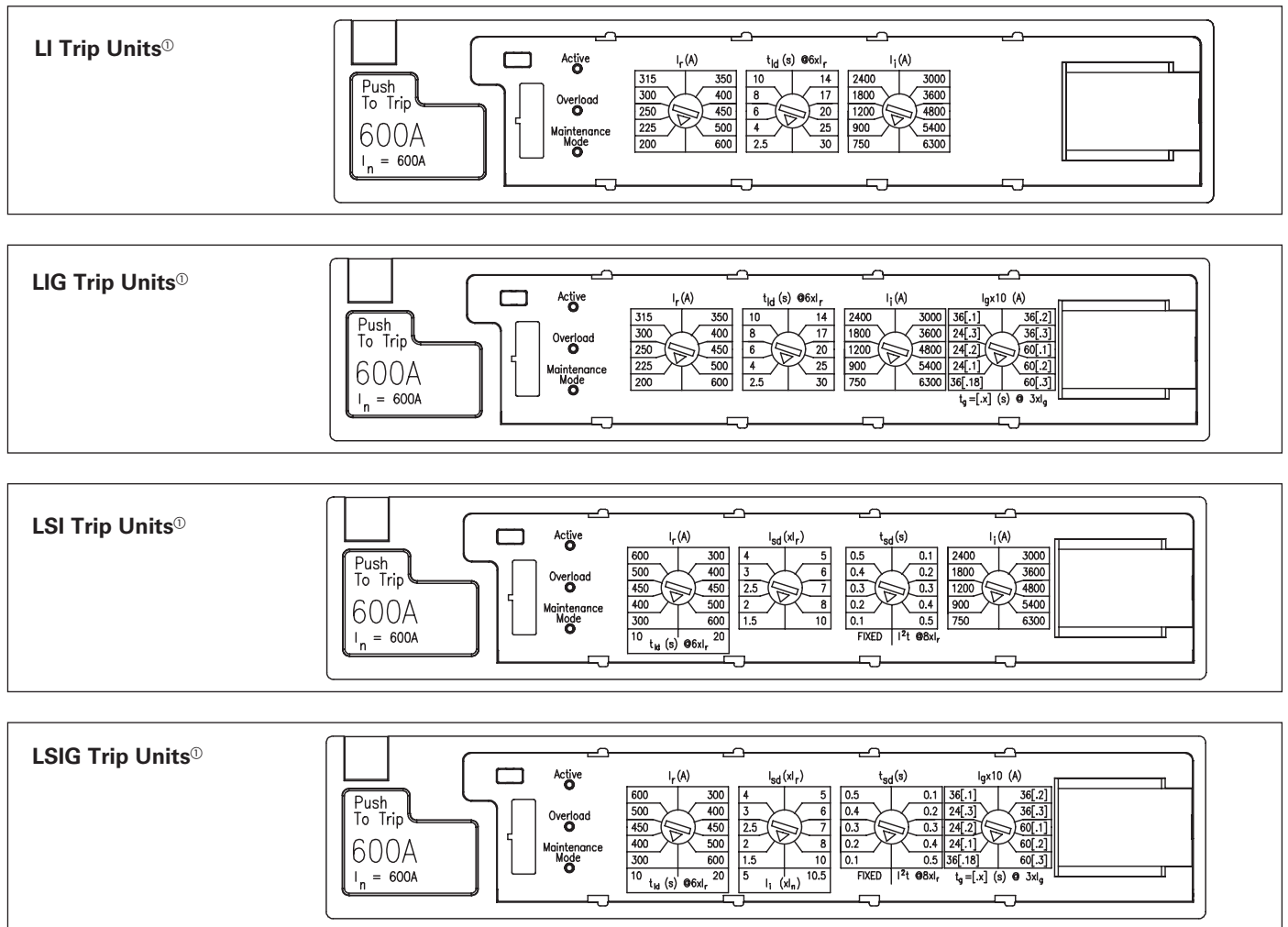
Technical

The Sentron Sensitrip IV circuit breaker is a true RMS current sensing device. Digital microprocessor circuitry within the electronic trip unit provides more precise control over the circuit breaker functions. This control allows circuit coordination flexibility not available with thermal magnetic circuit breakers.

Functions available in Sentron Sensitrip circuit breakers

| Catalogue Number Suffix | Trip Type | Cont Current Setting | Long Time Delay | Instantaneous Pickup | Short Time Pickup | Short Time Fixed Delay | Short Time I ² t Delay | Ground Fault Pickup | Ground Fault Delay |
|-------------------------|-----------|----------------------|-----------------|----------------------|-------------------|------------------------|-----------------------------------|---------------------|--------------------|
| LI | LI | ✓ | ✓ | ✓ | | | | | |
| LIG | LIG | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| LSI | LSI | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| LSIG | LSIG | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Typical Trip Unit Labeling and Adjustment Positions for the Sentron Sensitrip Circuit Breaker.



- I_n = Maximum circuit breaker ampere rating
- I_r = Continuous current rating expressed in amperes
- I₁ = Instantaneous pickup expressed in amperes
- I_{sd} = Short time pickup expressed in multiples of I_r

- I_g = Ground fault pickup expressed in amperes
- t_{sd} = Short time delay - either fixed or I²t time delay function
- t_{ld} = Long time delay - I²t time delay function
- t_g = Ground fault delay - I²t time delay function

NOTE: Frame rating (I_n) of 600A shown as an example. Trip unit settings will vary based on the specific frame rating (I_n) of the device.

© Schematic of advanced trip unit shown. Basic trip units are identical but do not include DAS / Maintenance Mode functionality.

Molded Case Circuit Breakers

Digital Solid State Sentron Sensitrip IV Series

Technical

A. Adjustable "Continuous Amps" Rating Switch
All Sensitrip IV solid state molded case circuit breakers have an adjustable ampere rating switch. Adjustments made to this switch change the continuous current rating of the breaker.

B. Adjustable "Long Time Delay" Switch
All Sensitrip IV circuit breakers have an adjustable long time delay switch to allow for selection of long time delays of fixed time intervals at six times the setting of the adjustable "continuous amps" rating switch.

C. Adjustable "Instantaneous Pick-Up" Switch
Sensitrip IV circuit breakers with an adjustable instantaneous pick up switch allow selection of a specific instantaneous trip setting.

D. Adjustable "Short Time Pick-Up" Switch (Optional)
Sensitrip IV circuit breakers with an adjustable short time pick-up switch allow for selection of short time pick-up in a range from 1.5 to 10 times the setting of the maximum current rating.

E. Adjustable "Short Time Delay" Switch (Optional)
Sensitrip IV circuit breakers with an adjustable short time delay switch also contain a switch for adjustment in time delay. The adjustable short time delay switch allows for either of two modes of short time delays. One range of settings enables the breaker to be set for fixed time delays and the other range of settings enables the breaker to be set for short time delays based on I²t curves.

Adjustable "Ground Fault Pick-Up" Switch
Sensitrip IV circuit breakers containing the optional equipment ground fault protection have a ground fault pick-up setting. The ground fault pick-up settings allow for one of three time delays based on I²t curves.
For 3-phase, 4-wire systems, an external neutral transformer is required with an ampere rating equal to the trip unit ampere rating.

Ground Fault Pick-up (I_g)
Ground Fault Delay @ I²T @ 3 x I_g (t_g)

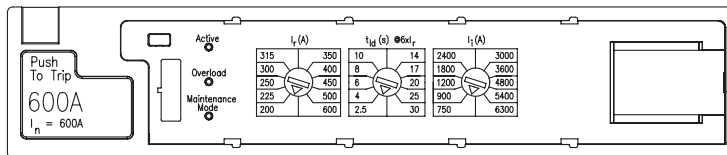
I_n = Maximum circuit breaker ampere rating
I_r = Continuous current rating expressed in amperes
I_i = Instantaneous pickup expressed in amperes
I_{sd} = Short time pickup expressed in multiples of I_r
I_g = Ground fault pickup expressed in amperes
t_{sd} = Short time delay - either fixed or I²t time delay function
t_{ld} = Long time delay - I²t time delay function
t_g = Ground fault delay - I²t time delay function

5 MOLDED CASE CIRCUIT BREAKERS

Examples of Adjustment Settings

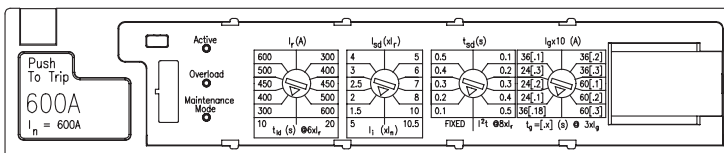
Catalogue Number SLD6A600LI

| Setting | Frame Rating (I _n) | Switch 1 | Switch 2 | Switch 3 |
|-------------|--------------------------------|----------------------------------------------|---------------------------------------------------------|------------------------------------------------|
| | | Continuous Current Setting (I _r) | Long Time Delay Setting (t _{ld}) | Instantaneous Pickup Setting (I _i) |
| Setting | 600A | 200 | 2.5 | 750 |
| Description | 600A max current rating | 200A | 2.5 sec to trip @ 6 x I _r [6 x 200A = 1200A] | 750A |



Catalogue Number SLD6A600LSIG

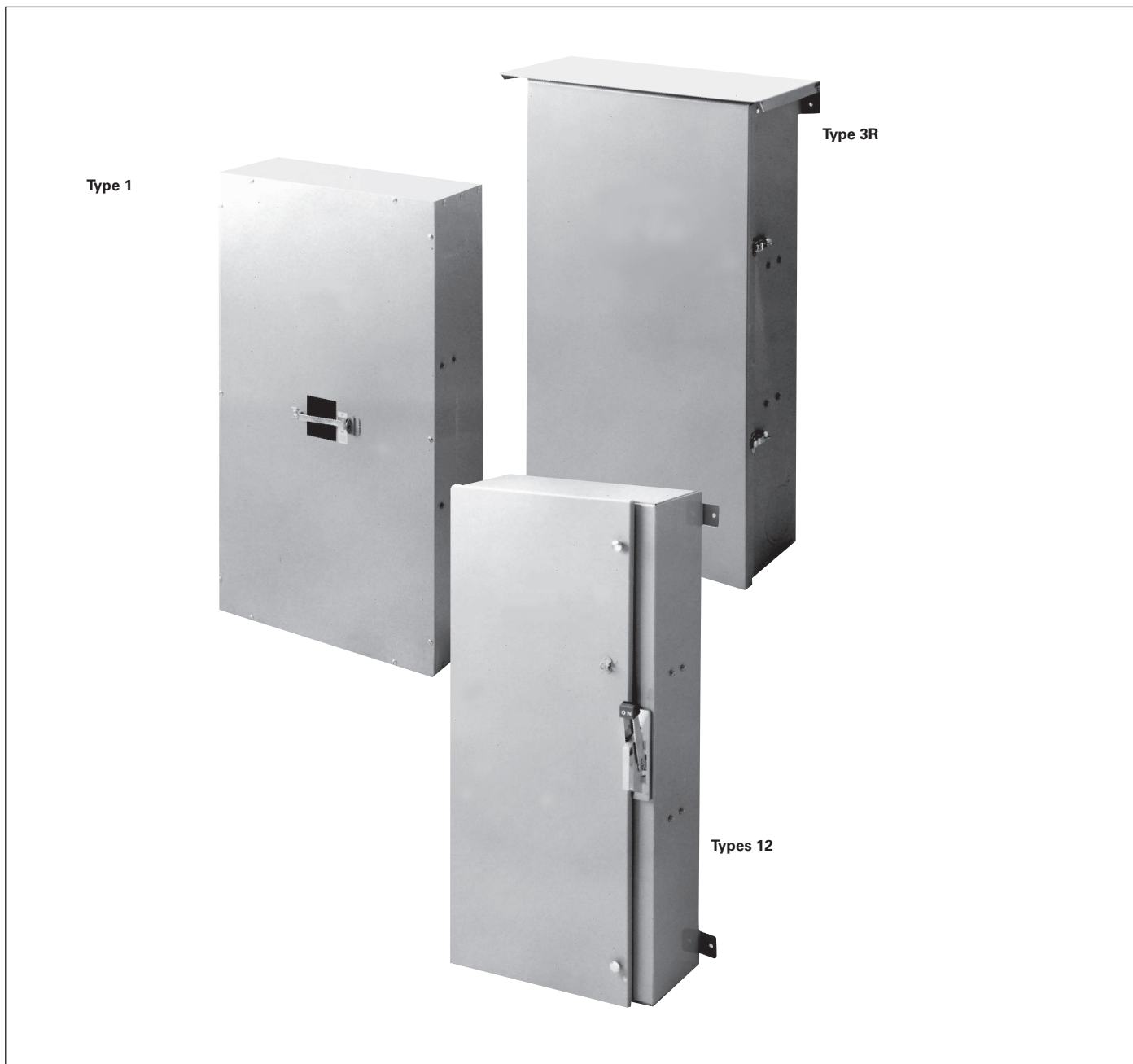
| Setting | Frame Rating (I _n) | Switch 1 | | Switch 2 | | Switch 3 | Switch 4 | Switch 4 |
|-------------|--------------------------------|-----------------------------------------|------------------------------------------------|----------------------------------------------|------------------------------------------------|---------------------------------------------|-----------------------------------------------|--------------------------------------------------|
| | | Cont. Current Setting (I _r) | Long Time Delay Setting (t _{ld}) | Short Time Pickup Setting (I _{sd}) | Instantaneous Pickup Setting (I _i) | Short Time Delay Setting (t _{sd}) | Ground Fault Pickup Setting (I _g) | Ground Fault Delay Setting (t _g) |
| Setting | 600A | 300 | 10 | 1.5 | 5 | 0.1 | 36 [.18] | 36 [.18] |
| Description | 600A max current rating | 300A | 10 sec @ 6 x I _r [6 x 300A = 1800A] | 1.5 x I _r [1.5 x 200A = 300A] | 5 x I _n [5 x 600A = 3,000A] | 0.1 sec | I _g = 36 x 10 [36 x 10 = 360A] | 0.18 sec @ 3 x I _g [3 x 360 = 1,080A] |



Enclosed Circuit Breakers

Enclosures

General



Type 1 — A general indoor, sheet-steel enclosure for use in normal atmospheres.

Type 3R — An outdoor, sheet-steel enclosure providing protection against driving rain, sleet or snow. Listed as service entrance equipment.

Types 12 — A special-industry, sheet-steel enclosure for use in atmospheres containing particles of lint, dust, dirt, sawdust and other foreign matter.

Enclosed Circuit Breakers

Enclosed Breaker Nomenclature

General

| | | | | | | | | | |
|-------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------|------|----|---|-----|-----|-------|-----|
| Sample Part Numbers: | E | 3R | ED | 6 | 2 | B | 060 | — | NC |
| | I | II | III | IV | V | VI* | VII | VIII* | IX* |
| | E | 12 | JXD | 6 | 3 | B* | 200 | — | NC |
| | I | II | III | IV | V | VI* | VII | VIII* | IX* |
| | E | 1S | SHJD | 6 | B | — | 400 | LSIG | NC |
| | I | II | III | IV | V | VI* | VII | VIII* | IX* |
| I | Base model Start with E | | | | | | | | |
| Placeholder Position Options | | | | | | | | | |
| II | May be replaced by 1S, 1F, 12, or 3R | | | | | | | | |
| III | May be replaced by BQ, BQH, HBQ | | | | | | | | |
| | May be replaced by QR, QRH, or HQR | | | | | | | | |
| | May be replaced by ED, HED, HHED, CED | | | | | | | | |
| | May be replaced by FD, FXD HFXD, HFD, HHFD, HHFXD, CFD | | | | | | | | |
| | May be replaced by JD, JXD, HJD, HJXD, HHJD, HHJXD. CJJD | | | | | | | | |
| | May be replaced by FD, FXD JD, JXD, SJD, SHJD, SCJD | | | | | | | | |
| | May be replaced by LD, LXD, HLD, HLXD. HHL, HHLCD, CLD, SLD, SHLD, SCLD | | | | | | | | |
| | May be replaced by MD, MXD, HMD, HMXD, CMD, SMD, SHMD, SCMD | | | | | | | | |
| | May be replaced by ND, NXD, HND, HNXD, CND, SND, SHND, SCND | | | | | | | | |
| IV | May be replaced by 2, 4, 6 | | | | | | | | |
| V | May be replaced by 2, 3, B | | | | | | | | |
| VI* | May be replaced by B, * If option not present omitted | | | | | | | | |
| VII | May be replaced by : | | | | | | | | |
| | QR | 100, 125, 150, 175, 200, 225 | | | | | | | |
| | ED | 015, 020, 025, 030, 040, 045, 050, 060, 070, 080, 090, 100, 110, 125 | | | | | | | |
| | FD | 070, 080, 090, 100, 110, 125, 150, 175, 200, 225, 250 | | | | | | | |
| | JD | 200, 225, 250, 300, 350, 400 | | | | | | | |
| | LD | 300, 400, 450, 500, 600 | | | | | | | |
| | MD | 600, 700, 800 | | | | | | | |
| ND | 900, 1000, 1200 | | | | | | | | |
| VIII* | May be replaced by "LI, LIG, LSI, LSIG, if option+ not present position omitted | | | | | | | | |
| IX* | NC: Suitable for service entrance,+ If option not present position omitted | | | | | | | | |

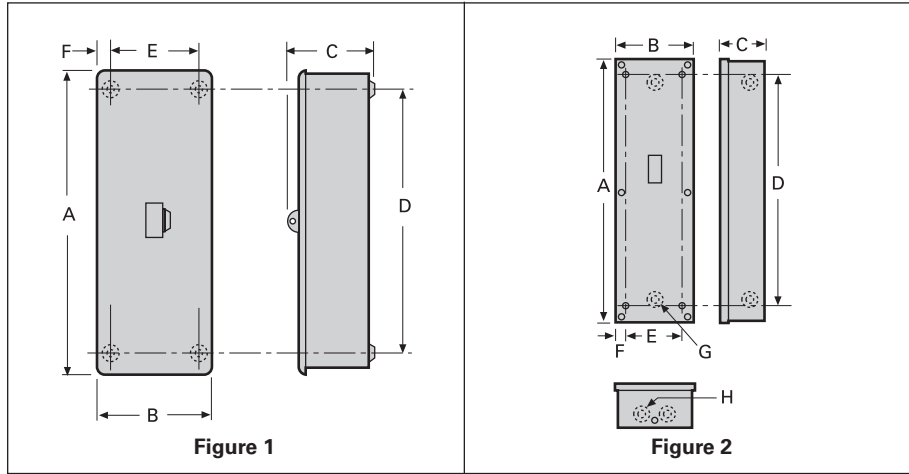
The enclosed breakers are factory assembled. Each enclosed breakers assembly includes the selected type of enclosures, circuit breakers, standard lugs, and Neutral.

Enclosed Circuit Breakers

Enclosures — Type 1

Selection/Dimensions

Dimensions



Type 1

| Fig. No. | Breaker Type | Number of Poles | Maximum Current Rating | Catalogue [®] Number | Weight Lb./Ship. Package | Dimensions (inches) | | | | | | K.O. Dimensions | |
|----------|----------------------------------------------------------------------------------------------------|-----------------|----------------------------------------|-------------------------------|--------------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--------------------|-------------------------------|---|
| | | | | | | A | B | C | D | E | F | G | H |
| 1 | BQ, BQH, HBQ | 3 | 100 | EB3100S ^{①②⑦} | 32 | 17 ^{1/8} | 7 ^{1/8} | 4 ^{3/4} | 14 ^{1/6} | 1 ^{5/16} | 1 ^{5/16} | — | — |
| 2 | ED2, ED4, ED6, HED4, HED6 | 3 | | E2N1S ^② | 8 | 16 ^{23/32} | 7 ^{1/2} | 5 ^{1/16} | 13 ^{45/64} | 5 ^{1/4} | 1 | 7/8, 11/8, 13/8, 13/4, 2 | |
| | ED4, ED6, HED4, HED6, CED6 | | | CED6N1S ^{②⑥} | 14 | 21 ^{15/32} | 7 ^{19/32} | 5 ^{7/64} | 18 ^{1/4} | | | | |
| | FXD6, FD6, FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, CFD6 | | 250 | F6N1S ^③ | 33 | 38 ^{13/32} | 11 ^{15/32} | 5 ^{1/16} | 33 | 8 | 13 ^{3/64} | 11/8, 13/8, 13/4, 2, 2 1/2, 3 | |
| 3 | JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A), SXD6H | 2-3 | 400 | J6N1 ^③ | 120 | 40 ^{13/64} | 22 ^{27/64} | 10 ^{45/64} | 36 | 18 ^{1/4} | 2 ^{5/64} | — | — |
| | 600 | | LD6N1 ^③ (L6N1) ^③ | 101 | 46 | 42 | | | — | | | — | |
| | MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6 | | 1200 | MND61 ^③ | 132 | 60 | 10 | 55 ^{7/8} | — | — | | | |

For inches / millimeters conversion, see Technical section.

- ① Surface mounted, indoor. If flush mounting is required, replace suffix "S" in catalogue number with suffix "F". Also, if outdoor model required, use prefix "W" instead of "E".
- ② Does not include circuit breaker. Order circuit breaker separately.
- ③ Neutral not included. Order as separate item from table on next page.
- ④ Neutral included in enclosure.

- ⑤ Surface mounted, indoor. If outdoor model is required, use prefix "W" instead of "E". Not available in flush ("F") model.
- ⑥ Use for 110-125 ampere ED4, ED6, HED4 or HED6 circuit breakers.
- ⑦ Will not accept breaker with shunt trip.
- ⑧ Will not accept 2-pole GFCI or breaker with shunt trip.
- ⑨ Items cannot be ordered separately. See configuration.

Built to order. Consult sales office for factory lead time and prices.

Enclosed Circuit Breakers

Enclosures — Type 1

Selection/Dimensions

Dimensions

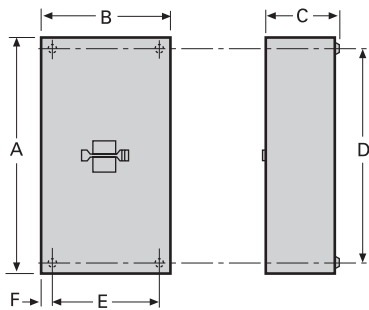


Figure 3

| Fig. No. | Breaker Type | Number of Poles | Maximum Current Rating | Catalogue® Number | Weight Lb./Ship. Package | Dimensions (inches) | | | | | | | |
|----------|--------------|-----------------|------------------------|------------------------|--------------------------|---------------------|------------------|------------------|-------------------|-------------------|-------------------|---|---|
| | | | | | | A | B | C | D | E | F | G | H |
| 1 | BQ, BQH, HBQ | 3 | 100 | EB3100S ^{①②③} | 32 | 17 ^{1/8} | 7 ^{1/8} | 4 ^{3/4} | 14 ^{1/8} | 1 ^{5/16} | 1 ^{5/16} | — | — |

Neutrals

| Enclosure Catalogue Number | Neutral Catalogue Number | Neutral Cable Capacity and Wire Range |
|----------------------------|--------------------------|---------------------------------------------------------------------------------------------------------|
| E2N1(S)(F) CED6N1(S)(F) | W53045 ^② | (1 pc.) #14–2 Cu/Al Grd. Lug (1 pc.) #14–8 Cu/Al |
| F6N1(S)(F) | N250 (NFD) | (1 pc.) #6–350 kcmil Grd. Lug (1 pc.) #14–2/0 Cu/Al |
| J6N1 | W60992 (NJD) | (1 pc.) #1/0–750 kcmil Cu/Al or (2 pcs.) #1/0–300 kcmil Cu/Al Grd. Lug (1 pc.) #6–250 kcmil Cu/Al |
| LD6N1 | W60993 (NLD) | (2 pcs.) #1/0–600 kcmil Grd. Lug (1 pc.) #6–250 kcmil Cu/Al |
| MND61 | W63623 (NMND) | (8 pcs.) 250 kcmil–500 kcmil Cu/Al Grd. Lug (1 pc.) #6–300 kcmil Cu/Al |

For inches / millimeters conversion, see Technical section.

① Does not include circuit breaker. Order circuit breaker separately.

② Neutral included in enclosure.

③ Items cannot be ordered separately. See configuration.

Built to order. Consult sales office for factory lead time and prices.

Enclosed Circuit Breakers

Enclosures — Type 3R

Selection/Dimensions

Dimensions

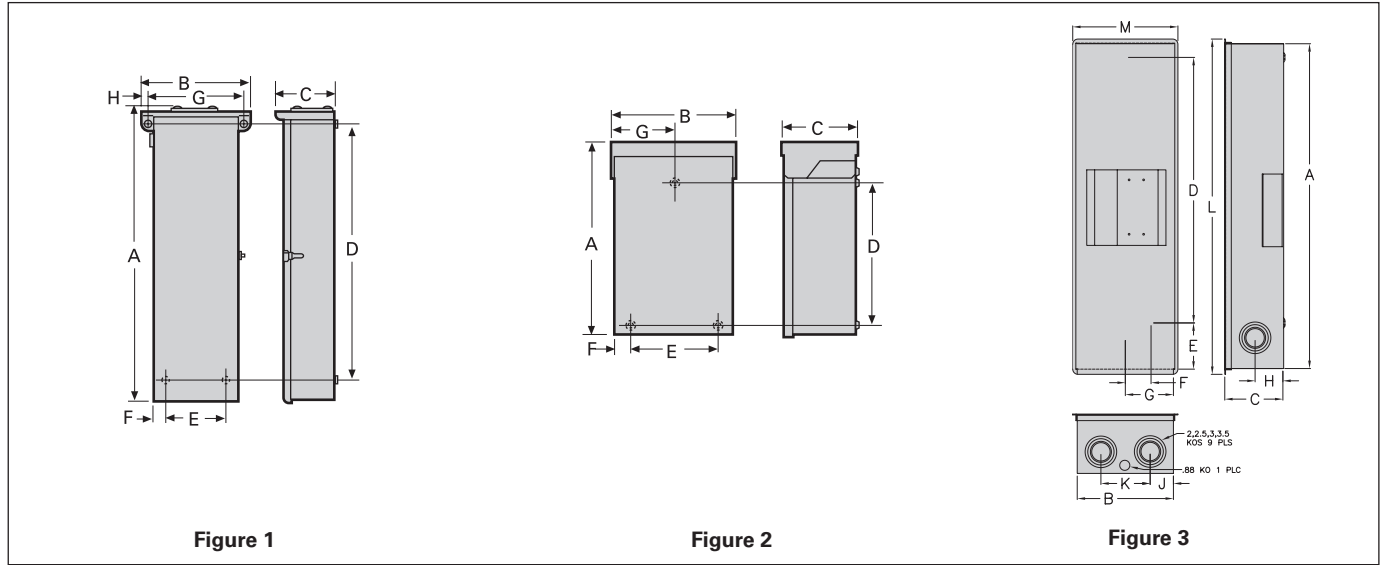


Figure 1

Figure 2

Figure 3

Type 3R

| Fig. No. | Breaker Type | Number of Poles | Maximum Current Rating | Catalogue Number | Weight Lb./Ship. Package | Dimensions (inches) | | | | | | | | |
|----------|----------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------------|--------------------------|---------------------|--------------------|---------------------|---------------------|-------------------|------------------|--------------------|-------------------|-------------------|
| | | | | | | A | B | C | D | E | F | G | H | |
| 2 | BQ, BQH, HBQ | 3 | 50 100 | WB3100 ^④ | 9 | 17 ^{1/8} | 7 ^{3/8} | 4 ^{5/16} | 14 ^{1/8} | 4 ^{1/2} | 1 ^{1/8} | 3 ^{11/16} | — | |
| 5 | ED2, ED4, ED6, HED4, HED6 CED6 | 2-3 | 100 | E2N3R ^③ | 12 | 17 ^{9/16} | 7 ^{1/4} | 5 ^{1/4} | 12 ^{39/64} | 5 ^{1/4} | 1 | 3 | — | |
| | | | 125 | CED6N3R ^③ | 16 | 22 ^{21/64} | | | | | | | | |
| 1 | FXD6, FD6, FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, CFD6 | 2-3 | 250 | F6N3R ^③ | 45 | 38 ^{1/8} | 14 ^{1/16} | 7 ^{3/4} | 33 ^{3/32} | 8 | 13/16 | 13 ^{1/2} | 13/16 | |
| | JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A), SXD6H | | 400 | J6N3R ^③ | 126 | 40 ^{63/64} | 26 ^{3/4} | 11 ^{23/32} | 35 ^{3/4} | 18 ^{1/4} | 2 ^{1/8} | 24 ^{1/2} | 1 ^{1/8} | |
| | LD6(A), LXD6(A), LXD6H, HLD6(A), HLXD6(A), HHL6(A), CLD6, SCJD6(A), SLD6(A), SHLD6(A) | | 600 | LD6N3R ^③ | 127 | 45 ^{63/64} | | | 40 ^{3/4} | | | | | |
| | MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6 | | 1200 | MND6 ^③ | 210 | 61 ^{9/64} | | | 57 ^{17/32} | | | | 24 ^{5/8} | 1 ^{1/16} |

For inches / millimeters conversion, see Technical section.

① Does not include circuit breaker.

Order circuit breaker separately.

② Neutral not included. Order as separate item from table on next page.

③ Neutral included in enclosure.

④ Will not accept breaker with shunt trip.

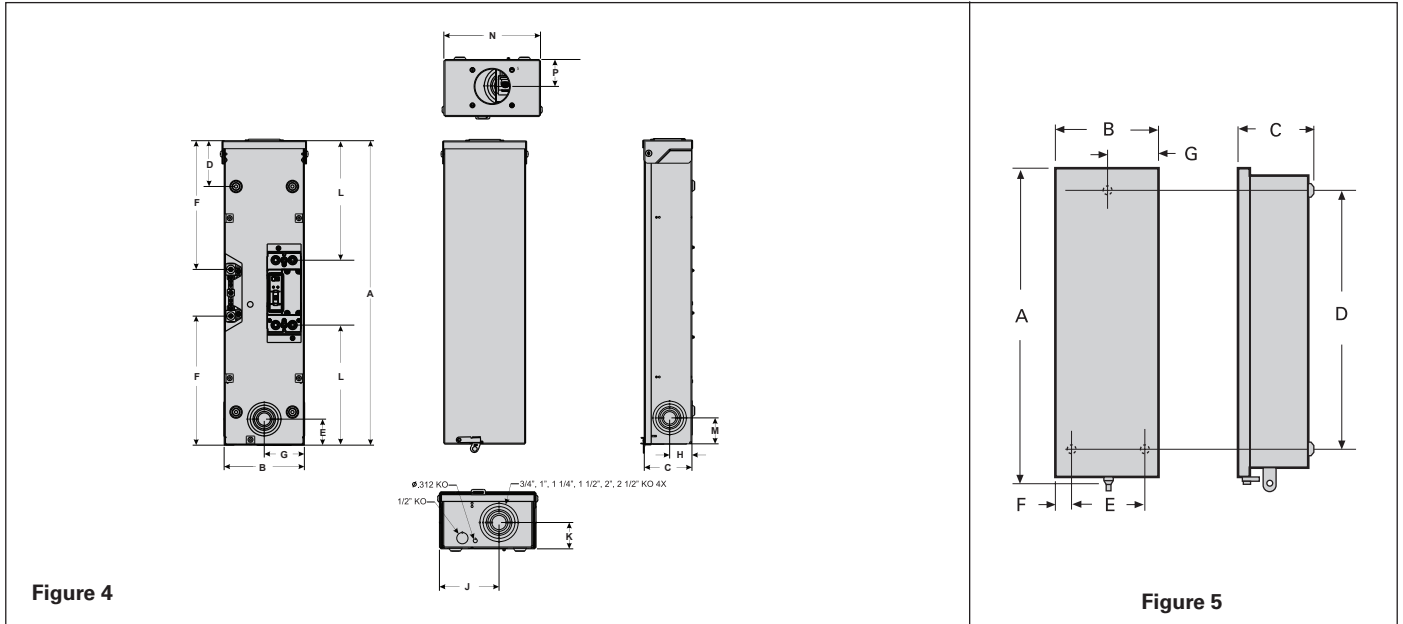
⑤ Items cannot be ordered separately. See configuration.

Enclosed Circuit Breakers

Enclosures — Type 3R

Selection/Dimensions

Dimensions



| Fig. No. | Breaker Type | Number of Poles | Maximum Current Rating | Weight Lb./Ship. Package | Dimensions (inches) | | | | | | | | | | | | | |
|----------|-----------------------|-----------------|------------------------|--------------------------|---------------------|-----|-----|------|-----|-------------------|-----|-----|-----|-----|------|-----|------------------|-----|
| | | | | | A | B | C | D | E | F | G | H | J | K | L | M | N | P |
| 3 | QR2, QR2H, HQR2, QR2H | 3 | 225A | 40 | 31.4 | 9.1 | 5.6 | 25.3 | 6.1 | 2.4 | 4.6 | 2.2 | 2.1 | 4.9 | 32.2 | 9.6 | — | — |
| 4 | QR2, QR2H, HQR2, QR2H | 2 | 225A | 40 | 27 | 7.1 | 4.2 | 4.1 | 2.3 | 11 ^{1/2} | 3.6 | 2 | 4.6 | 2 | 10.7 | 2.3 | 7 ^{1/2} | 2.1 |

Neutrals

| Enclosure Catalogue Number | Neutral Catalogue Number | Neutral Cable Capacity and Wire Range |
|----------------------------|--------------------------|---------------------------------------------------------------------------------------------------------|
| E2N3R ^③ | W53045 ^③ | (1 pc.) #14–2 Cu/Al Grd. Lug (1 pc.) #14–8 Cu/Al |
| CED6N3R ^④ | | |
| F6N3R ^② | N250 | (1 pc.) #6–350 kcmil Grd. Lug (1 pc.) #14–2/0 Cu/Al |
| JD6N3R ^② | W60992 | (1 pc.) #1/0–750 kcmil Cu/Al or (2 pcs.) #1/0–300 kcmil Cu/Al Grd. Lug (1 pc.) #6–250 kcmil Cu/Al |
| LD6N3R ^② | W60993 | (2 pcs.) #1/0–600 kcmil Grd. Lug (1 pc.) #6–250 kcmil Cu/Al |
| MND63 ^② | W63623 | (8 pcs.) 250 kcmil–500 kcmil Cu/Al Grd. Lug (1 pc.) #6–300 kcmil Cu/Al |

Hubs — see page 5-75

For inches / millimeters conversion, see Technical section.

- ① Does not include circuit breaker. Order circuit breaker separately.
- ② Neutral not included. Order as separate item from table on next page.

- ③ Neutral included in enclosure.
- ④ Use CED enclosure for all ED-frame 110-125 ampere units.
- ⑤ Items cannot be ordered separately. See configuration.

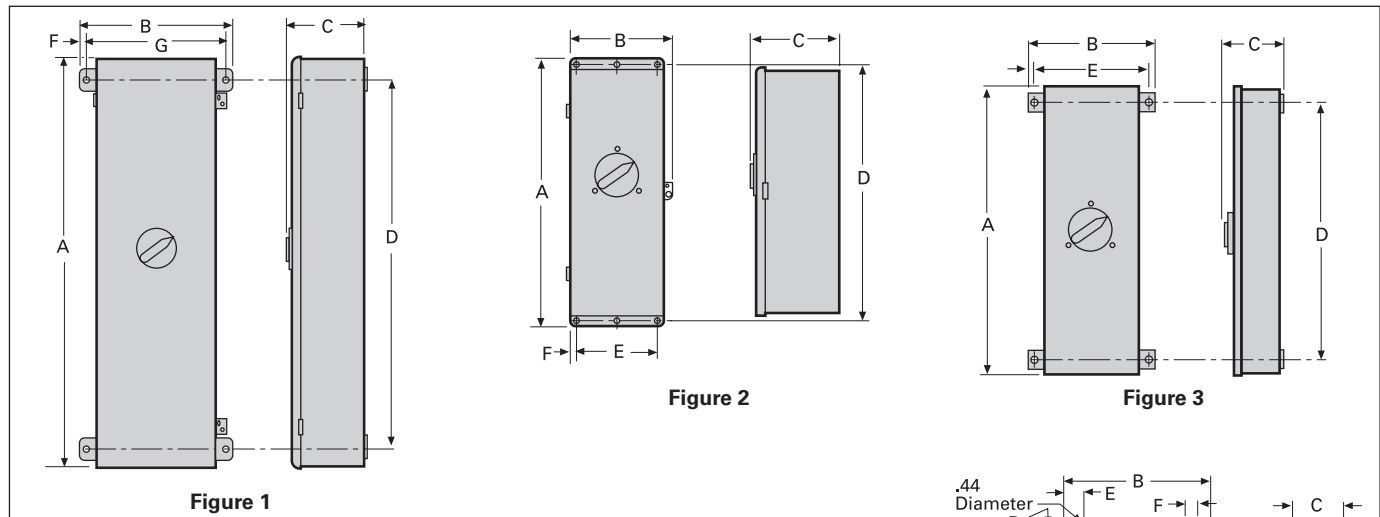
Enclosed Circuit Breakers

Enclosures — Type 12

Selection/Dimensions

| Fig. No. | Breaker Type | Number of Poles | Maximum Current Rating | Catalogue [®] Number | Weight Lb./Ship. Package | Dimensions (inches) | | | | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------|------------------------|------------------------------------------------|--------------------------|---------------------|---------------------|-------------------|----|---------------------|-------|
| | | | | | | A | B | C | D | E | F |
| 2 | ED2, ED4, ED6, HED4, HED6 | 2-3 | 100 | E2N12 [®] | 12 | 18 ^{5/8} | 8 ^{11/32} | 7 ^{1/16} | 18 | 6 ^{1/16} | 1/2 |
| 5 | CED6 | | 125 | CE6N12 [®] | 16 | 22 ^{5/8} | | | 22 | | 5/8 |
| 1 | FXD6, FD6, FXD6-A, FD6-A, HFD6, CFD6 | | 250 | F6N12 [®] | 40 | 38 ^{19/32} | 14 ^{29/64} | 8 ^{1/8} | 34 | 13 | 22/32 |
| | JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A) | | 400 | J6N12 [®] | 104 | 40 | 25 ^{35/64} | 11 ^{7/8} | 36 | 25 ^{35/64} | — |
| | LD6(A), LXD6(A), HLD6(A), HLXD6(A), HHL6, HHLXD6, SLD6(A), SHLD6(A), CJD6, CLD6, SCJD6(A), SCLD6(A) | | 600 | LD6N12 [®] (L6N12) | | | | | 45 | | 41 |
| MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6 | 1200 | MND612 [®] | 220 | 60 | 37 ^{3/8} | 10 | 5/8 | 3 | 2 | | |

Dimensions



Neutrals

| Enclosure Catalogue Number | Neutral Catalogue Number | Neutral Cable Capacity and Wire Range |
|----------------------------|----------------------------|---------------------------------------------------------------------------------------------------------|
| E2N12 [®] | W53045 [®] | (1 pc.) #14-2 Cu/Al |
| CE6N12 [®] | | (1 pc.) #14-2 Cu/Al |
| F6N12 [®] | N250 [®] | (1 pc.) #6-350 kcmil Grd. Lug (1 pc.) #14-2/0 Cu/Al |
| J6N12 [®] | W60992 [®] | (1 pc.) #1/0-750 kcmil Cu/Al or (2 pcs.) #1/0-300 kcmil Cu/Al Grd. Lug (1 pc.) #6-250 kcmil Cu/Al |
| L6N12 [®] | W60993 [®] | (2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al |
| MND612 [®] | W63623 [®] | (8 pcs.) 250 kcmil-500 kcmil Cu/Al Grd. Lug (1 pc.) #6-300 kcmil Cu/Al |

For inches / millimeters conversion, see Technical section.

- ① Does not include circuit breaker. Order circuit breaker separately.
- ② Neutral not included. Order as separate item.

- ③ Neutral included in enclosure.
- ④ Use CED enclosure for all ED-frame 110-125 ampere units.
- ⑤ Items cannot be ordered separately. See configuration.

Enclosed Circuit Breakers

Selection/Dimensions

Knockouts & Wire Bending Space

| Breaker Type | Conduit Range Per Knockout Outside Dimensions (inches) | Types 1, 12 | | | | Type 3R | | | Maximum Cable Sizes Recommended (Cu/Al) for Type 1, 3R, 4, 4X, 12 & 12K Enclosures ^{②③} | | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------|--------|--------|---------|--------|--------|--------------------------------------------------------------------------------------------------|------------------------------------|--|
| | | Number of Knockouts Per Panel (type 12 have no KO's) | | | | | | | | | |
| | | Top | Bottom | Side | Back | Bottom | Side | Back | | Maximum Hub Size (inches) Type 3R | |
| BQ, BQH, HBQ 70–100A | 3/4, 1, 1 ^{1/4} | 1 | 1 | 2 | 2 | 8 | 1 | 3 | 2 | ② | |
| ED2, ED4, ED6, HED4 | 7/8, 1 ^{1/8} , 1 ^{3/8} , 1 ^{3/4} , 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | ② | |
| CED6 | 7/8, 1 ^{1/8} , 1 ^{3/8} , 1 ^{3/4} , 2 7/8, 1 ^{1/8} , 1 ^{3/8} , 1 ^{3/4} , 2, 2 ^{1/2} | — 2 | — 2 | — 2 | — 2 | 2 — | — 1 | — 1 | 2 | (CFD6 only 300 kcmil) ^③ | |
| FXD6, FD6, FXD6-A, FD6-A, HFD6, CFD6 | 1 ^{1/8} , 1 ^{3/8} , 1 ^{3/4} , 2, 2 ^{1/2} , 3 | 1 1 | 1 1 | 2 — | 2 — | 1 1 | 1 — | — — | 4 | ② | |
| JXD2(A), JXD6(A), JD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A) | 1 ^{1/2} , 2, 2 ^{1/2} , 3, 3 ^{1/2} , 4 | 1 | 1 | 2 | 4 | — | — | — | 4 | (2) 500 kcmil | |
| LXD6(A), LD6(A), HLXD6(A), HLD6(A), HHLXD6, HHLXD6, SLD6(A), SHLD6(A) | 1 ^{1/2} , 2, 2 ^{1/2} , 3, 3 ^{1/2} , 4 | 1 | 1 | 2 | 4 | — | — | — | 4 | (2) 500 kcmil | |
| MD6, SMD6, HMD6, ND6, SND6, HND6 | — | — | — | — | — | — | — | — | 4 | (3) 600 kcmil or (4) 500 kcmil | |

Hubs (Type 3R)

| Breaker Type | Conduit Size (inches) | Catalogue Number |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------|
| BQ, BQH, HBQ, ED2, ED4, ED6, HED4, HED6, CED6 | 3/4 1 1/4 1 ^{1/2} 2 | ECHR075 ECHR100 ECHR125 ECHR150 ECHR200 |
| FXD6-A, FD6-A, HFD6, HFXD6, CFD6, JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), LD6(A), LXD6(A), HLD6(A), HLXD6(A) | 2 ^{1/2} 3 3 ^{1/2} 4 | ECHV250 ECHV300 ECHV350 ECHV400 |



Note: Enclosures for 250A max breakers have a hub provision on the rainshed. Enclosures for larger breakers (J, L, M & N frame) have blank top rainsheds. Drill or punch hole in the field to accommodate hub size desired.

For inches / millimeters conversion, see Technical section.

- ① 17^{1/8}" high enclosure provides sufficient wire bending space for all available CB lugs.
 ② Sufficient wire bending space is provided for all available mechanical type CB lugs.

- ③ The use of cables larger than those listed below may violate NEC & CSA wire bending space requirements.
 ④ The use of compression type connectors will violate NEC and CSA wire bending space requirements.

Lug Information

Mechanical Lug

Selection

| For Use With Type(s) | Circuit Breaker Ampere Rating | Cables Per Lug | Lug Wire Range | Catalog Number |
|-------------------------------------------------------------------------------|----------------------------------------|----------------|------------------------------------|--------------------------------------|
| BQ, BQH, BQHF BQE, BQF, BL, BLH, HBL, HBQ Switching Neutrals BG, BLG | Line Side | | | |
| | 15-40 | 1 1 | #14-#6 AWG Cu #12-#6 AWG Al | TC1Q1 ^{①②} |
| | 45-125 | 1 1 | #8-#1 AWG Cu #6-#1/0 AWG Al | TA1Q1 ^② |
| | Load Side | | | |
| | 15-20 | 1 1 | #14-#10 AWG Cu #12-#10 AWG Al | Lugs are integral to Circuit Breaker |
| | 25-35 | 1 1 | #14-#6 AWG Cu #12-#6 AWG Al | |
| | 40-50 | 1 1 | #8-#6 AWG Cu #8-#4 AWG Al | |
| | 55-70 *exceptions in Table A | 1 1 | #8-#4 AWG Cu #8-#2 AWG Al | |
| | 80-100 | 1 1 | #4-#1/0 AWG Cu #2-#1/0 AWG Al | |
| | 110-125 | 1 1 | #2-#1/0 AWG Cu #1/0-#2/0 AWG Al | |
| BQD, CQD BQD6 | Line Side (CQD) & Load Side | | | |
| | 15-40 | 1 | #14-#6 AWG Cu #12-#6 AWG Al | Integral |
| | 45-100 | 1 | #8-#1 AWG Cu #6-#1/0 AWG Al | Integral |
| NGG, HGG, LGG | 15-30 | 1 | #14-#6 AWG Cu #12-#6 AWG Al | TC1Q1 |
| | 15-30 | 1 | #14-#6 AWG Cu #12-#6 AWG Al | 3TC1Q1 (pkg. of 3) |
| | 35-125 | 1 | #8-#1/0 AWG Cu #8-#2/0 AWG Al | 3TC1GG20 (pkg. of 3) |
| | 15-125 | — | NUT KEEPER PLATE | TNKG3 ^③ (pkg. of 3) |

Connector wire ranges and cavities are established in conjunction with Table 6.1.4.2.1 of UL 489 standards.

Table A

| For Use With Type(s) | Circuit Breaker Ampere Rating | Cables Per Lug | Lug Wire Range | Number of Poles |
|----------------------|-------------------------------|----------------|--------------------------------------------------|----------------------------------------------------|
| BQ, BL, QP | Load Side | | | |
| | 55-60 | 1 | #8-#4 AWG Cu-Al #3 AWG requires 22 or 65 kAIC | This exception is applicable to 1- and 2-pole only |

Note:

- (A) Molded case circuit breakers having a rated ampacity of 125 amperes or less are to be connected with 60 or 75°C wire. Circuit breakers having a rated ampacity greater than 125 amperes shall only be cabled with 75°C cable unless otherwise indicated on the circuit breaker label. Exceptions to this rule are outlined in article 110-14 C(1)(2) of the 2005 National Electric Code and table 6.1.4.2.1 per CSA C22.2 No5.02 standard.
- (B) Connector wire ranges and cavities are established in conjunction with Table 6.1.4.2.1 of UL 489 standards.

- ① Lug is steel.
 ② Sold in package of six.
 ③ One nut keeper plate is required with each lug on the NGG breaker.

Lug Information

Aluminum Body Lugs for Copper or Aluminum Wire

Selection

| For Use With Type(s) | Circuit Breaker Ampere Rating | Cables Per Lug | Lug Wire Range | Catalogue Number |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|------------------------------------------------|---------------------------------------------------|
| QJ2, QJH2 QJ2H, HQJ2H | 60–225 | 1 | #6 AWG–300 kcmil (Cu) #4 AWG–300 kcmil (Al) | TA1Q300 (pkg of 3) |
| All 2, 3 pole ED2, ED4, ED6, ED6 ETI, HED4, | 15–25 | 1 | #14–#10 AWG (Cu) #12–#10 AWG (Al) | SA1E025 |
| | 30–100 | 1 | #10–#1/0 (Cu or Al) | LN1E100 |
| | 110–125 | 1 | #3-3/0 (Cu) #1-2/0 (Al) | TA1E6125 |
| CED6 All 1 pole ED, HED | 30–60 | 1 | #10–4 (Cu or Al) | LD1E060 (Load Side) |
| | 70–100 | 1 | #4–#1/0 (Cu or Al) | LD1E100 (Load Side) |
| FXD6-A, FD6-A, HFD6, CFD6 HHFD6 | 70–250 | 1 | #6 AWG–350 kcmil (Cu) #4 AWG–350 kcmil (Al) | TA1FD350A |
| SJD6(A), SHJD6(A) SCJD6 | 65-200 | 1–2 | #4 AWG–310 kcmil (Cu or Al) | TA2J630 |
| JXD2(A), JXD6(A), JD6(A), SJD6(A), HJD6(A), HHJXD6, HHJD6, SHJD6(A), CJD6, SCJD6 | 200–400 | 1–2 | 3/0–500 kcmil (Cu) 4/0–500 kcmil (Al) | TA2J6500 |
| LXD6(A), LD6(A), SLD6(A), HLD6(A), HHLXD6, HHL6, SHLD6(A), CLD6, SCLD6 | 250–600 | 1–2 | 3/0–500 kcmil (Cu) 4/0–500 kcmil (Al) | TA2J6500 |
| LMD6 ^① , LMXD6 ^① , HLM6 ^① , HLMXD6 ^① , MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, CMD6, SCMD6 | 500–600 | 1–2 | #1–500 kcmil (Cu or Al) | TA2K500 |
| | | 1–3 | 1/0–500 kcmil (Cu or Al) | TA3K500 |
| ND6, NXD6, SND6, HND6, HNXD6, SHND6, CND6, SCND6 | 800–1200 | 1–4 | 250–500 kcmil (Cu or Al) | 2TA4P8500 ^{②③} 3TA4P8500 ^④ |
| | | | 250–500 kcmil (Cu or Al) | 2TA4N8500 ^③ 3TA4N8500 ^④ |
| PD6, HPD6, CPD6 PXD6, HPXD6, SPD6, SHPD6 | 1200–1600 | 1–5 | 300–600 kcmil (Cu or Al) | TA5P600 |
| PD6, PXD6, HPD6, HPXD6, SPD6, SHPD6, RD6, RXD6, HRD6, HRXD6 | 1200–2000 | 1–6 | 300–600 kcmil (Cu or Al) | TA6R600 |

① Use TA2K500 or TA3K500 only.
 ② Contains 2 connectors plus 1 NDTs end barrier.
 ③ Contains 3 connectors plus 1 NDTs end barrier.

Lug information

Optional Mechanical Lugs

Selection

| For Use With Type | Circuit Breaker Ampere Rating | Cables Per Lug | Lug Material | Lug Wire Range | Qty per Cat. # | Catalogue Number |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|--------------|------------------------------------------|----------------|------------------------------------------------|
| QJ2, QJH2, QJ2H, HQJ2H | 60–225 | 1 | Cu | #6 AWG–250 kcmil (Cu) | 1 | TC1Q250 |
| ED, HED 2&3 pole | 2–3 pole 30-125 | 1 | Cu | #10–#1/0 (Cu) | 1 | TC1ED6150 |
| HFD6, HHFD6, CFD6, F(X)D6-A | 70–250 | 1 | Cu | #6 AWG–350 kcmil (Cu) | 1 | TC1FD350 |
| J(X)D2(A), J(X)D6(A), HJD6(A), HHJD6, SHJD6(A), L(X)D6(A), HHL6, SCD6, HLD6(A), SHLD6(A), CJD6, CLD6, SCJD6, SCLD6 | 200–600 | 1 1–2 | Cu | 3/0–600 kcmil (Cu) 3/0–500 kcmil (Cu) | 1 1 | TC1J6600 [Ⓢ] TC2J6500 [Ⓢ] |
| | 250–600 | 1 1 | Al | 500–750 kcmil (Al) 500–600 kcmil (Cu) | 1 | TA1L6750 |
| SMD6, M(X)D6, HM(X)D6, HMD6, CMD6, SCMD6, SND6, N(X)D6, HN(X)D6, SHND6, CND6, SCND6 | 500–600 | 1–2 | Cu | #1 AWG–500 kcmil (Cu) | 1 | TC2K500 |
| | 700–800 | 1–3 | Cu | #1 AWG–350 kcmil (Cu) | 1 | TC3K350 |
| | | 1–2 | Al | 500–750 kcmil (Cu) 500–750 kcmil (Al) | 2 3 | 2TA2N8750 3TA2N8750 |
| | 800–1200 | 1–3 | Al | 500–750 kcmil (Cu) 500–750 kcmil (Al) | 2 3 | 2TA3N8750 3TA3N8750 |
| R(X)D6, HR(X)D6 | 1600–2000 | 1–5 | Cu | 300–600 kcmil (Cu) | 1 | TC5R600 |
| P(X)D6, HP(X)D6, CPD6, SPD6, SHPD6 | 1200–1600 | 1–4 | Al | 600–750 kcmil (Cu/Al) | 1 | TA4P750 |

Compression Lugs

| For Circuit Breaker Types | Ampere Rating | Poles | Lugs Per Kit | Lug Wire Size | Catalogue Number |
|--------------------------------------------------------------------------------------------------------------------------|---------------|---------|--------------|-----------------|------------------|
| Lugs (contains indicated number of lugs and necessary hardware per kit) | | | | | |
| ED2, ED4, ED6, HED4, CED4 | 15–125 | 1, 2, 3 | 1 | #2/0 AWG Cu/AL | CCE125 |
| QJ2, QJH2, QJ2-H | 125–225 | 2, 3 | 1 | 350 kcmil Cu/AL | CCQ225 |
| F(X)D6-A, HF(X)D6, HHF(X)D6, CFD6 | 125–250 | 2, 3 | 1 | 350 kcmil | CCF250 |
| JXD2-A, J(X)D6-A, HJ(X)D6-A, HHJ(X)D6-A, CJD6, SJD6-A, SHJD6-A, SCJD6, L(X)D6-A, HL(X)D6-A, CLD6, SLD6-A, SHLD6-A, SCLD6 | 200–600 | 2, 3 | 1 | 500 kcmil | CCL600 |
| Kits (contain lugs and hardware for complete line or load end of 2 or 3 pole breaker) | | | | | |
| M(X)D6, HM(X)D6, CMD6, SMD6, SHMD6, SCMD6 | 500–800 | 2 | 6 | 500 kcmil | CCM800K2 |
| | | 3 | 9 | | CCM800K3 |
| N(X)D6, HN(X)D6, CND6, SND6, SHND6, SCND6 | 900–1200 | 2 | 8 | | CCN1200K2 |
| | | 3 | 12 | | CCN1200K3 |

Distribution Lugs[Ⓢ]

| For Circuit Breaker Types | Ampere Rating | Poles | Lugs Per kit | Wires Per Lug | Lug Wire Size | Catalogue Number |
|----------------------------------------------------------------------------------------------------------------------------|---------------|-------|--------------|---------------|---------------------------------|------------------|
| NGG, HGG, LGG | 15-125 | 1,2,3 | 1 | 6 | #6-#4 AL #14-#4 Cu | TA6GG04 |
| ED2, ED4, ED6, HED4, HHED6, CED6 | 15-125 | 1,2,3 | 1 | 6 | #14-#4 AWG Cu #6-#4 AWG Al | TA6ED06 |
| F(X)D6-A, HF(X)D6, HHF(X)D6, CFD6 | 70-250 | 2,3 | 1 | 6 | #14-#4 AWG Cu #6-#4 AWG Al | TA6FD04 |
| JXD2-A, J(X)D6-A, HJ(X)D6-A, HHJ(X)D6-A, CJD6-A, SJD6, SHJD6-A, SCJD6, L(X)D6-A, HL(X)D6-A, CLD6-A, SLD6-A, SHLD6-A, SCLD6 | 200-600 | 2,3 | 1 | 6 | #14-2/0 AWG Cu #6-2/0 AWG Al | TA6JD20 |

[Ⓢ]Used for 100% rated JD/LD frame circuit breakers.

[Ⓢ] Special purpose wire connectors, not for general use.

Molded Case Circuit Breakers

Modifications

A variety of internal and external accessories, as well as modifications, are available to adapt Siemens circuit breakers to special installation requirements. UL listed internal accessories for 100 through 2000A circuit breakers are field-addable.

Internal accessories fine tune an electrical distribution system, allowing control of the circuit breakers to meet special application requirements. For example, emergency situations may dictate tripping critically placed circuit breakers quickly. Shunt trips accomplish this conveniently and efficiently. Or, when voltage drops are a concern, undervoltage trips automatically open the circuit breaker at a predetermined voltage level.

A wide range of external operating and mounting accessories is also available. For example, face, shallow, and back mounting plates are ideal for tailoring BQ circuit breakers to OEM applications. A complete line of operating handles and handle-blocking devices meet switchboard, enclosure and safety needs. Plug-in mounting assemblies, which simplify switchboard mounting of circuit breakers and permit breaker removal without disconnecting bus or cable connections, are available.

UL 489 Supplement SB Naval Use Breakers

Breakers tested to UL 489 Supplement SB are qualified for use on non combat and auxiliary naval vessels.

Siemens' molded case breakers from the ED frame through the 2000 Amp SB frame can be labeled "Naval" in compliance with Supplement SB.

Supplement SB testing comprises two sets of vibration tests. The first is to find mechanical resonances in the product and to subject the breaker to extreme testing at each resonant frequency. The second is a swept frequency test, in which the frequency of excitation is changed in intervals of 1Hz, and held at each frequency for five minutes. The excitation frequencies run from 4 to 33Hz, and the test is conducted in each of the three orthogonal axes of the breaker.

During these tests, the breaker must not trip from the closed position, nor may the contacts touch from the open position. Calibration and insulation resistance are also verified during the test.

For detailed information, refer to UL 489, Supplement SB.

Selection/ General

Modifications^①

50°C Ambient Calibration — Not UL listed and not available for solid state, 100% rated breakers or 400HZ calibrated breakers.

For BL Type Circuit Breakers

— Add suffix 'M' to catalogue number (Example: B120M)

For BQ, QJ2, and ED Frame Circuit Breakers

— Replace 'B' in catalogue number with 'M' (Example: BQ3M060, QJ23M200, ED63M060)

For FD, JD, LD, LMD, MD, ND, PD, and RD Frame Circuit Breakers

Non-Interchangeable Trip (3-pole only)

— Replace 'B' in catalogue number with 'M' (Example: FXD63M225, JXD63M400)

Interchangeable Trip (trip unit only, 3-pole only)

— Replace 'T' in catalogue number with 'W' (Example: FD63W200, JD63W400)

400 HZ Calibration

UL Listed (5KA IR)

For BQ, BL, and QJ Type Circuit Breakers (200A max.)

— Add suffix 'Y' to catalogue number

Not UL Listed

For all other Circuit Breakers — Add suffix 'Y' to catalogue number

Fungus Proofing — In accordance with MIL-T-152.

All BQD, CQD, NGG, ED, FD, JD, LD, LMD, MD, ND, PD, and RD, Frame Circuit Breakers are inherently fungus resistant and do not require special treatment.

Fungus proofing in accordance with MIL-T-152

For BL, and BQ Type Circuit Breakers

— Order must be placed directly with the factory by the sales office.

For all other Circuit Breaker Types

— Order must be placed directly with the factory by the sales office.

Certificate of Compliance

Certificate of compliance testing must be performed on the actual device being shipped. The certificate cannot be provided after initial shipment. Order for devices with COC requirement must be placed directly with the factory by the sales office.

Ordering Information^①

For "NAVAL" label, order must be placed directly with the factory by Siemens Sales Office.

| Types | UL File |
|------------------------------------------------------------|-----------------------|
| ED2, ED4, ED6, HED4 | E10848, Vol 4, Sec 11 |
| CED6 | E10848, Vol 4, Sec 13 |
| FD6, FXD6, HFD6, HFXD6 | E10848, Vol 4, Sec 17 |
| CFD6 | E10848, Vol 4, Sec 18 |
| JXD2, JD6, JXD6, LXD6, LD6, HJD6, HJXD6, HLD6, HLXD6 | E10848, Vol 4, Sec 8 |
| HHJD6, HHJXD6, HHLD6, HHLXD6 | E10848, Vol 4, Sec 20 |
| CJD6, CLD6 | E10848, Vol 4, Sec 14 |
| MD6, MXD6, HMD6, HMXD6, CMD6, ND6, NXD6, HND6, HNXD6, CND6 | E10848, Vol 4, Sec 15 |
| PD6, PXD6, HPD6, HPXD6, CPD6, RD6, RXD6, HRD6, HRXD6 | E10848, Vol 4, Sec 19 |

① Consult sales office for pricing.

Molded Case Circuit Breakers

Internal Accessories

Selection/ General

Feature Combinations

The available feature combinations are shown in the chart below. For applications requiring combinations of features not listed in this chart, consult the sales office for availability.

| Breakers | Modules/ Breaker | Avail. On Breaker Poles | ST | ST/ AUX | ST/ ALSW | ST/ AUX/ ALSW | UVT | UVT/ AUX | UTV/ ALSW | UVT/ ST/ ALSW | AUX | AUX/ ALSW | ALSW | Elect. Bell Alarm | Ground Fault | Ground Fault w/Bell |
|-----------------------------------------------------------------|---------------------|-------------------------------|------|-------------|-------------|---------------------|-----|-------------|--------------|---------------------|------|--------------|------|-------------------------|-----------------|---------------------------|
| QP, BQ, BL ^① | 1 | 1, 2, 3 | 1 | — | — | — | — | — | — | — | 1, 2 | — | — | — | — | — |
| BQD, CQD, NGG | 1 | 2, 3 | 1 | 1/1 | — | — | — | — | — | — | 1, 2 | 1/1 | 1 | — | — | — |
| QR ^② | 1 | 2, 3 | 1, 2 | 1/1, 2/2 | — | — | — | — | — | — | 2 | — | — | — | — | — |
| All ED, EF | 1 | 1, 2, 3 | 1 | 1/1 | 1/1 | 1/1/1 | 1 | 1/1, 1/2 | 1/1 | 1/1/1 | 1, 2 | 1/1, 2/1 | 1 | — | 1 | 1 |
| All FD, FF | 2 | 2, 3 | 1 | — | — | — | 1 | 1 | — | — | 1, 2 | 1/1 | 1 | — | — | — |
| All JD, LD, LMD ^③ | 2 | 2,3 | 1 | 1 | — | — | 1 | 1/1, 1/2 | — | — | 1, 2 | — | 1, 2 | — | — | — |
| SJD6, SHJD6, SCJD6, SLD6, SHLD6, SCLD6 ^④ | 1 | 3 | 1 | 1 | — | — | 1 | 1/1, 1/2 | — | — | 1, 2 | — | 1, 2 | — | — | — |
| All MD, ND, PD, RD Including Electronic trip ^⑤ | 2 | 2,3 | 1 | 1/1 | — | — | 1 | 1/1, 1/2 | — | — | 1, 2 | 1/1, 2/1 | 1, 2 | — | — | — |

Shunt Trip (ST)

One or all critical circuit breakers may be tripped from a distant control point by use of a shunt trip device. A shunt trip operates through an auxiliary switch contact; when the breaker opens, current is not maintained on the shunt trip coil.

Undervoltage Trip (UVT)

When voltage drops to a value below 35% of the nominal coil rating, the undervoltage trip device automatically opens the breaker. The operation is instantaneous, and the circuit breaker cannot be reclosed

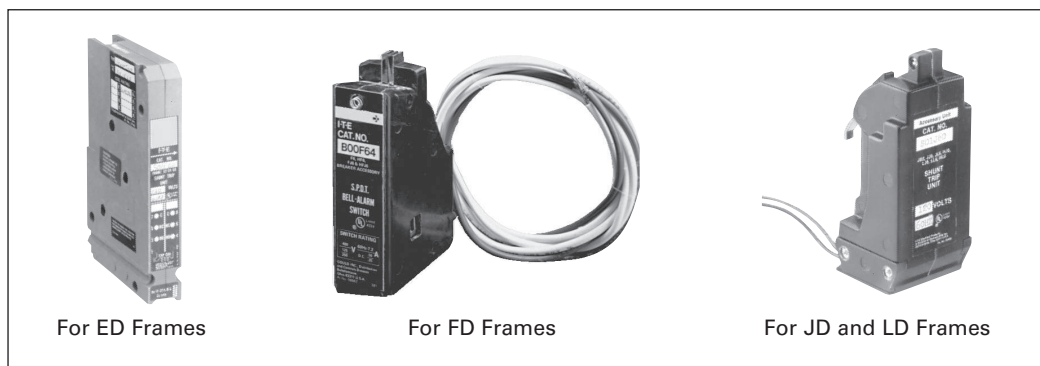
until the voltage returns to 85% of line voltage. The undervoltage trip, which is continuously energized, must be energized before the circuit breaker can be closed.

Auxiliary Switch (AUX)

For applications requiring remote "on" or "off" indication (or electrical interlocking), auxiliary switches are available. Each switch comprises an "A" (open when circuit breaker is open) and a "B" (closed when circuit breaker is open) contact with a common connection. (Form C)

Alarm Switch (ALSW)

The alarm switch contact is closed when the circuit breaker is opened automatically by an overload, short circuit, shunt trip or undervoltage trip. The alarm switch contact is open when the circuit breaker is reset.



^① Factory assembled only

^② If mechanical interlock is installed, no accessory module can be installed in the right pocket.

^③ If mechanical interlock is installed, no accessory module can be installed.

^④ If mechanical interlock is installed, no accessory module can be installed in the left pocket.

^⑤ Two accessory pockets in 3-pole breakers. One accessory pocket in 2-pole breakers

Molded Case Circuit Breakers

Circuit Breaker Accessories

Selection/ General

Circuit Breaker Accessories ④⑤⑥⑦⑧⑨

| Catalog Number | For Use With Breaker Type | Number of Poles | Standard Package |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------|------------------|
| Padlocking Device | | | |
| For locking breaker in "OFF" position. Note "ON" position does not affect breaker functionally | | | |
| ECPLD1 | Type QP, BL, QAF2, QPF2, QE, QT-Duplex, BQ, BQXD | 1P | 3 Pieces |
| ECPLD1R | Type QP, BL, QAF2, QPF, QE, QT-Duplex, BQ, BQXD (Red Color) | 1P | 3 Pieces |
| ECPLD2 | Type QP, BL, QAF2, QPF, QE, BQ, BQXD | 2P | 3 Pieces |
| ECPLD2R | Type QP, BL, QAF2, QPF, QE, BQ, BQXD (Red Color) | 2P | 3 Pieces |
| ECPLD3 | Type QP, BL, QAF2, QPF, QE, BQ | 3P | 1 Piece |
| US2:ECPLD3R | Type QP, BL, QAF2, QPF, QE, BQ (Red Color) | 3P | 1 Piece |
| ECQLD3 | Type QP, BL, BQ, BQXD | 1P | 10 Pieces |
| ECQLN3② | 150-225 MBKA, QN, QNR | n/a | 1 Piece |
| ECQTH4 | Type QP, BL, BQH | Designed for (3) 1P Breakers | 1 Piece |
| Handle Tie | | | |
| Provide simultaneous switching of 2 adjacent handles. | | | |
| ECQTH3 | Type QP, BL | 2P | 50 Pieces |
| Mechanical Interlock① | | | |
| ECQML12 | Type QP, BL, BQ Interlock Bracket | Designed for 1" Breaker | 10 Pieces |
| Handle Blocking Device | | | |
| For holding breaker in "ON" or "OFF" position. Not a lockout/tagout device | | | |
| ECQL1 | Type QP, BL, BQ, BQXD | 1P | 10 Pieces |
| Main Breaker Retainer | | | |
| ECMBR1③ | EQ Load Centers | | 1 Piece |
| Mounting Accessories | | | |
| MB120 | Type BQ, BQH Mounting Clips | 1P | 20 Pieces |
| FP9508 | Type BQ, BQH FACE MOUNT PLATE | 1P | 10 Pieces |
| FP9555 | Type BQ, BQH FACE MOUNT PLATE | 2P | 10 Pieces |
| FP9556 | Type BQ, BQH FACE MOUNT PLATE | 3P | 10 Pieces |
| SMB6R | Type BQ MOUNTING BRACKET | 1P, 2P, 3P | 6 Pieces |
| TCH65K | Type BQ MOUNTING ADAPTER | | 500 Pieces |
| BR2 | Type BQ, BQH, BQXD Back Mounting Plates | 2P | 10 Pieces |
| BR3 | Type BQ, BQH, BQXD Back Mounting Plates | 3P | 10 Pieces |
| BR4 | Type BQ, BQH, BQXD Back Mounting Plates | 4P | 10 Pieces |
| I0204ML1125CU | Type QP Back Mounting Plates | 1P, 2P | 10 Pieces |
| I0303ML3100CU | Type QP Back Mounting Plates | 3P | 10 Pieces |
| Replacement Lugs | | | |
| TA1Q1 | Type BQ, NGG 100A Al Cu LGS | n/a | 6 Pieces |
| TC1Q1 | Type BQ, NGG 40A Al Cu LUGS | n/a | 6 Pieces |
| Finger Shield | | | |
| BQFS1K | Type BQXD Finger Shield (Bulk Pack) | n/a | 1000 Pieces |
| BQFS2 | Type BQXD Finger Shield | n/a | 2 Pieces |
| Filler Plate | | | |
| ECQF3 | 1" Filler Plate | n/a | 5 Pieces |

5
MOLDED CASE
CIRCUIT BREAKERS

① For a complete list of standby power mechanical interlock kits, see page 1-25

② For use with Ultimate Load Center Main Breakers

③ Not suitable for use on 15-50A, 10 AIC Type QP Circuit Breakers

④ BL Type includes BLH, HBL

⑤ BQ Type includes BQH, HBO

⑥ QAF2 Type includes QAFH2, BAF2, BAFH2, QFGA2,

QFGAH2, BFGA2, BFGAH2

⑦ QPF Type includes QPHF, BLF, BLHF

⑧ QE Type includes QEH, BLE, BLEH

Molded Case Circuit Breakers

Circuit Breaker Accessories

General

Padlocking Device



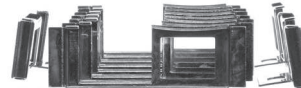
ECPLD1



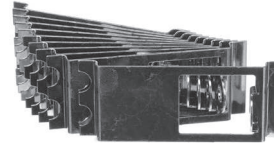
ECPLD2



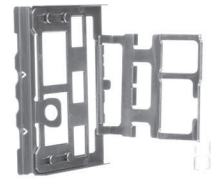
ECPLD1R/2R/3R (Single pole pictured. 2-/3-pole available)



ECQLD3



ECQLD4



ECQTH4

Handle Tie



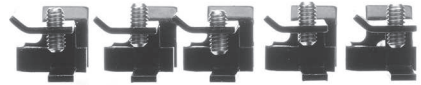
ECQTH2



ECQTH3

Handle Blocking Device

ECQL1



ECBX231M



Main Breaker Retainer

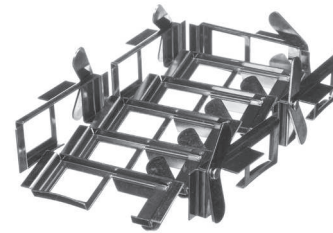


ECMBR1



ECMBR2

Mechanical Interlock



ECQML12

Mounting Accessories



MB120



SMB6R



I0204ML1125



FP9508



FP9555



FP9556

Molded Case Circuit Breakers

External Accessories

Selection

Handle Ties with Padlock Device

Provide simultaneous switching of 2 or 3 adjacent handles.
Do not provide common trip.

| For Use With Breaker Frame(s) | Catalog Number | Standard Package | Wt Lb/Std Pkg |
|-------------------------------|----------------|------------------|---------------|
| BQD, NGB, HGB, LGB | BQDHT2 | 10 | ½ |
| | BQDHT3 | 10 | ½ |

Padlocking Devices

For locking breaker in "OFF" position.

| | | | |
|-----------------------------|--------|---|---|
| All QR | HPLQR | 1 | ¼ |
| All BQD, CQD, NGB, HGB, LGB | BQDPLD | 1 | ⅝ |
| NGG, HGG, LGG | HPLG | 1 | ¼ |
| EB, 1- thru 3-pole | HPLEB | 1 | ⅝ |
| All ED | ED2HPL | 1 | ¼ |
| All FD | FD6PL1 | 1 | ¼ |
| All JD, LD, LMD | JD6HPL | 1 | ¼ |
| All MD, ND, PD, RD | MN6PLD | 1 | ¼ |



Handle Blocking Devices

For holding breaker in "ON" or "OFF" position.
Not a lockout/tagout device.

| | | | |
|----------------------|--------|---|---|
| All QR | HBLQR | 1 | 1 |
| All BQD, CQD, GG, GB | BQDHBD | 1 | ¼ |
| All ED | E2HBL | 1 | ¼ |
| All FD | FD6HB1 | 1 | ½ |
| All JD, LD, LMD | JD6HBL | 1 | ½ |
| All MD, ND, PD, RD | MN6BL | 1 | ½ |



Handle Extensions

For replacement. One extension shipped with breaker.

| | | | |
|--------------------|------|---|---|
| All MD, ND, PD, RD | EX11 | 1 | 2 |
|--------------------|------|---|---|

Terminal Shields

| Breaker Type | Poles | Catalog Number | Standard Package |
|--------------|-------|----------------|------------------|
| NGG | 3 | TSSG3A | 1 |
| | 1 | TSSG61 | 1 |
| HGG, LGG | 2 | TSSG62 | 1 |
| | 3 | TSSG63 | 1 |



© Sold only in standard package quantities.

Molded Case Circuit Breakers

External Accessories

Selection

Face Mounting Plates

| For Use With Breaker Frame(s) | Number of Poles | Catalog Number | Standard Package | Wt Lb/Std Pkg |
|-------------------------------|-----------------|----------------|------------------|---------------|
| CQD | 1 | CQDFMB1 | 1 | ¼ |
| | 2 | CQDFMB2 | 1 | ¼ |
| | 3 | CQDFMB3 | 1 | ¼ |
| NGG, HGG, LGG | 1 | FMPG1 | 1 | ¼ |
| | 2 | FMPG2 | 1 | ¼ |
| | 3 | FMPG3 | 1 | ¼ |

Back Mounting Plates

| | | | | |
|---------------------------|---|--------------|---|---|
| ED2, ED4, ED6, HED4, HED6 | 1 | E2BMB | 1 | ¼ |
|---------------------------|---|--------------|---|---|

Mounting Screw Kits

| | | | |
|-------------------------------|---------------------------------------------------------|-----------------------|--------|
| CQD | CQDSMK ^① | 1 | 1¼ |
| NGG, HGG, LGG | MSKG4 ^② | 1 | ¼ |
| All QR | MSQR3 | 1 | ½ |
| All ED (CED6 requires 2 kits) | MSE6 ^③ MSE6100 ^② | 1 100 ^② | ¼ 1 |
| All FD (CFD6 requires 2 kits) | MSF6 ^③ MSF650 ^③ | 1 50 ^② | ¼ 1 |
| All JD, LD | MSJ6 ^③ | 1 | ¼ |
| All LMD | MSLMD | 1 | ¼ |
| All MD, ND, | MSMN | 1 | ¼ |
| All PD, RD | MSPR6 | 1 | 2 |



Mounting Screw Kit
MSE6



Mechanical Interlock
MI5444

"MI" Mechanical Interlocks

| For Use With Breaker Type(s) | Panel ^① Mounted | Plug-in Mounted | Standard Package | Wt Lb Std Pkg |
|------------------------------|----------------------------|-----------------|------------------|---------------|
| All QR (Sliding Bar) | SBMIQR | — | 1 | 1½ |
| All FD | MI5444 | MI5444 | 1 | — |
| All JD, LD | MI5413 ^② | — | 1 | 1 |
| All LMD | MI5406 ^④ | — | 1 | 1 |
| All MD | MI5404 ^③ | — | 1 | 3 |
| All ND | MI5404 ^③ | — | 1 | 3 |
| All PD, RD | MI5405 ^⑤ | — | — | — |

① Kit consists of 4 screws and washers.
② Consists of 1 screw and washers (order 100).
③ Consists of 1 screw and washers (order 50).

④ With mechanical interlock in place, no accessory can be installed into circuit breaker right pole.
⑤ Addition of the mechanical interlock will prevent accessory installation in the left pole.
⑥ Sold only in standard package quantities. Multiply List Price Each times package quantity for full price.

⑦ Mechanical interlock is not designed for use within Siemens panelboards.

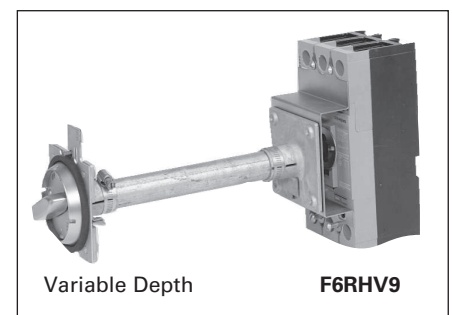
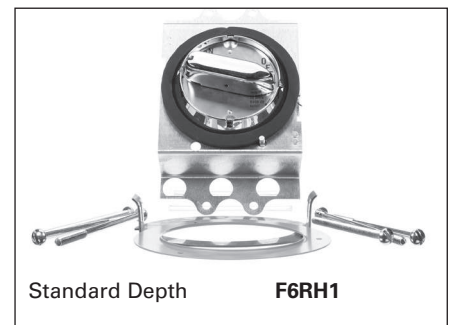
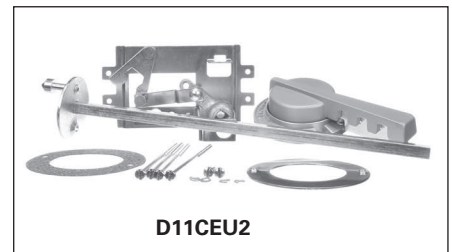
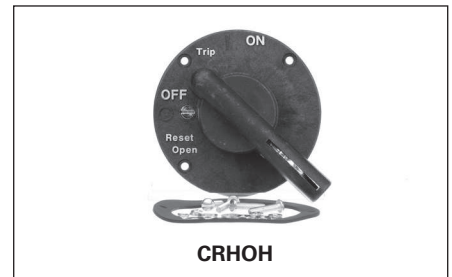
Molded Case Circuit Breakers

External Accessories

Selection

Rotary Door Mounted Operating Handles Types 1, 3, 3R, 12, 4 4X

| For Use With Breaker Frames | Complete Mechanism | | Handle Only | Breaker Operator | Shaft Only | |
|-----------------------------|--------------------|----------------|--------------------|---------------------|-----------------|-------------------------------|
| | Catalog Number | | Catalog Number | Catalog Number | Length (inches) | Catalog Number |
| | Standard Depth | Variable Depth | | | | |
| ED ^① | CRHOESD | CRHOEVD | CRHOH ^② | RHOEBO | 2 | RHOSSD |
| FD | CRHOFSD | CRHOFVD | | RHOFBO | 12 | RHOSVD |
| JD, LD | CRHOJSD | CRHOJVD | | RHOJBO | 16 | RHOSXD |
| LMD | CRHOLMSD | CRHOLMVD | | RHOLMBO | | |
| MD, ND PD, RD | RHONSD | RHONVD | RHOH ^② | RHONBO ^② | 3 12 24 | RHONSSD RHONSVD RHONSXD |



Rotary Door Mounted Operating Handles Types 1 & 12

| For Use With Breaker Frames | Standard Depth | Variable Depth | Handle and Shaft | Breaker Operator |
|-----------------------------|----------------|----------------|---------------------|------------------|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| CQD, NGG, HGG, LGG | — | RHOCQVD | RHOH62 ^③ | CQDOP |
| ED | D11CEU1 | D11CEU2 | — | — |
| FD | D11CFU1 | D11CFU2 | — | — |
| JD, LD | — | D11CJU2 | — | — |

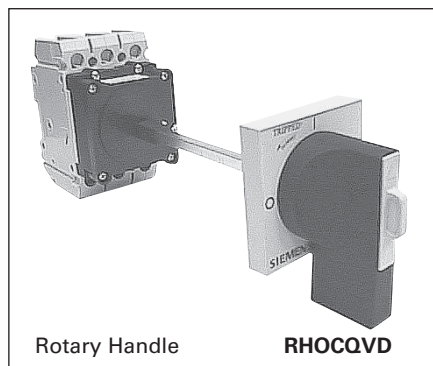
For CQD, NGG, HGG and LGG red emergency handle, order assembly **RHOCQVDE** (includes handle and operator).
For CQD, NGG, HGG and LGG in a NEMA 3R enclosure, order **CQDOP34** operator, **RHOH** handle and **RHOSVD** shaft.
For CQD, NGG, HGG and LGG in a NEMA 4 or 4X enclosure, order **CQDOP34** operator, **RHOH4** handle and **RHOSVD** shaft.

Through Door Mounted Operating Handles^④ Types 1 & 12

| For Use With Breaker Frames | Standard Depth | Variable Depth |
|-----------------------------|----------------|----------------|
| | Catalog Number | Catalog Number |
| CQD, NGG, HGG, LGG | FMHOS | — |
| ED | E2RH1 | E2RHV9 |
| FD | F6RH1 | F6RHV9 |

Door Latch Kits

| Type | Catalog Number | Catalog Number |
|---------------|----------------|----------------|
| | Right Hand | Left Hand |
| 2 point latch | DKR2 | DKL2 |
| 3 point latch | DKR3 | DKL3 |



① For use on 3-pole ED frame only.

② Meets the requirements of NFPA 79, section 5.3.3.1 for locking external operator disconnecting devices.
③ For 3 or 3R, order shaft and breaker operator as shown, and handle RHOH. For 4 & 4X, order handle RHOH4. Consult sales office for additional EG operator shaft lengths.

④ For extended shaft support order catalog number **RHONS2**.
⑤ Length of shaft is 300mm (11.8 inches).

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

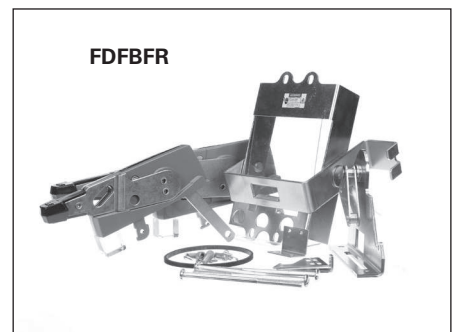
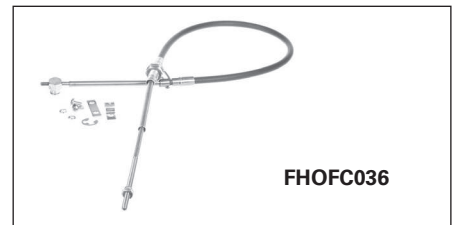
External Accessories

Selection

Max-Flex™, Flange Mounted Variable Depth Operators®

| Frames | NEMA Type | Complete Kit Catalog Number | Handle Only Catalog Number | Breaker Operator Catalog Number | 36" Cable Catalog Number |
|-------------------------------|--------------|-----------------------------|----------------------------|---------------------------------|--------------------------|
| GG | 1, 3 (R), 12 | MFKG3R3 | MFHG3R | MFMG | MFCF036 |
| | 4 (x) | MFKG4X3 | MFHG4X | | |
| ED | 1, 3 (R), 12 | FHOE036 ^① | FHOH | FHOEBO ^① | FHOEC036 |
| | 4 (x) | — | FHOH4 | | |
| FD | 1, 3 (R), 12 | FHOF036 | FHOH | FHOFBO | FHOFC036 |
| | 4 (x) | — | FHOH4 | | |
| JD, LD, SJD, SLD | 1, 3 (R), 12 | FHOJ036 | FHOH | FHOJBO | FHOJC036 |
| | 4 (x) | — | FHOH4 | | |
| LMD | 1, 3 (R), 12 | FHOLM036 ^② | FHOH | FHOLMBO | FHOJC036 |
| | 4 (x) | — | FHOH4 | | |
| MD, ND, PD, RD, SMD, SND, SPD | 1, 3 (R), 12 | FHON048 | FHOHN | FHONBO | FHONC048 ^② |
| | 4 (x) | — | FHOHN4 | | |

Max-Flex™ handles are available with solid black handles instead of the customary “red for on” flange handle. These are preferred for use in IEC markets, where red handles have specific meaning. Order components separately, appending the letter “i” to the catalog number (e.g. FHOHI).



Alternate Length Cable Only

| | ED | FD | JD/LD/LMD | MD/ND/PD/RD |
|--------|----------------|----------------|----------------|----------------|
| Inches | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| 48 | FHOEC048 | FHOFC048 | FHOJC048 | FHONC048 |
| 60 | FHOEC060 | FHOFC060 | FHOJC060 | FHONC060 |
| 72 | FHOEC072 | FHOFC072 | FHOJC072 | FHONC072 |
| 96 | FHOEC096 | FHOFC096 | FHOJC096 | FHONC096 |
| 120 | FHOEC120 | FHOFC120 | FHOJC120 | FHONC120 |
| 144 | FHOEC144 | FHOFC144 | FHOJC144 | FHONC144 |

Handle Auxiliary Switch

For use with Max-Flex and Rotary Door operators (FHOH and RHOH). 1 NO and 1 NC contact (Form C).

| For Use With | Catalog Number |
|-----------------------------------------------|----------------|
| ED, FD, JD, LD, LMD, ND, PD, RD, SD, Max Flex | HAS1 |

Fixed Depth Flange Mounting

| Frames | Minimum Enclosure Depth | NEMA Type | Left Hand Mount | Right Hand Mount |
|-----------------|-------------------------|-----------|-----------------|------------------|
| | | | Catalog Number | Catalog Number |
| ED ^③ | 6.44 | 1, 3R, 12 | FDFBEL | FDFBER |
| | | 4, 4X | FDFBEL4 | FDFBER4 |
| FD | 6.44 | 1, 3R, 12 | FDFBFL | FDFBFR |
| | | 4, 4X | FDFBFL4 | FDFBFR4 |

Max-Flex™ handles are available with solid black handles instead of the customary “Red for On” flange handle. These are preferred for use in IEC markets, where red handles have specific meaning. Order components separately, appending the letter “i” to the catalog number (e.g. FHOHI).

① For 1- or 2-pole breaker order FHOED036 complete kit or FHOEDBO breaker operator only. Use MFHM3R handle.
② 48 inch cable is standard length for M through R frame Max-Flex operators.

③ Meets requirements of NFPA 79, section 5.3.3.1 for locking external operator disconnecting devices
④ Consult sales office for additional cable lengths for EG Flex Shaft Operators. For 3-Pole only.

⑤ 3-Pole ED only.
⑥ FHOLM048 is available for a 48 inch handle kit.

Molded Case Circuit Breakers

External Accessories

Selection

Telemand® Motor Operator

| Breaker Frame | AC Voltage | Hinged to Open Down |
|---------------|------------|---------------------|
| ED except CED | 120 | MOE6120 |
| | 240 | MOE6240 |

ED motor operator opens downward.

| Breaker Frame | DC Voltage | Hinged to Open Right | AC Voltage | Hinged to Open Right |
|----------------|------------|----------------------|------------|----------------------|
| FD | 24 | MOF6024DC | 120 | MOF6120 |
| | 48 | MOF6048DC | 240 | MOF6240 |
| | 125 | MOF6125DC | — | — |
| JD, LD | 24 | MOJ6024DC | 120 | MOJ6120 |
| | 48 | MOJ6048DC | 240 | MOJ6240 |
| | 125 | MOJ6125DC | — | — |
| LMD | 24 | MOLMD6024DC | 120 | MOLMD6120 |
| | 48 | MOLMD6048DC | 240 | MOLMD6240 |
| | 125 | MOLMD6125DC | — | — |
| MD, ND, PD, RD | — | — | 120 | EMOPL120MN |
| | — | — | 240 | EMOPL240MN |

To order FD through RD motor operators with Left side hinges, add "L" to catalogue number (e.g. MOF6120L).

Dimensions

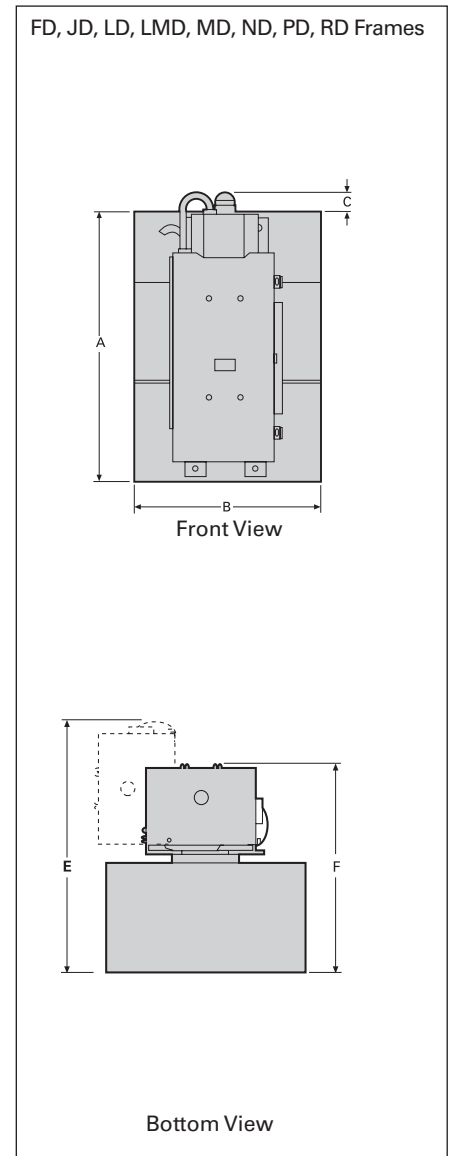
| Frame | A | B | C | D | E | F |
|----------------|-------|------|------|------|-------|-------|
| ED | 7.04 | 4.31 | — | 4.31 | 13.84 | 8.84 |
| FD | 9.50 | 4.55 | 1.60 | 6.84 | 9.70 | 7.58 |
| JD, LD, LMD | 11.00 | 7.50 | 0.79 | 8.34 | 9.85 | 7.74 |
| MD, ND, PD, RD | 16.00 | 9.00 | — | 9.83 | 13.13 | 10.13 |

Operating Currents

| Catalogue Number | On | | | Off | | | Reset (Amps) |
|------------------|----------------|----------------|-------------|----------------|----------------|-------------|--------------|
| | In-Rush (Amps) | Running (Amps) | Time (msec) | In-Rush (Amps) | Running (Amps) | Time (msec) | |
| MOE6120 | 10.25 | 2.3 | 550 | 10.0 | 2.3 | 400 | 2.3 |
| MOE6240 | 5.2 | 1.1 | 500 | 5.0 | 1.0 | 330 | 1.1 |
| MOF6120/L | 10.0 | 5.5 | 200 | 10.0 | 5.5 | 175 | 5.5 |
| MOF6240/L | 4.7 | 2.5 | 200 | 4.7 | 2.5 | 185 | 2.5 |
| MOLMD6120/L | 15.2 | 6.0 | 210 | 15.2 | 6.0 | 185 | 6.0 |
| MOJ6120/L | 15.2 | 6.0 | 210 | 15.2 | 6.0 | 185 | 6.0 |
| MOJ6240/L | 5.0 | 2.5 | 217 | 5.0 | 2.5 | 185 | 2.5 |
| MOMN6120/L | 22.7 | 13.9 | 240 | 22.7 | 13.9 | 210 | 13.9 |
| MOMN6240/L | 12.6 | 4.6 | 260 | 12.6 | 4.6 | 230 | 12.6 |



FD, JD, LD, LMD, MD, ND, PD, RD Frames



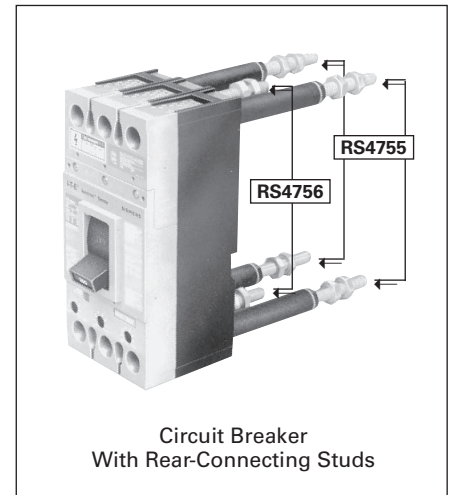
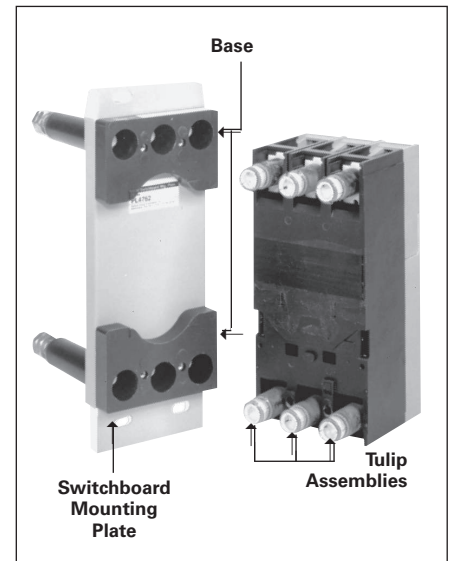
Molded Case Circuit Breakers

External Accessories

Plug-In Mounting Assemblies, Including Base and Tulip Assemblies

| For Use With Breaker Frames | Poles | Line Side | Load Side | Steel Switchboard Mounting Plate ^① Catalogue Number |
|-----------------------------|-------|-------------------------------|-------------------------------|-------------------------------------------------------------------|
| | | Catalogue Number ^② | Catalogue Number ^② | |
| All ED except CED | 2 | PC2637 | PC2638 | PL2616 |
| | 3 | PC2657 | PC2658 | |
| CED | 2 | PC2637 | PC2638 | PL2617 |
| | 3 | PC2657 | PC2658 | |
| All FD except CFD | 2 | PC4753 | PC4753 | PL4762 |
| | 3 | PC4754 | PC4754 | |
| CFD | 2 | PC4753 | PC4753 | PL4763 |
| | 3 | PC4754 | PC4754 | |
| All JD except CJD | 2 | PC5777 | PC5777 | PL5796 |
| | 3 | PC5778 | PC5778 | |
| Kit CJD, SCJD | 3 | PCCJD | PCCJD | PL5797 |
| All LD except CLD | 2 | PC5660 | PC5660 | PL5696 |
| | 3 | PC5661 | PC5661 | |
| Kit CLD, SCLD | 3 | PCCLD | PCCLD | PL5797 |
| All MD | 2 | PC5662 | PC5662 | PL9698 |
| | 3 | PC5663 | PC5663 | |
| All ND | 2 | PC5664 ^③ | PC5664 ^③ | PL9699 |
| | 3 | PC5666 ^③ | PC5666 ^③ | |

Selection/Dimensions



5 Tulip Assemblies Separately

| For Frame | 2 Pole | 3 Pole |
|-----------|------------------|------------------|
| | Catalogue Number | Catalogue Number |
| ED | TCE2 | TCE3 |
| FD | TCF2 | TCF3 |
| JD | TCJ2 | TCJ3 |
| LD | TCL2 | TCL3 |
| MD | TCM2 | TCM3 |
| ND | TCN2 | TCN3 |

Rear-Connecting Studs

| For Use With Breaker Frames | Ampere Rating | Description | Extension Behind Breaker (inches) | Line Side | Load Side |
|-----------------------------|--------------------------|-------------------|-----------------------------------|---------------------|---------------------|
| | | | | Catalogue Number | Catalogue Number |
| All ED | 100 | Line Side (Short) | 2.38 | RS2643 ^④ | — |
| | 100 | Load Side (Short) | 2.38 | — | RS2644 ^④ |
| | 100 | Line Side (Long) | 4.88 | RS2641 ^④ | — |
| | 100 | Load Side (Long) | 4.88 | — | RS2642 ^④ |
| All FD | 250 | Short | 3.12 | RS4756 ^④ | RS4756 ^④ |
| | 250 | Long | 7.06 | RS4755 ^④ | RS4755 ^④ |
| All JD | 400 | Short | 5.85 | RS5774 | RS5774 |
| | 400 | Long | 11.20 | RS5773 | RS5773 |
| All LD | 600 | Short | 5.85 | RS5784 | RS5784 |
| | 600 | Long | 11.20 | RS5783 | RS5783 |
| CJD, SCJD CLD, SCLD | Add required shield kit. | | | — | CLRSJL3 |
| LM(X)D6, HLM(X)D6 | 800 | Short | 5.85 | RS5788 | RS5788 |
| | | Long | 11.20 | RS5787 | RS5787 |
| All MD, ND | 1200 | Short | 5.50 | RS5786 | RS5786 |
| | | Long | 8.00 | RS5785 | RS5785 |

① Furnished at no extra charge when ordered with plug-in mounting assembly.

② Each piece catalogue number consists of (1) mounting block assembly and required tulip assemblies (2) for 2-pole, (3) for 3-pole

③ For vertical bus mounting — for horizontal, substitute PC5665 for PC5664 and PC5667 for PC5666.

④ Price includes one current stud, insulating tube, stud nuts and terminal shields, when required.

⑤ For proper electrical clearance, studs must alternate between short and long stud lengths on circuit breaker poles (e.g. SLSLSL or LSLSL).

Molded Case Circuit Breakers

Unusual Operating Conditions

Reference

Note: The information provided on this and the next page is intended for reference and recommendation only. Because several variables can act on a circuit breaker's performance at the same time, the data below is based less on controlled testing, than on experience and engineering judgment. Contact Siemens for further information on special conditions and treatment.

High Ambient Temperatures

Because thermal-magnetic trip breakers are temperature sensitive and calibrated for a specific ambient of 40° C (104° F) (average enclosure temperature), a higher ambient will cause the breaker to trip at lower current than its nameplate rating, in other words, causing the breaker to "derate" (see Table 1). Similarly, the current carrying capacity of a circuit conductor is based upon a certain ambient temperature, a higher ambient will reduce its current carrying capacity, causing it to "derate." Thus, with a fluctuating temperature, a thermal-magnetic breaker will derate nearly parallel with its connected circuit conductors and maintain close circuit protection. If the application temperature exceeds 40° C (104° F) and is known, either a breaker specially calibrated for the higher ambient or one oversized according to Table 1 may be selected. In a case such as this, the circuit conductors should be oversized as well.

Siemens Sensitrip® III and Type SB Encased Systems Breakers are insensitive to temperature changes. However, they do include circuitry to protect the components from abnormally high temperatures.

Moisture – Corrosion

For atmospheres having high moisture content and / or where fungus growth is prevalent, a special preventive treatment may be required.

Where the air is heavily laden with corrosive elements, breakers made with special corrosion-resistant finishes may be required.

Altitude

Reduced air density at altitudes greater than 6600 ft. (2000 meters) affects the ability of a molded case circuit breaker to transfer heat and interrupt faults. Therefore, circuit breakers applied at these altitudes should have interrupting, insulation and continuous currents derated as indicated in Figure 1.

Table 1 – Temperature Derating Data for Thermal-Magnetic Breakers

| Reference Ampere Rating at 40° C (104° F) | Ampere Rating at: | | | Siemens Breaker Frames |
|-------------------------------------------|-------------------|----------------|----------------|------------------------|
| | 25° C (77° F) | 50° C (122° F) | 60° C (140° F) | |
| 15 | 17 | 13 | 11 | ED |
| 20 | 22 | 18 | 16 | |
| 25 | 28 | 23 | 21 | |
| 30 | 33 | 28 | 26 | |
| 35 | 39 | 30 | 25 | |
| 40 | 44 | 37 | 34 | |
| 50 | 55 | 46 | 42 | |
| 60 | 66 | 56 | 52 | |
| 70 | 77 | 65 | 60 | |
| 90 | 99 | 84 | 78 | |
| 100 | 110 | 94 | 87 | |
| 125 | 137 | 114 | 100 | |
| 150 | 165 | 136 | 120 | |
| 175 | 192 | 159 | 140 | |
| 200 | 220 | 182 | 160 | |
| 225 | 247 | 205 | 180 | |
| 250 | 275 | 235 | 220 | |
| 300 | 330 | 276 | 252 | |
| 350 | 385 | 325 | 301 | |
| 400 | 440 | 372 | 340 | |
| 500 | 550 | 468 | 435 | |
| 600 | 660 | 564 | 525 | |
| 700 | 770 | 658 | 613 | |
| 800 | 880 | 754 | 704 | |
| 900 | 990 | 828 | 749 | |
| 1000 | 1100 | 900 | 825 | |
| 1200 | 1320 | 1090 | 1000 | |
| 1400 | 1540 | 1304 | 1148 | |
| 1600 | 1760 | 1500 | 1320 | |
| 1800 | 1980 | 1690 | 1485 | |
| 2000 | 2200 | 1880 | 1650 | |
| | | | | QJ |
| | | | | FD |
| | | | | JD |
| | | | | LD |
| | | | | MD |
| | | | | ND |
| | | | | PD |
| | | | | RD |

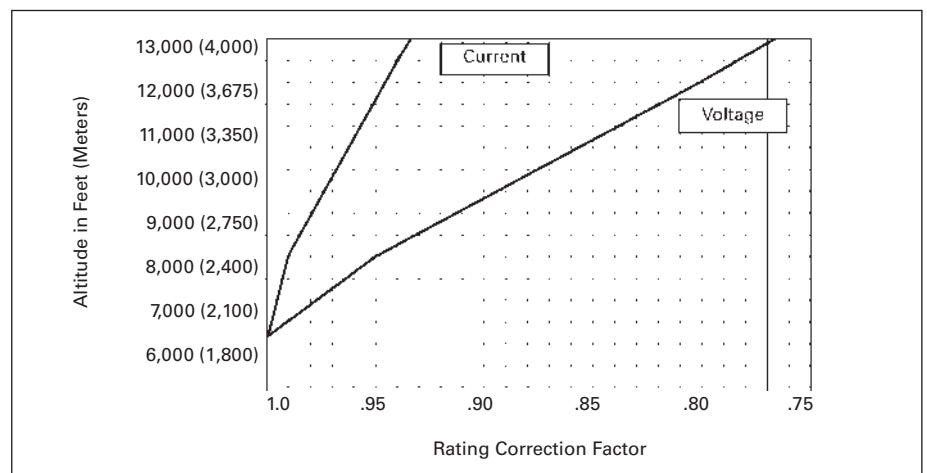


Figure 1 – Altitude Adjustment

Molded Case Circuit Breakers

Unusual Operating Conditions

Reference

400 Hz Systems^①

Siemens molded case circuit breakers can be applied for overcurrent protection on 400Hz systems, commonly used to power computer installations, aircraft, military and other specialty equipment. Below are basic guidelines.

Circuit Breaker Derating Required

This table lists the maximum continuous current carrying capacity for Siemens breakers at 400Hz. Due to the increased resistance of the copper sections resulting from the skin effect produced by eddy currents at these frequencies, circuit breakers in many cases require derating. The thermal derating on these devices is based upon 100%, three-phase application in open air in a maximum of 40° C (104° F) with 48 in. (1219 mm) of the specified cable or bus at the line and load side. Additional derating of not less than 20% will be required if the circuit breaker is to be utilized in an enclosure. Further derating may be required if the enclosure

ambient temperature exceeds 40° C (104° F).

Cable and Bus Sizing

The cable and bus sizes to be utilized at 400Hz are not based on standard National Electric Codes tables for 60Hz application. Larger cross sections are necessary at 400Hz. All bus bars specified are based upon mounting the bars in the vertical plane to allow maximum air flow. All bus bars are spaced at a minimum of 0.25 in. (6mm) apart. Mounting of bus bars in the horizontal plane will necessitate additional drafting. Edgewise orientation of the bus may change the maximum ratings indicated. If additional information is required for other connections of cable or bus, contact Siemens for information.

Application Recommendations

It is recommended that temperatures be measured on the line and load terminals or T-connectors of the center pole. These

are usually the hottest terminals with a balanced load. A maximum temperature of 75° C (35° C over a maximum ambient of 40° C) would verify the particular application. Temperature profiles taken on these breakers can be correlated to ensure that the hottest points within the breaker are within the required temperature limits.

Factory Configuration

When required, molded case circuit breakers may be factory calibrated for 400Hz application. These breakers are specially labeled for 400Hz usage and their nameplate current rating will include the necessary derating factor. The highest "Maximum Continuous Amperes" rating at 400Hz, found in the table below approximates the highest specially calibrated 400Hz nameplate ampere rating available for a given frame size. Contact Siemens for ordering information on other breakers applied in 400Hz systems.

400Hz Breakers

| Siemens Breaker Type | Maximum Continuous Ampere Rating At 40° C (104° F) ^② | | | 75° C (167° F) Copper Cable per Pole | | |
|-----------------------------------|-----------------------------------------------------------------|-----------------------|-------------------------|--------------------------------------|-----------|-----------|
| | 60HZ | | 400HZ | No of Pieces | Wire Size | |
| | Open Air | Open Air ^③ | Enclosed After Derating | | | |
| ED2, ED4, ED6, HED4, CED6 | 15 | 15 | 12 | 1 | #14 | |
| | 20 | 20 | 16 | 1 | #12 | |
| | 25 | 25 | 20 | 1 | #10 | |
| | 30 | 30 | 24 | 1 | #10 | |
| | 35 | 35 | 28 | 1 | #10 | |
| | 40 | 40 | 32 | 1 | #8 | |
| | 45 | 43 | 34 | 1 | #8 | |
| | 50 | 48 | 38 | 1 | #8 | |
| | 60 | 57 | 46 | 1 | #6 | |
| | 70 | 67 | 54 | 1 | #4 | |
| | 80 | 76 | 61 | 1 | #4 | |
| | 90 | 86 | 69 | 1 | #3 | |
| FD6, FXD6, HFD6, HFXD6, CFD6 | 100 | 95 | 76 | 1 | #3 | |
| | 110 | 105 | 84 | 1 | #2 | |
| | 125 | 119 | 95 | 1 | #1 | |
| | 70 | 63 | 50 | 1 | #4 | |
| | 80 | 72 | 58 | 1 | #4 | |
| | 90 | 80 | 64 | 1 | #3 | |
| | 100 | 90 | 72 | 1 | #3 | |
| | 110 | 95 | 75 | 1 | #2 | |
| | 125 | 105 | 84 | 1 | #1 | |
| | 150 | 125 | 100 | 1 | #1/0 | |
| | 175 | 140 | 112 | 1 | #2/0 | |
| | JXD2, JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, CJD6 | 200 | 160 | 128 | 1 | #3/0 |
| 225 | | 180 | 144 | 1 | #4/0 | |
| 250 | | 200 | 160 | 1 | 250 kcmil | |
| 200 | | 170 | 136 | 1 | #3/0 | |
| 225 | | 190 | 152 | 1 | #4/0 | |
| 250 | | 210 | 168 | 1 | 250 kcmil | |
| 300 | | 240 | 192 | 1 | 350 kcmil | |
| 350 | | 260 | 208 | 1 | 500 kcmil | |
| 400 | | 300 | 240 | 2 | #3/0 | |
| JD6, JXD6, HJD6, HJXD6 100% Rated | | 200 | 170 | 170 | 2 | #3/0 |
| | | 225 | 190 | 190 | 2 | #4/0 |
| | | 250 | 210 | 210 | 1 | 250 kcmil |
| | 300 | 240 | 240 | 1 | 350 kcmil | |
| | 350 | 260 | 260 | 1 | 500 kcmil | |
| | 400 | 300 | 300 | 2 | #3/0 | |

| Siemens Breaker Type | Maximum Continuous Ampere Rating At 40° C (104° F) ^② | | | 75° C (167° F) Copper Cable per Pole | |
|---------------------------------------------|-----------------------------------------------------------------|-----------------------|-------------------------|--------------------------------------|-----------|
| | 60HZ | | 400/415HZ | No of Pieces | Wire Size |
| | Open Air | Open Air ^③ | Enclosed After Derating | | |
| LD6, LXD6, HLD6, HLXD6, HHLD6, HHLXD6, CLD6 | 250 | 210 | 168 | 1 | 250 kcmil |
| | 300 | 240 | 192 | 1 | 350 kcmil |
| | 350 | 260 | 208 | 1 | 500 kcmil |
| | 400 | 300 | 240 | 2 | #3/0 |
| | 450 | 340 | 272 | 2 | #4/0 |
| | 500 | 375 | 300 | 2 | 250 kcmil |
| | 600 | 420 | 336 | 2 | 350 kcmil |
| | LD6, LXD6, HLD6, HLXD6, 100% Rated | 250 | 210 | 210 | 1 |
| 300 | | 240 | 240 | 1 | 350 kcmil |
| 350 | | 260 | 260 | 1 | 500 kcmil |
| 400 | | 300 | 300 | 2 | #3/0 |
| 450 | | 340 | 340 | 2 | #4/0 |
| 500 | | 375 | 375 | 2 | 250 kcmil |
| 600 | | 420 | 420 | 2 | 350 kcmil |
| MD6, MXD6, HMD6, HMXD6, CMD6 | | 500 | 400 | 320 | 2 |
| | 600 | 430 | 360 | 2 | 350 kcmil |
| | 700 | 500 | 400 | 3 | 250 kcmil |
| | 800 | 560 | 448 | 3 | 300 kcmil |
| MD6, MXD6, HMD6, HMXD6, CMD6 100% Rated | 500 | 400 | 400 | 2 | 250 kcmil |
| | 600 | 430 | 430 | 2 | 350 kcmil |
| | 700 | 500 | 500 | 3 | 250 kcmil |
| | 800 | 560 | 560 | 3 | 300 kcmil |
| ND6, NXD6, HND6, HNXD6, CND6 | 800 | 560 | 448 | 3 | 300 kcmil |
| | 900 | 600 | 480 | 3 | 350 kcmil |
| | 1000 | 650 | 520 | 3 | 400 kcmil |
| | 1200 | 780 | 624 | 4 | 350 kcmil |
| ND6, NXD6, HND6, HNXD6, CND6 | 900 | 600 | 600 | 3 | 350 kcmil |
| | 1000 | 650 | 650 | 3 | 400 kcmil |
| PD6, PXD6, HPD6, HFXD6, CPD6, 100% Rated | 1200 | 780 | 780 | 4 | 350 kcmil |
| | 1200 | 780 | 624 | 4 | 400 kcmil |
| | 1400 | 850 | 680 | 4 | 500 kcmil |
| PD6, PXD6, HPD6, HFXD6, CPD6 | 1600 | 960 | 768 | 5 | 500 kcmil |
| | 1200 | 780 | 780 | 4 | 400 kcmil |
| | 1400 | 850 | 850 | 4 | 500 kcmil |
| RD6, RXD6, HRD6, HRXD6 80% Rated | 1600 | 960 | 768 | 5 | 500 kcmil |
| | 1800 | 1080 | 864 | 5 | 500 kcmil |
| | 2000 | 1200 | 960 | 6 | 500 kcmil |
| | 1600 | 960 | 960 | 5 | 500 kcmil |

① The information provided on this page is intended for reference and recommendation only. Because several variables can act on a circuit breaker's performance at the same time, the data above is based less on

controlled testing, than on experience and engineering judgment. Contact Siemens for further information on special conditions and treatment.

② Additional derating may be required if the ambient temperature is greater than 40° C (104° F).





③ Calculated after derating to compensate for the heating of the copper conductor, caused by the skin effect generated by eddy currents produced at 400/415Hz.

VL Circuit Breakers

Technical Overview

Technical

Frame Summary and Ratings Table

| Frame Family | DG | FG | JG |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| |  |  |  |
| Continuous Ampere Range | 30 to 150A | 40 to 250A | 70 to 400A |
| Number of Poles | 2, 3 | 2, 3 | 2, 3 |
| Maximum Voltage Rating | 600Y/347 | 600Y/347 | 600V |
| Type of Protection | | | |
| Thermal-Magnetic | ◆ | ◆ | ◆ |
| Electronic | ◆ | ◆ | ◆ |
| Electronic with LCD | ◆ | ◆ | ◆ |
| Motor Circuit Protector | ◆ | ◆ | ◆ |
| Molded Case Switch | ◆ | ◆ | ◆ |
| 100% Rated Breaker | ◆ | ◆ | ◆ |
| Interchangeable Trip Unit | ETU only | — | ◆ |
|  W In.(mm) | | 4.1 (105) | 5.5 (139) |
| H | | 7.3 (175) | 11 (279) |
| D | | 3.4 (81) | 4.2 (102) |
| D1 | | 4.2 (107) | 5.4 (138) |
| Type N – Normal Interrupting Rating [®] , RMS Symmetrical Amperes (kA) | | | |
| CSA / UL | | | |
| 240Vac | 65 | 65 | 65 |
| 480Vac | 35 | 35 | 35 |
| 600Vac [®] | 18 | 18 | 25 |
| IEC (I_{cs}/I_{cu}) | | | |
| 240Vac | 65/65 | 65/65 | 65/65 |
| 415Vac | 40/40 | 40/40 | 45/45 |
| 690Vac | 12/6 | 12/6 | 12/6 |
| DC Voltages – Interrupting Rating (kA)[®] | | | |
| 250Vdc - 2p | 30 | 30 | 30 |
| 500Vdc - 3p [®] | 18 | 18 | 25 |
| Type H – High Interrupting Rating [®] , RMS Symmetrical Amperes (kA) | | | |
| CSA / UL | | | |
| 240Vac | 100 | 100 | 100 |
| 480Vac | 65 | 65 | 65 |
| 600Vac [®] | 18 | 18 | 25 |
| IEC (I_{cs}/I_{cu}) | | | |
| 240Vac | 100/75 | 100/75 | 100/75 |
| 415Vac | 70/70 | 70/70 | 70/70 |
| 690Vac | 12/6 | 12/6 | 15/8 |
| DC Voltages – Interrupting Rating (kA)[®] | | | |
| 250Vdc - 2p | 30 | 30 | 30 |
| 500Vdc - 3p [®] | 18 | 25 | 35 |
| Type L – Very High Interrupting Rating [®] , RMS Symmetrical Amperes (kA) | | | |
| CSA / UL | | | |
| 240Vac | 200 | 200 | 200 |
| 480Vac | 100 | 100 | 100 |
| 600Vac [®] | 18 | 18 | 25 |
| IEC (I_{cs}/I_{cu}) | | | |
| 240Vac | 200/150 | 200/150 | 200/150 |
| 415Vac | 100/75 | 100/75 | 100/75 |
| 690Vac | 12/6 | 12/6 | 15/8 |
| DC Voltages – Interrupting Rating (kA)[®] | | | |
| 250Vdc - 2p | 30 | 30 | 30 |
| 500Vdc - 3p [®] | 18 | 30 | 35 |

© UL does not recognize AIC ratings for Molded Case Switches or Motor Circuit Protectors.
 © 500Vdc nominal, for ungrounded DC UPS systems.






© DC Interruption Ratings do not apply to electronic trip circuit breakers.
 © DG & FG breakers are 600Y/347V.

VL Circuit Breakers

Technical Overview

Technical

Frame Summary and Ratings Table — Continued

| Frame Family | LG | MG | NG | PG | |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|
| |  |  |  |  | |
| Continuous Ampere Range | 150 to 600A | 200 to 800A | 300 to 1200A | 400 to 1600A | |
| Number of Poles | 2, 3 | 2, 3 | 2, 3 | 3 | |
| Maximum Voltage Rating | 600V | 600V | 600V | 600V | |
| Type of Protection | | | | | |
| Thermal-Magnetic | ◆ | ◆ | ◆ | ◆ | |
| Electronic | ◆ | ◆ | ◆ | ◆ | |
| Electronic with LCD | ◆ | ◆ | ◆ | ◆ | |
| Motor Circuit Protector | ◆ | ◆ | ◆ | — | |
| Molded Case Switch | ◆ | ◆ | ◆ | ◆ | |
| 100% Rated | 400/500 Amp | ◆ | ◆ | ◆ | |
| Interchangeable Trip Unit | — | ◆ | ◆ | ◆ [ⓐ] | |
|  W In.(mm) | 5.5 (139) | 7.5 (190) | 9 (229) | | |
| H | 11 (279) [ⓑ] | 16 (406) | 16 (406) | | |
| D | 4.2 (102) | 4.7 (114) | 6.2 (157) | | |
| D1 | 5.4 (138) | 5.9 (151) | 8.1 (207) | | |
| Type N – Normal Interrupting Rating [ⓐ] , RMS Symmetrical Amperes (kA) | | | | | |
| CSA / UL | 240Vac | 65 | 65 | 65 | 65 |
| | 480Vac | 35 | 35 | 35 | 35 |
| | 600Vac | 18 | 25 | 25 | 25 |
| IEC (I_{cs}/I_{ca}) | 240Vac | 65/65 | 65/65 | 65/65 | 65/65 |
| | 415Vac | 45/45 | 50/50 | 50/25 | 50/25 |
| | 690Vac | 12/6 | 20/10 | 20/10 | 20/10 |
| DC Voltages – Interrupting Rating (kA)[ⓐ] | | | | | |
| 250Vdc - 2p | 30 | 22 | 22 | 22 | |
| 500Vdc - 3p [ⓑ] | 25 | 35 | 35 | 35 | |
| Type H – High Interrupting Rating [ⓐ] , RMS Symmetrical Amperes (kA) | | | | | |
| CSA / UL | 240Vac | 100 | 100 | 100 | 100 |
| | 480Vac | 65 | 65 | 65 | 65 |
| | 600Vac | 18 [ⓑ] | 35 | 35 | 35 |
| IEC (I_{cs}/I_{ca}) | 240Vac | 100/75 | 100/75 | 100/75 | 100/50 |
| | 415Vac | 70/70 | 70/70 | 70/35 | 70/35 |
| | 690Vac | 15/8 | 30/15 | 30/15 | 30/15 |
| DC Voltages – Interrupting Rating (kA)[ⓐ] | | | | | |
| 250Vdc - 2p | 30 | 25 | 25 | 25 | |
| 500Vdc - 3p [ⓑ] | 35 | 50 | 50 | 50 | |
| Type L – Very High Interrupting Rating [ⓐ] , RMS Symmetrical Amperes (kA) | | | | | |
| CSA / UL | 240Vac | 200 | 200 | 200 | 200 |
| | 480Vac | 100 | 100 | 100 | 100 |
| | 600Vac | 18 | 50 | 65 | 65 |
| IEC (I_{cs}/I_{ca}) | 240Vac | 200/150 | 200/150 | 200/150 | 200/150 |
| | 415Vac | 100/75 | 100/75 | 100/75 | 100/75 |
| | 690Vac | 15/8 | 35/17 | 35/17 | 35/17 |
| DC Voltages – Interrupting Rating (kA)[ⓐ] | | | | | |
| 250Vdc - 2p | 30 | 42 | 42 | 42 | |
| 500Vdc - 3p [ⓑ] | 35 | 65 | 65 | 65 | |

ⓐ CSA / UL does not recognize AIC ratings for Molded Case Switches or Motor Circuit Protectors.

ⓑ 25kA available in a special version. Standard breakers rated 18kA. See page 5-166.

ⓐ 500Vdc nominal, for ungrounded DC UPS systems.

ⓑ DC Interruption Ratings do not apply to electronic trip circuit breakers.

ⓐ Thermal-magnetic available non-interchangeable only.

ⓐ 13.6" with extended shields.

VL Circuit Breakers

Trip Unit Overview

Selection

The interchangeability of the VL circuit breaker trip units allow for easy conversion from any of 3 types of protection. They are thermal-magnetic, electronic, or electronic with a built-in LCD display. The thermal-magnetic trip unit features an adjustable magnetic trip setting. The electronic trip units are microprocessor based true RMS sensing devices and are available with a variety of adjustable trip settings, configurations, and infor-

mation menus. With precise control over the circuit breaker functions and access to system status, diagnostics, and information, these trip units allow for unsurpassed flexibility in circuit coordination.

An example of coordination is the out of the box Ground Fault function on the Model 555 trip units. The pick-up and time delay settings are set at the

factory for each frame and do not overlap with the settings on the other frames. Therefore, when VL breakers are used together in a system the GF protection is automatically coordinated. The user also has the ability to program a custom coordination scheme with adjustable settings on both the 555 and 586 trip units.

| Trip Unit Functions | VL Trip Units | | | | | | | |
|--------------------------------------|------------------|---------------|----------------|----------------|-----------------|-------------------------|--------------------------|----------------------------------------|
| | Model 525 | Model 555 | | | | Model 586 | | |
| | Thermal-magnetic | Electronic LI | Electronic LIG | Electronic LSI | Electronic LSIG | Electronic with LCD LSI | Electronic with LCD LSIG | Electronic with LCD LSI + G alarm only |
| Continuous Current Setting (I_r) | Fixed | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Long Time Delay (t_r) | □ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Instantaneous Function | ● | ● | ● | ● | ● | (ON/OFF) | (ON/OFF) | (ON/OFF) |
| Instantaneous Pickup (I_i) | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Short Time Function | □ | □ | □ | ● | ● | (ON/OFF) | (ON/OFF) | (ON/OFF) |
| Short Time Pick-up (I_{sd}) | □ | □ | □ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Short Time Delay (t_{sd}) | □ | □ | □ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Ground Fault Pick-up (I_g) | □ | □ | ◆ | □ | ◆ | □ | ◆ | □ |
| Ground Fault Delay (t_g) | □ | □ | ◆ | □ | ◆ | □ | ◆ | □ |
| Ground Fault Alarm Pick-up | □ | □ | □ | □ | □ | □ | ◆ | ◆ |
| Ground Fault Alarm Delay | □ | □ | □ | □ | □ | □ | ◆ | ◆ |
| Alarm & Status Indicator | □ | ● | ● | ● | ● | ● | ● | ● |
| Built-in Display (LCD) | □ | □ | □ | □ | □ | ● | ● | ● |
| Pre-Trip Alarm ^① | □ | ● | ● | ● | ● | ● | ● | ● |
| Last Trip Information ^① | □ | ● | ● | ● | ● | ● | ● | ● |
| Zone Selective ^① | □ | ● | ● | ● | ● | ● | ● | ● |
| Communications ^① | □ | ● | ● | ● | ● | ● | ● | ● |

◆ Adjustable setting
 ● This feature is included
 □ Feature is not included.
 ① Requires a COMPRO20 or COMMOD21 module in a communication system.

Continuous Amps Rating (I_r)

This setting is the continuous current that the breaker will carry without tripping. It can be set up to 100% of the trip unit's nominal rating (I_n).

Long Time Delay (t_r)

Sometimes referred to as the "overload" position, this function controls the breaker's "pause-in-tripping" time. It allows low level, temporary inrush currents such as those encountered when starting a motor to pass without tripping. The time delay begins when the current reaches $6 \times I_r$.

Instantaneous Pick-up (I_i)

This function sets the breaker to trip instantaneously during high fault conditions. This function may be turned off on Model 586 trip units.

Short Time Pick-Up (I_{sd})

This function controls the level of fault current the breaker will carry for a short time without tripping, thus allowing downstream devices to clear short circuits ahead of up-stream protection. It may be defeated (turned-off) on Model 586 trip units.

Short Time Delay (t_{sd})

This controls the interval of time the breaker will remain closed against a fault (at the Short Time Pick-up current level) without tripping. The time delay may be set at fixed points or at short time intervals based on I^2t curves. This function is used with the Short Time Pick-up to achieve selectivity and better system coordination.

Ground Fault Pick-Up (I_g)

This setting controls the level of ground fault current that will cause the breaker to trip. Model 555 Electronic Trip Units act on the residual current to sense ground current. The Model 586 Electronic Trip Unit is programmable and allows the user to select either the residual current method or direct detection (via a separate current transformer) to detect ground current.

Ground Fault Time Delay (t_g)

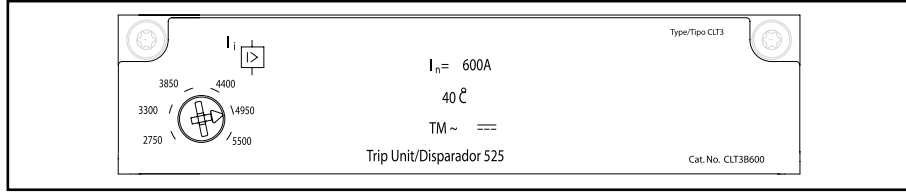
This controls the interval of time the breaker will remain closed after a ground fault is detected (at the Ground Fault Pick-up current level) without tripping.

VL Circuit Breakers

General Information

Selection

Thermal-Magnetic trip units, Model 525, combine the inverse time element design for low level overloads, and instantaneous magnetic action for short circuit protection. The standard unit has preset overload protection and an adjustable instantaneous trip setting, with 6 set points. Thermal-Magnetic trip units are available throughout the VL family, from 30 to 1600A.



Electronic Trip Units

Electronic trip units are available through the VL family, from 60A (which can be set as low as 30A) up through 1600A. They are also available in four trip configurations (LI, LIG, LSI, LSIG) and features can include a built-in LCD display.

microprocessor is in operating and another indicates an overload condition. For ease-of-use and to insure proper coordination, the set points for the continuous current are shown on the face of these trip units in amps.

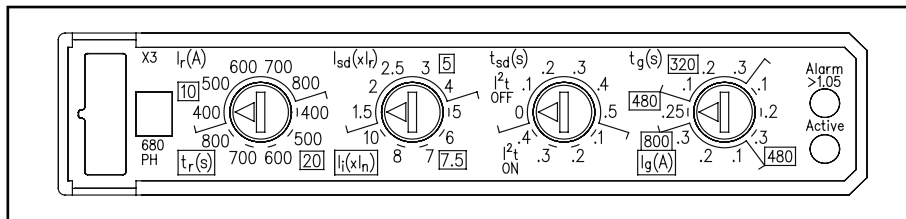
On the Model 555 Electronic Trip Unit a flashing LED confirms that the

On the Model 586, the LCD version, the current in each phase is continuously shown on the display. Unlike many

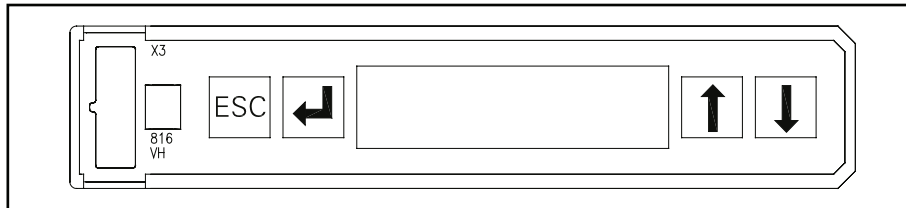
displays, no secondary or auxiliary voltage is required as long as the breaker is energized and a minimal load current is present. These trip units can also indicate the "last trip" status (date, time, amps) when they're connected to a PC via one of our communications modules. Without being connected via a communication module, the last trip status can be viewed on Model 586 trip units (no time stamp).

5
MOLDED CASE
CIRCUIT BREAKERS

Typical Trip Unit Labeling and Adjustment Positions



Model 555 Electronic Trip Unit with LSIG trip functions



Model 586 Electronic Trip Unit has an LCD display

VL Circuit Breakers

DG 150A Frame, VL Series

Selection

Ordering Information

Complete Assembled Breaker

A complete factory assembled DG breaker includes the frame, trip unit, and standard line and load connectors, all factory installed and shipped as a complete breaker. Assembled breakers are only available with standard connectors.

For any other configuration, order the frame, trip unit, and terminals as separate items.

For DC applications, use thermal magnetic trip unit only.

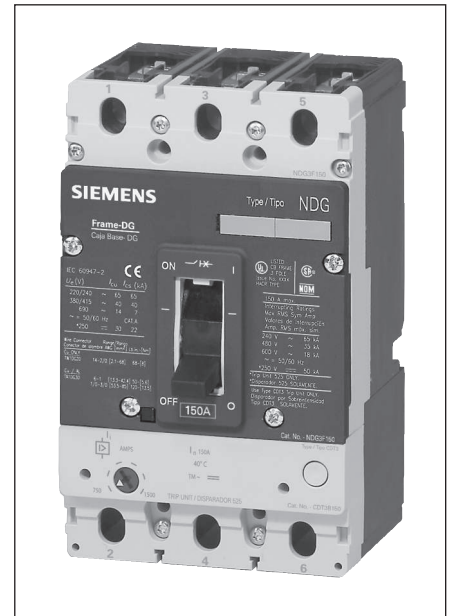
For reverse feed applications, select non-interchangeable trip breakers only. For non-interchangeable trip breakers, change the third digit of the catalogue number to "X" for standard breakers.

For special applications, refer to page 5-144.

Mounting hardware is included with each frame or complete breaker.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalogue number to "Y". Available in electronic and electronic with LCD only.

HACR rated.



Interrupting Ratings

| Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------|------------------------------|-----|-----|----------|-----------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| | UL 489 | | | | | IEC 60947-2 | | | | | |
| | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| | | | | | I _{sc} | I _{sc} | I _{sc} | I _{sc} | I _{sc} | I _{sc} | |
| NDGA | 65 | 35 | 18 | 30 | 18 | 65 | 65 | 40 | 40 | 12 | 6 |
| HDGA | 100 | 65 | 20 | 30 | 18 | 100 | 75 | 70 | 70 | 12 | 6 |
| LDGA | 200 | 100 | 25 | 30 | 18 | 200 | 150 | 100 | 75 | 12 | 6 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per connector | Catalogue Number |
|-------------------|---------------|-----------------------|-----------------------------|------------------------|
| Steel | 30-150 | #8-1/0 Cu | 1 | 3TW1DG20 ^② |
| Aluminum | 30-150 | #6-3/0 Al/Cu | 1 | 3TA1DG30 ^{①②} |
| Copper | 30-150 | #6-3/0 Cu | 1 | 3TC1DG30 ^{②④} |
| Distribution Lugs | | | | |
| | 30-150 | #14-#2 Cu (3pcs. Max) | 3 | 3TA3DG02 ^② |
| | 30-150 | #14-#4 Cu | 6 | 3TA6DG04 ^② |
| Compression Lugs | | | | |
| | 30-150 | #14-2/0 kcmil Al/Cu | - | 2CLD20 ^③ |
| | 30-150 | #14-2/0 kcmil Al/Cu | - | 3CLD20 ^② |

① Standard connector supplied with complete breakers.

② Kit consists of 3 terminal connectors.

③ 2 Lugs for 2-pole breakers.

④ Required for 100% rated DG breakers. Requires 90°C cable sized at 75°C ampacity

DG Thermal-Magnetic, Instantaneous Trip Adjustment Range

| Trip Unit Continuous Amp Rating (I _c) | Instantaneous Overcurrent Setting (I _n) | |
|---------------------------------------------------|-----------------------------------------------------|------|
| | Min. | Max. |
| 50 | 450 | 700 |
| 60 | 450 | 700 |
| 70 | 450 | 700 |
| 80 | 450 | 800 |
| 90 | 500 | 1000 |
| 100 | 500 | 1000 |
| 110 | 550 | 1100 |
| 125 | 625 | 1250 |
| 150 | 800 | 1600 |

Note: Each breaker has 6 trip settings in this range.

Dimensions - Inches (mm)

| Number of Poles | Width | Length | Depth | To Handle D1 |
|-----------------|-----------|-----------|----------|--------------|
| 2, 3 | 4.1 (105) | 6.9 (175) | 3.4 (81) | 4.2(107) |

Approx. Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | | Complete Breaker |
|-------|-----------|--------------|------------|------------------|
| | | Thermal-Mag. | Electronic | |
| 2, 3 | 3.7 (1.7) | 2.2 (1.0) | 2.6 (1.2) | 5.9 (2.7) |

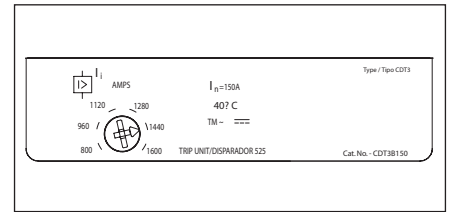
5 MOLDED CASE CIRCUIT BREAKERS

External Accessories page 5-126 – 5-139

VL Circuit Breakers

DG 150A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

DG 150A Frame 2-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NDG2F150 | HDG2F150 | LDG2F150 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| 50 | NDG2B050L | HDG2B050L | LDG2B050L | CDT2B050 |
| 60 | NDG2B060L | HDG2B060L | LDG2B060L | CDT2B060 |
| 70 | NDG2B070L | HDG2B070L | LDG2B070L | CDT2B070 |
| 80 | NDG2B080L | HDG2B080L | LDG2B080L | CDT2B080 |
| 90 | NDG2B090L | HDG2B090L | LDG2B090L | CDT2B090 |
| 100 | NDG2B100L | HDG2B100L | LDG2B100L | CDT2B100 |
| 110 | NDG2B110L | HDG2B110L | LDG2B110L | CDT2B110 |
| 125 | NDG2B125L | HDG2B125L | LDG2B125L | CDT2B125 |
| 150 | NDG2B150L | HDG2B150L | LDG2B150L | CDT2B150 |

DG 150A Frame 3-Pole with Thermal-Magnetic Trip Unit

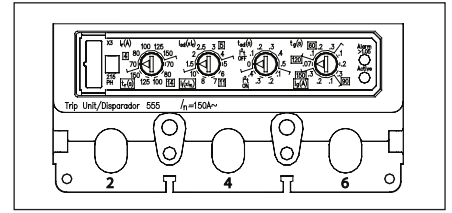
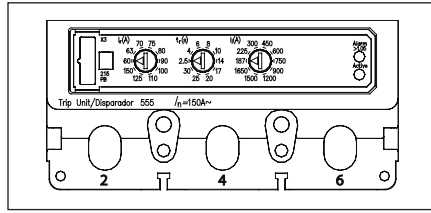
| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NDG3F150 | HDG3F150 | LDG3F150 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| 50 | NDG3B050L | HDG3B050L | LDG3B050L | CDT3B050 |
| 60 | NDG3B060L | HDG3B060L | LDG3B060L | CDT3B060 |
| 70 | NDG3B070L | HDG3B070L | LDG3B070L | CDT3B070 |
| 80 | NDG3B080L | HDG3B080L | LDG3B080L | CDT3B080 |
| 90 | NDG3B090L | HDG3B090L | LDG3B090L | CDT3B090 |
| 100 | NDG3B100L | HDG3B100L | LDG3B100L | CDT3B100 |
| 110 | NDG3B110L | HDG3B110L | LDG3B110L | CDT3B110 |
| 125 | NDG3B125L | HDG3B125L | LDG3B125L | CDT3B125 |
| 150 | NDG3B150L | HDG3B150L | LDG3B150L | CDT3B150 |

5
MOLDED CASE
CIRCUIT BREAKERS

VL Circuit Breakers

DG 150A Electronic 3-Knob & LCD Trip Units

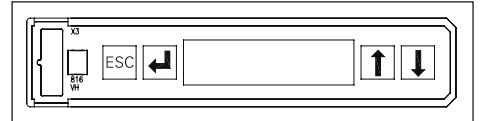
Selection



Model 555 Trip Units

DG 150A Frame 3-Pole Electronic Trip Unit^①

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NDG3F150 | HDG3F150 | LDG3F150 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| ELECTRONIC LI TRIP | | | | |
| 60 | NDG3R060L | HDG3R060L | LDG3R060L | CDT3R060 |
| 100 | NDG3R100L | HDG3R100L | LDG3R100L | CDT3R100 |
| 150 | NDG3R150L | HDG3R150L | LDG3R150L | CDT3R150 |
| ELECTRONIC LSI TRIP | | | | |
| 60 | NDG3T060L | HDG3T060L | LDG3T060L | CDT3T060 |
| 100 | NDG3T100L | HDG3T100L | LDG3T100L | CDT3T100 |
| 150 | NDG3T150L | HDG3T150L | LDG3T150L | CDT3T150 |
| ELECTRONIC LSIG TRIP | | | | |
| 60 | NDG3V060L | HDG3V060L | LDG3V060L | CDT3V060 |
| 100 | NDG3V100L | HDG3V100L | LDG3V100L | CDT3V100 |
| 150 | NDG3V150L | HDG3V150L | LDG3V150L | CDT3V150 |
| ELECTRONIC LIG TRIP | | | | |
| 60 | NDG3W060L | HDG3W060L | LDG3W060L | CDT3W060 |
| 100 | NDG3W100L | HDG3W100L | LDG3W100L | CDT3W100 |
| 150 | NDG3W150L | HDG3W150L | LDG3W150L | CDT3W150 |



Model 586 Trip Unit

DG 150A Frame 3-Pole Electronic LCD Trip Unit^①

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NDG3F150 | HDG3F150 | LDG3F150 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| LCD ELECTRONIC LSI TRIP | | | | |
| 60 | NDG3A060L | HDG3A060L | LDG3A060L | CDT3A060 |
| 100 | NDG3A100L | HDG3A100L | LDG3A100L | CDT3A100 |
| 150 | NDG3A150L | HDG3A150L | LDG3A150L | CDT3A150 |
| LCD ELECTRONIC LSIG TRIP | | | | |
| 60 | NDG3G060L | HDG3G060L | LDG3G060L | CDT3G060 |
| 100 | NDG3G100L | HDG3G100L | LDG3G100L | CDT3G100 |
| 150 | NDG3G150L | HDG3G150L | LDG3G150L | CDT3G150 |
| LCD ELECTRONIC LSI + GF ALARM ONLY | | | | |
| 60 | NDG3K060L | HDG3K060L | LDG3K060L | CDT3K060 |
| 100 | NDG3K100L | HDG3K100L | LDG3K100L | CDT3K100 |
| 150 | NDG3K150L | HDG3K150L | LDG3K150L | CDT3K150 |

^① Due to the location of the magnetic tripping solenoid, the left accessory pocket is not available for accessories.

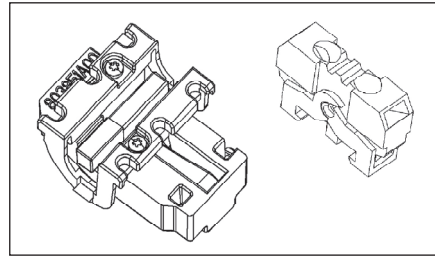
VL Circuit Breakers

Internal Accessories for DG 150A and FG 250A Frames

Selection

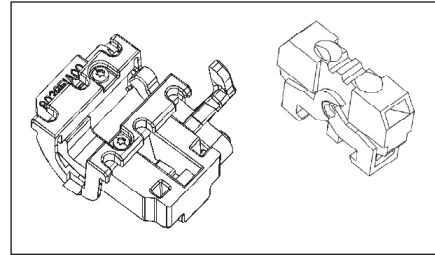
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket ^① | Catalogue Number |
|------------------------------------------------------------------------------|------------------------------|------------------|
| 1 Alarm Switch 1A/B ^② Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL1 |
| 2 Aux. Switches 1A + 1B Bases AMBL1 | Left, Right | ASKL2 |
| 2 Aux. + 1 Alarm Switch 1A + 1B, 1A/B ^② Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL3 |



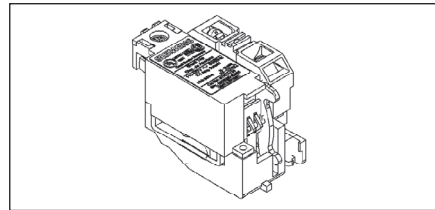
Auxiliary/Alarm Switch Mounting Base Only

| Description | Mounting Pocket | Catalogue Number |
|----------------------------|-------------------|------------------|
| Up to 3 Auxiliary Switches | Left, Right | AMBL1 |
| 2 Aux. + 1 Alarm Switch | Left Pocket Only | AMBL2 |
| 2 Aux. + 1 Alarm Switch | Right Pocket Only | AMBL3 |



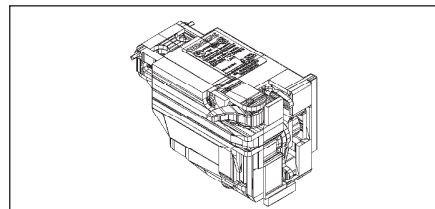
Auxiliary/Alarm Switch Only Common to DG - PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |



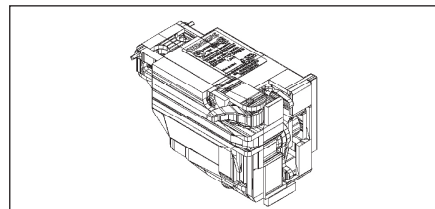
Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRLB24DC |
| 48-60 VDC | | STRLC60DC |
| 110-127 VDC | | STRLD125DC |
| 220-250 VDC | | STRLE250DC |
| 48-60 VAC | | STRLM60 |
| 110-127 VAC | | STRLN120 |
| 208-277 VAC | | STRLS277 |
| 380-600 VAC | | STRLV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRLA12DC |
| 24 VDC | | UVRLB24DC |
| 48 VDC | | UVRLC48DC |
| 60 VDC | | UVRLG60DC |
| 110-127 VDC | | UVRLD125DC |
| 220-250 VDC | | UVRLE250DC |
| 24 VAC | | UVRL24 |
| 110-127 VAC | | UVRLN120 |
| 220-240 VAC | | UVRLR240 |
| 208 VAC | | UVRLP208 |
| 277 VAC | | UVRLS277 |
| 380-415 VAC | | UVRLT415 |
| 440-480 VAC | | UVRLU480 |



'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

① Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.

② These kits include two bases, one for mounting switches in the left pocket and another for mounting in the right.

③ Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.

External Accessories page 5-137

VL Circuit Breakers

FG 250A Frame, VL Series

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled FG breaker includes the frame, trip unit, and standard line and load connectors, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For any other configuration, order the frame, trip unit, and terminals as separate items.

For DC applications, use thermal magnetic trip unit only.

For reverse feed applications, select non-interchangeable trip breakers only. For non-interchangeable trip breakers, change the third digit of the catalogue number to "X" for standard breakers.

For special applications, refer to page 5-144.

Mounting hardware is included with each frame or complete breaker.
HACR rated.



Dimensions - Inches (mm)

| Number of Poles | Width | Length | Depth | To Handle D1 |
|-----------------|-----------|-----------|----------|--------------|
| 2, 3 | 4.1 (105) | 6.9 (175) | 3.4 (81) | 4.2 (107) |

Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | | Complete Breaker |
|-------|-----------|--------------|------------|------------------|
| | | Thermal-Mag. | Electronic | |
| 2, 3 | 4.0 (1.8) | 2.2 (1.0) | 2.6 (1.2) | 6.2 (2.8) |

Interrupting Ratings

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|----------|-----------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| | | CSA C22.2 NO.5 / UL 489 | | | | | IEC 60947-2 | | | | | |
| | | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| | | | | | | I _{cs} | I _{cs} | I _{cs} | I _{cs} | I _{cs} | I _{cs} | |
| N | NFGA | 65 | 35 | 18 | 30 | 18 | 65 | 65 | 40 | 40 | 12 | 6 |
| H | HFGA | 100 | 65 | 20 | 30 | 25 | 100 | 75 | 70 | 70 | 12 | 6 |
| L | LFGA | 200 | 100 | 25 | 30 | 30 | 200 | 150 | 100 | 75 | 12 | 6 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per connector | Catalogue Number |
|-------------------|---------------|--------------------|-----------------------------|--------------------------|
| Steel | 50-250 | #4-350 kcmil Cu | 1 | 3TW1FG350 ^② |
| Aluminum | 50-250 | #4-350 kcmil Al/Cu | 1 | 3TAW1FG350 ^{①②} |
| Copper | 50-250 | #4-350 kcmil Cu | 1 | 3TCW1FG350 ^② |
| Distribution Lugs | | | | |
| | 50-250 | #14-2/0 Cu | 3 | 3TA3FG20 ^② |
| | 50-250 | #14-#4 Cu | 6 | 3TA6FG04 ^② |
| Compression Lugs | | | | |
| | 50-250 | #4-350 Al/Cu | 1 | 3CLF350 ^② |

① Standard connector supplied with complete breakers.

② Kit consists of 3 terminal connectors.

FG Thermal-Magnetic, Instantaneous Trip Adjustment Range

| Trip Unit Continuous Amp Rating (I _n) | Instantaneous Overcurrent Setting (I) | |
|---------------------------------------------------|---------------------------------------|------|
| | Min. | Max. |
| 100 | 625 | 1250 |
| 110 | 800 | 1600 |
| 125 | 800 | 1600 |
| 150 | 800 | 1600 |
| 175 | 1000 | 2000 |
| 200 | 1000 | 2000 |
| 225 | 1250 | 2500 |
| 250 | 1250 | 2500 |

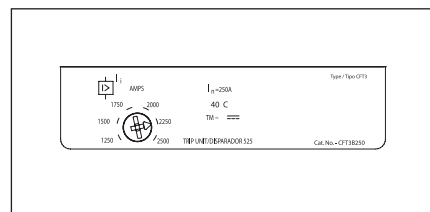
Note: Each breaker has 6 trip settings in this range.

External Accessories page 5-137

VL Circuit Breakers

FG 250A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

FG 250A Frame 2-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-----------------------------|--------------------------------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NFG2F250 | HFG2F250 | LFG2F250 | |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | |
| | TRIP UNIT ONLY | | | |
| 100 | NFG2B100L | HFG2B100L | LFG2B100L | CFT2B100 |
| 110 | NFG2B110L | HFG2B110L | LFG2B110L | CFT2B110 |
| 125 | NFG2B125L | HFG2B125L | LFG2B125L | CFT2B125 |
| 150 | NFG2B150L | HFG2B150L | LFG2B150L | CFT2B150 |
| 175 | NFG2B175L | HFG2B175L | LFG2B175L | CFT2B175 |
| 200 | NFG2B200L | HFG2B200L | LFG2B200L | CFT2B200 |
| 225 | NFG2B225L | HFG2B225L | LFG2B225L | CFT2B225 |
| 250 | NFG2B250L | HFG2B250L | LFG2B250L | CFT2B250 |

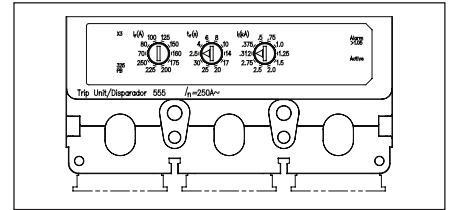
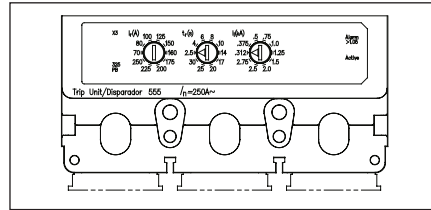
FG 250A Frame 3-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-----------------------------|--------------------------------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NFG3F250 | HFG3F250 | LFG3F250 | |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | |
| | TRIP UNIT ONLY | | | |
| 100 | NFG3B100L | HFG3B100L | LFG3B100L | CFT3B100 |
| 110 | NFG3B110L | HFG3B110L | LFG3B110L | CFT3B110 |
| 125 | NFG3B125L | HFG3B125L | LFG3B125L | CFT3B125 |
| 150 | NFG3B150L | HFG3B150L | LFG3B150L | CFT3B150 |
| 175 | NFG3B175L | HFG3B175L | LFG3B175L | CFT3B175 |
| 200 | NFG3B200L | HFG3B200L | LFG3B200L | CFT3B200 |
| 225 | NFG3B225L | HFG3B225L | LFG3B225L | CFT3B225 |
| 250 | NFG3B250L | HFG3B250L | LFG3B250L | CFT3B250 |

VL Circuit Breakers

FG 250A Electronic 3-Knob & LCD Trip Units

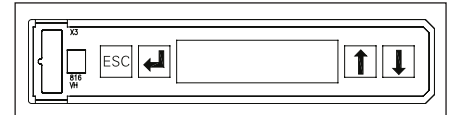
Selection



Model 555 Trip Units

FG 250A Frame 3-Pole Electronic Trip Unit^①

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NFG3F250 | HFG3F250 | LFG3F250 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| ELECTRONIC LI TRIP | | | | |
| 100 | NFG3R100L | HFG3R100L | LFG3R100L | CFT3R100 |
| 150 | NFG3R150L | HFG3R150L | LFG3R150L | CFT3R150 |
| 250 | NFG3R250L | HFG3R250L | LFG3R250L | CFT3R250 |
| ELECTRONIC LSI TRIP | | | | |
| 100 | NFG3T100L | HFG3T100L | LFG3T100L | CFT3T100 |
| 150 | NFG3T150L | HFG3T150L | LFG3T150L | CFT3T150 |
| 250 | NFG3T250L | HFG3T250L | LFG3T250L | CFT3T250 |
| ELECTRONIC LSIG TRIP | | | | |
| 100 | NFG3V100L | HFG3V100L | LFG3V100L | CFT3V100 |
| 150 | NFG3V150L | HFG3V150L | LFG3V150L | CFT3V150 |
| 250 | NFG3V250L | HFG3V250L | LFG3V250L | CFT3V250 |
| ELECTRONIC LIG TRIP | | | | |
| 100 | NFG3W100L | HFG3W100L | LFG3W100L | CFT3W100 |
| 150 | NFG3W150L | HFG3W150L | LFG3W150L | CFT3W150 |
| 250 | NFG3W250L | HFG3W250L | LFG3W250L | CFT3W250 |



Model 586 Trip Unit

FG 250A Frame 3-Pole Electronic LCD Trip Unit^①

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NFG3F250 | HFG3F250 | LFG3F250 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| LCD ELECTRONIC LSI TRIP | | | | |
| 100 | NFG3A100L | HFG3A100L | LFG3A100L | CFT3A100 |
| 150 | NFG3A150L | HFG3A150L | LFG3A150L | CFT3A150 |
| 250 | NFG3A250L | HFG3A250L | LFG3A250L | CFT3A250 |
| LCD ELECTRONIC LSIG TRIP | | | | |
| 100 | NFG3G100L | HFG3G100L | LFG3G100L | CFT3G100 |
| 150 | NFG3G150L | HFG3G150L | LFG3G150L | CFT3G150 |
| 250 | NFG3G250L | HFG3G250L | LFG3G250L | CFT3G250 |
| LCD ELECTRONIC LSI TRIP + GF ALARM ONLY | | | | |
| 100 | NFG3K100L | HFG3K100L | LFG3K100L | CFT3K100 |
| 150 | NFG3K150L | HFG3K150L | LFG3K150L | CFT3K150 |
| 250 | NFG3K250L | HFG3K250L | LFG3K250L | CFT3K250 |

① Due to the location of the magnetic tripping solenoid, the left accessory pocket is not available for accessories.

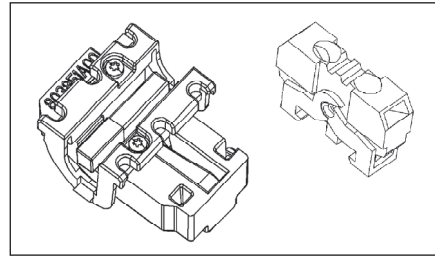
VL Circuit Breakers

Internal Accessories for DG 150A and FG 250A Frames

Selection

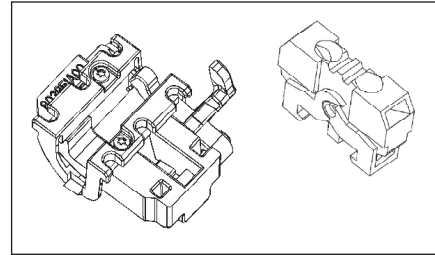
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket ^① | Catalogue Number |
|--------------------------------------------------------------------------------|------------------------------|------------------|
| 1 Alarm Switch 1A/B ^③ Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL1 |
| 2 Aux. Switches 1A + 1B Bases AMBL1 | Left, Right | ASKL2 |
| 2 Aux. + 1 Alarm Switches 1A + 1B, 1A/B ^③ Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL3 |



Auxiliary/Alarm Switch Mounting Base Only

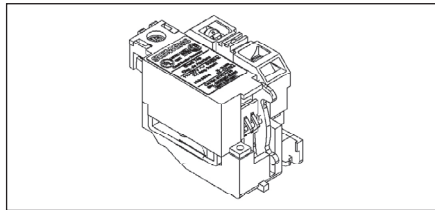
| Description | Mounting Pocket | Catalogue Number |
|----------------------------|-------------------|------------------|
| Up to 3 Auxiliary Switches | Left, Right | AMBL1 |
| 2 Aux. + 1 Alarm Switch | Left Pocket Only | AMBL2 |
| 2 Aux. + 1 Alarm Switch | Right Pocket Only | AMBL3 |



Auxiliary/Alarm Switch Only

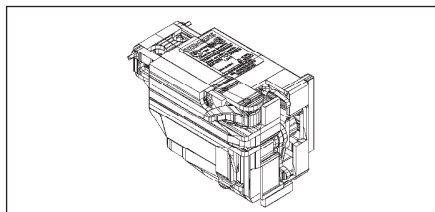
Common to DG - PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |



Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRLB24DC |
| 48-60 VDC | | STRLC60DC |
| 110-127 VDC | | STRLD125DC |
| 220-250 VDC | | STRLE250DC |
| 48-60 VAC | | STRLM60 |
| 110-127 VAC | | STRLN120 |
| 208-277 VAC | | STRLS277 |
| 380-600 VAC | | STRLV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRLA12DC |
| 24 VDC | | UVRLB24DC |
| 48 VDC | | UVRLC48DC |
| 60 VDC | | UVRLG60DC |
| 110-127 VDC | | UVRLD125DC |
| 220-250 VDC | | UVRLE250DC |
| 24 VAC | | UVRL24 |
| 110-127 VAC | | UVRLN120 |
| 220-240 VAC | | UVRLR240 |
| 208 VAC | | UVRLP208 |
| 277 VAC | | UVRLS277 |
| 380-415 VAC | | UVRLT415 |
| 440-480 VAC | | UVRLU480 |

① Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.

② These kits include two bases, one for mounting switches in the left pocket and another for mounting in the right.

③ Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.

'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories page 5-137

VL Circuit Breakers

JG 400A Frame, VL Series

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled JG breaker includes the frame, trip unit, and standard line and load connectors, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For any other configuration, order the frame, trip unit, and terminals as separate items.

For DC applications, use thermal magnetic trip unit only.

For reverse feed applications, select non-interchangeable trip breakers only.

For non-interchangeable trip breakers, change the third digit of the catalogue number to "X" for standard breakers.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalogue number to "Y".

For special applications, refer to page 5-144.

Mounting hardware is included with each frame or complete breaker.

HACR rated.



Dimensions - Inches (mm)

| Number of Poles | Width | Length | Depth | To Handle D1 |
|-----------------|-----------|----------|-----------|--------------|
| 2, 3 | 5.5 (139) | 11 (279) | 4.2 (102) | 5.4 (138) |

Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | | Complete Breaker |
|-------|-----------|--------------|------------|------------------|
| | | Thermal-Mag. | Electronic | |
| 2, 3 | 9.3 (4.2) | 4.0 (1.8) | 4.0 (1.8) | 12.6 (5.7) |

Interrupting Ratings

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|----------|-----------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| | | UL 489 AIR (File E10848) | | | | | IEC 60947-2 | | | | | |
| | | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| | | | | | | I _{co} | I _{cs} | I _{co} | I _{cs} | I _{co} | I _{cs} | |
| N | NJGA | 65 | 35 | 25 | 30 | 25 | 65 | 65 | 45 | 45 | 12 | 6 |
| H | HJGA | 100 | 65 | 25 | 30 | 35 | 100 | 75 | 70 | 70 | 15 | 8 |
| L | LJGA | 200 | 100 | 25 | 30 | 35 | 200 | 150 | 100 | 75 | 15 | 8 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per connector | Catalogue Number |
|--------------------------|---------------|---------------------|-----------------------------|-------------------------|
| Steel | 70-400 | 1/0-600 kcmil Cu | 1 | 3TW1JG600 ^② |
| Aluminum | 70-400 | 3/0-250 kcmil Al/Cu | 2 | 3TA2JG250 ^{①②} |
| Aluminum | 70-400 | 250-750 kcmil Al | 1 | 3TA1JG750 ^② |
| Aluminum | 70-400 | 3/0-600 kcmil Cu | 1 | 3TA1JG750 ^② |
| Copper | 70-400 | 3/0-750 kcmil Cu | 1 | TC1JG750 ^③ |
| Copper | 70-400 | 3/0-250 kcmil Cu | 2 | TC2JG250 ^③ |
| Distribution Lugs | | | | |
| | 70-400 | #14-4 Cu | 12 | 3TA12JG04 ^② |
| | 70-400 | #14-2/0 Cu | 6 | 3TA6JG20 ^② |
| Compression Lugs | | | | |
| | 70-400 | #6-350 kcmil | — | 3CLJ350 ^② |
| | 70-400 | 250-600 kcmil | — | 3CLJ600 ^② |
| | 70-400 | 250-750 kcmil | — | 3CLJ750 ^② |

① Standard construction supplied for each breaker.

② Kit consists of 3 terminal connectors.

③ Required for 100% rated JG breakers. Requires 90°C cable sized at 75°C ampacity.

JG Thermal-Magnetic, Instantaneous Trip Adjustment Range

| Trip Unit Continuous Amp Rating (I _n) | Instantaneous Overcurrent Setting (I) | |
|---------------------------------------------------|---------------------------------------|------|
| | Min. | Max. |
| 250 | 1250 | 2500 |
| 300 | 1500 | 3000 |
| 350 | 1750 | 3500 |
| 400 | 2000 | 4000 |

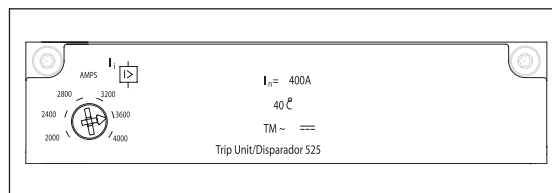
Note: Each breaker has 6 trip settings in this range.

External Accessories page 5-137

VL Circuit Breakers

JG 400A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

JG 400A Frame 2-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-----------------------------|--------------------------------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NJG2F400 | HJG2F400 | LJG2F400 | |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | TRIP UNIT ONLY |
| 250 | NJG2B250L | HJG2B250L | LJG2B250L | CJT2B250 |
| 300 | NJG2B300L | HJG2B300L | LJG2B300L | CJT2B300 |
| 350 | NJG2B350L | HJG2B350L | LJG2B350L | CJT2B350 |
| 400 | NJG2B400L | HJG2B400L | LJG2B400L | CJT2B400 |

JG 400A Frame 3-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-----------------------------|--------------------------------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NJG3F400 | HJG3F400 | LJG3F400 | |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | TRIP UNIT ONLY |
| 250 | NJG3B250L | HJG3B250L | LJG3B250L | CJT3B250 |
| 300 | NJG3B300L | HJG3B300L | LJG3B300L | CJT3B300 |
| 350 | NJG3B350L | HJG3B350L | LJG3B350L | CJT3B350 |
| 400 | NJG3B400L | HJG3B400L | LJG3B400L | CJT3B400 |

JJ 400A Frame 240V max., 2-pole with Thermal-Magnetic Non-Interchangeable Trip Unit^①

| Continuous Ampere Rating | N-Interrupting Class |
|-----------------------------|----------------------|
| | Catalogue Number |
| | COMPLETE BREAKER |
| 250 | NJJ2B250 |
| 300 | NJJ2B300 |
| 350 | NJJ2B350 |
| 400 | NJJ2B400 |

JJ 400A Frame 240V max., 3-pole with Thermal-Magnetic Non-Interchangeable Trip Unit^①

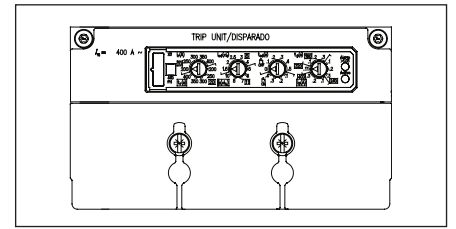
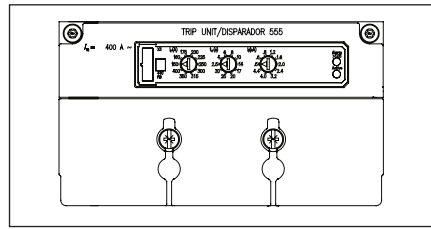
| Continuous Ampere Rating | N-Interrupting Class |
|-----------------------------|----------------------|
| | Catalogue Number |
| | COMPLETE BREAKER |
| 250 | NJJ3B250 |
| 300 | NJJ3B300 |
| 350 | NJJ3B350 |
| 400 | NJJ3B400 |

^① Terminal connectors must be ordered separately.
Breaker Type NJJA.

VL Circuit Breakers

JG 400A Electronic 3-Knob & LCD Trip Units

Selection

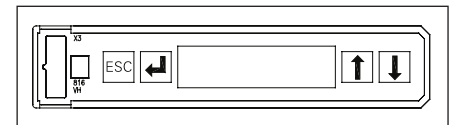


Model 555 Trip Units

JG 400A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NJG3F400 | HJG3F400 | LJG3F400 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| ELECTRONIC LI TRIP | | | | |
| 250 | NJG3R250L | HJG3R250L | LJG3R250L | CJT3R250 |
| 400 | NJG3R400L | HJG3R400L | LJG3R400L | CJT3R400 |
| ELECTRONIC LSI TRIP | | | | |
| 250 | NJG3T250L | HJG3T250L | LJG3T250L | CJT3T250 |
| 400 | NJG3T400L | HJG3T400L | LJG3T400L | CJT3T400 |
| ELECTRONIC LSIG TRIP | | | | |
| 250 | NJG3V250L | HJG3V250L | LJG3V250L | CJT3V250 |
| 400 | NJG3V400L | HJG3V400L | LJG3V400L | CJT3V400 |
| ELECTRONIC LIG TRIP | | | | |
| 250 | NJG3W250L | HJG3W250L | LJG3W250L | CJT3W250 |
| 400 | NJG3W400L | HJG3W400L | LJG3W400L | CJT3W400 |

5
MOLDED CASE
CIRCUIT BREAKERS



Model 586 Trip Unit

JG 400A Frame 3-Pole Electronic LCD Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NJG3F400 | HJG3F400 | LJG3F400 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| LCD ELECTRONIC LSI TRIP | | | | |
| 250 | NJG3A250L | HJG3A250L | LJG3A250L | CJT3A250 |
| 400 | NJG3A400L | HJG3A400L | LJG3A400L | CJT3A400 |
| LCD ELECTRONIC LSIG TRIP | | | | |
| 250 | NJG3G250L | HJG3G250L | LJG3G250L | CJT3G250 |
| 400 | NJG3G400L | HJG3G400L | LJG3G400L | CJT3G400 |
| LCD ELECTRONIC LSI TRIP + GF ALARM ONLY | | | | |
| 250 | NJG3K250L | HJG3K250L | LJG3K250L | CJT3K250 |
| 400 | NJG3K400L | HJG3K400L | LJG3K400L | CJT3K400 |

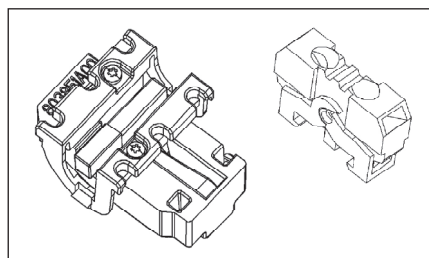
VL Circuit Breakers

Internal Accessories for JG 400A and LG 600A Frames

Selection

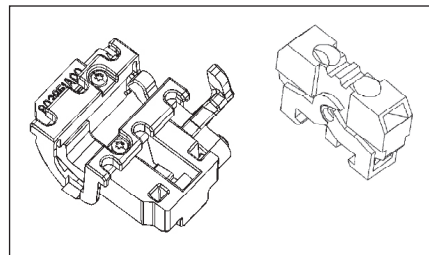
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket ^① | Catalogue Number |
|--------------------------------------------------------------------------------|------------------------------|------------------|
| 1 Alarm Switch 1A/B ^② Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL1 |
| 2 Aux. Switches 1A + 1B Bases AMBL1 | Left, Right | ASKL2 |
| 2 Aux. + 1 Alarm Switches 1A + 1B, 1A/B ^② Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL3 |



Auxiliary/Alarm Switch Mounting Base Only

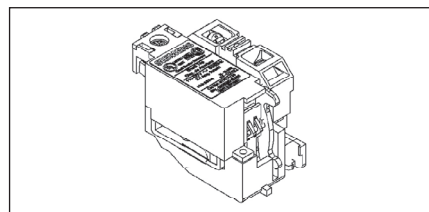
| Description | Mounting Pocket | Catalogue Number |
|----------------------------|-------------------|------------------|
| Up to 3 Auxiliary Switches | Left, Right | AMBL1 |
| 2 Aux. + 1 Alarm Switch | Left Pocket Only | AMBL2 |
| 2 Aux. + 1 Alarm Switch | Right Pocket Only | AMBL3 |



Auxiliary/Alarm Switch Only

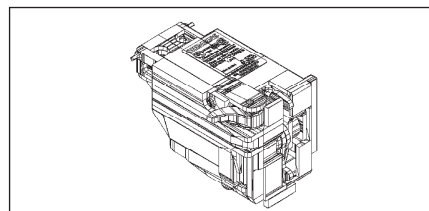
Common to DG - PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |



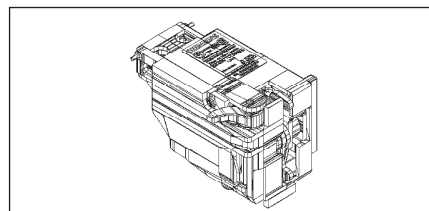
Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRLB24DC |
| 48-60 VDC | | STRLC60DC |
| 110-127 VDC | | STRLD125DC |
| 220-250 VDC | | STRLE250DC |
| 48-60 VAC | | STRLM60 |
| 110-127 VAC | | STRLN120 |
| 208-277 VAC | | STRLS277 |
| 380-600 VAC | | STRLV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRLA12DC |
| 24 VDC | | UVRLB24DC |
| 48 VDC | | UVRLC48DC |
| 60 VDC | | UVRLG60DC |
| 110-127 VDC | | UVRLD125DC |
| 220-250 VDC | | UVRLE250DC |
| 24 VAC | | UVRLI24 |
| 110-127 VAC | | UVRLN120 |
| 220-240 VAC | | UVRLR240 |
| 208 VAC | | UVRLP208 |
| 277 VAC | | UVRLS277 |
| 380-415 VAC | | UVRLT415 |
| 440-480 VAC | | UVRLU480 |



① Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.

② Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.

'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories page 5-137

VL Circuit Breakers

LG 600A Frame, VL Series

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled LG breaker includes the frame, trip unit, and standard line and load lugs, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For DC applications, use thermal magnetic trip unit only.

Breakers are suitable for reverse feed applications.

For special applications, refer to page 5-144.

Mounting hardware is included with each breaker.

For 100% rated breakers, change the 3rd character of the catalogue number to "W". Available on 400/500 Amp only.

HACR rated.



Interrupting Ratings

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|-----------------|-----------------|---------------------|-----------------|-----------------|-----------------|-----|---|
| | | CSA C22.2 NO.5 / UL 489 | | | | | IEC 60947-2 | | | | | |
| | | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| | | | | | I _{cu} | I _{cs} | I _{cu} | I _{cs} | I _{cu} | I _{cs} | | |
| N | NLGB | 65 | 35 | 18 | 30 | 25 | 65 | 65 | 45 | 45 | 12 | 6 |
| H | HLGB | 100 | 65 | 18 | 30 | 35 | 100 | 75 | 70 | 70 | 15 | 8 |
| L | LLGB | 200 | 100 | 18 | 30 | 35 | 200 | 150 | 100 | 75 | 15 | 8 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per connector | Catalogue Number ^② |
|------------------|---------------|----------------------|-----------------------------|-------------------------------|
| Aluminum | 150-600 | #2/0-600 kcmil Al/Cu | 2 (load side) | 3TA2LG600LD ^① |
| Aluminum | 150-600 | #2/0-600 kcmil Al/Cu | 2 (line side) | 3TA2LG600LN ^① |
| Copper | 150-600 | #2/0-600 kcmil Cu | 2 (load side) | 3TC2LG600LD ^④ |
| Copper | 150-600 | #2/0-600 kcmil Cu | 2 (line side) | 3TC2LG600LN ^④ |
| Compression Lugs | | | | |
| | 150-600 | #6-350 kcmil Al/Cu | — | 6CLL350 ^③ |
| | 150-600 | 250-750 kcmil Al/Cu | — | 3CLL750 ^② |
| | 150-600 | 250-600 kcmil Al/Cu | — | 6CLL600 ^③ |

① Standard construction supplied for each breaker.

② Kit consists of 3 terminal connectors.

③ Kit consists of 6 lugs for Line or Load end.

④ Required for 100% rated LG breakers. Requires 90°C cable sized at 75°C ampacity.

LG Thermal-Magnetic, Instantaneous Trip Adjustment Range

| Trip Unit Continuous Amp Rating (I _n) | Instantaneous Overcurrent Setting (I) | |
|---------------------------------------------------|---------------------------------------|------|
| | Min. | Max. |
| 400 | 2000 | 4000 |
| 500 | 2500 | 5000 |
| 600 | 2750 | 5500 |

Note: Each breaker has 6 trip settings.

Dimensions - Inches (mm)

| Number of Poles | Width | Length | Depth | To Handle D1 |
|-----------------|-----------|--------------|-----------|--------------|
| 2, 3 | 5.5 (139) | 11 (279) | 4.2 (102) | 5.4 (138) |
| Ext. Shield | | 13.6 (345.5) | | |

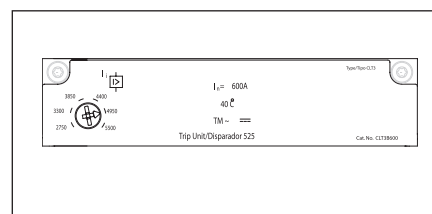
Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | | Complete Breaker |
|-------|------------|--------------|------------|------------------|
| | | Thermal-Mag. | Electronic | |
| 2, 3 | 17.4 (7.9) | 3.5 (1.6) | 4.2 (1.9) | 20.9 (9.5) |

VL Circuit Breakers

LG 600A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

LG 600A Frame 2-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class |
|-----------------------------|--------------------------------------------|----------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | |
| 400 | NLK2B400L | HLK2B400L | LLK2B400L |
| 500 | NLK2B500L | HLK2B500L | LLK2B500L |
| 600 | NLK2B600L | HLK2B600L | LLK2B600L |

LG 600A Frame 3-Pole with Thermal-Magnetic Trip Unit

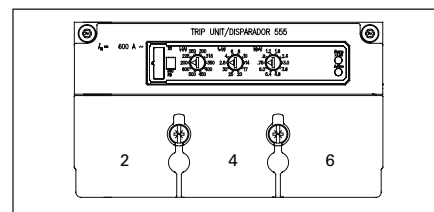
| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class |
|-----------------------------|--------------------------------------------|----------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | |
| 400 | NLK3B400L | HLK3B400L | LLK3B400L |
| 500 | NLK3B500L | HLK3B500L | LLK3B500L |
| 600 | NLK3B600L | HLK3B600L | LLK3B600L |

① For 100% rated 400A or 500A versions, change the third character of the catalogue number to "Z".
 ② Please consult Siemens sales office for availability.

VL Circuit Breakers

LG 600A Electronic 3-Knob & LCD Trip Units

Selection

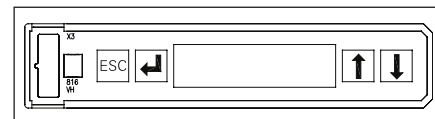


Model 555 Trip Unit

LG 600A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class |
|---------------------------------------------------|----------------------|----------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | |
| ELECTRONIC LI TRIP | | | |
| 400 | NLK3R400L | HLK3R400L | LLK3R400L |
| 600 | NLK3R600L | HLK3R600L | LLK3R600L |
| ELECTRONIC LSI TRIP | | | |
| 400 | NLK3T400L | HLK3T400L | LLK3T400L |
| 600 | NLK3T600L | HLK3T600L | LLK3T600L |
| ELECTRONIC LSIG TRIP | | | |
| 400 | NLK3V400L | HLK3V400L | LLK3V400L |
| 600 | NLK3V600L | HLK3V600L | LLK3V600L |
| ELECTRONIC LIG TRIP | | | |
| 400 | NLK3W400L | HLK3W400L | LLK3W400L |
| 600 | NLK3W600L | HLK3W600L | LLK3W600L |

5
MOLDED CASE
CIRCUIT BREAKERS



Model 586 Trip Unit

LG 600A Frame 3-Pole Electronic LCD Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class |
|---------------------------------------------------|----------------------|----------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | |
| ELECTRONIC LSI TRIP | | | |
| 400 | NLK3A400L | HLK3A400L | LLK3A400L |
| 600 | NLK3A600L | HLK3A600L | LLK3A600L |
| ELECTRONIC LSIG TRIP | | | |
| 400 | NLK3G400L | HLK3G400L | LLK3G400L |
| 600 | NLK3G600L | HLK3G600L | LLK3G600L |
| ELECTRONIC LSIG TRIP + GFG ALARM ONLY | | | |
| 400 | NLK3K400L | HLK3K400L | LLK3K400L |
| 600 | NLK3K600L | HLK3K600L | LLK3K600L |

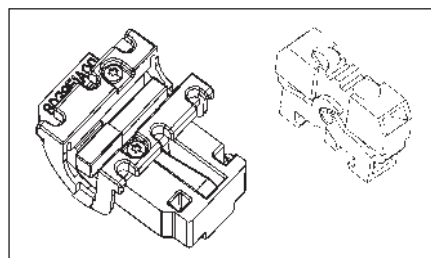
VL Circuit Breakers

Internal Accessories for JG 400A and LG 600A Frames

Selection

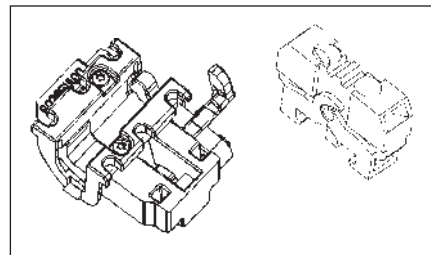
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket ^① | Catalogue Number |
|--------------------------------------------------------------------------------|------------------------------|------------------|
| 1 Alarm Switch 1A/B ^② Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL1 |
| 2 Aux. Switches 1A + 1B Bases AMBL1 | Left, Right | ASKL2 |
| 2 Aux. + 1 Alarm Switches 1A + 1B, 1A/B ^② Bases AMBL2 & AMBL3 | Left, Right ^② | ASKL3 |



Auxiliary/Alarm Switch Mounting Base Only

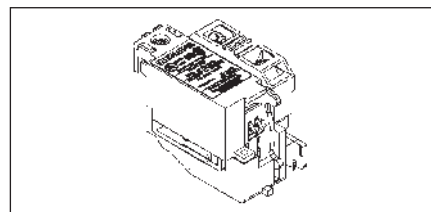
| Description | Mounting Pocket | Catalogue Number |
|----------------------------|-------------------|------------------|
| Up to 3 Auxiliary Switches | Left, Right | AMBL1 |
| 2 Aux. + 1 Alarm Switch | Left Pocket Only | AMBL2 |
| 2 Aux. + 1 Alarm Switch | Right Pocket Only | AMBL3 |



Auxiliary/Alarm Switch Only

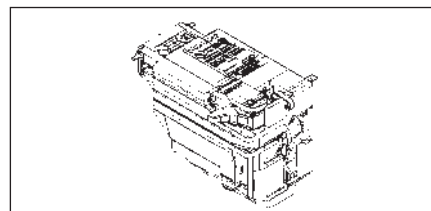
Common to DG - PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |



Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRLB24DC |
| 48-60 VDC | | STRLC60DC |
| 110-127 VDC | | STRLD125DC |
| 220-250 VDC | | STRLE250DC |
| 48-60 VAC | | STRLM60 |
| 110-127 VAC | | STRLN120 |
| 208-277 VAC | | STRLS277 |
| 380-600 VAC | | STRLV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRLA12DC |
| 24 VDC | | UVRLB24DC |
| 48 VDC | | UVRLC48DC |
| 60 VDC | | UVRLG60DC |
| 110-127 VDC | | UVRLD125DC |
| 220-250 VDC | | UVRLE250DC |
| 24 VAC | | UVRL24 |
| 110-127 VAC | | UVRLN120 |
| 220-240 VAC | | UVRLR240 |
| 208 VAC | | UVRLP208 |
| 277 VAC | | UVRLS277 |
| 380-415 VAC | | UVRLT415 |
| 440-480 VAC | | UVRLU480 |

① Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.

② Includes 1A and 1B contact for alarm purposes, only one of which may be installed at any time.

'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

External Accessories page 5-137

VL Circuit Breakers

MG 800A Frame, VL Series

Selection/Dimensions

Ordering Information

Complete Assembled Breaker

A complete factory assembled MG breaker includes the frame, trip unit, and standard line and load lugs, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For any other configuration, order the frame, trip unit, and terminals as separate items.

For DC applications, use thermal magnetic trip unit only.

For reverse feed applications, select non-interchangeable trip breakers only. For non-interchangeable trip breakers, change the third digit of the catalogue number to "X" for standard breakers.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalogue number to "Y".

For special applications, refer to page 5-144.

Mounting hardware is included with each frame or complete breaker.
HACR rated.



Dimensions - Inches (mm)

| Number of Poles | Width | Length | Depth | To Handle D1 |
|-----------------|-----------|----------|-----------|--------------|
| 2, 3 | 7.5 (190) | 16 (406) | 4.7 (119) | 5.9 (151) |

Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | Complete Breaker |
|-------|-------------|-----------|------------------|
| 2, 3 | 31.3 (14.2) | 4.0 (1.8) | 35.3 (16.0) |

Interrupting Ratings

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|----------|-----------------|---------------------|-----------------|-----------------|-----------------|-----------------|----|
| | | CSA C22.2 NO.5 / UL 489 | | | | | IEC 60947-2 | | | | | |
| | | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| | | | | | | I _{cu} | I _{cs} | I _{cu} | I _{cs} | I _{cu} | I _{cs} | |
| N | NMG | 65 | 35 | 25 | 22 | 35 | 65 | 65 | 50 | 50 | 20 | 10 |
| H | HMG | 100 | 65 | 35 | 25 | 50 | 100 | 75 | 70 | 70 | 30 | 15 |
| L | LMG | 200 | 100 | 50 | 42 | 65 | 200 | 150 | 100 | 75 | 35 | 17 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per connector | Catalogue Number |
|--------------|---------------|---------------------|-----------------------------|-------------------------|
| Aluminum | 200-800A | 1/0-500 kcmil Al/Cu | 3 | 3TA3MG500 ^{①②} |
| Aluminum | 200-800A | 500-750 kcmil Al/Cu | 2 | 3TA2MG750 ^② |
| Copper | 200-800A | 1/0-500 kcmil Cu | 3 | TC3MG500 ^{③⑤} |
| Aluminum | 200-800A | #2-600 kcmil Al/Cu | 3 | 3TA3MG600 ^{②④} |

① Standard connector supplied with complete breakers.

② Kit consists of 3 terminal connectors.

③ Consists of one terminal.

④ Includes extended terminal cover.

⑤ Required for 100% rated MG breakers. Requires 90°C cable sized at 75°C ampacity.

MG Thermal-Magnetic, Instantaneous Trip Adjustment Range

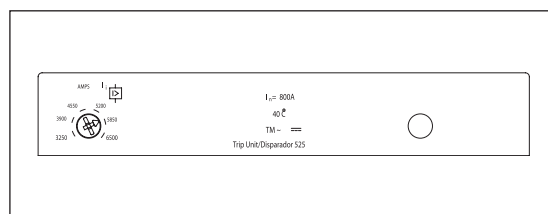
| Trip Unit Continuous Amp Rating (I _n) | Instantaneous Overcurrent Setting (I) | |
|---------------------------------------------------|---------------------------------------|------|
| | Min. | Max. |
| 600 | 3000 | 6000 |
| 700 | 3250 | 6500 |
| 800 | 3250 | 6500 |

Note: Each breaker has 6 trip settings.

VL Circuit Breakers

MG 800A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

MG 800A Frame 2-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-----------------------------|--------------------------------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | |
| 600 | NMG2F800 | HMG2F800 | LMG2F800 | CMT2B600 |
| 700 | NMG2B600L | HMG2B600L | LMG2B600L | CMT2B700 |
| 800 | NMG2B700L | HMG2B700L | LMG2B700L | CMT2B800 |
| | NMG2B800L | HMG2B800L | LMG2B800L | |

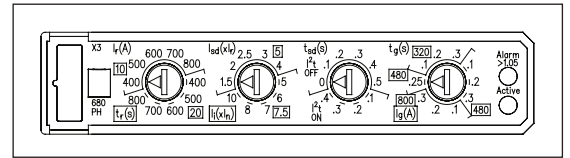
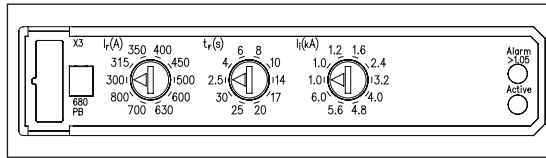
MG 800A Frame 3-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-----------------------------|--------------------------------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | |
| 600 | NMG3F800 | HMG3F800 | LMG3F800 | CMT3B600 |
| 700 | NMG3B600L | HMG3B600L | LMG3B600L | CMT3B700 |
| 800 | NMG3B700L | HMG3B700L | LMG3B700L | CMT3B800 |
| | NMG3B800L | HMG3B800L | LMG3B800L | |

VL Circuit Breakers

MG 800A Electronic 3-Knob & LCD Trip Units

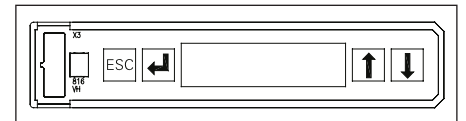
Selection



Model 555 Trip Units

MG 800A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|------------------------|------------------------|------------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NMG3F800 | HMG3F800 | LMG3F800 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| ELECTRONIC LI TRIP | | | | |
| 600 800 | NMG3R600L NMG3R800L | HMG3R600L HMG3R800L | LMG3R600L LMG3R800L | CMT3R600 CMT3R800 |
| ELECTRONIC LSI TRIP | | | | |
| 600 800 | NMG3T600L NMG3T800L | HMG3T600L HMG3T800L | LMG3T600L LMG3T800L | CMT3T600 CMT3T800 |
| ELECTRONIC LSIG TRIP | | | | |
| 600 800 | NMG3V600L NMG3V800L | HMG3V600L HMG3V800L | LMG3V600L LMG3V800L | CMT3V600 CMT3V800 |
| ELECTRONIC LIG TRIP | | | | |
| 600 800 | NMG3W600L NMG3W800L | HMG3W600L HMG3W800L | LMG3W600L LMG3W800L | CMT3W600 CMT3W800 |



Model 586 Trip Unit

MG 800A Frame 3-Pole Electronic LCD Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|------------------------|------------------------|------------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NMG3F800 | HMG3F800 | LMG3F800 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| LCD ELECTRONIC LSI TRIP | | | | |
| 600 800 | NMG3A600L NMG3A800L | HMG3A600L HMG3A800L | LMG3A600L LMG3A800L | CMT3A600 CMT3A800 |
| LCD ELECTRONIC LSIG TRIP | | | | |
| 600 800 | NMG3G600L NMG3G800L | HMG3G600L HMG3G800L | LMG3G600L LMG3G800L | CMT3G600 CMT3G800 |
| LCD ELECTRONIC LSI TRIP + GF ALARM ONLY | | | | |
| 600 800 | NMG3K600L NMG3K800L | HMG3K600L HMG3K800L | LMG3K600L LMG3K800L | CMT3K600 CMT3K800 |

5 MOLDED CASE CIRCUIT BREAKERS

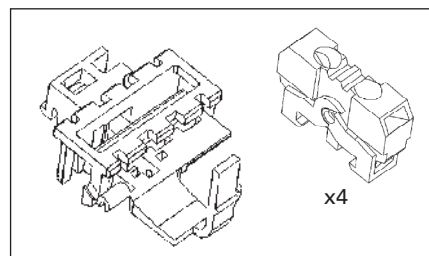
VL Circuit Breakers

Internal Accessories for MG 800A, NG 1200A and PG 1600A Frames

Selection

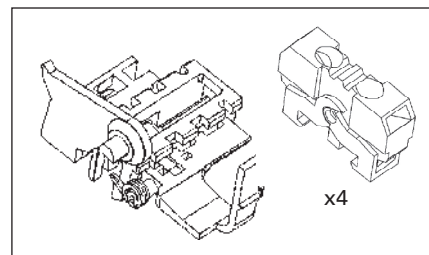
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket [Ⓞ] | Catalogue Number |
|-----------------------------------------------------|------------------------------|------------------|
| 2 Aux. + 2 Alarm Switches 2A + 2B Bases AMBP2 | Left Pocket Only | ASKP3 |
| 4 Aux. Switches 2A + 2B Bases AMBP1 | Left, Right | ASKP4 |



Auxiliary/Alarm Switch Mounting Base Only

| Description | Mounting Pocket | Catalogue Number |
|----------------------------|------------------|------------------|
| Up to 4 Auxiliary Switches | Left, Right | AMBP1 |
| 2 Aux. + 2 Alarm Switches | Left Pocket Only | AMBP2 |



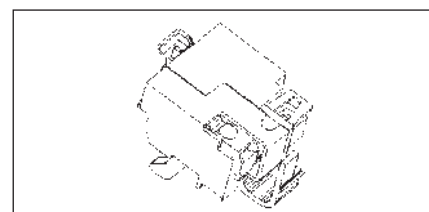
Auxiliary/Alarm Switch Only

Common to DG - PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |

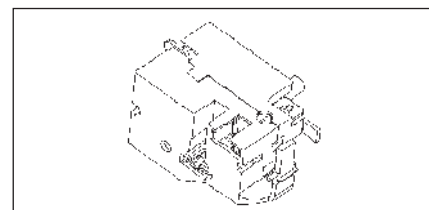
Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRPB24DC |
| 48-60 VDC | | STRPC60DC |
| 110-127 VDC | | STRPD125DC |
| 220-250 VDC | | STRPE250DC |
| 48-60 VAC | | STRPM60 |
| 110-127 VAC | | STRPN120 |
| 208-277 VAC | | STRPS277 |
| 380-600 VAC | | STRPV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRPA12DC |
| 24 VDC | | UVRPB24DC |
| 48 VDC | | UVRPC48DC |
| 60 VDC | | UVRPG60DC |
| 110-127 VDC | | UVRPD125DC |
| 220-250 VDC | | UVRPE250DC |
| 110-127 VAC | | UVRPN120 |
| 220-240 VAC | | UVRPR240 |
| 208 VAC | | UVRPP208 |
| 277 VAC | | UVRPS277 |
| 380-415 VAC | | UVRPT415 |
| 440-480 VAC | | UVRPU480 |



[Ⓞ] Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.

'A' refers to a normally open contact (open when the breaker contacts are open).

'B' refers to a normally closed contact (closed when the breaker contacts are open).

VL Circuit Breakers

NG 1200A Frame, VL Series

Selection/Dimensions



Dimensions - Inches (mm)

| Number of Poles | W | L | D | To Handle D1 |
|-----------------|---------|----------|---------|--------------|
| 2, 3 | 9 (229) | 16 (406) | 6 (152) | 8.1 (207) |

Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | Complete Breaker |
|-------|-------------|-----------|------------------|
| 2, 3 | 46.3 (21.0) | 8.8 (4.0) | 55.1 (25.0) |

5 MOLDED CASE CIRCUIT BREAKERS

Ordering Information

Complete Assembled Breaker with Lugs

A complete factory assembled NG breaker includes the frame, trip unit, and standard line and load lugs, all factory installed and shipped as a complete breaker. Assembled breakers are available only with standard connectors.

For any other configuration, order the frame, trip unit, and terminals as separate items.

For DC applications, use thermal magnetic trip unit only.

For reverse feed applications, select non-interchangeable trip breakers only. For non-interchangeable trip breakers, change the third digit of the catalogue number to "X" for standard breakers.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalogue number to "Y".

For special applications, refer to page 5-144.

Mounting hardware is included with each frame or complete breaker.

A Toggle Handle Extension is included with each frame or complete breaker.

HACR rated.

Interrupting Ratings

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|----------|-----------------|---------------------|-----------------|-----------------|-----------------|-----------------|----|
| | | CSA C22.2 NO.5 / UL 489 | | | | | IEC 60947-2 | | | | | |
| | | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| | | | | | | I _{co} | I _{cs} | I _{co} | I _{cs} | I _{co} | I _{cs} | |
| N | NNG | 65 | 35 | 25 | 22 | 35 | 65 | 35 | 50 | 25 | 20 | 10 |
| H | HNG | 100 | 65 | 35 | 25 | 50 | 100 | 50 | 70 | 35 | 30 | 15 |
| L | LNG | 200 | 100 | 65 | 42 | 65 | 200 | 100 | 100 | 50 | 35 | 17 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per connector | Catalogue Number |
|------------------|---------------|---------------------|-----------------------------|--------------------------|
| Aluminum | 300-1200A | 1/0-500 kcmil Al/Cu | 4 | 3TA4NG500 ^{③④} |
| Aluminum | 300-1200A | 500-750 kcmil Al/Cu | 3 | 3TA3NG750 ^④ |
| Copper | 300-1200A | 1/0-500 kcmil Cu | 4 | 3TC4NG500 ^{③④} |
| Aluminum | 300-1200A | 1/0-500 kcmil Al/Cu | 4 | 3TA4NG500H ^{②④} |
| Compression Lugs | | | | |
| | 300-1200A | 1/0-500 kcmil Al/Cu | — | 12CLN500 ^① |

① Total of 12 connectors (4 per phase Line or Load).

② For 100% rated NG breakers. Requires 90°C cable sized at 75°C ampacity.

③ Standard connector provided with complete breakers.

④ Kit consists of 3 terminal connectors.

NG Thermal-Magnetic, Instantaneous Trip Adjustment Range

| Trip Unit Continuous Amp Rating (I _c) | Instantaneous Overcurrent Setting (I) | |
|---------------------------------------------------|---------------------------------------|-------|
| | Min. | Max. |
| 800 | 4000 | 8000 |
| 900 | 5000 | 10000 |
| 1000 | 5000 | 10000 |
| 1200 | 7000 | 12000 |

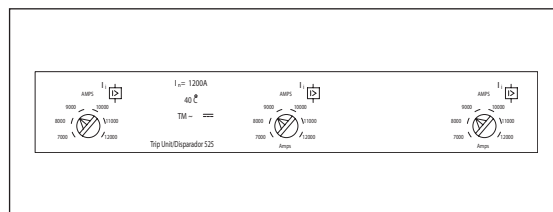
Note: Each breaker has 6 trip settings.

External Accessories page 5-137

VL Circuit Breakers

NG 1200A Thermal-Magnetic Trip Unit

Selection



Model 525 Trip Unit

NG 1200A Frame 2-Pole with Thermal-Magnetic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NNG2F120 | HNG2F120 | LNG2F120 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| 800 | NNG2B800L | HNG2B800L | LNG2B800L | CNT2B800 |
| 900 | NNG2B900L | HNG2B900L | LNG2B900L | CNT2B900 |
| 1000 | NNG2B100L | HNG2B100L | LNG2B100L | CNT2B100 |
| 1200 | NNG2B120L | HNG2B120L | LNG2B120L | CNT2B120 |

NG 1200A Frame 3-Pole with Thermal-Magnetic Trip Unit

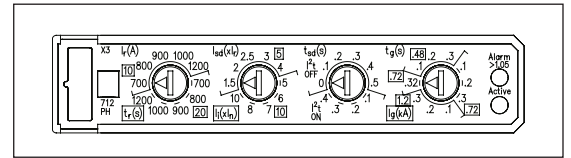
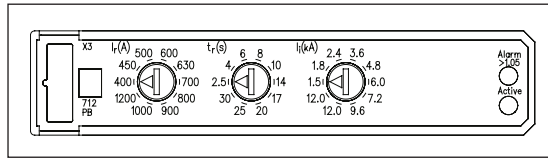
| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NNG3F120 | HNG3F120 | LNG3F120 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| 800 | NNG3B800L | HNG3B800L | LNG3B800L | CNT3B800 |
| 900 | NNG3B900L | HNG3B900L | LNG3B900L | CNT3B900 |
| 1000 | NNG3B100L | HNG3B100L | LNG3B100L | CNT3B100 |
| 1200 | NNG3B120L | HNG3B120L | LNG3B120L | CNT3B120 |

5
MOLDED CASE
CIRCUIT BREAKERS

VL Circuit Breakers

NG 1200A Electronic 3-Knob & LCD Trip Units

Selection

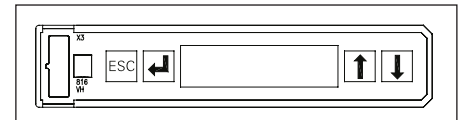


Model 555 Trip Units

NG 1200A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NNG3F120 | HNG3F120 | LNG3F120 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| ELECTRONIC LI TRIP | | | | |
| 800 | NNG3R800L | HNG3R800L | LNG3R800L | CNT3R800 |
| 1000 | NNG3R100L | HNG3R100L | LNG3R100L | CNT3R100 |
| 1200 | NNG3R120L | HNG3R120L | LNG3R120L | CNT3R120 |
| ELECTRONIC LSI TRIP | | | | |
| 800 | NNG3T800L | HNG3T800L | LNG3T800L | CNT3T800 |
| 1000 | NNG3T100L | HNG3T100L | LNG3T100L | CNT3T100 |
| 1200 | NNG3T120L | HNG3T120L | LNG3T120L | CNT3T120 |
| ELECTRONIC LSIG TRIP | | | | |
| 800 | NNG3V800L | HNG3V800L | LNG3V800L | CNT3V800 |
| 1000 | NNG3V100L | HNG3V100L | LNG3V100L | CNT3V100 |
| 1200 | NNG3V120L | HNG3V120L | LNG3V120L | CNT3V120 |
| ELECTRONIC LIG TRIP | | | | |
| 800 | NNG3W800L | HNG3W800L | LNG3W800L | CNT3W800 |
| 1000 | NNG3W100L | HNG3W100L | LNG3W100L | CNT3W100 |
| 1200 | NNG3W120L | HNG3W120L | LNG3W120L | CNT3W120 |

5 MOULDED CASE CIRCUIT BREAKERS



Model 586 Trip Unit

NG 1200A Frame 3-Pole Electronic LCD Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|-------------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NNG3F120 | HNG3F120 | LNG3F120 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| LCD ELECTRONIC LSI TRIP | | | | |
| 800 | NNG3A800L | HNG3A800L | LNG3A800L | CNT3A800 |
| 1000 | NNG3A100L | HNG3A100L | LNG3A100L | CNT3A100 |
| 1200 | NNG3A120L | HNG3A120L | LNG3A120L | CNT3A120 |
| LCD ELECTRONIC LSIG TRIP | | | | |
| 800 | NNG3G800L | HNG3G800L | LNG3G800L | CNT3G800 |
| 1000 | NNG3G100L | HNG3G100L | LNG3G100L | CNT3G100 |
| 1200 | NNG3G120L | HNG3G120L | LNG3G120L | CNT3G120 |
| LCD ELECTRONIC LSIG TRIP + GF ALARM ONLY | | | | |
| 800 | NNG3K800L | HNG3K800L | LNG3K800L | CNT3K800 |
| 1000 | NNG3K100L | HNG3K100L | LNG3K100L | CNT3K100 |
| 1200 | NNG3K120L | HNG3K120L | LNG3K120L | CNT3K120 |

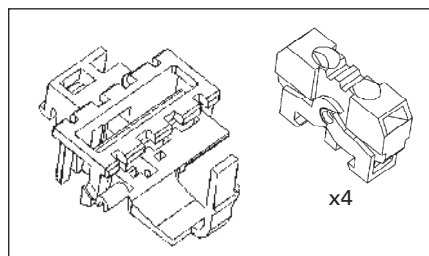
VL Circuit Breakers

Internal Accessories for MG 800A, NG 1200A, and PG 1600A Frames

Selection

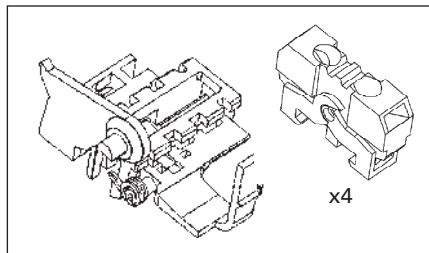
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket [Ⓞ] | Catalogue Number |
|----------------------------------------------------|------------------------------|------------------|
| 2 Aux. + 2 Alarm Switches 2A + 2B Base AMBP2 | Left Pocket Only | ASKP3 |
| 4 Aux. Switches 2A + 2B Base AMBP1 | Left, Right | ASKP4 |



Auxiliary/Alarm Switch Mounting Base Only

| Description | Mounting Pocket [Ⓞ] | Catalogue Number |
|---------------------------------------------------------|---------------------------------|------------------|
| Up to 4 Auxiliary Switches 2 Aux. + 2 Alarm Switches | Left, Right Left Pocket Only | AMBP1 AMBP2 |



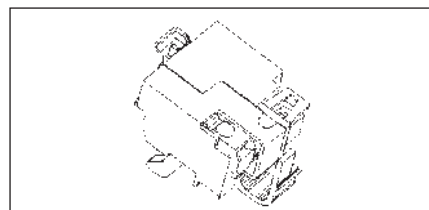
Auxiliary/Alarm Switch Only

Common to DG-PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |

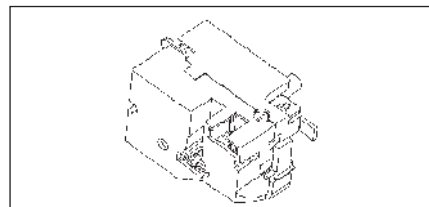
Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRPB24DC |
| 48-60 VDC | | STRPC60DC |
| 110-127 VDC | | STRPD125DC |
| 220-250 VDC | | STRPE250DC |
| 48-60 VAC | | STRPM60 |
| 110-127 VAC | | STRPN120 |
| 208-277 VAC | | STRPS277 |
| 380-600 VAC | | STRPV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRPA12DC |
| 24 VDC | | UVRPB24DC |
| 48 VDC | | UVRPC48DC |
| 60 VDC | | UVRPG60DC |
| 110-127 VDC | | UVRPD125DC |
| 220-250 VDC | | UVRPE250DC |
| 110-127 VAC | | UVRPN120 |
| 220-240 VAC | | UVRPR240 |
| 208 VAC | | UVRPP208 |
| 277 VAC | | UVRPS277 |
| 380-415 VAC | | UVRPT415 |
| 440-480 VAC | | UVRPU480 |



Ⓞ Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.
 'A' refers to a normally open contact (open when the breaker contacts are open).
 'B' refers to a normally closed contact (closed when the breaker contacts are open).

VL Circuit Breakers

PG 1600A Frame, VL Series & Thermal-Magnetic Trip Unit

Selection/Dimensions

Ordering Information

A complete factory assembled PG breaker includes the frame and trip unit only. The connectors must be ordered as separate items.

PG thermal-magnetic breakers sold as non-interchangeable only.

For any other configuration, order the frame, trip unit, and connectors as separate items.

Connectors require a Breaker Lug Mounting Assembly or Breaker Mounting Base and must be ordered as a separate item.

For DC applications, use Thermal magnetic trip unit only.

For reverse feed applications select non-interchangeable trip breakers only. Change the third digit of the catalogue number to "X" for non-interchangeable trip breakers.

For 100% rated breakers with a non-interchangeable trip unit, change the 3rd character of the catalogue number to "Y".

For special applications, refer to page 5-144.

Mounting hardware is included with each frame or complete breaker.

A Toggle Handle Extension is included with each frame or complete breaker.



Dimensions - Inches (mm)

| Number of Poles | W | L | D | To Handle D1 |
|-----------------|---------|----------|---------|--------------|
| 2, 3 | 9 (229) | 16 (406) | 6 (152) | 8.1 (207) |

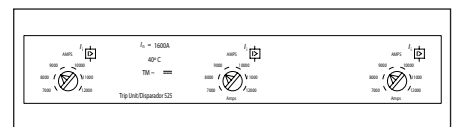
Shipping Weight, lbs. (kg)

| Poles | Frame | Trip Unit | Complete Breaker |
|-------|-------------|-----------|------------------|
| 2, 3 | 60.2 (27.3) | 8.8 (4.0) | 69.0 (31.3) |

PG Thermal-Magnetic, Instantaneous Trip Adjustment Range

| Trip Unit Continuous Amp Rating (I _n) | Instantaneous Overcurrent Setting (I) | |
|---------------------------------------------------|---------------------------------------|-------|
| | Min. | Max. |
| 1200 | 7000 | 12000 |
| 1400 | 7000 | 12000 |
| 1600 | 7000 | 12000 |

Note: Each breaker has 6 trip settings in this range.



Model 525 Trip Unit

Interrupting Ratings

| Interrupting Class | Breaker Type | RMS Symmetrical Amperes (KA) | | | | | | | | | | |
|--------------------|--------------|------------------------------|-----|-----|----------|-----|---------------------|-----|---------|----|-----|----|
| | | CSA C22.2 NO.5 / UL 489 | | | | | IEC 60947-2 | | | | | |
| | | Volts AC (50/60 Hz) | | | Volts DC | | Volts AC (50/60 Hz) | | | | | |
| | | 240 | 480 | 600 | 250 | 500 | 220/240 | | 380/415 | | 690 | |
| N | NPG | 65 | 35 | 25 | 22 | 35 | 65 | 35 | 50 | 25 | 20 | 10 |
| H | HPG | 100 | 65 | 35 | 25 | 50 | 100 | 50 | 70 | 35 | 30 | 15 |
| L | LPG | 200 | 100 | 65 | 42 | 65 | 200 | 100 | 100 | 50 | 35 | 17 |

Connectors for 75°C Wire

| Construction | Ampere Rating | Wire Range | No. of cables per phase | Catalogue Number |
|--------------|---------------|---------------------|-------------------------|--------------------------|
| Aluminum | 1200-1600A | 1/0-750 kcmil Al/Cu | 6 | 3TA6PG750 ^{①②③} |
| Aluminum | 1200-1600A | 300-600 kcmil | 5 | TA5P600 ^{②④} |
| Aluminum | 1200-1600A | 600-750 kcmil | 4 | TA4P750 ^{②④} |
| Aluminum | 1200-1600A | 300-600 kcmil | 6 | TA6R600 ^{②④} |
| Copper | 1200-1600A | 300-600 kcmil | 5 | TC5R600 ^{②④⑤} |

① Requires Lug Mounting Assembly LMAP1600.

② Requires Breaker Mounting Base MBPG1600 Kit or MBPG1601.

③ Consists of 3 connectors.

④ Consists of 1 connector.

⑤ For 100% rated PG breakers. Requires 90°C cable sized at 75°C ampacity.

Mounting Arrangement

| Description | Catalogue Number |
|---------------------------------------|------------------|
| Lug Mounting Assembly | LMAP1600 |
| Breaker Mounting Base (Front Connect) | MBPG1600 |
| Breaker Mounting Base (Rear Connect) | MBPG1601 |

PG 1600A Frame 3-Pole with Thermal-Magnetic Trip Unit

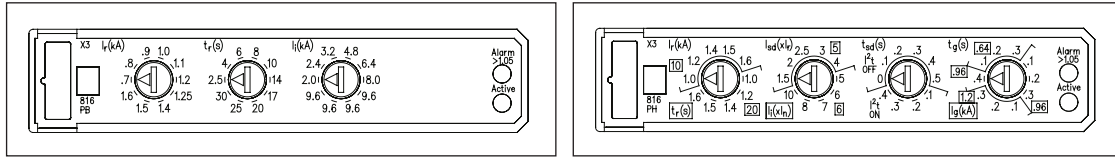
| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class |
|--------------------------|--------------------------------------------|----------------------|----------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| | COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | |
| 1200 | NPX3B120 | HPX3B120 | LPX3B120 |
| 1400 | NPX3B140 | HPX3B140 | LPX3B140 |
| 1600 | NPX3B160 | HPX3B160 | LPX3B160 |

External Accessories page 5-137

VL Circuit Breakers

PG 1600A Electronic 3-Knob & LCD Trip Units

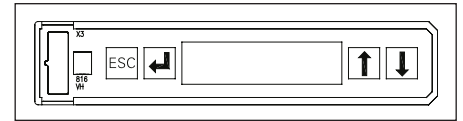
Selection



Model 555 Trip Unit

PG 1600A Frame 3-Pole Electronic Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NPG3F160 | HPG3F160 | LPG3F160 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| ELECTRONIC LI TRIP | | | | |
| 1200 | NPG3R120 | HPG3R120 | LPG3R120 | CPT3R120 |
| 1600 | NPG3R160 | HPG3R160 | LPG3R160 | CPT3R160 |
| ELECTRONIC LSI TRIP | | | | |
| 1200 | NPG3T120 | HPG3T120 | LPG3T120 | CPT3T120 |
| 1600 | NPG3T160 | HPG3T160 | LPG3T160 | CPT3T160 |
| ELECTRONIC LSIG TRIP | | | | |
| 1200 | NPG3V120 | HPG3V120 | LPG3V120 | CPT3V120 |
| 1600 | NPG3V160 | HPG3V160 | LPG3V160 | CPT3V160 |
| ELECTRONIC LIG TRIP | | | | |
| 1200 | NPG3W120 | HPG3W120 | LPG3W120 | CPT3W120 |
| 1600 | NPG3W160 | HPG3W160 | LPG3W160 | CPT3W160 |



Model 586 Trip Unit

PG 1600A Frame 3-Pole Electronic LCD Trip Unit

| Continuous Ampere Rating | N-Interrupting Class | H-Interrupting Class | L-Interrupting Class | Catalogue Number |
|--------------------------------------------|----------------------|----------------------|----------------------|------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number | |
| | FRAME ONLY | | | |
| | NPG3F160 | HPG3F160 | LPG3F160 | |
| COMPLETE FACTORY ASSEMBLED CIRCUIT BREAKER | | | | TRIP UNIT ONLY |
| LCD ELECTRONIC LSI TRIP | | | | |
| 1200 | NPG3A120 | HPG3A120 | LPG3A120 | CPT3A120 |
| 1600 | NPG3A160 | HPG3A160 | LPG3A160 | CPT3A160 |
| LCD ELECTRONIC LSIG TRIP | | | | |
| 1200 | NPG3G120 | HPG3G120 | LPG3G120 | CPT3G120 |
| 1600 | NPG3G160 | HPG3G160 | LPG3G160 | CPT3G160 |
| LCD ELECTRONIC LSIG TRIP + GF ALARM ONLY | | | | |
| 1200 | NPG3K120 | HPG3K120 | LPG3K120 | CPT3K120 |
| 1600 | NPG3K160 | HPG3K160 | LPG3K160 | CPT3K160 |

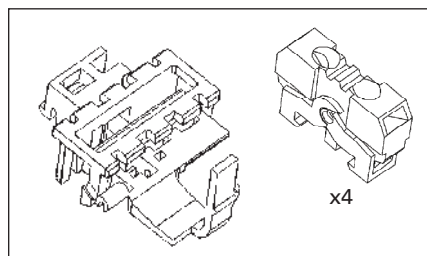
VL Circuit Breakers

Internal Accessories for MG 800A, NG 1200A, and PG 1600A Frames

Selection

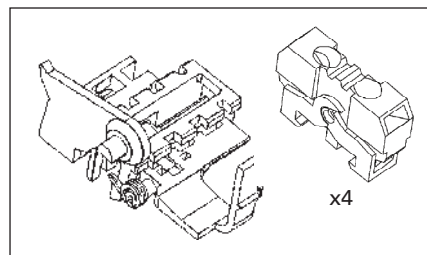
Auxiliary Switch and Alarm Switch Combination Kits

| Description | Mounting Pocket ^① | Catalogue Number |
|----------------------------------------------------|------------------------------|------------------|
| 2 Aux. + 2 Alarm Switches 2A + 2B Base AMBP2 | Left Pocket Only | ASKP3 |
| 4 Aux. Switches 2A + 2B Base AMBP1 | Left, Right | ASKP4 |



Auxiliary/Alarm Switch Mounting Base Only

| Description | Mounting Pocket ^① | Catalogue Number |
|---------------------------------------------------------|---------------------------------|------------------|
| Up to 4 Auxiliary Switches 2 Aux. + 2 Alarm Switches | Left, Right Left Pocket Only | AMBP1 AMBP2 |



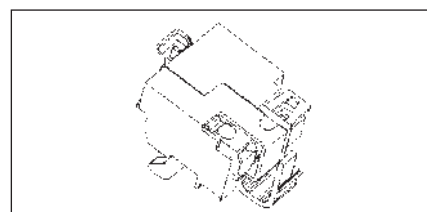
Auxiliary/Alarm Switch Only

Common to DG-PG Frames

| Description | Catalogue Number |
|--------------------------------|------------------|
| 1 Normally Open Contact (1A) | ASWPA |
| 1 Normally Closed Contact (1B) | ASWPB |

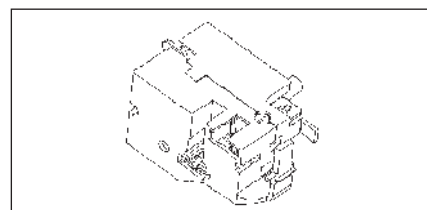
Shunt Trips

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 24 VDC | Right Pocket Only | STRPB24DC |
| 48-60 VDC | | STRPC60DC |
| 110-127 VDC | | STRPD125DC |
| 220-250 VDC | | STRPE250DC |
| 48-60 VAC | | STRPM60 |
| 110-127 VAC | | STRPN120 |
| 208-277 VAC | | STRPS277 |
| 380-600 VAC | | STRPV600 |



Undervoltage Release

| Description | Mounting Pocket | Catalogue Number |
|-------------|-------------------|------------------|
| 12 VDC | Right Pocket Only | UVRPA12DC |
| 24 VDC | | UVRPB24DC |
| 48 VDC | | UVRPC48DC |
| 60 VDC | | UVRPG60DC |
| 110-127 VDC | | UVRPD125DC |
| 220-250 VDC | | UVRPE250DC |
| 110-127 VAC | | UVRPN120 |
| 220-240 VAC | | UVRPR240 |
| 208 VAC | | UVRPP208 |
| 277 VAC | | UVRPS277 |
| 380-415 VAC | | UVRPT415 |
| 440-480 VAC | | UVRPU480 |



① Refer to the "Accessory Locations" chart for guidelines and limitations about which pockets may be used for accessory combinations.
 'A' refers to a normally open contact (open when the breaker contacts are open).
 'B' refers to a normally closed contact (closed when the breaker contacts are open).

Molded Case Circuit Breakers

Molded Case Switch

Selection

General

Typically a molded case switch is used when a compact load-break switch is needed for disconnect purposes. The VL line of molded case switches from Siemens is made of the same materials and components as the VL circuit breakers but do not provide overcurrent protection. Each molded case

switch has a fixed instantaneous self-protecting trip element which may open the switch under high fault conditions.

Application Note

Overcurrent protection must be provided by an appropriate overcurrent protective device located upstream

from the molded case switch. Also, the short-circuit current rating of the switch is limited to the interrupting rating of the upstream protective device or the ratings in the table below, **whichever is less.**

Ordering Information

Each type VL molded case switch accepts the same terminals and accessories as the equivalent VL circuit breakers.

All type VL molded case switches are suitable for reverse feed applications.

Mounting hardware and standard line and load terminals are included on ratings through 250A. For 400 – 1600A ratings, order the lugs separately.

All ratings are UL listed and CSA certified.

Molded Case Switch

| Maximum Ampere Rating / Frame | 2-Pole | 3-Pole | Short-Circuit Current Rating ^① | | | Self Protective Instantaneous Override |
|-------------------------------|------------------|------------------|-------------------------------------------|------|------|----------------------------------------|
| | Catalogue Number | Catalogue Number | 240V | 480V | 600V | |
| 150A / DG | HDS2S150L | HDS3S150L | 100k | 65k | 20k | 2,500A |
| 250A / FG | HFS2S250L | HFS3S250L | 100k | 65k | 20k | 3,500A |
| 400A / JG | HJS2S400 | HJS3S400 | 100k | 65k | 25k | 4,400A |
| 600A / LG | HLR2S600 | HLR3S600 | 100k | 65k | 18k | 5,500A |
| 800A / MG | HMS2S800 | HMS3S800 | 100k | 65k | 35k | 6,500A |
| 1200A / NG | HNS2S120 | HNS3S120 | 100k | 65k | 35k | 12,000A |
| 1600A / PG | - | HPS3S160 | 100k | 65k | 35k | 14,000A |

| Maximum Ampere Rating / Frame | 3-Pole | Short-Circuit Current Rating ^① | | | Self Protective Instantaneous Override |
|-------------------------------|------------------|-------------------------------------------|------|------|----------------------------------------|
| | Catalogue Number | 240V | 480V | 600V | |
| 250A / FG | LFS3S250L | 200k | 100k | 25k | 3,500A |
| 400A / JG | LJS3S400 | 200k | 100k | 25k | 4,400A |
| 600A / LG | LLR3S600 | 200k | 100k | 18k | 5,500A |
| 800A / MG | LMS3S800 | 200k | 100k | 65k | 6,500A |
| 1200A / NG | LNS3S120 | 200k | 100k | 65k | 12,000A |
| 1600A / PG | LPS3S160 | 200k | 100k | 65k | 14,000A |

^①The Short-Circuit Current Rating is the maximum available current of the circuit where the switch is used, when protected by an appropriate overcurrent protective device.

Molded Case Circuit Breakers

Motor Circuit Protectors

Selection

General

Protection of Motor Circuits

Molded case circuit breakers are used in motor circuits as a disconnecting means and for short-circuit protection. They should be used in conjunction with motor-running, over-current protection devices, and should permit the motor to start without nuisance tripping from motor-inrush current. The circuit breaker should have a continuous current rating of not less than 115% of the motor full-load current.

The recommended motor circuit protectors listed have continuous-current ratings of at least 115% of motor full-load currents. The trip setting positions are approximately 11 times motor full-load current. The suggested trip settings may need to be adjusted upward to no higher than 1300% of full-load current for non-design E type motors, and no greater than 1700% of full-load current for design E motors, to allow for motor startup due to in-rush current.

Breaker Mounted Immediately Ahead of Motor Starter

Siemens motor circuit protectors are recommended for use in combination motor starters to provide selective short-circuit protection for the motor branch circuit. The adjustable instantaneous trip feature of the Siemens motor circuit protector provides for a trip setting slightly above the peak motor in-rush current. With this setting, no delay is introduced in opening the circuit when a fault occurs. This circuit breaker has no time-delay trip element. Therefore it must be used in conjunction with, and immediately ahead of, the motor-running overcurrent protection device.

Important: The information below does not apply to all motor applications: it is recommended that the user refer to the National Electrical Code (NEC) for specific needs.

Table 1 (When Breaker is Mounted Immediately Ahead of Motor Starter)

3-Phase Induction Type Motors (Siemens motor circuit protectors for branch circuit use with alternating-current combination, full voltage motor starters)

| Motor Full Load Amperes | Trip Setting (A) | Catalogue Number ^① |
|-------------------------|------------------|-------------------------------|
| 35-50 | 450 | HDM3L150L |
| 42-60 | 540 | |
| 48-70 | 630 | |
| 55-80 | 720 | |
| 62-90 | 810 | |
| 69-100 | 900 | |
| 58-83 | 750 | HDM3M150L |
| 69-100 | 900 | |
| 81-117 | 1050 | |
| 92-133 | 1200 | |
| 104-150 | 1350 | |
| 115-150 ^② | 1500 | |
| 96-139 | 1250 | HDM3H150L |
| 115-150 ^② | 1500 | |
| 135-150 ^② | 1750 | |
| 135-150 ^② | 2000 | |
| 135-150 ^② | 2250 | |
| 135-150 ^② | 2500 | |
| 46-67 | 600 | HFM3L250L |
| 55-80 | 720 | |
| 65-93 | 840 | |
| 74-107 | 960 | |
| 83-120 | 1080 | |
| 92-133 | 1200 | |
| 77-111 | 1000 | HFM3M250L |
| 92-133 | 1200 | |
| 108-156 | 1400 | |
| 123-178 | 1600 | |
| 138-200 | 1800 | |
| 154-222 | 2000 | |
| 135-194 | 1750 | HFM3H250L |
| 162-210 | 2100 | |
| 188-220 | 2450 | |
| 215-241 | 2800 | |
| 242-250 ^② | 3150 | |
| 242-250 ^② | 3500 | |

① Motor circuit protectors rated 150A and 250A are supplied with line and load lugs installed. If lugs are required on 400A to 1200A motor circuit breakers, order required lugs separately.

| Motor Full Load Amperes | Trip Setting (A) | Catalogue Number ^① |
|-------------------------|------------------|-------------------------------|
| 96-139 | 1250 | HJM3L400 |
| 115-167 | 1500 | |
| 135-194 | 1750 | |
| 154-222 | 2000 | |
| 173-250 | 2250 | |
| 192-278 | 2500 | |
| 154-222 | 2000 | HJM3M400 |
| 185-267 | 2400 | |
| 215-311 | 2800 | |
| 246-356 | 3200 | |
| 277-400 | 3600 | |
| 308-400 ^② | 4000 | |
| 154-222 | 2000 | HLM3J600 |
| 185-267 | 2400 | |
| 215-311 | 2800 | |
| 246-356 | 3200 | |
| 277-400 | 3600 | |
| 308-444 | 4000 | |
| 212-306 | 2750 | HLM3Y600 |
| 254-367 | 3300 | |
| 296-428 | 3850 | |
| 338-489 | 4400 | |
| 381-550 | 4950 | |
| 423-600 | 5500 | |
| 250-361 | 3250 | HMM3M800 |
| 292-422 | 3800 | |
| 335-483 | 4350 | |
| 385-556 | 5000 | |
| 442-638 | 5740 | |
| 500-722 | 6500 | |
| 385-556 | 5000 | HNM3M120 |
| 462-667 | 6000 | |
| 538-778 | 7000 | |
| 615-889 | 8000 | |
| 692-1000 | 9000 | |
| 769-1111 | 10,000 | |

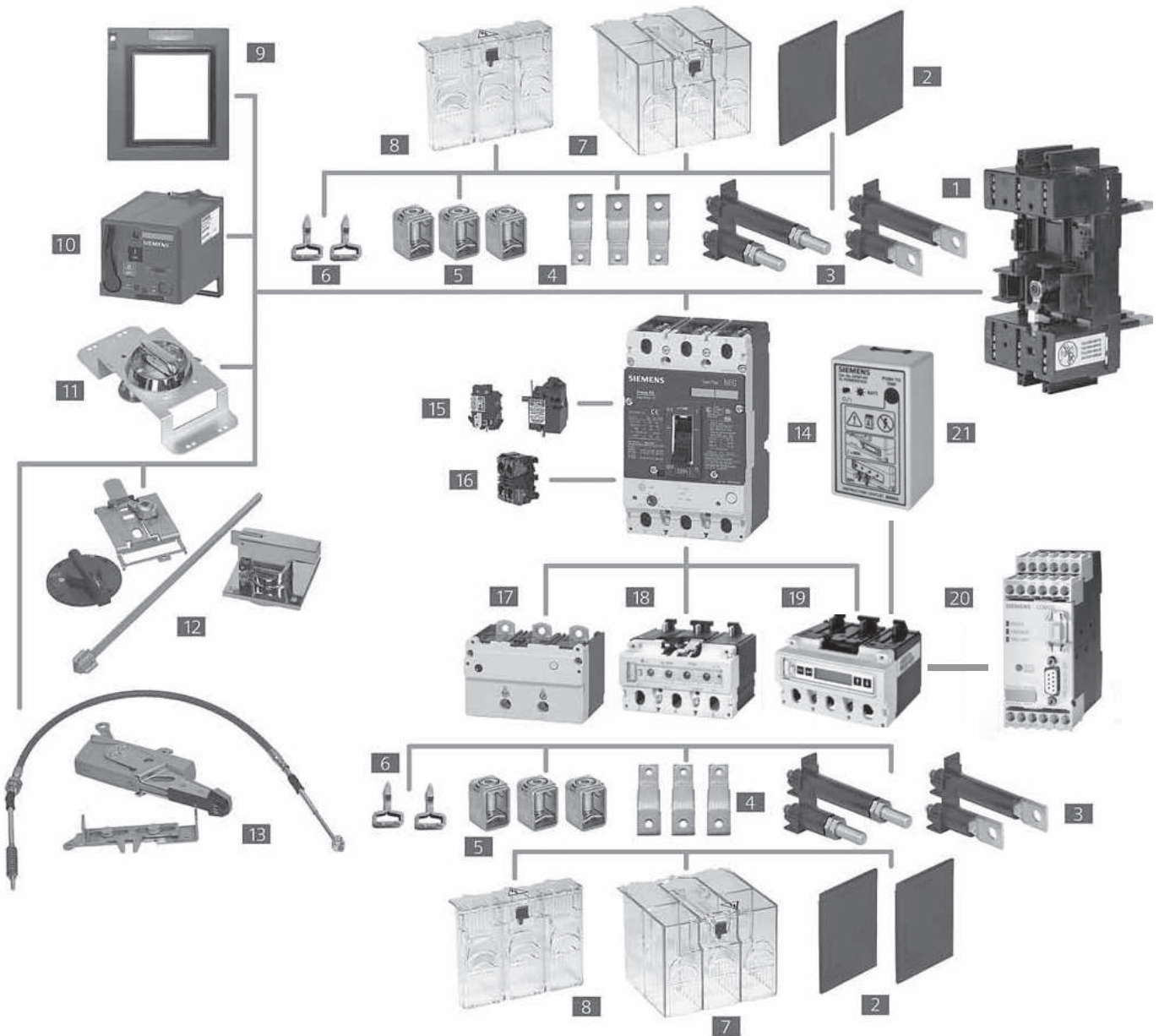
② These settings are provided for starting currents greater than 11X but not to exceed 17X. Full Load Amps (FLA) not to exceed ampere rating of MCP.

VL External Accessories

Operating Mechanisms

Selection

Modularity To Support All Your Application Needs Modules and More: VL Circuit Breakers with Optional Accessories

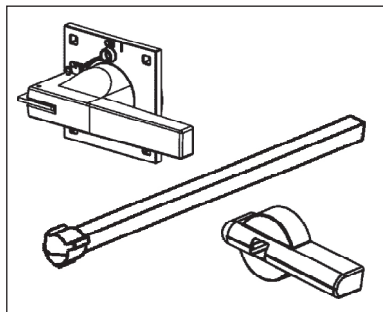
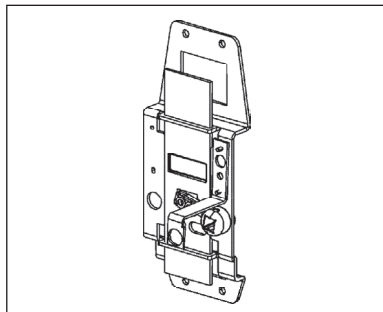
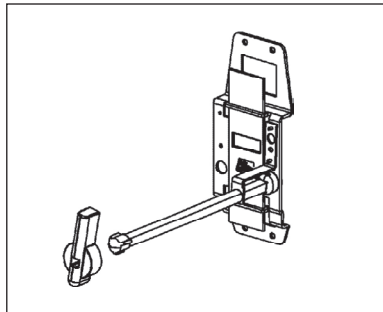
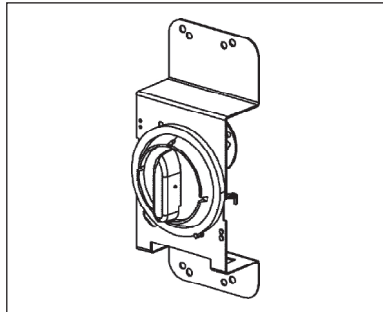


5
MOLDED CASE
CIRCUIT BREAKERS

- | | | |
|-----------------------------------|----------------------------------------|--------------------------------------------------------|
| 1 Base for Plug-In or Draw-Out | 9 Cover Frame for Door Cutout | 17 Thermal Magnetic Trip Unit (525) |
| 2 Interphase Barriers | 10 Stored Energy Operator | 18 Electronic Trip Unit (555) |
| 3 Rear Terminals – Flat and Round | 11 Rotary Handle Operator | 19 Elec. Trip Unit with LCD (586) |
| 4 Bus Extensions | 12 Variable Depth Rotary Operator | 20 Communication Module with ZSI |
| 5 Terminal Connectors | 13 Max Flex Operator | 21 Electronic Trip Unit Tester and LCB Power Supply |
| 6 Plug-In Terminal Blades | 14 Circuit Breaker | |
| 7 Extended Terminal Shield | 15 Shunt Trip or Undervoltage Releases | |
| 8 Standard Terminal Shield | 16 Auxiliary/Alarm Switches | |

VL External Accessories

Operating Mechanisms



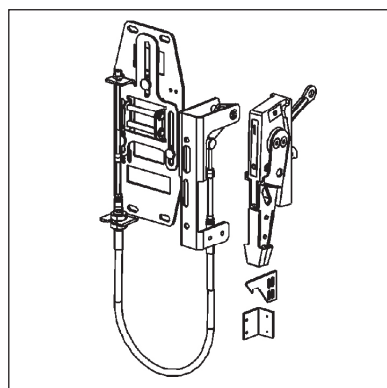
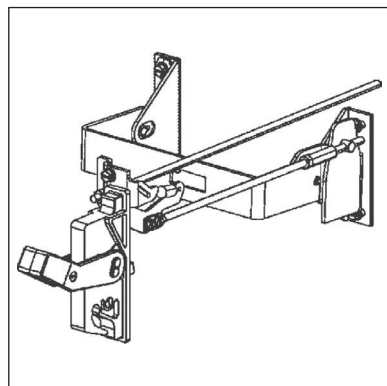
Ⓞ During manual operation, Early Break auxiliary switch contacts open before the breaker opens.

| Description | For DG to FG Frame 150 to 250 A | For JG to LG Frame 400 A to 600 A |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| | Catalogue Number | Catalogue Number |
| Through-Door Rotary Handle Operator Kit Fixed depth and the handle is mounted directly on the circuit breaker. Lockable knob (for up to 3 padlocks). NEMA 1, 12 Red Handle Version with red knob, yellow indicator plate NEMA 1, 12 | RHFF | RHFL |
| Door-Mounted Rotary Handle Operator Kit Variable depth, door mounted handle. Includes knob with masking frame, indicator plate, detachable door coupling, 12" shaft, and breaker mounted rotary operator. Lockable knob (for up to 3 padlocks). NEMA 1, 12 | RHFFEM | RHFLEM |
| Auxiliary Switch Kits For Direct or Extended Rotary Handle Operators (RHF and RHV). Form C, Early Break type2 Aux. Switch Kit [Ⓞ] Includes 1 switch with 5' wire For Door-Mounted Operator For Through-Door Operator Includes 2 switches with 5' wire For Door-Mounted Operator For Through-Door Operator | — RHSFA1F — RHSFA2F | RHSLA1 RHSLA1F RHSLA2 RHSLA2F |
| Door-Mounted Rotary Operator Mechanism Breaker mechanism only | RHVFBM | RHVLBM |
| Door-Mounted Rotary Handle Only Standard version NEMA 1, 12 NEMA 3R NEMA 4X Red Handle version | RHVM12H RHVM3RH RHVM4XH RHVMEMH | RHVM12H RHVM3RH RHVM4XH RHVMEMH |
| NFPA-79 Handle Kit Intermediate handle for NFPA-79 compliance with door-mounted rotary operator | RHVF79H | RHVM79H |
| Extension Shaft Only, for Door Mounted Operator 2 inches (50.8mm) 3 inches (76.2mm) 12 inches (304.8 mm) 16 inches (406.4 mm) 24 inches (609.6mm) w/ support bracket | RHVMS02 — RHVMS12 RHVMS16 RHVMS24 | RHVMS02 — RHVMS12 RHVMS16 RHVMS24 |

| Description | For MG Frame 800 A | For NG to PG Frame 1200 to 1600 A |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------|
| | Catalogue Number | Catalogue Number |
| Through-Door Rotary Handle Operator Kit Fixed depth, breaker mounted. For direct fitting to the circuit breaker. Lockable with up to 3 padlocks. NEMA 1, 12 Red Handle Version with red knob, yellow indicator plate NEMA 1, 12 | RHFM — | — — |
| Door-Mounted Rotary Handle Operator Kit Variable depth, door mounted handle. Includes knob with masking frame, indicator plate, detachable door coupling, 12" shaft, and breaker mounted rotary operator. Lockable knob (for up to 3 padlocks). NEMA 1, 12 | RHVM12 — | — — |
| Auxiliary Switch Kits For Direct or Extended Rotary Handle Operators (RHF and RHV). Early Break type2 Aux. Switch Kit Includes 1 switch with 5' wire For Door-Mounted Operator For Through-Door Operator Includes 2 switches with 5' wire For Door-Mounted Operator For Through-Door Operator | RHSMA1 — RHSMA2 — | RHSPA1 — RHSPA2 — |
| Door-Mounted Rotary Operator Mechanism Breaker mechanism only | RHVMBM | RHVPBM |
| Door-Mounted Rotary Handle Only Standard version NEMA 1, 12 NEMA 3R NEMA 4X Red Handle version | RHVM12H RHVM3RH RHVM4XH RHVMEMH | RHVP12H RHVP3RH RHVP4XH RHVPEMH |
| NFPA-79 Handle Kit Intermediate handle for NFPA-79 compliance with door-mounted rotary operator | RHVM79H | RHVP79H |
| Extension Shaft Only, for Door Mounted Operator 2 inches (50.8mm) 3 inches (76.2mm) 12 inches (304.8 mm) 16 inches (406.4 mm) 24 inches (609.6mm) w/ support bracket | RHVMS02 — RHVMS12 RHVMS16 RHVMS24 | — RHVPS03 RHVPS12 — RHVPS24 |

VL External Accessories

Operating Mechanisms



| Description | For DG and FG Frame 150 to 250 A | For JG and LG Frame 400 to 600 A |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| | Catalogue Number | Catalogue Number |
| Variable Depth Flange Mounted Operator Kit Adjustable from 8" to 16" Complete kit, includes handle and variable depth operator. NEMA 1, 3R, 12 NEMA 4X IEC Black Handle NEMA 1, 3R, 12 NEMA 4X | FHVF3R FHVF4X FHVF3RB FHVF4XB | FHVL3R FHVL4X FHVL3RB FHVL4XB |
| Max-Flex™, Variable Depth Flange Mounted Operator Kit Complete kit, includes plastic handle, breaker operator, and cable. NEMA 1, 3R, 12 For DG and FG operators, the cable is 36", all others are 48" May be right- or left-hand mounted | MFKF3R | MFKL3R |
| Handle Only, for Max-Flex™ Variable Depth NEMA 1, 3R, 12 Plastic NEMA 1, 3R, 12 Steel - epoxy coated NEMA 4, 4X Steel - chrome plated Solid color (all gray) Plastic [Ⓞ] NEMA 1, 3R, 12 Solid color (black handle) Steel epoxy coated [Ⓞ] NEMA 1, 3R, 12 | MFHM3R MFHM3RS MFHM4X MFHM3RB MFHM3RSB | MFHM3R MFHM3RS MFHM4X MFHM3RB MFHM3RSB |
| Breaker Operator Mechanism Only, for Max-Flex™ | MFMF | MFML |
| Cable Only, for Max-Flex™ Variable Depth 36" 48" 60" 72" 84" 96" 120" 144" | MFCF036 MFCF048 MFCF060 MFCF072 MFCF084 MFCF096 MFCF120 MFCF144 | MFCM036 MFCM048 MFCM060 MFCM072 MFCM084 MFCM096 MFCM120 MFCM144 |
| Handle Auxiliary Switch Form C (1NO - 1NC), early break [Ⓞ] 1 Aux. switch 2 Aux. switch | MFSFA1 MFSFA2 | MFSLA1 MFSLA2 |

Ⓞ Max-Flex™ handles are available with solid gray or black handles instead of the customary "Red for On" flange handle.

The black handle is preferred for IEC markets, where red handles have a specific meaning.

Ⓞ During manual operation, Early Break aux. contacts open before the breaker opens.

| Description | For MG Frame 800 A | For NG Frame 1200 A | For PG Frame 1600 A |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | Catalogue Number | Catalogue Number | Catalogue Number |
| Variable Depth Flange Mounted Operator Kit Adjustable from 8" to 16" Complete kit, includes handle and variable depth operator. | | | |
| NEMA 1, 3R, 12 | — | — | |
| NEMA 4X | — | — | |
| IEC Black Handle | — | — | |
| NEMA 1, 3R, 12 | | | |
| NEMA 4X | | | |
| Max-Flex™, Variable Depth Flange Mounted Operator Kit Complete kit, includes plastic handle, breaker operator, and cable. NEMA 1, 3R, 12 For DG and FG operators, the cable is 36", all others are 48" May be right- or left-hand mounted | MFKM3R | MFKP3RS | MFKP3RS |
| Handle Only, for Max-Flex™ Variable Depth | | | |
| NEMA 1, 3R, 12 Plastic | MFHM3R | — | — |
| NEMA 1, 3R, 12 Steel - epoxy coated | MFHM3RS | MFHP3RS | MFHP3RS |
| NEMA 4, 4X Steel - chrome plated | MFHM4X | MFHP4X | MFHP4X |
| Solid color (all gray) Plastic ^① | | | |
| NEMA 1, 3R, 12 | MFHM3RB | — | — |
| Solid color (black handle) Steel epoxy coated ^① | | | |
| NEMA 1, 3R, 12 | MFHM3RSB | MFHP3RSB | MFHP3RSB |
| Breaker Operator Mechanism Only, for Max-Flex™ | MFMM | MFMP | MFMP |
| Cable Only, for Max-Flex™ Variable Depth | | | |
| 36" | MFCM036 | — | — |
| 48" | MFCM048 | MFCP048 | MFCP048 |
| 60" | MFCM060 | MFCP060 | MFCP060 |
| 72" | MFCM072 | MFCP072 | MFCP072 |
| 84" | MFCM084 | MFCP084 | MFCP084 |
| 96" | MFCM096 | MFCP096 | MFCP096 |
| 120" | MFCM120 | MFCP120 | MFCP120 |
| 144" | MFCM144 | MFCP144 | MFCP144 |
| Handle Auxiliary Switch Form C (1NO - 1NC), early break ^② 1 Aux. switch 2 Aux. switch | MFSPA1 MFSPA2 | MFSPA1 MFSPA2 | MFSPA1 MFSPA2 |

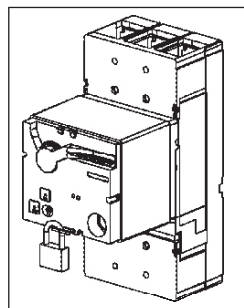
① Max-Flex™ handles are available with solid gray or black handles instead of the customary "Red for On" flange handle.

The black handle is preferred for IEC markets, where red handles have a specific meaning.

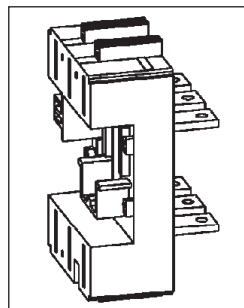
② During manual operation, Early Break aux. contacts open before the breaker opens.

VL External Accessories

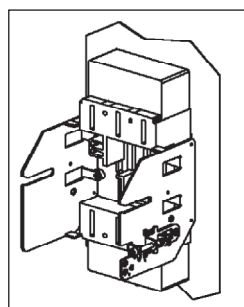
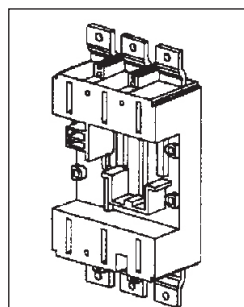
Operating Mechanisms



| Description | For DG to FG Frame 150 to 250 A | |
|-----------------------------------------------------------------------------|------------------------------------|--|
| | Catalogue Number | |
| Stored Energy and Motor Operators Lockable with up to 3 padlocks. | | |
| AC Voltage DC Voltage | Stored Energy Type | |
| — 24 | SEAFB | |
| 42-48 42-48 | SEAFM | |
| 60 60 | SEAFY | |
| 110-127 110-127 | SEAFN | |
| 220-250 220-250 | SEAFR | |
| Cylinder Locks for Field Installation | CLKF | |



| Description | For DG Frame 150 A | For FG Frame 250 A |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| | Catalogue Number | Catalogue Number |
| Plug-in Mounting Base Assembly Includes base, terminal blade kit, sec. terminal block assembly, base trip interlock, and mounting hardware. | | |
| Rear Connected 3-pole | PCBDRC3 | PCBFRC3 |
| Front Connected 3-pole | PCBDFC3 | PCBFFC3 |
| Draw-out Assembly Includes base, position indicator switch, socket, base trip interlock, crank handle, connectors, and necessary shields. | | |
| Rear Connected 3-pole | DCADRC3 | DCAFRC3 |
| Front Connected 3-pole (Draw-out assembly includes side plates and all hardware) | DCADFC3 | DCAFFC3 |
| Hex Wrench for racking draw-out assembly and position indicator | DCHP | DCHP |
| Position Indicator Switch Form "C" switch to indicate breaker engaged/de-engaged position.ⓐ | DCIP | DCIP |
| Secondary Terminal Block Assy. Accessory connections for plug-in or draw-out breakers. Pre-wired plug and block with 8 terminal points.ⓑ | PCTF83 | PCTF83 |
| Plug-In Spare Breaker Kit Set of 6 terminal blades, 2 terminal shield, & 1 trip interlock | PCXD3 | PCXF3 |
| Draw-out Spare Breaker Kit Set of 6 terminal blades, & 1 trip interlock | DCXD3 | DCXF3 |
| Spare Breaker Trip Interlock | PCXFT | PCXFT |



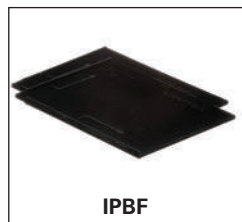
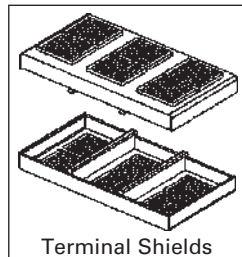
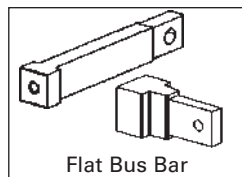
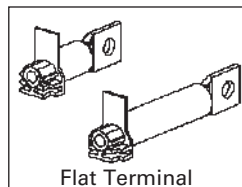
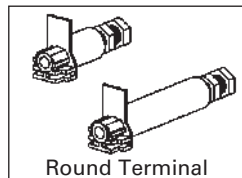
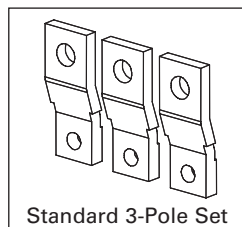
ⓐ Up to 2 position indicator switches may be mounted per plug-in or draw-out base.

ⓑ Up to 2 plugs per breaker (16 terminal points) may be mounted on DG, and FG breakers. Up to 3 plugs per breaker (24 terminal points) may be mounted on JG, LG, MG, NG, and PG breakers.

| For JG to LG Frame 400 to 600 A | For MG Frame 800 A | For NG to PG Frame 1200 to 1600 A | | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|------------------------|
| Catalogue Number | Catalogue Number | Catalogue Number | | |
| Stored Energy Type SEALB SEALM SEALY SEALN SEALR CLKP | Stored Energy Type SEAMB SEAMM SEAMY SEAMN SEAMR CLKP | Motor Operator Type MTRPB MTRPM MTRPY MTRPN MTRPR CLKP | | |
| For JG Frame 400 A | For LG Frame 600 A | For MG Frame 800 A | For NG Frame 1200 A | For PG Frame 1600 A |
| Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| PCBJRC3 | PCBLRC3 | PCBMRC3 | PCBNRC3 | — |
| PCBJFC3 | PCBLFC3 | — | — | — |
| DCAJRC3 | DCALRC3 | DCAMRC3 | DCANRC3 | — |
| DCAJFC3 | DCALFC3 | DCAMFC3 | DCANFC3 | — |
| DCHP | DCHP | DCHP | DCHP | — |
| DCIP | DCIP | DCIP | DCIP | — |
| PCTL83 | PCTL83 | PCTM83 | PCTN83 | — |
| PCXJ3 | PCXL3 | PCXM3 | PCXN3 | — |
| DCXJ3 | DCXL3 | DCXM3 | DCXN3 | — |
| PCXLT | PCXLT | PCXMT | PCXPT | — |

VL External Accessories

Connections



| Description | For DG Frame 150 A | For FG Frame 250 A |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| | Catalog Number | Catalog Number |
| Front Bus Bar Connections Includes nut keeper plates and shield. Standard (straight) 3-Pole Set Bus Bar Connection Strap Kit Includes 6 - Bus Bars, 6 Nut Keepers & Shields 100% rated applications | FBCD3 — — | FBCF3 — — |
| Rear-Connecting Studs Short length round term. (1piece) Long length round term. (1piece) 3-Pole round term. kit, 2 short + 1 long Short length flat term. (1piece) Long length flat term. (1piece) 3-Pole flat term. kit, 2 short + 1 long Flat bus bar type (1 piece) 3-Pole set of flat bus bar | RTLDSR RTLDLR SRTDR3 RTLDSF RTLDLF SRTDF3 — — | RTLFSR RTLFLR SRTFR3 RTLFSF RTLFLF SRTFF3 — — |
| Terminal Shields Includes 2 terminal shields. 3-Pole Standard Shield 3-Pole Extended Shield | TSSF3 TSLF3 | TSSF3 TSLF3 |
| Interphase Barriers Set of 2 barriers Also fits plug-in and draw-out bases. | IPBF | IPBF |
| Lug Mounting Assy. | — | — |
| Breaker Mounting Base Front connected Rear connected | — — | — — |

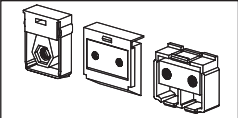
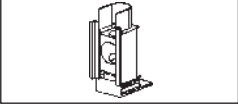

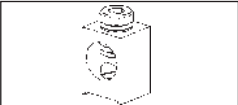
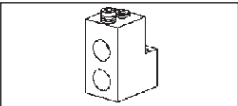

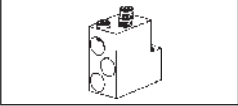
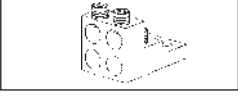
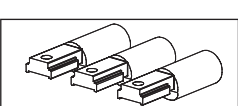

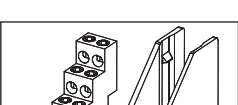

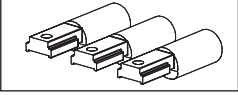

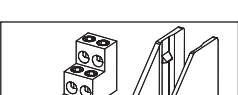
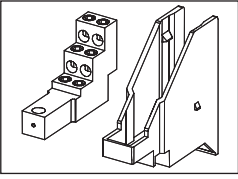
| For JG Frame 400 A | For LG Frame 600 A | For MG Frame 800 A | For NG Frame 1200 A | For PG Frame 1600 A |
|--------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------|------------------------------------------------|--------------------------------------|
| Catalog Number | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| FBCJ3 — | FBCL3 — | FBCM3 — | SSBP SSBPH | SSBP SSBPH |
| RTLJSR RTLJLR SRTJR3 RTLJSF RTLJLF SRTJF3 — — | — — — — — — RTLLSF SRTL3F3 | — — — — — — RTLMSF SRTMF3 | — — — — — — RTLNSF SRTNF3 | — — — — — — — — |
| TSSL3 TSLL3 | — — | TSSM3 TSLM3 | TSSP3 TSLP3 | TSSP3 TSLP3 |
| IPBM | IPBM | IPBM | IPBP | IPBP |
| — | — | — | — | LMAP1600® |
| — — | — — | — — | — — | MBPG1600 MBPG1601 |

© Not for use with standard AI terminals. Use Standard Shield for rear connection and Extended Shield for busbar connection.

© Kit includes connection for one side of breaker only. Order quantity 2 if connecting line and load side.

VL External Accessories

Connections

| | | For DG Frame 150 A | For FG Frame 250 A |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| | Description | Catalogue Number | Catalogue Number |
|  | Nut Keeper Plates For ring/tongue terminal or bus bar connections. (For metric threads on other than the JG or LG frame, change "TNK" to "TMK") 1 Nut Keeper Plate Kit of 3 | TNKD TNKD3 | TNKF TNKF3 |
|  | | | |
|  | Mechanical Lugs <i>Steel Wrap Around Body (Cu Wire Only)</i> Cable Size; (cables per phase) Single Lug Kit of 3 | #8-1/0; 1-hole TW1DG20 3TW1DG20 | #4-350 kcmil; 1-hole TW1FG350 3TW1FG350 |
|  | <i>Aluminum Body (Al or Cu Wire)</i> Cable Size; (cables per phase) Single Lug Kit of 2 | #6-3/0; 1-hole TA1DG30 — | #4-350 kcmil; 1-hole TAW1FG350 — |
|  | Kit of 3 | 3TA1DG30 | 3TAW1FG350 |
|  | Cable Size; (cables per phase) | — | — |
|  | Single Lug | — | — |
|  | Kit of 2 | — | — |
|  | Kit of 3 | — | — |
|  | Cable Size; (cables per phase) | — | — |
|  | Single Lug | — | — |
|  | Kit of 3 | — | — |
|  | Compression Lugs Cable Size; (cables per phase) Kit of 2 Kit of 3 | #14-2/0; 1-cable 2CLD20 3CLD20 | #4-350 kcmil; 1-cable — 3CLF350 |
|  | Cable Size; (cables per phase) | — | — |
|  | Kit of 2 | — | — |
|  | Kit of 3 | — | — |
| | Distribution Lugs (Cu Wire Only) Cable Size; (cables per phase) Single Lug Kit of 3 Cable Size; (cables per phase) Single Lug Kit of 3 | #14-#2; 3-hole TA3DG02 3TA3DG02 #14-#4; 6-hole TA6DG04 3TA6DG04 | #14-#1; 2-hole and #14-2/0; 1-hole TA3FG20 3TA3FG20 #14-#4; 6-hole TA6FG04 3TA6FG04 |
| | Control Wire Terminals Control Wire Terminal (Single) Control Wire Terminal (Kit of 3) | — — | — — |

Note: pictures provide graphical representations only.

Ⓞ Required for 100% rated breakers. Requires 90°C cable sized at 75°C ampacity.

| For JG Frame 400 A | For LG Frame 600 A | For MG Frame 800 A | For NG Frame 1200 A | For PG Frame 1600 A |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| TMKJ TMKJ3 <i>metric only</i> | TNKL TNKL3 | TNKM TNKM3 | TNKP TNKP3 | TNKP TNKP3 |
| 1/0-600 kcmil; 1-hole TW1JG600 3TW1JG600 | — — — | — — — | — — — | — — — |
| 3/0-250 kcmil; 2-hole TA2JG250 — 3TA2JG250 AL: 250-750 kcmil CU: 3/0-600 kcmil; 1-hole TA1JG750 — 3TA1JG750 — — — | #2-600 kcmil; 2-hole — — 3TA2LG600LD ^① 3TA2LG600LN ^② AL: 250-750 kcmil CU: 3/0-600 kcmil; 1-hole TA1JG750 (400A max) — 3TA1JG750 (400A max) — — — | 1/0-500 kcmil, 3-hole TA3MG500 3TA3MG500 500 -750 kcmil; 2-hole TA2MG750 — 3TA2MG750 #2-600 kcmil; 3-hole — 3TA3MG600 ^④ | 1/0-500 kcmil; 4-hole — 2TA4NG500 3TA4NG500 3TA4NG500H ^⑤ 500 -750 kcmil; 3-hole — 2TA3NG750 3TA3NG750 — | 1/0-750 kcmil; 6-hole — — 3TA6PG750 ^⑥ 600-750 kcmil; 4-hole TA4P750 ^⑥ — 300-600 kcmil; 5; 6-hole TA5P600 ^⑥ TA6R600 ^⑥ — |
| 3/0-250 kcmil; 2-hole TC2JG250 ^③ — — 3/0-750 kcmil; 1-hole TC1JG750 ^③ | #2-600 kcmil; 2-hole — — 3TC2LG600LD ^{①③} 3TC2LG600LN ^{②③} — — | 1/0-500 kcmil; 3-hole TC3MG500 ^③ — — — — | 1/0-500 kcmil; 4-hole — — 3TC4NG500 ^③ — — | — — — — 300-600 kcmil; 5-hole TC5R600 ^{③⑥} |
| #6-350 kcmil; 1-cable — 3CLJ350 250-600 kcmil; 1-cable 3CLJ600 — 250-750 kcmil; 1-cable 3CLJG750 — | #6-350 kcmil; 2-cable — 6CLL350 (kit of 6) 250-750 kcmil; 1-cable 3CLL750 — 250-600 kcmil; 2-cable 6CLL600 (kit of 6) — | — — — — — — | 1/0-500 kcmil; 4-cable — 12CLN500 (kit of 12) — — — — — | — — — — — — |
| #14-#4; 12-hole TA12JG04 3TA12JG04 #14-2/0; 6-hole TA6JG20 3TA6JG20 | — — — — — | — — — — — | — — — — — | — — — — — |
| TA2JG250PT — | — 3TA2LG600LNPT | TA3MG500PT — | — 3TA4NG500PT | — — |

All lug kits include the nut keepers.

① Mounted on Load Side Only.

② Mounted on Line Side Only.

③ Required for 100% rated breakers. Requires 90°C cable

sized at 75°C ampacity.

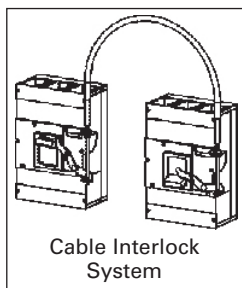
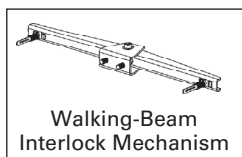
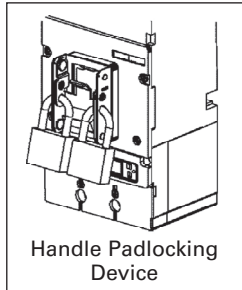
④ Requires extended modified shield.

⑤ Used only with LMAP1600 mounting base.

⑥ Used only with MBPG1600 or MBPG1601 mounting base.

VL External Accessories

General



5
MOLDED CASE
CIRCUIT BREAKERS

| Description | For DG Frame 150 A | For FG Frame 250 A |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|
| | Catalogue Number | Catalogue Number |
| Handle Padlocking Device To padlock breaker toggle in the "OFF" position. Accepts up to 3 padlocks with 5–8 mm shackles. | HPLF | HPLF |
| Handle Blocking Device For holding the handle in the "ON" position. Not a lockout/tagout device. | HBDF | HBDF |
| Walking-Beam Interlock Mechanism Provides mechanical interlocking between two adjacent circuit breakers. Fixed mounted breakers Note: Both breakers must be of the same frame size. | WBMFFM | WBMFFM |
| Cable Interlock Mechanism Provides mechanical interlocking between 2 circuit-breakers - includes operator mechanism for one circuit breaker only. Combination with the next larger or smaller frame size is possible. | CBTF | CBTF |
| Interlock Cable Cable only, to connect 2 circuit breakers. Cable length 18 in. .46m (recommended up to 250A) Cable length 36 in. .91m (recommended from 400–800A) Cable length 54 in. 1.37m (recommended from 1200–1600A) | CBCF18 CBCM36 CBCP54 | CBCF18 CBCM36 CBCP54 |
| Mounting Screw Kit Includes the necessary hardware to mount a circuit breaker to the user's prepared surface Kit with 2 screws (SAE thread) Kit with 4 screws (SAE thread) | MSKF2 MSKF4 | MSKF2 MSKF4 |
| Trip Adjustment Sealing Cover Includes a trip unit cover to prevent tampering or adjustment of trip settings. Seal not included. Thermal-Magnetic Trip Units | TSCFTM | TSCFTM |

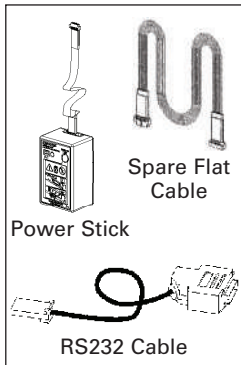
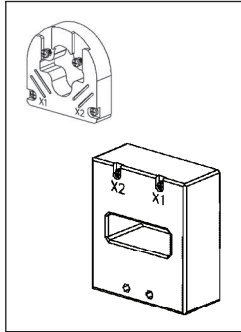
| For JG Frame 400 A | For LG Frame 600 A | For MG Frame 800 A | For NG Frame 1200 A | For PG Frame 1600 A |
|-----------------------|-----------------------|-----------------------|------------------------|------------------------|
| Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| HPLL | HPLL | HPLM | HPLP | HPLP |
| HBDL | HBDL | HBDM | HBDP | HBDP |
| WBMLFM | WBMLFM | WBMMFM | WBMPFM | WBMPFM |
| CBTL | CBTL | CBTM | CBTP | CBTP |
| — CBCM36 CBCP54 | — CBCM36 CBCP54 | — CBCM36 CBCP54 | — — CBCP54 | — — CBCP54 |
| — MSKL4 | — MSKL4 | — MSKM4 | — MSKP4 | — MSKP4 |
| TSLTM | TSLTM | TSCMTM | — | — |

5

**MOLDED CASE
CIRCUIT BREAKERS**

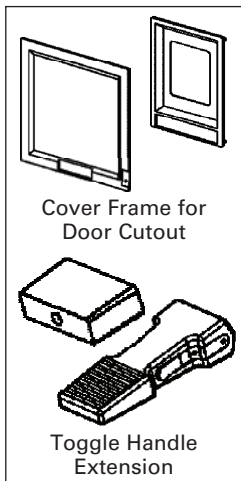
VL External Accessories

Ground Sensors & Electronic Accessories



| Description | For DG Frame 150 A | For FG Frame 250 A |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| | Catalogue Number | Catalogue Number |
| Neutral Current Transformer (Ground Sensor, N-pole) Neutral = 35/60A Neutral = 100A Neutral = 150A Neutral = 250A Neutral = 400A Neutral = 600A Neutral = 800A Neutral = 1000/1200A Neutral = 1600A | NGSD060 NGSF100 NGSF150 — — — — — — | — NGSF100 NGSF150 NGSJ250 — — — — — |
| Communications & Electronics Power Stick - Hand held, battery operated power supply for LCD trip units. (Requires two -9V batteries) For programming and trip testing only. | EPSP18V | EPSP18V |
| Com20 Profibus Communications Module with ZSI for electronic trip units (order cable separately) | COMPRO20 | COMPRO020 |
| Com21 Modbus Communications Module with ZSI for electronic trip units (order cable separately) | COMM021 | COMM021 |
| Cable for COM20/21 and power supply.....5ft. (1.5m) | COMKIT13 | COMKIT13 |
| Cable for COM20/21, 3.0m (9.8ft). | COMKIT6 | COMKIT6 |
| Spare flat cable for Test Kits | COMPCA | COMPCA |
| Addressing Plug - Assigns a field bus address without a PC by plugging into Com20/21 | 3UF79100AA00 | 3UF79100AA000 |

Door Cutouts & Extensions



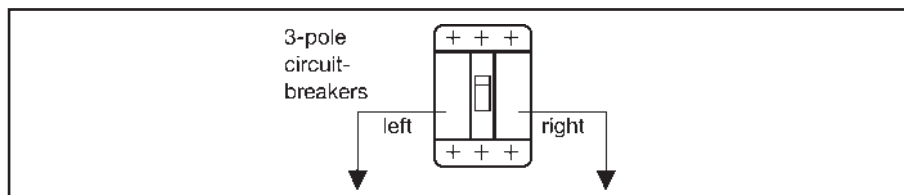
| | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|
| Cover Frame for Door Cutout For fixed or plug-in mounted circuit breakers. (IP30) 2-Pole & 3-Pole | BZLF3 | BZLF3 |
| For breakers with stored energy operator. (IP40) | BZLFRHSE | BZLFRHSE |
| Circuit-breaker draw-out mounted and toggle handle operated. Kit includes cover frame (bezel) and escutcheon as needed. (IP40) (not for use with rotary handle or stored energy operator) | BZLFBDC | BZLFBDC |
| Toggle Handle Extension For spare or replacement. (One is included with each NG - PG frame.) | — | — |

| For JG Frame 400 A | For LG Frame 600 A | For MG Frame 800 A | For NG Frame 1200 A | For PG Frame 1600 A |
|-------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number | Catalogue Number |
| — — — NGSJ250 NGSL400 — — — — | — — — — NGSL400 NGSM600 — — — — | — — — — — NGSM600 NGSN800 — — — | — — — — — — NGSN800 NGSP120 — | — — — — — — — NGSP120 NGSP160 |
| EPSP18V | EPSP18V | EPSP18V | EPSP18V | EPSP18V |
| COMPRO20 | COMPRO20 | COMPRO20 | COMPRO20 | COMPRO20 |
| COMMOD21 | COMMOD21 | COMMOD21 | COMMOD21 | COMMOD21 |
| COMKIT4 | COMKIT4 | COMKIT5 | COMKIT5 | COMKIT5 |
| COMKIT7 | COMKIT7 | COMKIT8 | COMKIT8 | COMKIT8 |
| COMPCA | COMPCA | COMPCA | COMPCA | COMPCA |
| 3UF79100AA000 | 3UF79100AA000 | 3UF79100AA000 | 3UF79100AA000 | 3UF79100AA000 |
| BZLL3 | BZLL3 | BZLM3 | BZLP3 | BZLP3 |
| BZLLRHSE | BZLLRHSE | BZLMRHSE | BZLPRHSE | BZLPRHSE |
| BZLLBDC | BZLLBDC | BZLMBDC | BZLPBDC | BZLPBDC |
| THEL | THEL | THEM | THEP | THEP |

VL Molded Case Circuit Breakers

Accessory Locations

Selection



Locations of Internally Mounted Accessories

| Frame Family | Left Pocket | Right Pocket |
|----------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| DG*, FG*, JG, LG 150 to 600A | Up to 3 Auxiliary Switches | Shunt Trip or UVR or up to 3 Auxiliary Switches or up to 2 Auxiliary Switches + 1 Alarm Switch |
| | Up to 2 Auxiliary Switches + 1 Alarm Switch | Shunt Trip or UVR or up to 3 Auxiliary Switches or up to 2 Auxiliary Switches + 1 Alarm Switch |
| MG, NG, PG 800 to 1600A | Up to 4 Auxiliary Switches | Shunt Trip or UVR or up to 4 Auxiliary Switches |
| | Up to 2 Auxiliary Switches + 2 Alarm Switches | Shunt Trip or UVR or up to 4 Auxiliary Switches |

* Except DG and FG breakers with Electronic Trip Units. Due to the location of the Magnetic Latch, the Left Pocket is not available for accessories.

Accessory Information

- Aux. Switch is an Auxiliary Switch, 1A or 1B contact
- Alarm Switch has 1A or 1B contact
- UVR is an Undervoltage Release
- The standard location for factory mounted Auxiliary and Alarm Switches is the Left Pocket

Accessory Maximums

DG, FG, JG, LG Maximum Accessories:

- Maximum of six (6) switches total
- DG, FG Maximum of two (2) Alarm Switches, one each in the Left and Right Pockets. JG, LG Max. of 1 Alarm, Left only

MG, NG, PG Maximum Accessories:

- Maximum of eight (8) switches total
- Maximum of two (2) Alarm Switches, Left Pocket only

VL Circuit Breakers

Suffix for factory mounted Switch Combinations

Selection

| If the frame is: | And you need these functions: | Then add this suffix: | Device Catalog Number |
|------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| DG, FG, JG or LG | 1 Alarm Switch 1 NO Alarm 1 NC Alarm | A1 | ASKL1 |
| DG, FG, JG or LG | 2 Aux. Switches 1 NO + 1 NC Aux. Contacts | A2 | ASKL2 |
| DG, FG, JG or LG | 2 Aux. + 1 Alarm Switches 1NO + 1NC Aux. and 1NC Alarm 2NO Aux. and 1NC Alarm | A3 | ASKL3 |
| MG, NG or PG | 2 Aux. + 2 Alarm Switches 1NO + 1NC Aux. and 1NO + 1NC Alarm 2NO Aux. and 2NC Alarm 2NC Aux. and 2NO Alarm | A3 | ASKP3 |
| MG, NG or PG | 4 Aux. Switches 2NO + 2NC Aux. | A4 | ASKP4 |

Suffix for factory mounted Shunt Trips

| If the frame is: | And you need these functions: | Then add this suffix: | Device Catalog Number |
|------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------|
| DG, FG, JG or LG | 24V DC 48-60V DC 110-127V DC 220-250V DC 48-60V AC 110-127V AC 208-277V AC 380-600V AC | RB RC RD RE RM RN RS RV | STRLB24DC STRLC60DC STRLD125DC STRLE250DC STRLM60 STRLN120 STRLS277 STRLV600 |
| MG, NG or PG | 24V DC 48-60V DC 110-127V DC 220-250V DC 48-60V AC 110-127V AC 208-277V AC 380-600V AC | RB RC RD RE RM RN RS RV | STRPB24DC STRPC60DC STRPD125DC STRPE250DC STRPM60 STRPN120 STRPS277 STRPV600 |

5
MOLDED CASE
CIRCUIT BREAKERS

Suffix for factory mounted Undervoltage Releases

| If the frame is: | And you need these functions: | Then add this suffix: | Device Catalog Number |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DG, FG, JG or LG | 12V DC 24V DC 48V DC 60V DC 110-127V DC 220-250V DC 24V AC 110-127V AC 220-240V AC 208V AC 277V AC 380-415V AC 440-480V AC | UA UB UC UG UD UE UK UN UR UP US UT UU | UVRLA12DC UVRLB24DC UVRLC48DC UVRLG60DC UVRLD125DC UVRLE250DC UVRL24 UVRLN120 UVRLR240 UVRLP208 UVRLS277 UVRLT415 UVRLU480 |
| MG, NG or PG | 12V DC 24V DC 48V DC 60V DC 110-127V DC 220-250V DC 110-127V AC 220-240V AC 208V AC 277V AC 380-415V AC 440-480V AC | UA UB UC UG UD UE UN UR UP US UT UU | UVRPA12DC UVRPB24DC UVRPC48DC UVRPG60DC UVRPD125DC UVRPE250DC UVRPN120 UVRPR240 UVRPP208 UVRPS277 UVRPT415 UVRPU480 |

VL Technical Data

| | | DG | FG | JG | LG | MG | NG | PG |
|--------------------------------------|------|------------|------------|------------|------------|------------|------------|------------|
| Max rated continuous current | | 150 | 250 | 400 | 600 | 800 | 1200 | 1600 |
| Rated operational voltage | | | | | | | | |
| NEMA | V AC | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| IEC | V AC | 690 | 690 | 690 | 690 | 690 | 690 | 690 |
| Rated impulse withstand voltage | | | | | | | | |
| Main conducting paths | kV | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Auxiliary circuits | kV | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Ambient temperature range | °C | -25 to +75 | -25 to +75 | -25 to +75 | -25 to +75 | -25 to +75 | -25 to +75 | -25 to +75 |
| High ambient derating (thermal-mag.) | 50°C | 93% | 93% | 93% | 93% | 95% | 95% | 95% |
| | 60°C | 86% | 86% | 86% | 86% | 86% | 86% | 80% |
| | 70°C | 80% | 80% | 80% | 80% | 80% | 80% | 74% |
| Operating cycles | | 20,000 | 20,000 | 20,000 | 10,000 | 5,000 | 3,000 | 3,000 |
| Max switching rate (per hour) | | 120 | 120 | 120 | 60 | 60 | 30 | 30 |
| Power loss (at max. rated current) | | | | | | | | |
| Thermal-magnetic | W | 15 – 48 | 32 – 80 | 60 – 175 | 85 – 230 | 170 – 250 | 150 – 220 | 200 – 260 |
| Electronic trip unit | W | 40 | 60 | 90 | 160 | 250 | 210 | 260 |
| IEC ① | | | | | | | | |
| Time constant t = 10 ms | | | | | | | | |
| 1 current path | | | | | | | | |
| 2 current paths in series | | | | | | | | |
| 3 current paths in series | | | | | | | | |
| Up to 250V DC | | — | — | — | — | — | — | — |
| 440V DC | | | | | | | | |
| 600V DC | | | | | | | | |
| NEMA | | | | | | | | |
| Time constant t = 8 ms | | | | | | | | |
| 2 poles switching | | | | | | | | |
| 1 current path | | | | | | | | |
| 250V DC max.② | | 30 | 30 | 30 | 30 | 42 | 42 | 42 |
| 3 poles switching | | | | | | | | |
| 2 current paths in series | | | | | | | | |
| 500V DC max.② | | 18 | 25 | 35 | 35 | 65 | 65 | 65 |
| Accessories | | | | | | | | |
| Auxiliary/Alarm switch | | | | | | | | |
| Current rating (1 or 2 switches) | | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Current rating (3 or 4 same switch) | A | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Shunt trip | | | | | | | | |
| Pick-up voltage | V | 0.7 – 1.1 | 0.7 – 1.1 | 0.7 – 1.1 | 0.7 – 1.1 | 0.7 – 1.1 | 0.7 – 1.1 | 0.7 – 1.1 |
| Power consumption (short-time) at: | | | | | | | | |
| 48 – 60 V AC | VA | 158 – 200 | 158 – 200 | 158 – 200 | 158 – 200 | 380 – 480 | 380 – 480 | 380 – 480 |
| 110 – 127 V AC | VA | 136 – 158 | 136 – 158 | 136 – 158 | 136 – 158 | 302 – 353 | 302 – 353 | 302 – 353 |
| 208 – 277 V AC | VA | 274 – 350 | 274 – 350 | 274 – 350 | 274 – 350 | 330 – 439 | 330 – 439 | 330 – 439 |
| 380 – 600 V AC | VA | 158 – 237 | 158 – 237 | 158 – 237 | 158 – 237 | 243 – 384 | 243 – 384 | 243 – 384 |
| 24 V DC | W | 110 | 110 | 110 | 110 | 360 | 360 | 360 |
| 48 – 60 V DC | W | 110 – 172 | 110 – 172 | 110 – 172 | 110 – 172 | 512 – 820 | 512 – 820 | 512 – 820 |
| 110 – 127 V DC | W | 220 – 254 | 220 – 254 | 220 – 254 | 220 – 254 | 302 – 353 | 302 – 353 | 302 – 353 |
| 220 – 250 V DC | W | 97 – 110 | 97 – 110 | 97 – 110 | 97 – 110 | 348 – 397 | 348 – 397 | 348 – 397 |
| Max. operating time | ms | 50 | 50 | 50 | 50 | 50 | 50 | 50 |

① Consult Siemens for short circuit values.

② Review individual frame and type values.

VL Technical Data

| Undervoltage trip | | DG | FG | JG | LG | MG | NG | PG |
|-----------------------------------------------------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Drop voltage (percentage) | V | 35% – 70% | 35% – 70% | 35% – 70% | 35% – 70% | 35% – 70% | 35% – 70% | 35% – 70% |
| Pick-up voltage (percentage) | V | 70% – 85% | 70% – 85% | 70% – 85% | 70% – 85% | 70% – 85% | 70% – 85% | 70% – 85% |
| Power consumption (continuous) at: | | | | | | | | |
| 110 – 127 V AC | VA | 1.5 | 1.5 | 1.5 | 1.5 | 1.1 | 1.1 | 1.1 |
| 220 – 250 V AC | VA | 1.5 | 1.5 | 1.5 | 1.5 | 2.1 | 2.1 | 2.1 |
| 208 V AC | VA | 1.8 | 1.8 | 1.8 | 1.8 | 2.2 | 2.2 | 2.2 |
| 277 V AC | VA | 2.1 | 2.1 | 2.1 | 2.1 | 1.6 | 1.6 | 1.6 |
| 380 – 415 V AC | VA | 1.6 | 1.6 | 1.6 | 1.6 | 2.0 | 2.0 | 2.0 |
| 440 – 480 V AC | VA | 1.8 | 1.8 | 1.8 | 1.8 | 2.3 | 2.3 | 2.3 |
| 500 – 525 V AC | VA | 2.5 | 2.5 | 2.5 | 2.5 | 2.9 | 2.9 | 2.9 |
| Max. opening time | ms | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Motorized operating mechanism | | | | | | | | |
| Motor with stored energy mechanism (synchronizable) | | X | X | X | X | X | — | — |
| Motor Operator | | | | | | — | X | X |
| Max. switching rate (per hour) | | 120 | 120 | 120 | 60 | 60 | 30 | 30 |
| Command duration | ms | 20 – 50 | 20 – 50 | 20 – 50 | 20 – 50 | 20 – 50 | 50 | 50 |
| Closing time | ms | <100 | <100 | <100 | <100 | <100 | <5,000 | <5,000 |
| Charging time | s | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Break time | s | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Power consumption | VA/W | <100 | <100 | <100 | <100 | <250 | <250 | <250 |
| Control voltages 24 V DC | | | | | | | | |
| 42 – 48 V AC / DC | | | | | | | | |
| 60 V AC / DC | | | | | | | | |
| 110 - 127 V AC/ DC | | | | | | | | |
| 220 - 250 V AC/ DC | | | | | | | | |

Operating range: 85 – 110% of rated control voltage

Technical Data

Unusual Operating Conditions

Reference

Note: The information provided on this and the next page is intended for reference and recommendation only. Because several variables can act on a circuit breaker's performance at the same time, the data below is based less on controlled testing, than on experience and engineering judgment. Contact Siemens for further information on special conditions and treatment.

High Ambient Temperatures

Because thermal-magnetic trip breakers are temperature sensitive and calibrated for a specific ambient of 40° C (104° F) (average enclosure temperature), a higher ambient will cause the breaker to trip at lower current than its nameplate rating, in other words, causing the breaker to "derate" (see Table 1). Similarly, the current carrying capacity of a circuit conductor is based upon a certain ambient temperature, a higher ambient will reduce its current carrying capacity, causing it to "derate." Thus, with a fluctuating temperature, a thermal-magnetic breaker will derate nearly parallel with its connected circuit conductors and maintain close circuit protection. If the application temperature exceeds 40° C (104° F) and is known, either a breaker specially calibrated for the higher ambient or one oversized according to Table 1 may be selected. In a case such as this, the circuit conductors should be oversized as well.

Siemens Electronic Trip Unit Breakers are insensitive to temperature changes. However, they do include circuitry to protect the components from abnormally high temperatures.

Altitude

Reduced air density at altitudes greater than 6600 ft. (2000 meters) affects the ability of a molded case circuit breaker to transfer heat and interrupt faults. Therefore, circuit breakers applied at these altitudes should have interrupting, insulation and continuous currents derated as indicated in Figure 1.

Table 1 – Temperature derating date for thermal-magnetic breakers

| Reference Ampere Rating at 40° C (104° F) | Ampere Rating at: | | | Siemens Breaker Frames |
|-------------------------------------------|-------------------|----------------|----------------|------------------------|
| | 25° C (77° F) | 50° C (122° F) | 60° C (140° F) | |
| 50 | 55 | 46 | 42 | DG |
| 60 | 66 | 56 | 52 | |
| 70 | 77 | 65 | 60 | |
| 90 | 99 | 84 | 78 | |
| 100 | 110 | 94 | 87 | |
| 125 | 137 | 114 | 100 | |
| 150 | 165 | 136 | 120 | |
| 175 | 192 | 159 | 140 | |
| 200 | 220 | 182 | 160 | |
| 225 | 247 | 205 | 180 | |
| 250 | 275 | 235 | 220 | |
| 300 | 330 | 276 | 252 | |
| 350 | 385 | 325 | 301 | |
| 400 | 440 | 372 | 340 | |
| 500 | 550 | 468 | 435 | |
| 600 | 660 | 564 | 525 | |
| 700 | 770 | 658 | 613 | |
| 800 | 880 | 754 | 704 | |
| 900 | 990 | 828 | 749 | |
| 1000 | 1100 | 900 | 825 | |
| 1200 | 1320 | 1090 | 1000 | |
| 1400 | 1540 | 1304 | 1148 | |
| 1600 | 1760 | 1500 | 1320 | |
| | | | | FG |
| | | | | JG |
| | | | | LG |
| | | | | MG |
| | | | | NG |
| | | | | PG |

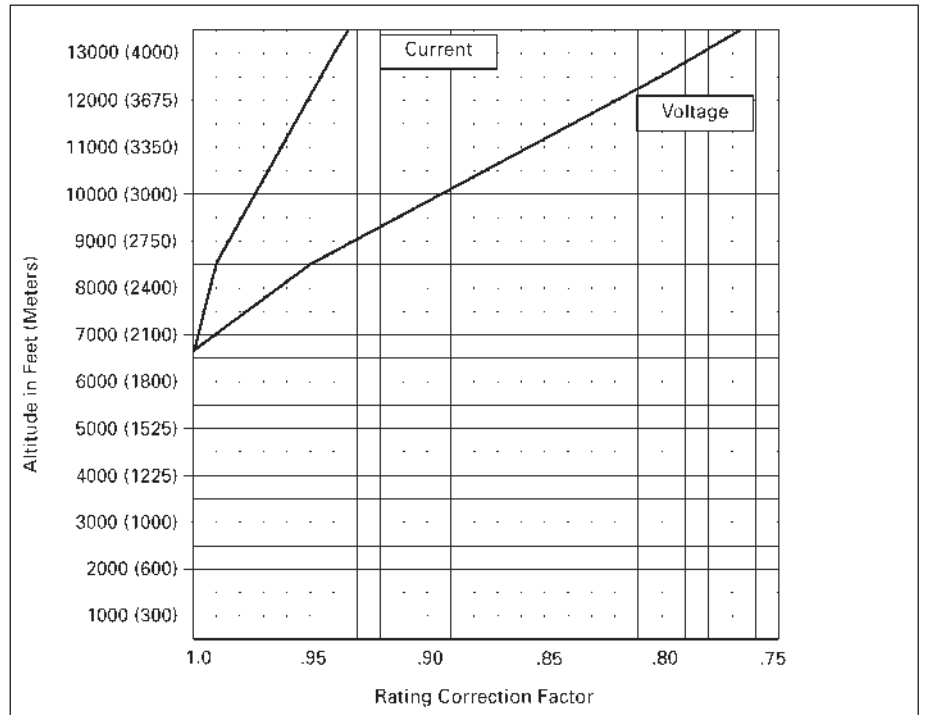


Figure 1 – Altitude adjustment

Technical Data

Unusual Operating Conditions

Reference

Unusual Operating Conditions 400 Hz Systems

Circuit Breaker Derating Required

This table lists the maximum continuous current carrying capacity for Siemens breakers at 400Hz. Due to the increased resistance of the copper sections resulting from the skin effect produced by eddy currents at these frequencies, circuit breakers in many cases require derating. The thermal derating on these devices is based upon 100%, three phase application in open air in a maximum of 40°C (104° F) with 48 in. (1219 mm) of the specified cable or bus at the line and load side. Additional derating of not less than 20% will be required if the circuit breaker is to be utilized in an enclosure. Further derating may be required if the enclosure ambient temperature exceeds 40°C(104° F).

Cable and Bus Sizing

The cable and bus sizes to be utilized at 400Hz are not based on standard National Electric Codes tables for 60Hz application. Larger cross sections are necessary at 400Hz. All bus bars specified are based upon mounting the bars in the vertical plane to allow maximum air flow. All bus bars are spaced at a minimum of 0.25 in. (6 mm) apart. Mounting of bus bars in the horizontal plane will necessitate additional drafting. Edgewise orientation of the bus may change the maximum ratings indicated. If additional information is required for other connections of cable or bus, contact Siemens for information.

Application Recommendations

It is recommended that temperatures be measured on the line and load terminals or T-connectors of the center pole. These are usually the hottest terminals with a balanced load. A maximum temperature of 75°C (35°C over a maximum ambient of 40°C) would verify the particular application. Temperature profiles taken on these breakers can be correlated to ensure that the hottest points within the breaker are within the required temperature limits.

Interrupting Rating

Circuit breakers used in 400 Hz systems are limited to a 5000 A interrupting rating. If higher ratings are required, consult Siemens.

| Breaker type | Maximum continuous ampere rating at 40°C (104°F)® | | | 75°C (167F) Copper cable per pole | |
|---------------|---------------------------------------------------|-----------|-------------------------|-----------------------------------|-----------|
| | 60HZ | | 400HZ | No of pieces | Wire size |
| | Open air | Open air® | Enclosed after derating | | |
| DG | 50 | 48 | 38 | 1 | #8 |
| | 60 | 57 | 46 | 1 | #6 |
| | 70 | 63 | 50 | 1 | #4 |
| | 80 | 72 | 58 | 1 | #4 |
| | 90 | 80 | 64 | 1 | #3 |
| | 100 | 90 | 72 | 1 | #3 |
| | 110 | 95 | 75 | 1 | #2 |
| | 125 | 105 | 84 | 1 | #1 |
| FG | 150 | 125 | 100 | 1 | #1/0 |
| | 100 | 90 | 72 | 1 | #3 |
| | 110 | 95 | 75 | 1 | #2 |
| | 125 | 105 | 84 | 1 | #1 |
| | 150 | 125 | 100 | 1 | #1/0 |
| | 175 | 140 | 112 | 1 | #2/0 |
| | 200 | 160 | 128 | 1 | #3/0 |
| | 225 | 180 | 144 | 1 | #4/0 |
| JG | 250 | 200 | 160 | 1 | 250 kcmil |
| | 250 | 210 | 168 | 1 | 250 kcmil |
| | 300 | 240 | 192 | 1 | 350 kcmil |
| | 350 | 260 | 208 | 1 | 500 kcmil |
| JG 100% Rated | 400 | 300 | 240 | 2 | #2/0 |
| | 250 | 210 | 210 | 1 | 250 kcmil |
| | 300 | 240 | 240 | 1 | 350 kcmil |
| | 350 | 260 | 260 | 1 | 500 kcmil |
| LG | 400 | 300 | 300 | 2 | #3/0 |
| | 400 | 300 | 240 | 2 | #3/0 |
| | 500 | 375 | 300 | 2 | 250 kcmil |
| | 600 | 420 | 336 | 2 | 350 kcmil |

| Breaker type | Maximum continuous ampere rating at 40°C (104°F)® | | | 75°C (167F) Copper cable per pole | |
|---------------|---------------------------------------------------|-----------|-------------------------|-----------------------------------|-----------|
| | 60HZ | | 400HZ | No of pieces | Wire size |
| | Open air | Open air® | Enclosed after derating | | |
| LG | 400 | 300 | 240 | 2 | #3/0 |
| | 500 | 375 | 300 | 2 | 250 kcmil |
| | 600 | 420 | 336 | 2 | 350 kcmil |
| | 600 | 430 | 360 | 2 | 350 kcmil |
| MG | 700 | 500 | 400 | 3 | 250 kcmil |
| | 800 | 560 | 448 | 3 | 300 kcmil |
| | 600 | 430 | 430 | 2 | 350 kcmil |
| MG 100% Rated | 700 | 500 | 500 | 3 | 250 kcmil |
| | 800 | 560 | 560 | 3 | 300 kcmil |
| | 800 | 560 | 448 | 3 | 300 kcmil |
| NG | 900 | 600 | 480 | 3 | 350 kcmil |
| | 1000 | 650 | 520 | 3 | 400 kcmil |
| | 1200 | 780 | 624 | 4 | 350 kcmil |
| | 900 | 600 | 600 | 3 | 350 kcmil |
| NG 100% Rated | 1000 | 650 | 650 | 3 | 400 kcmil |
| | 1200 | 780 | 780 | 4 | 350 kcmil |
| | 1200 | 780 | 624 | 4 | 400 kcmil |
| PG | 1400 | 850 | 680 | 4 | 500 kcmil |
| | 1600 | 960 | 768 | 5 | 500 kcmil |
| | 1200 | 780 | 780 | 4 | 400 kcmil |
| PG 100% Rated | 1400 | 850 | 850 | 4 | 500 kcmil |
| | 1600 | 960 | 960 | 5 | 500 kcmil |

® The information provided on this page is intended for reference and recommendation only. Because several variables can act on a circuit breaker's performance at the same time, the data above is based less on controlled testing, than on experience and engineering

judgment. Contact Siemens for further information on special conditions and treatment.

® Additional derating may be required if the ambient temperature is greater than 40°C (104°F).

® Calculated after derating to compensate for the heating of the copper conductor, caused by the skin effect generated by eddy currents produced at 400/415HZ.

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

The term "Series Connected Short Circuit Rating" refers to the application of series circuit breakers in a combination that allows downstream breakers to have lower individual interrupting ratings than the available fault current.

This is permitted as long as the series combination has been tested and certified by CSA.

The tables on these pages list specific main and branch breaker combinations that may be used for the short circuit interrupting ratings shown.

No substitutions are permitted. All combinations shown have been tested and are CSA Certified. This information is provided as a reference tool only.

240V Series Ratings

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|------------------|---------------------------------------------|-----------------------------------|-------------|-------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 22,000 | 70 125 100 | QPH,BQH,BLH 70(1P) 125(2P) 100(3P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | | 2 | 15-125 | 240 | | |
| | | | | 3 | 15-100 | 240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | | |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | | |
| | | | QAF,BAF | 2 | 15-20 | 120/240 | | |
| | | | QPH,BQH,BLH 125(2P) 100(3P) | QT | 1 | 15-50 | 120/240 | |
| | 125 | EQ967# (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | | QPF,BLF,SPF | 2 | 15-60 | 120/240 | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | | | 2 | 15-60 | 120/240 | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | | | QAF,BAF | 2 | 15-20 | 120/240 | | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | | |
| | | | 200 | EQ968# (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | | | 2 | 15-125 | 120/240 |
| | | | | | QT | 1,2 | 15-50 | 120/240 |
| | | | | | QPF,BQF,BLF | 1 | 15-30 | 120 |
| | | | | | QPF,BLF | 2 | 15-60 | 120/240 |
| | QE,BE,BLE | 1 | | | 15-30 | 120 | | |
| | | 2 | | | 15-60 | 120/240 | | |
| | QPF2,BLF2 | 1 | | | 15-30 | 120 | | |
| | QAF,BQAF,BAF | 1 | | | 15-20 | 120 | | |
| | QAF,BAF | 2 | | | 15-20 | 120/240 | | |
| | QAF2,BAF2 | 1 | | | 15-20 | 120 | | |
| | QFGA2,BFGA2 | 1 | | | 15-20 | 120 | | |
| | QNH,QNRH (2P) | QP,BQ,BL | | | 1 | 15-70 | 120/240 | |
| | | | | | 2 | 15-125 | 120/240 | |
| | | QT | | | 1,2 | 15-50 | 120/240 | |
| | | QPF,BQF,BLF | 1 | 15-30 | 120 | | | |
| | | QPF,BLF | 2 | 15-60 | 120/240 | | | |
| | | QE,BE,BLE | 1 | 15-30 | 120 | | | |
| | | | 2 | 15-60 | 120/240 | | | |
| | | QPF2,BLF2 | 1 | 15-30 | 120 | | | |
| QAF,BQAF,BAF | | 1 | 15-20 | 120 | | | | |
| QAF,BAF | | 2 | 15-20 | 120/240 | | | | |
| QAF2,BAF2 | | 1 | 15-20 | 120 | | | | |
| QFGA2,BFGA2 | | 1 | 15-20 | 120 | | | | |

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|--------------|--------------|----------------|--------------|--------------|---------|----------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 22,000 | 225 | QPPH (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | | | 2 | 15-60 | 120/240 | | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | | | QAF,BAF | 2 | 15-20 | 120/240 | | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | | |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 | | |
| | | | QPP | 2 | 125-200 | 120/240 | | |
| | | | EQ948# | 2 | 125-200 | 120/240 | | |
| | | | 250 | QJH2 (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | | | | 2 | 15-125 |
| | | | | | | 2 | 15-125 | 240 |
| | | | | | QT | 1,2 | 15,20,40 | 120/240 |
| | | | | | QPF,BQF,BLF | 1 | 15-30 | 120 |
| | | | | | QPF,BLF | 2 | 15-60 | 120/240 |
| | | | | | QE,BE,BLE | 1 | 15-30 | 120 |
| | | | | | | 2 | 15-60 | 120/240 |
| | | | | | QPF2,BLF2 | 1 | 15-30 | 120 |
| | | | | | QAF,BQAF,BAF | 1 | 15-20 | 120 |
| | | | 250 | QRH2 (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | 2 | | | | 15-125 | 120/240 | |
| | | 2 | | | 15-125 | 240 | | |
| | QT | 1,2 | | | 15-50 | 120/240 | | |
| | QPF,BQF,BLF | 1 | | | 15-30 | 120 | | |
| | 250 | QRH2 (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | | | 2 | 15-125 | 120/240 | |
| | | | | 2 | 15-125 | 240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | 250 | QRH2 (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | | | 2 | 15-125 | 120/240 | |
| | | | | 2 | 15-125 | 240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | 42,000 | 225 | QJ2H (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | | |
| QPH | | | | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| BQH,BLH | | | | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | | |
| EQ967# | | | 2 | 100-125 | 120/240 | | | |
| QJH2 | | | 2 | 60-225 | 240 | | | |
| QJ2H (3P) | | | QP,BQ,BL | 3 | 60-100 | 240 | | |
| | | | | QPH | 3 | 15-100 | 240 | |
| | BQH,BLH | 3 | | 15-100 | 240 | | | |
| | QJH2 | 3 | | 60-225 | 240 | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|------------------|------------------------------------------|---------------------|--------------------------------|----------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 65,000 | 70 | HQP,HBQ,HBL 70(1P) | QP,BQ,BL | 1 | 15-70 | 120/240 | |
| | | | QPH | 1 | 15-70 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | QT | 1 | 15-50 | 120/240 | |
| | 125 | HQP,HBQ,HBL 125(2P) | QP,BQ,BL | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| EQ967# | 2 | 100-125 | 120/240 | | | | |
| 100 | HQP,HBQ,HBL 100(3P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-100 | 120/240 | | |
| | | | 2 | 15-100 | 240 | | |
| | | QPH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-100 | 120/240 | | |
| | | | 3 | 15-100 | 240 | | |
| | | BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-100 | 120/240 | | |
| | | | 3 | 15-100 | 240 | | |
| | | 125 100 | HQP,HBQ,HBL 125(2P) 100(3P) | QT | 1,2 | 15-50 | 120/240 |
| | | | | QPF,BLF | 2 | 15-60 | 120/240 |
| | | | | QE,BLE | 2 | 15-60 | 120/240 |
| QPHF,BLHF | 2 | | | 15-60 | 120/240 | | |
| QEH,BLEH | 2 | | | 15-60 | 120/240 | | |
| 70 125 100 | HQP,HBQ,HBL 70(1P) 125(2P) 100(3P) | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | QPHF,BQHF | 1 | 15-30 | 120 | | |
| | | BLHF | 1 | 15-30 | 120 | | |
| | | QEH,BLEH | 1 | 15-30 | 120 | | |
| | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | QPHF2,BLHF2 | 1 | 15-30 | 120 | | |
| | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | | QAFH,BQAFH | 1 | 15-20 | 120 | | |
| | | BAFH | 1 | 15-20 | 120 | | |
| | | QAF2,BAF2 | 1 | 15-20 | 120 | | |
| | | QAFH2,BAFH2 | 1 | 15-20 | 120 | | |
| | | QFGA2,BFGA2 | 1 | 15-20 | 120 | | |
| | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | | |
| 100 | ED4 (1P) | QP,BQ,BL | 1 | 15-70 | 120 | | |
| | | QPH | 1 | 15-70 | 120 | | |
| | | BQH,BLH | 1 | 15-70 | 120 | | |
| | | QT | 1 | 15-50 | 120 | | |
| | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | QPHF,BQHF | 1 | 15-30 | 120 | | |
| | | BLHF | 1 | 15-30 | 120 | | |
| | | QEH,BLEH | 1 | 15-30 | 120 | | |
| | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | QPHF2,BLHF2 | 1 | 15-30 | 120 | | |
| | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | | QAFH,BQAFH | 1 | 15-20 | 120 | | |
| | | BAFH | 1 | 15-20 | 120 | | |
| | | QAF2,BAF2 | 1 | 15-20 | 120 | | |
| | | QAFH2,BAFH2 | 1 | 15-20 | 120 | | |
| | | QFGA2,BFGA2 | 1 | 15-20 | 120 | | |
| | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | | |
| | | ED2 | 1 | 15-100 | 120 | | |
| | | 125 | ED4,ED6 (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | | 2 | 15-125 | 240 |

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | | |
|---------------|--------------|-----------------|----------------|-------------------|-------------|---------|--------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | | |
| 65,000 | 125 | ED4,ED6 (2, 3P) | QPH | 1 | 15-70 | 120/240 | | | |
| | | | | 2 | 15-125 | 120/240 | | | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | | | |
| | | | | 2 | 15-125 | 120/240 | | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | | | |
| | | | QPHF,BQHF | 1 | 15-30 | 120 | | | |
| | | | QPHF,BLHF | 2 | 15-60 | 120/240 | | | |
| | | | BLHF | 1 | 15-30 | 120 | | | |
| | | | QEH,BLEH | 1 | 15-30 | 120 | | | |
| | | | | 2 | 15-60 | 120/240 | | | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | | | |
| | | | QPHF2,BLHF2 | 1 | 15-30 | 120 | | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | | |
| | | | QAFH,BQAFH | 1 | 15-20 | 120 | | | |
| | | | BAFH | 1 | 15-20 | 120 | | | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | | | |
| | | | QAFH2,BAFH2 | 1 | 15-20 | 120 | | | |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 | | | |
| | | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | | | |
| | | | ED2 | 1 | 15-100 | 120 | | | |
| | | | | 2 | 15-100 | 240 | | | |
| | | | 150 | ED4,ED6 (3P) | QP,BQ,BL | 3 | 15-100 | 240 | |
| | | | | | | QPH | 3 | 15-100 | 240 |
| | | | | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | | | | ED2 | 3 | 15-100 | 240 |
| | | | 150 | NDGA,NDGB (2, 3P) | QPH,BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | | | 2 | 15-125 | 120/240 | |
| | | | | NDGA,NDGB (3P) | QPH,BQH,BLH | 3 | 15-100 | 240 | |
| | | | 200 | HQN,HQNR (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 | |
| | | | | | | 2 | 15-125 | 120/240 | |
| | | | | | QPH,BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | | | 2 | 15-125 | 120/240 | |
| | | | | | QT | 1,2 | 15-50 | 120/240 | |
| | | | | | QPF,BQF,BLF | 1 | 15-30 | 120 | |
| | | | | | QPF,BLF | 2 | 15-60 | 120/240 | |
| | | | | | QE,BE,BLE | 1 | 15-30 | 120 | |
| | | | | | | 2 | 15-60 | 120/240 | |
| | | | | | QPHF,BQHF | 1 | 15-30 | 120 | |
| QPHF,BLHF | 2 | 15-60 | | | 120/240 | | | | |
| BLHF | 1 | 15-30 | | | 120 | | | | |
| QEH,BLEH | 1 | 15-30 | | | 120 | | | | |
| | 2 | 15-60 | | | 120/240 | | | | |
| QPF2,BLF2 | 1 | 15-30 | | | 120 | | | | |
| QPHF2,BLHF2 | 1 | 15-30 | | | 120 | | | | |
| QAF,BQAF,BAF | 1 | 15-20 | | | 120 | | | | |
| QAFH,BQAFH | 1 | 15-20 | | | 120 | | | | |
| BAFH | 1 | 15-20 | | | 120 | | | | |
| QAF2,BAF2 | 1 | 15-20 | | | 120 | | | | |
| QAFH2,BAFH2 | 1 | 15-20 | | | 120 | | | | |
| QFGA2,BFGA2 | 1 | 15-20 | | | 120 | | | | |
| QFGAH2,BFGAH2 | 1 | 15-20 | 120 | | | | | | |
| EQ967# | 2 | 100-125 | 120/240 | | | | | | |
| EQ968# | 2 | 150-200 | 120/240 | | | | | | |
| 225 | HQPP (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | | | |
| | | | 2 | 15-125 | 120/240 | | | | |
| | | QPH | 1 | 15-70 | 120/240 | | | | |
| | 2 | 15-125 | 120/240 | | | | | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|---------------|----------------|----------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 65,000 | 225 | HQPP (2P) | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QT | 1,2 | 15-50 | 120/240 | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | |
| | | | QPHF,BQHF | 1 | 15-30 | 120 | |
| | | | QPHF,BLHF | 2 | 15-60 | 120/240 | |
| | | | BLHF | 1 | 15-30 | 120 | |
| | | | QEH,BLEH | 1 | 15-30 | 120 | |
| | | | | 2 | 15-60 | 120/240 | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | |
| | | | QPHF2,BLHF2 | 1 | 15-30 | 120 | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | |
| | | | QAFH,BQAFH | 1 | 15-20 | 120 | |
| | | | BAFH | 1 | 15-20 | 120 | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | |
| | | | QAFH2,BAFH2 | 1 | 15-20 | 120 | |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 | |
| | | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | |
| | | | EQ967# | 2 | 100-125 | 120/240 | |
| | | | QPP | 2 | 125-200 | 120/240 | |
| | | | QPPH | 2 | 125-200 | 120/240 | |
| | | | EQ968# | 2 | 150-200 | 120/240 | |
| | | | EQ978# (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | QPH | 1 | 15-70 | 120/240 |
| | | 2 | | | 15-125 | 120/240 | |
| | | BQH,BLH | | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | QT | | 1,2 | 15-50 | 120/240 | |
| | | QPF,BQF,BLF | | 1 | 15-30 | 120 | |
| | | QPF,BLF | | 2 | 15-60 | 120/240 | |
| | | QE,BE,BLE | | 1 | 15-30 | 120 | |
| | | QE,BLE | | 2 | 15-60 | 120/240 | |
| | | QPHF,BQHF | | 1 | 15-30 | 120 | |
| | | QPHF,BLHF | | 2 | 15-60 | 120/240 | |
| | | BLHF | | 1 | 15-30 | 120 | |
| | | QEH,BLEH | | 1 | 15-30 | 120 | |
| | | | | 2 | 15-60 | 120/240 | |
| | | QPF2,BLF2 | | 1 | 15-30 | 120 | |
| | | QPHF2,BLHF2 | | 1 | 15-30 | 120 | |
| | | QAF,BQAF,BAF | | 1 | 15-20 | 120 | |
| | | QAFH,BQAFH | | 1 | 15-20 | 120 | |
| | | BAFH | | 1 | 15-20 | 120 | |
| | | QAF2,BAF2 | | 1 | 15-20 | 120 | |
| | | QAFH2,BAFH2 | | 1 | 15-20 | 120 | |
| | | QFGA2,BFGA2 | | 1 | 15-20 | 120 | |
| | | QFGAH2,BFGAH2 | | 1 | 15-20 | 120 | |
| | | EQ967# | | 2 | 100-125 | 120/240 | |
| | | QPP | | 2 | 125-200 | 120/240 | |
| | | QPPH | | 2 | 125-200 | 120/240 | |
| | | EQ968# | | 2 | 150-200 | 120/240 | |
| | | HQJ2 (3P) | | QP,BQ,BL | 1 | 15-70 | 120/240 |
| 2 | 15-125 | | | | 120/240 | | |
| 3 | 15-100 | | | | 240 | | |
| QPH,BQH,BLH | 1 | | 15-70 | 120/240 | | | |
| | 2 | | 15-125 | 120/240 | | | |
| | 3 | | 15-100 | 240 | | | |
| QT | 1,2 | | 15-50 | 120/240 | | | |
| QPF,BQF,BLF | 1 | | 15-30 | 120 | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|----------------------|----------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 65,000 | 225 | HQJ2 (3P) | QPF,BLF | 2 | 15-60 | 120/240 |
| | | | QE,BE,BLE | 1 | 15-30 | 120 |
| | | | QE,BLE | 2 | 15-60 | 120/240 |
| | | | | 1 | 15-30 | 120 |
| | | | QPHF,BLHF | 2 | 15-60 | 120/240 |
| | | | | 1 | 15-30 | 120 |
| | | | QEH,BLEH | 2 | 15-60 | 120/240 |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 |
| | | | QPHF2,BLHF2 | 1 | 15-30 | 120 |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 |
| | | | QAF,BAF | 2 | 15-20 | 120/240 |
| | | | QAFH,BQAFH | 1 | 15-20 | 120 |
| | | | QAFH,BAFH | 2 | 15-20 | 120/240 |
| | | | BAFH | 1 | 15-20 | 120 |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 |
| | | | QAFH2,BAFH2 | 1 | 15-20 | 120 |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 |
| | | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 |
| | | | | 1 | 15-70 | 120/240 |
| | | | QP,BQ,BL | 2 | 15-125 | 120/240 |
| | | | | 2 | 15-125 | 240 |
| | | | | 1 | 15-70 | 120 |
| | | | QPH,BQH,BLH | 2 | 15-125 | 120/240 |
| | | | | 2 | 15-125 | 240 |
| | | | QT | 1,2 | 15-50 | 120/240 |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 |
| | | | QPF,BLF | 2 | 15-60 | 120/240 |
| | | | QE,BE,BLE | 1 | 15-30 | 120 |
| | | QE,BLE | 2 | 15-60 | 120/240 | |
| | | QPHF,BQHF | 1 | 15-30 | 120 | |
| | | QPHF,BLHF | 2 | 15-60 | 120/240 | |
| | | BLHF | 1 | 15-30 | 120 | |
| | | QEH,BLEH | 1 | 15-30 | 120 | |
| | | | 2 | 15-60 | 120/240 | |
| | | QPF2,BLF2 | 1 | 15-30 | 120 | |
| | | QPHF2,BLHF2 | 1 | 15-30 | 120 | |
| | | QAF,BQAF,BAF | 1 | 15-20 | 120 | |
| | | QAF,BAF | 2 | 15-20 | 120/240 | |
| | | QAFH,BQAFH | 1 | 15-20 | 120 | |
| | | QAFH,BAFH | 2 | 15-20 | 120/240 | |
| | | BAFH | 1 | 15-20 | 120 | |
| | | QAF2,BAF2 | 1 | 15-20 | 120 | |
| | | QAFH2,BAFH2 | 1 | 15-20 | 120 | |
| | | QFGA2,BFGA2 | 1 | 15-20 | 120 | |
| | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | |
| | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | HQR2 (3P) | QP,BQ,BL | 3 | 15-100 | 240 |
| | | | QPH,BQH,BLH | 3 | 15-100 | 240 |
| | | | QR2,QRH2 | 3 | 100-250 | 240 |
| | | NFGA,NFGB (2, 3P) | 1 | 15-70 | 120/240 | |
| | | | 2 | 15-125 | 120/240 | |
| | | NFGA,NFGB (3P) | 3 | 15-100 | 240 | |
| | | FD6-A,FXD6-A (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | QPH | 1 | 15-70 | 120/240 |
| | 2 | | 15-125 | 120/240 | | |
| BQH,BLH | 1 | | 15-70 | 120/240 | | |
| | 2 | | 15-125 | 120/240 | | |
| QPPH | 2 | | 125-225 | 120/240 | | |
| QJ2 | 2 | | 60-225 | 240 | | |
| QJH2 | 2 | 60-225 | 240 | | | |
| QJ2H | 2 | 60-225 | 240 | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|----------------------|----------------------|-------------------|-------------------|----------|-------------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 250 | FD6-A,FXD6-A (2, 3P) | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | QP,BQ,BL | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QPPH | 2 | 125-225 | 120/240 | |
| | | | QJ2 | 2 | 60-225 | 240 | |
| | | | QJH2 | 2 | 60-225 | 240 | |
| | | | QJ2H | 2 | 60-225 | 240 | |
| | | | FD6-A,FXD6-A (3P) | QP,BQ,BL | 3 | 15-100 | 240 |
| | | | | QPH | 3 | 15-100 | 240 |
| | | | | BQH,BLH | 3 | 15-100 | 240 |
| | QJ2 | 3 | | 60-225 | 240 | | |
| | QJH2 | 3 | | 60-225 | 240 | | |
| | QJ2H | 3 | | 60-225 | 240 | | |
| | QR2,QRH2 | 3 | | 100-250 | 240 | | |
| | QP,BQ,BL | 3 | | 15-100 | 240 | | |
| | QPH | 3 | | 15-100 | 240 | | |
| | BQH,BLH | 3 | | 15-100 | 240 | | |
| | QJ2 | 3 | | 60-225 | 240 | | |
| | QJH2 | 3 | | 60-225 | 240 | | |
| | QJ2H | 3 | | 60-225 | 240 | | |
| | 65,000 | NJGA,NJJA (2, 3P) | | | QPH,BQH,BLH | 1 | 15-70 |
| | | | 2 | | 15-125 | 120/240 | |
| | | | QN,QNH | | 2 | 150-200 | 120/240 |
| | | | QNR,QNRH | | 2 | 150-200 | 120/240 |
| NJGA,NJJA (3P) | | | QPH,BQH,BLH | 3 | 15-100 | 240 | |
| | | | QR2,QRH2 | 3 | 100-250 | 240 | |
| JXD2-A (2, 3P) | | | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 | |
| | | | QJH2 | 2 | 60-225 | 240 | |
| | | | QJ2H | 2 | 60-225 | 240 | |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | JXD2-A (3P) | | QPH | 3 | 15-100 |
| BQH,BLH | | 3 | | | 15-100 | 240 | |
| QJH2 | | 3 | | | 60-225 | 240 | |
| QJ2H | | 3 | | | 60-225 | 240 | |
| JXD2 (2, 3P) | | | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 | |
| | | | QJH2 | 2 | 60-225 | 240 | |
| | | | QJ2H | 2 | 60-225 | 240 | |
| | | | JXD2 (3P) | | QR2,QRH2 | 3 | 100-250 |
| | QPH | | | | 3 | 15-100 | 240 |
| BQH,BLH | 3 | 15-100 | | | 240 | | |
| QJH2 | 3 | 60-225 | | | 240 | | |
| JXD2 (3P) | | | QJ2H | 3 | 60-225 | 240 | |
| | | | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| 2 | 15-125 | 120/240 | | | | | |
| JD6-A,JXD6-A (2, 3P) | | QPH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | |
| | | BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | |
| | | QN,QNH | 2 | 150-200 | 120/240 | | |
| | | QNR,QNRH | 2 | 150-200 | 120/240 | | |

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|----------------------|----------------|-------------------|----------|-------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 400 | JD6-A,JXD6-A (2, 3P) | | QJH2 | 2 | 60-225 | 240 | | |
| | | | QJ2H | 2 | 60-225 | 240 | | |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | | |
| | | | QPH | 3 | 15-100 | 240 | | |
| | | | | 3 | 15-100 | 240 | | |
| | | | BQH,BLH | 3 | 15-100 | 240 | | |
| | | | | 3 | 60-225 | 240 | | |
| | | | QJ2H | 3 | 60-225 | 240 | | |
| | | | JD6-A,JXD6-A (3P) | | QR2,QRH2 | 3 | 100-250 | 240 |
| | | | | | | 3 | 100-250 | 240 |
| | | | | | QPH | 1 | 15-70 | 120/240 |
| | | | | | | 2 | 15-125 | 120/240 |
| | BQH,BLH | 1 | | | 15-70 | 120/240 | | |
| | | 2 | | | 15-125 | 120/240 | | |
| | JD6,JXD6 (2, 3P) | | QPH | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | JD6,JXD6 (3P) | | QPH | 3 | 15-100 | 240 | | |
| | | | | 3 | 15-100 | 240 | | |
| | | | BQH,BLH | 3 | 15-100 | 240 | | |
| | | | | 3 | 60-225 | 240 | | |
| | 400 | SJD6-A (3P) | | QPH | 1 | 15-70 | 120/240 | |
| | | | | | 2 | 15-125 | 120/240 | |
| | | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | | 2 | 15-125 | 120/240 | |
| | | | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | | | 3 | 100-250 | 240 | |
| | | SJD6 (3P) | | QPH | 1 | 15-70 | 120/240 | |
| | | | | | 2 | 15-125 | 120/240 | |
| | | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | 2 | 15-125 | | 120/240 | | | |
| | | HJD6-A (2, 3P) | | QPH | 1 | 15-70 | 120/240 | |
| | | | | | 2 | 15-125 | 120/240 | |
| | QR2,QRH2 | | | 2 | 100-250 | 240 | | |
| | | | | 2 | 100-250 | 240 | | |
| | HJD6-A (3P) | | QPH | 3 | 15-100 | 240 | | |
| | | | | 3 | 15-100 | 240 | | |
| | HJXD6-A (2, 3P) | | QPH | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| HJXD6-A (3P) | | QPH | 3 | 15-100 | 240 | | | |
| | | | 3 | 15-100 | 240 | | | |
| 600 | NLGA (2, 3P) | | QPH,BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | | |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 | | |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | | |
| | | | QPH,BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | | |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 | | |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | | |
| | | | NLGA (3P) | | QPH,BQH,BLH | 3 | 15-100 | 240 |
| | | | | | | 3 | 100-250 | 240 |
| | LD6-A (2, 3P) | | QPH | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | | |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|----------------|----------------|----------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 65,000 | 600 | LD6-A (3P) | QPH | 3 | 15-100 | 240 |
| | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | QJH2 | 3 | 60-225 | 240 |
| | | | QJ2H | 3 | 60-225 | 240 |
| | | LD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | QN,QNH | 2 | 150-200 | 120/240 |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 |
| | | | QJH2 | 2 | 60-225 | 240 |
| | | | QJ2H | 2 | 60-225 | 240 |
| | | LD6 (3P) | QPH | 3 | 15-100 | 240 |
| | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | QJH2 | 3 | 60-225 | 240 |
| | | | QJ2H | 3 | 60-225 | 240 |
| | | LXD6-A (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | QN,QNH | 2 | 150-200 | 120/240 |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 |
| | | | QJH2 | 2 | 60-225 | 240 |
| | | | QJ2H | 2 | 60-225 | 240 |
| | | | QR2,QRH2 | 2 | 100-250 | 240 |
| | | | LXD6-A (3P) | QPH | 3 | 15-100 |
| | | BQH,BLH | | 3 | 15-100 | 240 |
| | | QJH2 | | 3 | 60-225 | 240 |
| | | QJ2H | | 3 | 60-225 | 240 |
| | | QR2,QRH2 | | 3 | 100-250 | 240 |
| | | QPH | | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | BQH,BLH | | 1 | 15-70 | 120/240 |
| | | | 2 | 15-125 | 120/240 | |
| | | LXD6 (2, 3P) | QN,QNH | 2 | 150-200 | 120/240 |
| | | | QNR,QNRH | 2 | 150-200 | 120/240 |
| | | | QJH2 | 2 | 60-225 | 240 |
| | | | QJ2H | 2 | 60-225 | 240 |
| | | LXD6 (3P) | QPH | 3 | 15-100 | 240 |
| | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | QJH2 | 3 | 60-225 | 240 |
| | | | QJ2H | 3 | 60-225 | 240 |
| | | SLD6-A (3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | | 3 | 15-100 | 240 |
| | | | BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | | 3 | 15-100 | 240 |
| | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | 3 | 100-250 | 240 | |
| | | | SLD6 (3P) | QPH | 1 | 15-70 |
| | | 2 | | | 15-125 | 120/240 |
| | | 3 | | | 15-100 | 240 |
| | | BQH,BLH | | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | | 3 | 15-100 | 240 |
| | | HLD6-A (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | QR2,QRH2 | 2 | 100-250 | 240 |
| | | | QPH | 3 | 15-100 | 240 |
| | | | | QR2,QRH2 | 3 | 100-250 |
| | | HLD6-A (3P) | QPH | 3 | 15-100 | 240 |
| | | | QR2,QRH2 | 3 | 100-250 | 240 |
| | | HLD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|--------------------|----------------------|-------------|----------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 65,000 | 800 | HLD6 (3P) | QPH | 3 | 15-100 | 240 | |
| | | | | 1 | 15-70 | 120/240 | |
| | | | HLXD6-A (2, 3P) | QPH | 2 | 15-125 | 120/240 |
| | | | | | QR2,QRH2 | 2 | 100-250 |
| | | | HLXD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | HLXD6-A (3P) | QPH | 3 | 15-100 | 240 |
| | | | | | QR2,QRH2 | 3 | 100-250 |
| | | | HLXD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | HLXD6 (3P) | QPH | 3 | 15-100 | 240 |
| | | | | | | | |
| | | LMD6,LMXD6 (2, 3P) | QPH,BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QPH,BQH,BLH | 3 | 15-100 | 240 | |
| | | | | | | | |
| | | | HLMD6,HLMXD6 (2, 3P) | QPH,BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | HLMD6,HLMXD6 (3P) | QPH,BQH,BLH | 3 | 15-100 | 240 |
| | | | | | | | |
| | | | NMG,HMG (2, 3P) | QPH,BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | QN,QNH | 2 | 150-200 | 120/240 |
| | | | | | QR2,QRH2 | 2 | 100-250 |
| | | NMG,HMG (3P) | | QPH,BQH,BLH | 3 | 15-100 | 240 |
| | | | | | QR2,QRH2 | 3 | 100-250 |
| | | MD6,MXD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | |
| | | | | QNR,QNRH | 2 | 150-200 | 120/240 |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | | | | | |
| | | MD6,MXD6 (3P) | QPH | 3 | 15-100 | 240 | |
| | | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | QR2,QRH2 | 3 | 100-250 | 240 | |
| | | | | | | | |
| | | SMD6 (3P) | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | | 3 | 15-100 | 240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | | 3 | 15-100 | 240 | |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | | 3 | 100-250 | 240 | |
| | | | | | | | |
| | | | HMD6,HMXD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | QR2,QRH2 | 2 | 100-250 | 240 |
| | | | | | | | |
| | | HMD6,HMXD6 (3P) | QPH | 3 | 15-100 | 240 | |
| | | | | QR2,QRH2 | 3 | 100-250 | 240 |
| | | NNG,HNG (2, 3P) | QPH,BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QN,QNH | 2 | 150-200 | 120/240 | |
| | | | | QNR,QNRH | 2 | 150-200 | 120/240 |
| | | | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | | | | | |
| | | | NNG,HNG (3P) | QPH,BQH,BLH | 3 | 15-100 | 240 |
| | | | | | QR2,QRH2 | 3 | 100-250 |
| | | | ND6,NXD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | QN,QNH | | 2 | 150-200 | 120/240 | |
| | | | | QNR,QNRH | 2 | 150-200 | 120/240 |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|-----------------|-----------------|--------------------|----------------|-------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 65,000 | 1200 | ND6,NXD6 (2, 3P) | QR2,QRH2 | 2 | 100-250 | 240 | |
| | | | QPH | 3 | 15-100 | 240 | |
| | | ND6,NXD6 (3P) | BQH,BLH | 3 | 15-100 | 240 | |
| | | | QR2,QRH2 | 3 | 100-250 | 240 | |
| | | SND6 (3P) | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | | 3 | 15-100 | 240 | |
| | | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | | 3 | 15-100 | 240 | |
| | | QR2,QRH2 | 2 | 100-250 | 240 | | |
| | | | 3 | 100-250 | 240 | | |
| | | HND6,HNXD6 (2, 3P) | QPH | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | HND6,HNXD6 (3P) | QPH | 3 | 15-100 | 240 | |
| | | | | QR2,QRH2 | 3 | 100-250 | 240 |
| | | 1600 | NPG,HPG (3P) | QPH,BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | 3 | | | | 15-100 | 240 | |
| | QN,QNH | | | 2 | 150-200 | 120/240 | |
| | | | | 2 | 150-200 | 120/240 | |
| | | | | 2 | 100-250 | 240 | |
| | QR2,QRH2 | | 2 | 100-250 | 240 | | |
| | | | 3 | 100-250 | 240 | | |
| | | | PD6,PXD6 (3P) | QPH | 1 | 15-70 | 120/240 |
| | 2 | | | | 15-125 | 120/240 | |
| | 3 | | | | 15-100 | 240 | |
| | BQH,BLH | | | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | | 3 | 15-100 | 240 | |
| | QN,QNH | | 2 | 150-200 | 120/240 | | |
| | | | 2 | 150-200 | 120/240 | | |
| | | | 2 | 100-250 | 240 | | |
| | QR2,QRH2 | | 2 | 100-250 | 240 | | |
| | | 3 | 100-250 | 240 | | | |
| | | SPD6 (3P) | QPH | 1 | 15-70 | 120/240 | |
| | 2 | | | 15-125 | 120/240 | | |
| | 3 | | | 15-100 | 240 | | |
| | BQH,BLH | | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | |
| | | | 3 | 15-100 | 240 | | |
| | QR2,QRH2 | 2 | 100-250 | 240 | | | |
| 3 | | 100-250 | 240 | | | | |
| HPD6,HPXD6 (3P) | | QPH | 1 | 15-70 | 120/240 | | |
| | 2 | | 15-125 | 120/240 | | | |
| | QR2,QRH2 | 3 | 15-100 | 240 | | | |
| | | 2 | 100-250 | 240 | | | |
| 2000 | RD6,RXD6 (3P) | QPH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | |
| | | | 3 | 15-100 | 240 | | |
| | | BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | |
| | | | 3 | 15-100 | 240 | | |
| | QN,QNH | 2 | 150-200 | 120/240 | | | |
| | | 2 | 150-200 | 120/240 | | | |
| | QR2,QRH2 | 2 | 100-250 | 240 | | | |
| | | 3 | 100-250 | 240 | | | |
| | HRD6,HRXD6 (3P) | QPH | 1 | 15-70 | 120/240 | | |
| | | | 2 | 15-125 | 120/240 | | |
| | | QR2,QRH2 | 3 | 15-100 | 240 | | |
| | | | 2 | 100-250 | 240 | | |
| 100,000 | 100 | HED4 (1P) | ED2 | 1 | 15-100 | 120 | |

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|---------------|-------------------|------------------------|------------------------|--------------|---------|--------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 100,000 | 100 | HED4 (1P) | ED4 | 1 | 15-100 | 120 | | |
| | | | QP,BQ,BL | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QPH | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | BQH,BLH | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | HQP | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | HBO,HBL | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | |
| | | | | 3 | 15-100 | 240 | | |
| | | | NGB,HGB,LGB (3P) | NGB,HGB,LGB (3P) | QP,BQ,BL | 3 | 15-100 | 240 |
| | | | | | QPH | 3 | 15-100 | 240 |
| | | | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | | | HQP | 3 | 15-100 | 240 |
| | | | | | HBO,HBL | 3 | 15-100 | 240 |
| | | | | | QPF,BQF,BLF | 1 | 15-30 | 120 |
| | | | NGB,HGB,LGB (1, 2, 3P) | NGB,HGB,LGB (1, 2, 3P) | QPHF,BQHF | 1 | 15-30 | 120 |
| | | | | | BLHF | 1 | 15-30 | 120 |
| | | | | | QPF2,BLF2 | 1 | 15-30 | 120 |
| | | | | | QPHF2,BLHF2 | 1 | 15-30 | 120 |
| | | | | | HQPF2,HBLF2 | 1 | 15-30 | 120 |
| | | | | | QAF,BQAF,BAF | 1 | 15-20 | 120 |
| | | | | | QAFH,BOAFH | 1 | 15-20 | 120 |
| | | | | | BAFH | 1 | 15-20 | 120 |
| | | | | | QAF2,BAF2 | 1 | 15-20 | 120 |
| | | | | | QAFH2,BAFH2 | 1 | 15-20 | 120 |
| | | | | | HOAF2,HBAF2 | 1 | 15-20 | 120 |
| | QFGA2,BFGA2 | 1 | | | 15-20 | 120 | | |
| | QFGAH2,BFGAH2 | 1 | | | 15-20 | 120 | | |
| | HQFGA2,HBFGA2 | 1 | | | 15-20 | 120 | | |
| | 125 | HED4,HED6 (2, 3P) | | | QP,BQ,BL | 1 | 15-70 | 120 |
| | | | | | | 2 | 15-125 | 120/240 |
| | | | | | QPH | 1 | 15-70 | 120 |
| | | | 2 | 15-125 | | 120/240 | | |
| | | | BQH,BLH | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | HQP | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | HBO,HBL | 1 | 15-70 | 120 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | | |
| | | | QPHF,BQHF | 1 | 15-30 | 120 | | |
| | | | | 2 | 15-60 | 120/240 | | |
| | | | BLHF | 1 | 15-30 | 120 | | |
| | | | QEH,BLEH | 1 | 15-30 | 120 | | |
| | | | | 2 | 15-60 | 120/240 | | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | | QPHF2,BLHF2 | 1 | 15-30 | 120 | | |
| | | | HQPF2,HBLF2 | 1 | 15-30 | 120 | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| QAFH,BOAFH | 1 | 15-20 | 240 | | | | | |
| BAFH | 1 | 15-20 | 120 | | | | | |
| QAF2,BAF2 | 1 | 15-20 | 120 | | | | | |
| QAFH2,BAFH2 | 1 | 15-20 | 240 | | | | | |
| HOAF2,HBAF2 | 1 | 15-20 | 240 | | | | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|--------------|-------------------|----------------|-----------|----------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 100,000 | 125 | HED4,HED6 (2, 3P) | QFGA2,BFGA2 | 1 | 15-20 | 120 | | |
| | | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | | |
| | | | HQFGA2,HBFGA2 | 1 | 15-20 | 120 | | |
| | | | ED2 | 1 | 15-100 | 120 | | |
| | | | ED4 | 1 | 15-100 | 120 | | |
| | | | ED4,ED6 | 2 | 15-125 | 240 | | |
| | | HED4,HED6 (3P) | QPBO,BL | 3 | 15-100 | 240 | | |
| | | | QPH | 3 | 15-100 | 240 | | |
| | | | BQH,BLH | 3 | 15-100 | 240 | | |
| | | | HQP | 3 | 15-100 | 240 | | |
| | | | HBO,HBL | 3 | 15-100 | 240 | | |
| | | | ED2 | 3 | 15-100 | 240 | | |
| | | 150 | HDGA (2, 3P) | ED4,ED6 | 1 | 15-100 | 240 | |
| | | | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | | HDGA (3P) | ED4,ED6 | 3 | 15-125 | 240 | |
| | | | | NDGA,NDGB | 3 | 50-150 | 240 | |
| | | | 225 | HQP (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | | | 2 | 15-125 | 120/240 |
| | QPH | 1 | | | 15-70 | 120/240 | | |
| | | 2 | | | 15-125 | 120/240 | | |
| | BQH,BLH | 1 | | | 15-70 | 120/240 | | |
| | | 2 | | | 15-125 | 120/240 | | |
| | HQP | 1 | | | 15-70 | 120/240 | | |
| | | 2 | | | 15-125 | 120/240 | | |
| | HBO,HBL | 1 | | | 15-70 | 120/240 | | |
| | | 2 | | | 15-125 | 120/240 | | |
| | QT | 1,2 | | | 15-50 | 120/240 | | |
| | QPF,BQF,BLF | 1 | | | 15-30 | 120 | | |
| | QPF,BLF | 2 | | | 15-60 | 120/240 | | |
| | QE,BE,BLE | 1 | | | 15-30 | 120 | | |
| | QE,BLE | 2 | | | 15-60 | 120/240 | | |
| | HQP (3P) | QPHF,BQHF | | | 1 | 15-30 | 120 | |
| | | QPHF,BLHF | | | 2 | 15-60 | 120/240 | |
| | | BLHF | | | 1 | 15-30 | 120 | |
| | | QEH,BLEH | | 1 | 15-30 | 120 | | |
| | | | | 2 | 15-60 | 120/240 | | |
| QPF2,BLF2 | | 1 | | 15-30 | 120 | | | |
| QPHF2,BLHF2 | | 1 | | 15-30 | 120 | | | |
| HQPF2,HBLF2 | | 1 | | 15-30 | 120 | | | |
| QAF,BQAF,BAF | | 1 | | 15-20 | 120 | | | |
| QAFH,BQAFH | | 1 | | 15-20 | 120 | | | |
| BAFH | | 1 | | 15-20 | 120 | | | |
| QAF2,BAF2 | | 1 | | 15-20 | 120 | | | |
| QAFH2,BAFH2 | | 1 | | 15-20 | 120 | | | |
| HQAF2,HBAF2 | | 1 | | 15-20 | 120 | | | |
| QFGA2,BFGA2 | | 1 | | 15-20 | 120 | | | |
| QFGAH2,BFGAH2 | | 1 | | 15-20 | 120 | | | |
| HQFGA2,HBFGA2 | | 1 | | 15-20 | 120 | | | |
| QPP | | 2 | | 125-225 | 120/240 | | | |
| EQ948# | 2 | 125-225 | | 120/240 | | | | |
| QPPH | 2 | 125-225 | | 120/240 | | | | |
| EQ968# | 2 | 125-225 | | 120/240 | | | | |
| HQPP | 2 | 125-225 | 120/240 | | | | | |
| EQ978# | 2 | 125-225 | 120/240 | | | | | |
| EQ988# (2P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | | | |
| | | 2 | 15-125 | 120/240 | | | | |
| | QPH | 1 | 15-70 | 120/240 | | | | |
| | | 2 | 15-125 | 120/240 | | | | |
| | BQH,BLH | 1 | 15-70 | 120/240 | | | | |
| | | 2 | 15-125 | 120/240 | | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|-------------|----------------|--------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 100,000 | 225 | EQ988# (2P) | HQP | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | HBO,HBL | 1 | 15-70 | 120/240 | |
| | | | | 2 | 15-125 | 120/240 | |
| | | | QT | 1,2 | 15-50 | 120/240 | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | |
| | | | QPHF,BQHF | 1 | 15-30 | 120 | |
| | | | | 2 | 15-60 | 120/240 | |
| | | | BLHF | 1 | 15-30 | 120 | |
| | | | QEH,BLEH | 1 | 15-30 | 120 | |
| | | | | 2 | 15-60 | 120/240 | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | |
| | | | QPHF2,BLHF2 | 1 | 15-30 | 120 | |
| | | | HQPF2,HBLF2 | 1 | 15-30 | 120 | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | |
| | | | QAFH,BQAFH | 1 | 15-20 | 120 | |
| | | | BAFH | 1 | 15-20 | 120 | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | |
| | | | QAFH2,BAFH2 | 1 | 15-20 | 120 | |
| | | | HQAF2,HBAF2 | 1 | 15-20 | 120 | |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 | |
| | | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | |
| | | | HQFGA2,HBFGA2 | 1 | 15-20 | 120 | |
| | | | QPP | 2 | 125-225 | 120/240 | |
| | | | EQ948# | 2 | 125-225 | 120/240 | |
| | | | QPPH | 2 | 125-225 | 120/240 | |
| | | | EQ968# | 2 | 125-225 | 120/240 | |
| | | | HQPP | 2 | 125-225 | 120/240 | |
| | | | EQ978# | 2 | 125-225 | 120/240 | |
| | | | HQP (2P) | QP,BQ,BL | 1 | 15-25 | 120/240 |
| | | | | | 2 | 15-25 | 120/240 |
| | | | | | 2 | 35-125 | 120/240 |
| | | | | QPH,BQH,BLH | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | HQP,HBO,HBL | 1 | 15-70 | 120/240 |
| | | | | | 2 | 15-125 | 120/240 |
| | | | | QT | 1 | 15-50 | 120/240 |
| | | | | | 1 | 15-50 | 120/240 |
| | | | | QPF,BQF,BLF | 1 | 15-30 | 120 |
| | | | | QPF,BLF | 2 | 15-60 | 120/240 |
| | | | | QE,BE,BLE | 1 | 15-30 | 120 |
| | | | | QE,BLE | 2 | 15-60 | 120/240 |
| | | | | QPHF,BQHF | 1 | 15-30 | 120 |
| | | | | QPHF,BLHF | 2 | 15-60 | 120/240 |
| | | | | BLHF | 1 | 15-30 | 120 |
| | | | | QEH,BLEH | 1 | 15-30 | 120 |
| | | | | | 2 | 15-60 | 120/240 |
| | | | | QPF2,BLF2 | 1 | 15-30 | 120 |
| | | | | QPHF2,BLHF2 | 1 | 15-30 | 120 |
| | | | | HQPF2,HBLF2 | 1 | 15-30 | 120 |
| | | | | QAF,BQAF,BAF | 1 | 15-20 | 120 |
| QAFH,BQAFH | 1 | 15-20 | | 120 | | | |
| BAFH | 1 | 15-20 | | 120 | | | |
| QAF2,BAF2 | 1 | 15-20 | | 120 | | | |
| QAFH2,BAFH2 | 1 | 15-20 | | 120 | | | |
| HQAF2,HBAF2 | 1 | 15-20 | | 120 | | | |
| QFGA2,BFGA2 | 1 | 15-20 | | 120 | | | |
| QFGAH2,BFGAH2 | 1 | 15-20 | | 120 | | | |
| HQFGA2,HBFGA2 | 1 | 15-20 | | 120 | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|--------------|---------------|----------------|---------------|---------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 100,000 | 225 | HQJ2H (3P) | QP,BQ,BL | 3 | 15-100 | 240 | | |
| | | | QPH,BQH,BLH | 3 | 15-100 | 240 | | |
| | | | HQP,HBQ,HBL | 3 | 15-100 | 240 | | |
| | 250 | HQR2H (2, 3P) | QP,BQ,BL | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | QPH,BQH,BLH | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 120/240 | | |
| | | | HQP,HBQ,HBL | 1 | 15-70 | 120/240 | | |
| | | | | 2 | 15-125 | 240 | | |
| | | | QT | 1,2 | 15-50 | 120/240 | | |
| | | | QPF,BQF,BLF | 1 | 15-30 | 120 | | |
| | | | QPF,BLF | 2 | 15-60 | 120/240 | | |
| | | | QE,BE,BLE | 1 | 15-30 | 120 | | |
| | | | QE,BLE | 2 | 15-60 | 120/240 | | |
| | | | QPHF,BQHf | 1 | 15-30 | 120 | | |
| | | | QPHF,BLHF | 2 | 15-60 | 120/240 | | |
| | | | BLHF | 1 | 15-30 | 120 | | |
| | | | QEH,BLEH | 1 | 15-30 | 120 | | |
| | | | | 2 | 15-60 | 120/240 | | |
| | | | QPF2,BLF2 | 1 | 15-30 | 120 | | |
| | | | QPHF2,BLHF2 | 1 | 15-30 | 120 | | |
| | | | HQPF2,HBLF2 | 1 | 15-30 | 120 | | |
| | | | QAF,BQAF,BAF | 1 | 15-20 | 120 | | |
| | | | QAF,BAF | 2 | 15-20 | 120/240 | | |
| | | | QAFH,BQAFH | 1 | 15-20 | 120 | | |
| | | | QAFH,BAFH | 2 | 15-20 | 120/240 | | |
| | | | BAFH | 1 | 15-20 | 120 | | |
| | | | QAF2,BAF2 | 1 | 15-20 | 120 | | |
| | | | QAFH2,BAFH2 | 1 | 15-20 | 120 | | |
| | | | HQAF2,HBAF2 | 1 | 15-20 | 120 | | |
| | | | QFGA2,BFGA2 | 1 | 15-20 | 120 | | |
| | | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | | |
| | | | HQFGA2,HBFGA2 | 1 | 15-20 | 120 | | |
| | | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | | |
| | | | HQR2H (3P) | QP,BQ,BL | 3 | 15-100 | 240 | |
| | | | | QPH,BQH,BLH | 3 | 15-100 | 240 | |
| | | | | HQP,HBQ,HBL | 3 | 15-100 | 240 | |
| | | | HFGA (2, 3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 | |
| | | | | ED4,ED6 | 1 | 15-100 | 240 | |
| | | | | | 2 | 15-125 | 240 | |
| | | | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | | | NFGA,NFGB | 2 | 70-250 | 240 | |
| | | | | FD6-A,FXD6-A | 2 | 70-250 | 240 | |
| | | | | FD6,FXD6 | 2 | 70-250 | 240 | |
| | | | | HFGA (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | | 3 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | | 3 | 70-250 | 240 | |
| | | | HFGB (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | |
| | ED4,ED6 | 1 | | 15-100 | 240 | | | |
| | | 2 | | 15-125 | 240 | | | |
| | NDGA,NDGB | 2 | | 50-150 | 240 | | | |
| | NFGA,NFGB | 2 | | 70-250 | 240 | | | |
| | FD6-A,FXD6-A | 2 | | 70-250 | 240 | | | |
| | FD6,FXD6 | 2 | | 70-250 | 240 | | | |
| | HFGB (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 | | | |
| | | ED4,ED6 | 3 | 15-125 | 240 | | | |

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|--------------------|----------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 250 | HFGB (3P) | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | QP,BQ,BL | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | QPH | 1 | 15-70 | 120/240 | |
| | | | 2 | 15-125 | 120/240 | |
| | | BQH,BLH | 1 | 15-70 | 120/240 | |
| | | | 2 | 15-125 | 120/240 | |
| | | HQP | 1 | 15-70 | 120/240 | |
| | | | 2 | 15-125 | 120/240 | |
| | | HBQ,HBL | 1 | 15-70 | 120/240 | |
| | | | 2 | 15-125 | 120/240 | |
| | | QT | 1,2 | 15-50 | 120/240 | |
| | | QPF,BQF,BLF | 1 | 15-30 | 120 | |
| | | QPF,BLF | 2 | 15-60 | 120/240 | |
| | | QE,BE,BLE | 1 | 15-30 | 120 | |
| | | QE,BLE | 2 | 15-60 | 120/240 | |
| | | QPHF,BQHf | 1 | 15-30 | 120 | |
| | | QPHF,BLHF | 2 | 15-60 | 120/240 | |
| | | BLHF | 1 | 15-30 | 120 | |
| | | QEH,BLEH | 1 | 15-30 | 120 | |
| | | | 2 | 15-60 | 120/240 | |
| | | QPF2,BLF2 | 1 | 15-30 | 120 | |
| | | QPHF2,BLHF2 | 1 | 15-30 | 120 | |
| | | HQPF2,HBLF2 | 1 | 15-30 | 120 | |
| | | QAF,BQAF,BAF | 1 | 15-20 | 120 | |
| | | QAFH,BQAFH | 1 | 15-20 | 120 | |
| | | QAFH,BAFH | 1 | 15-20 | 120 | |
| | | BAFH | 1 | 15-20 | 120 | |
| | | QAF2,BAF2 | 1 | 15-20 | 120 | |
| | | QAFH2,BAFH2 | 1 | 15-20 | 120 | |
| | | HQAF2,HBAF2 | 1 | 15-20 | 120 | |
| | | QFGA2,BFGA2 | 1 | 15-20 | 120 | |
| | | QFGAH2,BFGAH2 | 1 | 15-20 | 120 | |
| | | HQFGA2,HBFGA2 | 1 | 15-20 | 120 | |
| | | QPP | 2 | 125-225 | 120/240 | |
| | | QPPH | 2 | 125-225 | 120/240 | |
| | | HQPP | 2 | 125-225 | 120/240 | |
| | | QJ2 | 2 | 60-225 | 240 | |
| | | QJH2 | 2 | 60-225 | 240 | |
| | | QJ2H | 2 | 60-225 | 240 | |
| | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | |
| | | ED4 | 1 | 15-100 | 120 | |
| | | ED4,ED6 | 2 | 15-125 | 240 | |
| | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | NFGA,NFGB | 2 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | 2 | 70-250 | 240 | |
| | | FD6,FXD6 | 2 | 70-250 | 240 | |
| | | HFD6,HFXD6 (2, 3P) | QP,BQ,BL | 3 | 15-100 | 240 |
| | | | QPH | 3 | 15-100 | 240 |
| | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | HQP | 3 | 15-100 | 240 |
| | | | HBQ,HBL | 3 | 15-100 | 240 |
| | | | QJ2 | 3 | 60-225 | 240 |
| | | | QJH2 | 3 | 60-225 | 240 |
| | | | QJ2H | 3 | 60-225 | 240 |
| | | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|--------------------|----------------|---------------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 400 | HJGA (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | ED4,ED6 | 1 | 15-100 | 240 |
| | | | | 2 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | | JD6,JXD6 | 2 | 200-400 | 240 |
| | | HJGA (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 |
| | | | JD6,JXD6 | 3 | 200-400 | 240 |
| | | | HJD6-A (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 |
| | | ED4 | | 1 | 15-100 | 120 |
| | | ED4,ED6 | | 2 | 15-125 | 240 |
| | | NDGA,NDGB | | 2 | 50-150 | 240 |
| | | NFGA,NFGB | | 2 | 70-250 | 240 |
| | | FD6-A,FXD6-A | | 2 | 70-250 | 240 |
| | | FD6,FXD6 | | 2 | 70-250 | 240 |
| | | NJGA,NJJA | | 2 | 200-400 | 240 |
| | | JXD2-A | | 2 | 200-400 | 240 |
| | | JD6-A,JXD6-A | | 2 | 200-400 | 240 |
| | | HJD6-A (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JXD2-A | 3 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 |
| | | | SJD6-A | 3 | 200-400 | 240 |
| | | HJXD6-A (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | ED4 | 1 | 15-100 | 120 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | JXD2-A | 2 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | HJXD6-A (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JXD2-A | 3 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 |
| | | | SJD6-A | 3 | 200-400 | 240 |
| | | HJD6,HJXD6 (2, 3P) | ED4 | 1 | 15-100 | 120 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|--------------------|----------------|---------------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 400 | HJD6,HJXD6 (2, 3P) | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | JXD2 | 2 | 200-400 | 240 |
| | | | JD6,JXD6 | 2 | 200-400 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | HJD6,HJXD6 (3P) | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JXD2 | 3 | 200-400 | 240 |
| | | | JD6,JXD6 | 3 | 200-400 | 240 |
| | | | SJD6 | 3 | 200-400 | 240 |
| | | | SHJD6-A (3P) | QR2,QRH2,HQR2 | 2 | 100-250 |
| | | ED4 | | 3 | 100-250 | 240 |
| | | ED4 | | 1 | 15-100 | 120 |
| | | ED4,ED6 | | 2 | 15-125 | 240 |
| | | | | 3 | 15-125 | 240 |
| | | NDGA,NDGB | | 2 | 50-150 | 240 |
| | | | | 3 | 50-150 | 240 |
| | | NFGA,NFGB | | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | FD6-A,FXD6-A | | 2 | 70-250 | 240 |
| | | SHJD6 (3P) | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | | JXD2-A | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | | SJD6-A | 3 | 200-400 | 240 |
| | | HLGA (2, 3P) | ED4 | 1 | 15-100 | 120 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | 2 | 200-400 | 240 |
| | | | JXD2 | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | HLGA (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | ED4,ED6 | 1 | 15-100 | 240 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | 2 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | JD6,JXD6 | 2 | 200-400 | 240 | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|--------------|----------------|---------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 100,000 | 600 | HLGA (2, 3P) | NLGA,NLGB | 2 | 400-600 | 240 | |
| | | | LD6,LD6-A | 2 | 200-600 | 240 | |
| | | | LXD6-A,LXD6 | 2 | 450-600 | 240 | |
| | | HLGA (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 | |
| | | | ED4,ED6 | 3 | 15-125 | 240 | |
| | | | NDGA,NDGB | 3 | 50-150 | 240 | |
| | | | NFGA,NFGB | 3 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 | |
| | | | FD6,FXD6 | 3 | 70-250 | 240 | |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | | 3 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | | JD6,JXD6 | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6,LD6-A | 3 | 200-600 | 240 | |
| | | | LXD6-A,LXD6 | 3 | 450-600 | 240 | |
| | | | HLGB (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | ED4,ED6 | 1 | 15-100 | 240 |
| | | ED4,ED6 | | 2 | 15-125 | 240 | |
| | | NDGA,NDGB | | 2 | 50-150 | 240 | |
| | | NFGA,NFGB | | 2 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | | 2 | 70-250 | 240 | |
| | | FD6,FXD6 | | 2 | 70-250 | 240 | |
| | | NJGA,NJJA | | 2 | 200-400 | 240 | |
| | | | | 2 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | | 2 | 200-400 | 240 | |
| | | JD6,JXD6 | | 2 | 200-400 | 240 | |
| | | NLGA,NLGB | | 2 | 400-600 | 240 | |
| | | LD6,LD6-A | | 2 | 200-600 | 240 | |
| | | LXD6-A,LXD6 | | 2 | 450-600 | 240 | |
| | | HLGB (3P) | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 | |
| | | | NDGA,NDGB | 3 | 50-150 | 240 | |
| | | | NFGA,NFGB | 3 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 | |
| | | | FD6,FXD6 | 3 | 70-250 | 240 | |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | | 3 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | | JD6,JXD6 | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6,LD6-A | 3 | 200-600 | 240 | |
| | | | LXD6-A,LXD6 | 3 | 450-600 | 240 | |
| | | | HLD6-A (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | ED4 | 1 | 15-100 | 120 |
| | | ED4,ED6 | | 2 | 15-125 | 240 | |
| | | NDGA,NDGB | | 2 | 50-150 | 240 | |
| | | NFGA,NFGB | | 2 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | | 2 | 70-250 | 240 | |
| | | FD6,FXD6 | | 2 | 70-250 | 240 | |
| | | NJGA,NJJA | | 2 | 200-400 | 240 | |
| | | JXD2 | | 2 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | | 2 | 200-400 | 240 | |
| | | NLGA,NLGB | | 2 | 400-600 | 240 | |
| | | LD6-A | | 2 | 200-600 | 240 | |
| | | LXD6-A | | 2 | 450-600 | 240 | |
| | | HLD6-A (3P) | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 | |
| | | | FD6,FXD6 | 3 | 70-250 | 240 | |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | JXD2-A | 3 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | | SJD6-A | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6-A | 3 | 200-600 | 240 | |
| | | | LXD6-A | 3 | 450-600 | 240 | |
| | | | ED4 | 1 | 15-100 | 120 | |
| | | | ED4,ED6 | 2 | 15-125 | 240 | |

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|--------------|-----------------|---------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 100,000 | 600 | HLD6-A (3P) | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | | SJD6-A | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6-A | 3 | 200-600 | 240 | |
| | | | LXD6-A | 3 | 450-600 | 240 | |
| | | | SLD6-A | 3 | 300-600 | 240 | |
| | | | ED4 | 1 | 15-100 | 120 | |
| | | | ED4,ED6 | 2 | 15-125 | 240 | |
| | | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | | NFGA,NFGB | 2 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 | |
| | | | FD6,FXD6 | 2 | 70-250 | 240 | |
| | | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | | JXD2 | 2 | 200-400 | 240 | |
| | | | JD6,JXD6 | 2 | 200-400 | 240 | |
| | | HLD6 (2, 3P) | NLGA,NLGB | 2 | 400-600 | 240 | |
| | | | LD6 | 2 | 200-600 | 240 | |
| | | | LXD6 | 2 | 450-600 | 240 | |
| | | | ED4,ED6 | 3 | 15-125 | 240 | |
| | | | NDGA,NDGB | 3 | 50-150 | 240 | |
| | | | NFGA,NFGB | 3 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 | |
| | | | FD6,FXD6 | 3 | 70-250 | 240 | |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | JXD2 | 3 | 200-400 | 240 | |
| | | | JD6,JXD6 | 3 | 200-400 | 240 | |
| | | | SJD6 | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6 | 3 | 200-600 | 240 | |
| | | | LXD6 | 3 | 450-600 | 240 | |
| | | SLD6 | 3 | 300-600 | 240 | | |
| | | HLD6 (3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | |
| | | | ED4 | 1 | 15-100 | 120 | |
| | | | ED4,ED6 | 2 | 15-125 | 240 | |
| | | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | | NFGA,NFGB | 2 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 | |
| | | | FD6,FXD6 | 2 | 70-250 | 240 | |
| | | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | | JXD2-A | 2 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 | |
| | | | NLGA,NLGB | 2 | 400-600 | 240 | |
| | | | LD6-A | 2 | 200-600 | 240 | |
| | | | LXD6-A | 2 | 450-600 | 240 | |
| | | | HLXD6-A (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | NDGA,NDGB | | 3 | 50-150 | 240 | |
| | | NFGA,NFGB | | 3 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | | 3 | 70-250 | 240 | |
| | | FD6,FXD6 | | 3 | 70-250 | 240 | |
| | | NJGA,NJJA | | 3 | 200-400 | 240 | |
| | | JXD2-A | | 3 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | | 3 | 200-400 | 240 | |
| | | SJD6-A | | 3 | 200-400 | 240 | |
| | | NLGA,NLGB | | 3 | 400-600 | 240 | |
| | | LD6-A | | 3 | 200-600 | 240 | |
| | | LXD6-A | | 3 | 450-600 | 240 | |
| | | HLXD6-A (3P) | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 | |
| | | | NFGA,NFGB | 3 | 70-250 | 240 | |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 | |
| | | | FD6,FXD6 | 3 | 70-250 | 240 | |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | JXD2-A | 3 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | | SJD6-A | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6-A | 3 | 200-600 | 240 | |
| | | | LXD6-A | 3 | 450-600 | 240 | |
| | | | HLXD6 (2, 3P) | ED4 | 1 | 15-100 | 120 |
| | | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | NDGA,NDGB | | 2 | 50-150 | 240 | |
| | | NFGA,NFGB | | 2 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | | 2 | 70-250 | 240 | |
| | | FD6,FXD6 | | 2 | 70-250 | 240 | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|---------------|----------------|---------------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 600 | HLXD6 (2, 3P) | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | JXD2 | 2 | 200-400 | 240 |
| | | | JD6,JXD6 | 2 | 200-400 | 240 |
| | | | NLGA,NLGB | 2 | 400-600 | 240 |
| | | | LD6 | 2 | 200-600 | 240 |
| | | | LXD6 | 2 | 450-600 | 240 |
| | | HLXD6 (3P) | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JXD2 | 3 | 200-400 | 240 |
| | | | JD6,JXD6 | 3 | 200-400 | 240 |
| | | | SJD6 | 3 | 200-400 | 240 |
| | | | NLGA,NLGB | 3 | 400-600 | 240 |
| | | | LD6 | 3 | 200-600 | 240 |
| | | | LXD6 | 3 | 450-600 | 240 |
| | | | SLD6 | 3 | 300-600 | 240 |
| | | | SHLD6-A (3P) | QR2,QRH2,HQR2 | 2 | 100-250 |
| | | | | 3 | 100-250 | 240 |
| | | ED4 | | 1 | 15-100 | 120 |
| | | ED4,ED6 | | 2 | 15-125 | 240 |
| | | | | 3 | 15-125 | 240 |
| | | NDGA,NDGB | | 2 | 50-150 | 240 |
| | | | | 3 | 50-150 | 240 |
| | | NFGA,NFGB | | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | FD6-A,FXD6-A | | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | FD6,FXD6 | | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | NJGA,NJJA | | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | JXD2-A | | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | JD6-A,JXD6-A | | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | SJD6-A | | 3 | 200-400 | 240 |
| | | NLGA,NLGB | | 2 | 400-600 | 240 |
| | | | | 3 | 400-600 | 240 |
| | | LD6-A | 2 | 200-600 | 240 | |
| | | | 3 | 200-600 | 240 | |
| | | | 2 | 450-600 | 240 | |
| | | | 3 | 450-600 | 240 | |
| | | SLD6-A | 3 | 300-600 | 240 | |
| | | SHLD6 (3P) | ED4 | 1 | 15-100 | 120 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | 3 | | 70-250 | 240 | | |
| FD6,FXD6 | 2 | | 70-250 | 240 | | |
| | 3 | | 70-250 | 240 | | |
| NJGA,NJJA | 2 | | 200-400 | 240 | | |
| | 3 | | 200-400 | 240 | | |
| JXD2 | 2 | | 200-400 | 240 | | |
| | 3 | | 200-400 | 240 | | |
| JD6,JXD6 | 2 | | 200-400 | 240 | | |
| | 3 | 200-400 | 240 | | | |
| SJD6 | 3 | 200-400 | 240 | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|-----------------|---------------|--------------------|----------------|---------|---------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 600 | SHLD6 (3P) | NLGA,NLGB | 2 | 400-600 | 240 |
| | | | | 3 | 400-600 | 240 |
| | | | LD6 | 2 | 200-600 | 240 |
| | | | | 3 | 200-600 | 240 |
| | | | LXD6 | 2 | 450-600 | 240 |
| | | | | 3 | 450-600 | 240 |
| | | HMG (2, 3P) | SLD6 | 3 | 300-600 | 240 |
| | | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | ED4,ED6 | 1 | 15-100 | 240 |
| | | | | 2 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | 3 | 200-400 | 240 |
| | | JD6-A,JXD6-A | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | JD6,JXD6 | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | NLGA,NLGB | 2 | 400-600 | 240 | |
| | | | 3 | 400-600 | 240 | |
| | | LD6,LD6-A | 2 | 200-600 | 240 | |
| | | LXD6-A,LXD6 | 2 | 450-600 | 240 | |
| | | LMD6,LMXD6 | 2 | 600-800 | 240 | |
| | | NMG | 2 | 600-800 | 240 | |
| | | MD6,MXD6 | 2 | 400-800 | 240 | |
| | | HMG (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 |
| | | | JD6,JXD6 | 3 | 200-400 | 240 |
| | | | NLGA,NLGB | 3 | 400-600 | 240 |
| | | | LD6,LD6-A | 3 | 200-600 | 240 |
| | | | LXD6-A,LXD6 | 3 | 450-600 | 240 |
| | | | LMD6,LMXD6 | 3 | 600-800 | 240 |
| | | | NMG | 3 | 600-800 | 240 |
| | | MD6,MXD6 | 3 | 400-800 | 240 | |
| | | HMD6,HMXD6 (2, 3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | ED4 | 1 | 15-100 | 120 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | | 3 | 50-150 | 240 |
| NFGA,NFGB | 2 | | 70-250 | 240 | | |
| | 3 | | 70-250 | 240 | | |
| FD6-A,FXD6-A | 2 | | 70-250 | 240 | | |
| | 3 | | 70-250 | 240 | | |
| FD6,FXD6 | 2 | | 70-250 | 240 | | |
| | 3 | | 70-250 | 240 | | |
| NJGA,NJJA | 2 | | 200-400 | 240 | | |
| | 3 | | 200-400 | 240 | | |
| JXD2-A | 2 | 200-400 | 240 | | | |
| | 3 | 200-400 | 240 | | | |
| JD6-A,JXD6-A | 2 | 200-400 | 240 | | | |
| | 3 | 200-400 | 240 | | | |
| JD6,JXD6 | 2 | 200-400 | 240 | | | |
| | 3 | 200-400 | 240 | | | |
| NLGA,NLGB | 2 | 400-600 | 240 | | | |
| LD6-A | 2 | 200-600 | 240 | | | |
| LD6 | 2 | 200-600 | 240 | | | |
| LXD6-A | 2 | 450-600 | 240 | | | |
| LXD6 | 2 | 450-600 | 240 | | | |
| NMG | 2 | 500-800 | 240 | | | |
| MD6,MXD6 | 2 | 500-800 | 240 | | | |
| HMD6,HMXD6 (3P) | QR2,QRH2,HQR2 | 3 | 100-250 | 240 | | |
| | ED4,ED6 | 3 | 15-125 | 240 | | |
| | NDGA,NDGB | 3 | 50-150 | 240 | | |
| | NFGA,NFGB | 3 | 70-250 | 240 | | |
| | FD6-A,FXD6-A | 3 | 70-250 | 240 | | |
| | FD6,FXD6 | 3 | 70-250 | 240 | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|---------------|-----------------|----------------|---------------|----------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 100,000 | 800 | HMD6,HMXD6 (3P) | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | JXD2-A | 3 | 200-400 | 240 | |
| | | | JXD2 | 3 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | | JD6,JXD6 | 3 | 200-400 | 240 | |
| | | | SJD6-A | 3 | 200-400 | 240 | |
| | | | SJD6 | 3 | 200-400 | 240 | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | | LD6-A | 3 | 200-600 | 240 | |
| | | | LD6 | 3 | 200-600 | 240 | |
| | | | LXD6-A | 3 | 450-600 | 240 | |
| | | | LXD6 | 3 | 450-600 | 240 | |
| | | | SLD6-A | 3 | 300-600 | 240 | |
| | | | SLD6 | 3 | 300-600 | 240 | |
| | | | NMG | 3 | 500-800 | 240 | |
| | | | MD6,MXD6 | 3 | 500-800 | 240 | |
| | | | SMD6 | 3 | 500-800 | 240 | |
| | | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | |
| | | | ED4 | 1 | 15-100 | 120 | |
| | | | ED4,ED6 | 2 | 15-125 | 240 | |
| | | | ED6 | 3 | 15-125 | 240 | |
| | | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | | NLGA,NLGB | 3 | 50-150 | 240 | |
| | | | NFGA,NFGB | 2 | 70-250 | 240 | |
| | | | NFGB | 3 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | 2 | 70-250 | 240 | | |
| | | FD6,FXD6 | 2 | 70-250 | 240 | | |
| | | FD6 | 3 | 70-250 | 240 | | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | | |
| | | NJJA | 3 | 200-400 | 240 | | |
| | | JXD2-A | 2 | 200-400 | 240 | | |
| | | JXD2 | 3 | 200-400 | 240 | | |
| | | JXD2 | 2 | 200-400 | 240 | | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 240 | | |
| | | JD6-A | 3 | 200-400 | 240 | | |
| | | JD6,JXD6 | 2 | 200-400 | 240 | | |
| | | JD6 | 3 | 200-400 | 240 | | |
| | | SJD6-A | 3 | 200-400 | 240 | | |
| | | SJD6 | 3 | 200-400 | 240 | | |
| | | NLGA,NLGB | 2 | 400-600 | 240 | | |
| | | NLGB | 3 | 400-600 | 240 | | |
| | | LD6-A | 2 | 200-600 | 240 | | |
| | | LD6 | 3 | 200-600 | 240 | | |
| | | LD6 | 2 | 200-600 | 240 | | |
| | | LD6 | 3 | 200-600 | 240 | | |
| | | LXD6-A | 2 | 450-600 | 240 | | |
| | | LXD6 | 3 | 450-600 | 240 | | |
| | | LXD6 | 2 | 450-600 | 240 | | |
| | | LXD6 | 3 | 450-600 | 240 | | |
| | | SLD6-A | 3 | 300-600 | 240 | | |
| | SLD6 | 3 | 300-600 | 240 | | | |
| | NMG | 2 | 500-800 | 240 | | | |
| | NMG | 3 | 500-800 | 240 | | | |
| | MD6,MXD6 | 2 | 500-800 | 240 | | | |
| | MD6,MXD6 | 3 | 500-800 | 240 | | | |
| | SMD6 | 2 | 500-800 | 240 | | | |
| | SMD6 | 3 | 500-800 | 240 | | | |
| | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | | | |
| | ED4,ED6 | 1 | 15-100 | 120 | | | |
| | ED6 | 2 | 15-125 | 240 | | | |
| | 100,000 | 800 | SHMD6 (3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | ED4,ED6 | 1 | 15-100 | 120 |
| | | | | ED6 | 2 | 15-125 | 240 |
| | | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | | NLGA,NLGB | 3 | 50-150 | 240 |
| | | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | | NFGB | 3 | 70-250 | 240 |
| | | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | | FD6 | 3 | 70-250 | 240 |
| | | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | NJJA | 3 | 200-400 | 240 |
| | | | | JXD2-A | 2 | 200-400 | 240 |
| | | | | JXD2 | 3 | 200-400 | 240 |
| | | | | JXD2 | 2 | 200-400 | 240 |
| | | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | | | JD6-A | 3 | 200-400 | 240 |
| | | | | JD6,JXD6 | 2 | 200-400 | 240 |
| | | | | JD6 | 3 | 200-400 | 240 |
| | | | | SJD6-A | 3 | 200-400 | 240 |
| | | | | SJD6 | 3 | 200-400 | 240 |
| | | | | NLGA,NLGB | 2 | 400-600 | 240 |
| | | | | NLGB | 3 | 400-600 | 240 |
| | | | | LD6-A | 2 | 200-600 | 240 |
| | | | | LD6 | 3 | 200-600 | 240 |
| | | | LD6 | 2 | 200-600 | 240 | |
| | | | LD6 | 3 | 200-600 | 240 | |
| | | | LXD6-A | 2 | 450-600 | 240 | |
| | | | LXD6 | 3 | 450-600 | 240 | |
| | | | LXD6 | 2 | 450-600 | 240 | |
| | | | LXD6 | 3 | 450-600 | 240 | |
| | | | SLD6-A | 3 | 300-600 | 240 | |
| | | | SLD6 | 3 | 300-600 | 240 | |
| | | | NMG | 2 | 500-800 | 240 | |
| | | | NMG | 3 | 500-800 | 240 | |
| | | | MD6,MXD6 | 2 | 500-800 | 240 | |
| | | | MD6,MXD6 | 3 | 500-800 | 240 | |
| | | | SMD6 | 2 | 500-800 | 240 | |
| | | | SMD6 | 3 | 500-800 | 240 | |
| | | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | |
| ED4,ED6 | | | 1 | 15-100 | 120 | | |
| ED6 | | | 2 | 15-125 | 240 | | |
| 1200 | | | HNG (2, 3P) | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | | | JD6,JXD6 | 2 | 200-400 | 240 |
| | | | | NLGA,NLGB | 2 | 400-600 | 240 |
| | | LD6,LD6-A | | 2 | 200-600 | 240 | |
| | | LXD6-A,LXD6 | | 2 | 450-600 | 240 | |
| | | LMD6,LMXD6 | | 2 | 600-800 | 240 | |
| | | NMG | | 2 | 600-800 | 240 | |
| | | NNG | | 2 | 800-1200 | 240 | |
| | | ND6,NXD6 | | 2 | 600-1200 | 240 | |
| | | QR2,QRH2,HQR2 | | 3 | 100-250 | 240 | |
| | | ED4,ED6 | | 3 | 15-125 | 240 | |
| | | NDGA,NDGB | | 3 | 50-150 | 240 | |
| | | NFGA,NFGB | | 3 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | | 3 | 70-250 | 240 | |
| | | FD6,FXD6 | | 3 | 70-250 | 240 | |
| | | NJGA,NJJA | | 3 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | | 3 | 200-400 | 240 | |
| | | JD6,JXD6 | | 3 | 200-400 | 240 | |
| | | NLGA,NLGB | | 3 | 400-600 | 240 | |
| | | LD6,LD6-A | | 3 | 200-600 | 240 | |
| | | LXD6-A,LXD6 | 3 | 450-600 | 240 | | |
| | | LMD6,LMXD6 | 3 | 600-800 | 240 | | |
| | | NMG | 3 | 600-800 | 240 | | |
| | | NNG | 3 | 800-1200 | 240 | | |
| | | ND6,NXD6 | 3 | 600-1200 | 240 | | |
| | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | | |
| | | NDGA,NDGB | 2 | 50-150 | 240 | | |
| | | NFGA,NFGB | 2 | 70-250 | 240 | | |
| | | FD6-A,FXD6-A | 2 | 70-250 | 240 | | |
| | | FD6,FXD6 | 2 | 70-250 | 240 | | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | | |
| | | JXD2-A | 2 | 200-400 | 240 | | |
| | | JXD2 | 2 | 200-400 | 240 | | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 240 | | |
| | | JD6,JXD6 | 2 | 200-400 | 240 | | |
| | | NLGA,NLGB | 2 | 400-600 | 240 | | |
| | | LD6-A | 2 | 200-600 | 240 | | |
| | | LD6 | 2 | 200-600 | 240 | | |
| | | LXD6-A | 2 | 450-600 | 240 | | |
| | | LXD6 | 2 | 450-600 | 240 | | |
| | | NMG | 2 | 500-800 | 240 | | |
| | | MD6,MXD6 | 2 | 500-800 | 240 | | |
| | | NNG | 2 | 800-1200 | 240 | | |
| | | ND6,NXD6 | 2 | 500-1200 | 240 | | |
| | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 | | |
| NDGA,NDGB | | 3 | 50-150 | 240 | | | |
| NFGA,NFGB | | 3 | 70-250 | 240 | | | |
| FD6-A,FXD6-A | | 3 | 70-250 | 240 | | | |
| FD6,FXD6 | | 3 | 70-250 | 240 | | | |
| NJGA,NJJA | | 3 | 200-400 | 240 | | | |
| JXD2-A | | 3 | 200-400 | 240 | | | |
| JXD2 | | 3 | 200-400 | 240 | | | |
| JD6-A,JXD6-A | | 3 | 200-400 | 240 | | | |
| JD6,JXD6 | 3 | 200-400 | 240 | | | | |
| SJD6-A | 3 | 200-400 | 240 | | | | |
| SJD6 | 3 | 200-400 | 240 | | | | |
| NLGA,NLGB | 3 | 400-600 | 240 | | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|---------------|----------------|----------|----------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 1200 | HNG (2, 3P) | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 |
| | | | FD6,FXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 |
| | | | JD6,JXD6 | 2 | 200-400 | 240 |
| | | | NLGA,NLGB | 2 | 400-600 | 240 |
| | | | LD6,LD6-A | 2 | 200-600 | 240 |
| | | | LXD6-A,LXD6 | 2 | 450-600 | 240 |
| | | | LMD6,LMXD6 | 2 | 600-800 | 240 |
| | | | NMG | 2 | 600-800 | 240 |
| | | | NNG | 2 | 800-1200 | 240 |
| | | | ND6,NXD6 | 2 | 600-1200 | 240 |
| | | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 |
| | | | FD6,FXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 |
| | | | JD6,JXD6 | 3 | 200-400 | 240 |
| | | | NLGA,NLGB | 3 | 400-600 | 240 |
| | | | LD6,LD6-A | 3 | 200-600 | 240 |
| | | LXD6-A,LXD6 | 3 | 450-600 | 240 | |
| | | LMD6,LMXD6 | 3 | 600-800 | 240 | |
| | | NMG | 3 | 600-800 | 240 | |
| | | NNG | 3 | 800-1200 | 240 | |
| | | ND6,NXD6 | 3 | 600-1200 | 240 | |
| | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 | |
| | | NDGA,NDGB | 2 | 50-150 | 240 | |
| | | NFGA,NFGB | 2 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | 2 | 70-250 | 240 | |
| | | FD6,FXD6 | 2 | 70-250 | 240 | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | JXD2-A | 2 | 200-400 | 240 | |
| | | JXD2 | 2 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 240 | |
| | | JD6,JXD6 | 2 | 200-400 | 240 | |
| | | NLGA,NLGB | 2 | 400-600 | 240 | |
| | | LD6-A | 2 | 200-600 | 240 | |
| | | LD6 | 2 | 200-600 | 240 | |
| | | LXD6-A | 2 | 450-600 | 240 | |
| | | LXD6 | 2 | 450-600 | 240 | |
| | | NMG | 2 | 500-800 | 240 | |
| | | MD6,MXD6 | 2 | 500-800 | 240 | |
| | | NNG | 2 | 800-1200 | 240 | |
| | | ND6,NXD6 | 2 | 500-1200 | 240 | |
| | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 | |
| | NDGA,NDGB | 3 | 50-150 | 240 | | |
| | NFGA,NFGB | 3 | 70-250 | 240 | | |
| | FD6-A,FXD6-A | 3 | 70-250 | 240 | | |
| | FD6,FXD6 | 3 | 70-250 | 240 | | |
| | NJGA,NJJA | 3 | 200-400 | 240 | | |
| | JXD2-A | 3 | 200-400 | 240 | | |
| | JXD2 | 3 | 200-400 | 240 | | |
| | JD6-A,JXD6-A | 3 | 200-400 | 240 | | |
| | JD6,JXD6 | 3 | 200-400 | 240 | | |
| | SJD6-A | 3 | 200-400 | 240 | | |
| | SJD6 | 3 | 200-400 | 240 | | |
| | NLGA,NLGB | 3 | 400-600 | 240 | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|-----------------|----------------|---------|----------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 100,000 | 1200 | HND6,HNXD6 (3P) | LD6-A | 3 | 200-600 | 240 |
| | | | LD6 | 3 | 200-600 | 240 |
| | | | LXD6-A | 3 | 450-600 | 240 |
| | | | LXD6 | 3 | 450-600 | 240 |
| | | | SLD6-A | 3 | 300-600 | 240 |
| | | | SLD6 | 3 | 300-600 | 240 |
| | | | NMG | 3 | 500-800 | 240 |
| | | | MD6,MXD6 | 3 | 500-800 | 240 |
| | | | SMD6 | 3 | 500-800 | 240 |
| | | | NNG | 3 | 800-1200 | 240 |
| | | | ND6,NXD6 | 3 | 500-1200 | 240 |
| | | | SND6 | 3 | 500-1200 | 240 |
| | | | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | ED4 | 1 | 15-100 | 240 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | FD6-A,FXD6-A | 2 | 70-250 | 240 | |
| | | FD6-A,FXD6-A | 3 | 70-250 | 240 | |
| | | FD6,FXD6 | 2 | 70-250 | 240 | |
| | | FD6,FXD6 | 3 | 70-250 | 240 | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | JXD2-A | 2 | 200-400 | 240 | |
| | | JXD2-A | 3 | 200-400 | 240 | |
| | | JXD2 | 2 | 200-400 | 240 | |
| | | JXD2 | 3 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | 3 | 200-400 | 240 | |
| | | JD6,JXD6 | 2 | 200-400 | 240 | |
| | | JD6,JXD6 | 3 | 200-400 | 240 | |
| | | SJD6-A | 3 | 200-400 | 240 | |
| | | SJD6 | 3 | 200-400 | 240 | |
| | | NLGA,NLGB | 2 | 400-600 | 240 | |
| | | NLGA,NLGB | 3 | 400-600 | 240 | |
| | | LD6-A | 2 | 200-600 | 240 | |
| | | LD6-A | 3 | 200-600 | 240 | |
| | | LD6 | 2 | 200-600 | 240 | |
| | | LD6 | 3 | 200-600 | 240 | |
| | | LXD6-A | 2 | 450-600 | 240 | |
| | | LXD6-A | 3 | 450-600 | 240 | |
| | | LXD6 | 2 | 450-600 | 240 | |
| | | LXD6 | 3 | 450-600 | 240 | |
| | | SLD6-A | 3 | 300-600 | 240 | |
| | | SLD6 | 3 | 200-600 | 240 | |
| | | NMG | 2 | 500-800 | 240 | |
| | | NMG | 3 | 500-800 | 240 | |
| | MD6,MXD6 | 2 | 500-800 | 240 | | |
| | MD6,MXD6 | 3 | 500-800 | 240 | | |
| | SMD6 | 3 | 500-800 | 240 | | |
| | NNG | 2 | 800-1200 | 240 | | |
| | NNG | 3 | 800-1200 | 240 | | |
| | ND6,NXD6 | 2 | 500-1200 | 240 | | |
| | ND6,NXD6 | 3 | 500-1200 | 240 | | |
| | SND6 | 3 | 500-1200 | 240 | | |
| | 1600 | HPG (3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | ED4,ED6 | 1 | 15-100 | 240 |
| | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|--------------|----------|----------------|-----------------|---------------|-------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 100,000 | 1600 | HPG (3P) | NDGA,NDGB | 2 | 50-150 | 240 | | |
| | | | NDGA,NDGB | 3 | 50-150 | 240 | | |
| | | | NFGA,NFGB | 2 | 70-250 | 240 | | |
| | | | NFGA,NFGB | 3 | 70-250 | 240 | | |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 240 | | |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 240 | | |
| | | | FD6,FXD6 | 2 | 70-250 | 240 | | |
| | | | FD6,FXD6 | 3 | 70-250 | 240 | | |
| | | | NJGA,NJJA | 2 | 200-400 | 240 | | |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | | |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 | | |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 | | |
| | | | JD6,JXD6 | 2 | 200-400 | 240 | | |
| | | | JD6,JXD6 | 3 | 200-400 | 240 | | |
| | | | NLGA,NLGB | 2 | 400-600 | 240 | | |
| | | | NLGA,NLGB | 3 | 400-600 | 240 | | |
| | | | LD6,LD6-A | 2 | 200-600 | 240 | | |
| | | | LD6,LD6-A | 3 | 200-600 | 240 | | |
| | | | LXD6-A,LXD6 | 2 | 450-600 | 240 | | |
| | | | LXD6-A,LXD6 | 3 | 450-600 | 240 | | |
| | | | LMD6,LMXD6 | 2 | 600-800 | 240 | | |
| | | | LMD6,LMXD6 | 3 | 600-800 | 240 | | |
| | | | NMG | 2 | 600-800 | 240 | | |
| | | | NMG | 3 | 600-800 | 240 | | |
| | | | MD6,MXD6 | 2 | 400-800 | 240 | | |
| | | | MD6,MXD6 | 3 | 400-800 | 240 | | |
| | | | NNG | 2 | 800-1200 | 240 | | |
| | | | NNG | 3 | 800-1200 | 240 | | |
| | | | ND6,NXD6 | 2 | 600-1200 | 240 | | |
| | | | ND6,NXD6 | 3 | 600-1200 | 240 | | |
| | | | NPG | 2 | 1200-1600 | 240 | | |
| | | | NPG | 3 | 1200-1600 | 240 | | |
| | | | PD6,PXD6 | 2 | 1200-1600 | 240 | | |
| | | | PD6,PXD6 | 3 | 1200-1600 | 240 | | |
| | | | 1600 | HPD6,HPXD6 (3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | | QR2,QRH2,HQR2 | 3 | 100-250 | 240 |
| | | | | | ED4 | 1 | 15-100 | 120 |
| | | | | | ED4,ED6 | 2 | 15-125 | 240 |
| | | | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | | | NDGA,NDGB | 2 | 50-150 | 240 |
| | | | | | NDGA,NDGB | 3 | 50-150 | 240 |
| | | | | | NFGA,NFGB | 2 | 70-250 | 240 |
| | | | | | NFGA,NFGB | 3 | 70-250 | 240 |
| | | | | | FXD6-A,FD6-A | 2 | 70-250 | 240 |
| | | | | | FXD6-A,FD6-A | 3 | 70-250 | 240 |
| | | | | | FXD6,FD6 | 2 | 70-250 | 240 |
| | | | | | FXD6,FD6 | 3 | 70-250 | 240 |
| | | | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | | | JXD2-A | 2 | 200-400 | 240 |
| | JXD2-A | 3 | | | 200-400 | 240 | | |
| | JXD2 | 2 | | | 200-400 | 240 | | |
| | JXD2 | 3 | | | 200-400 | 240 | | |
| | JXD6-A,JD6-A | 2 | | | 200-400 | 240 | | |
| | JXD6-A,JD6-A | 3 | | | 200-400 | 240 | | |
| | JXD6,JD6 | 2 | | | 200-400 | 240 | | |
| | JXD6,JD6 | 3 | | | 200-400 | 240 | | |
| | SJD6-A | 3 | | | 200-400 | 240 | | |
| | SJD6 | 3 | | | 200-400 | 240 | | |
| | NLGA,NLGB | 2 | | | 400-600 | 240 | | |
| | NLGA,NLGB | 3 | | | 400-600 | 240 | | |
| | LD6-A | 2 | | | 200-600 | 240 | | |
| | LD6-A | 3 | | | 200-600 | 240 | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | | |
|---------------|--------------|-----------------|----------------|-------|------------|---------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | | |
| 100,000 | 1600 | HPD6,HPXD6 (3P) | LD6 | 2 | 200-600 | 240 | | | |
| | | | | 3 | 200-600 | 240 | | | |
| | | | LXD6-A | 2 | 450-600 | 240 | | | |
| | | | | 3 | 450-600 | 240 | | | |
| | | | LXD6 | 2 | 450-600 | 240 | | | |
| | | | | 3 | 450-600 | 240 | | | |
| | | | SLD6-A | 3 | 300-600 | 240 | | | |
| | | | SLD6 | 3 | 300-600 | 240 | | | |
| | | | NMG | 2 | 600-800 | 240 | | | |
| | | | | 3 | 600-800 | 240 | | | |
| | | | MD6,MXD6 | 2 | 500-800 | 240 | | | |
| | | | | 3 | 500-800 | 240 | | | |
| | | | SMD6 | 3 | 500-800 | 240 | | | |
| | | | NNG | 2 | 800-1200 | 240 | | | |
| | | | | 3 | 800-1200 | 240 | | | |
| | | | ND6,NXD6 | 2 | 500-1200 | 240 | | | |
| | | | | 3 | 500-1200 | 240 | | | |
| | | | SND6 | 3 | 500-1200 | 240 | | | |
| | | | NPG | 2 | 1200-1600 | 240 | | | |
| | | | | 3 | 1200-1600 | 240 | | | |
| | | | PD6,PXD6 | 2 | 1200-1600 | 240 | | | |
| | | | | 3 | 1200-1600 | 240 | | | |
| | | | SPD6 | 3 | 1400-1600 | 240 | | | |
| | | | | 1600 | SHPD6 (3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | | | 3 | 100-250 | 240 | |
| | | | ED4 | | | 1 | 15-100 | 120 | |
| | ED4,ED6 | 2 | 15-125 | | | 240 | | | |
| | | 3 | 15-125 | | | 240 | | | |
| | NDGA,NDGB | 2 | 50-150 | | | 240 | | | |
| | | 3 | 50-150 | | | 240 | | | |
| | NFGA,NFGB | 2 | 70-250 | | | 240 | | | |
| | | 3 | 70-250 | | | 240 | | | |
| | FXD6-A,FD6-A | 2 | 70-250 | | | 240 | | | |
| | | 3 | 70-250 | | | 240 | | | |
| | FXD6,FD6 | 2 | 70-250 | | | 240 | | | |
| | | 3 | 70-250 | | | 240 | | | |
| | NJGA,NJJA | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD2-A | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD2 | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD6-A,JD6-A | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD6,JD6 | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | SJD6-A | 3 | 200-400 | | | 240 | | | |
| | SJD6 | 3 | 200-400 | | | 240 | | | |
| | NLGA,NLGB | 2 | 400-600 | | | 240 | | | |
| | | 3 | 400-600 | 240 | | | | | |
| LD6-A | 2 | 200-600 | 240 | | | | | | |
| | 3 | 200-600 | 240 | | | | | | |
| LD6 | 2 | 200-600 | 240 | | | | | | |
| | 3 | 200-600 | 240 | | | | | | |
| LXD6-A | 2 | 450-600 | 240 | | | | | | |
| | 3 | 450-600 | 240 | | | | | | |
| LXD6 | 2 | 450-600 | 240 | | | | | | |
| | 3 | 450-600 | 240 | | | | | | |
| SLD6-A | 3 | 300-600 | 240 | | | | | | |
| SLD6 | 3 | 300-600 | 240 | | | | | | |
| NMG | 2 | 600-800 | 240 | | | | | | |
| | 3 | 600-800 | 240 | | | | | | |
| MD6,MXD6 | 2 | 500-800 | 240 | | | | | | |
| | 3 | 500-800 | 240 | | | | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | | | | |
|---------------|--------------|------------|----------------|-------|-----------------|---------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | | |
| 100,000 | 1600 | SHPD6 (3P) | SMD6 | 3 | 500-800 | 240 | | | |
| | | | NNG | 2 | 800-1200 | 240 | | | |
| | | | | 3 | 800-1200 | 240 | | | |
| | | | ND6,NXD6 | 2 | 500-1200 | 240 | | | |
| | | | | 3 | 500-1200 | 240 | | | |
| | | | SND6 | 3 | 500-1200 | 240 | | | |
| | | | NPG | 2 | 1200-1600 | 240 | | | |
| | | | | 3 | 1200-1600 | 240 | | | |
| | | | PD6,PXD6 | 2 | 1200-1600 | 240 | | | |
| | | | | 3 | 1200-1600 | 240 | | | |
| | | | SPD6 | 3 | 1400-1600 | 240 | | | |
| | | | | 2000 | HRD6,HRXD6 (3P) | QR2,QRH2,HQR2 | 2 | 100-250 | 240 |
| | | | | | | 3 | 100-250 | 240 | |
| | | | ED4 | | | 1 | 15-100 | 120 | |
| | | | ED4,ED6 | | | 2 | 15-125 | 240 | |
| | | | | | | 3 | 15-125 | 240 | |
| | | | NDGA,NDGB | | | 2 | 50-150 | 240 | |
| | | | | | | 3 | 50-150 | 240 | |
| | NFGA,NFGB | 2 | 70-250 | | | 240 | | | |
| | | 3 | 70-250 | | | 240 | | | |
| | FXD6-A,FD6-A | 2 | 70-250 | | | 240 | | | |
| | | 3 | 70-250 | | | 240 | | | |
| | FXD6,FD6 | 2 | 70-250 | | | 240 | | | |
| | | 3 | 70-250 | | | 240 | | | |
| | NJGA,NJJA | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD2-A | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD2 | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD6-A,JD6-A | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | JXD6,JD6 | 2 | 200-400 | | | 240 | | | |
| | | 3 | 200-400 | | | 240 | | | |
| | SJD6-A | 3 | 200-400 | | | 240 | | | |
| | SJD6 | 3 | 200-400 | | | 240 | | | |
| | NLGA,NLGB | 2 | 400-600 | | | 240 | | | |
| | | 3 | 400-600 | | | 240 | | | |
| | LD6-A | 2 | 200-600 | | | 240 | | | |
| | | 3 | 200-600 | | | 240 | | | |
| | LD6 | 2 | 200-600 | | | 240 | | | |
| | | 3 | 200-600 | | | 240 | | | |
| | LXD6-A | 2 | 450-600 | | | 240 | | | |
| | | 3 | 450-600 | 240 | | | | | |
| | LXD6 | 2 | 450-600 | 240 | | | | | |
| | | 3 | 450-600 | 240 | | | | | |
| | SLD6-A | 3 | 300-600 | 240 | | | | | |
| | SLD6 | 3 | 300-600 | 240 | | | | | |
| | NMG | 2 | 600-800 | 240 | | | | | |
| | | 3 | 600-800 | 240 | | | | | |
| MD6,MXD6 | 2 | 500-800 | 240 | | | | | | |
| | 3 | 500-800 | 240 | | | | | | |
| SMD6 | 3 | 500-800 | 240 | | | | | | |
| NNG | 2 | 800-1200 | 240 | | | | | | |
| | 3 | 800-1200 | 240 | | | | | | |
| ND6,NXD6 | 2 | 500-1200 | 240 | | | | | | |
| | 3 | 500-1200 | 240 | | | | | | |
| SND6 | 3 | 500-1200 | 240 | | | | | | |
| NPG | 2 | 1200-1600 | 240 | | | | | | |
| | 3 | 1200-1600 | 240 | | | | | | |
| PD6,PXD6 | 2 | 1200-1600 | 240 | | | | | | |
| | 3 | 1200-1600 | 240 | | | | | | |
| SPD6 | 3 | 1400-1600 | 240 | | | | | | |
| RD6,RXD6 | 2 | 1600-2000 | 240 | | | | | | |
| | 3 | 1600-2000 | 240 | | | | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|----------------|----------------|--------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 125 | CED6 (2, 3P) | Q, P, BQ, BL | 1 | 15-70 | 120/240 | |
| | | | 2 | 15-125 | 120/240 | |
| | | | 2 | 15-125 | 240 | |
| | | | QPH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | BQH, BLH | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | HQP | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | HBO, HBL | 1 | 15-70 | 120/240 |
| | | | | 2 | 15-125 | 120/240 |
| | | | QT | 1 | 15-50 | 120/240 |
| | | | QT | 1,2 | 15-50 | 120/240 |
| | | | QPF, BQF, BLF | 1 | 15-30 | 120 |
| | | | QPF, BLF | 2 | 15-60 | 120/240 |
| | | | QE, BE, BLE | 1 | 15-30 | 120 |
| | | | QE, BLE | 2 | 15-60 | 120/240 |
| | | | QPHF, BQHF | 1 | 15-30 | 120 |
| | | QPHF, BLHF | 2 | 15-60 | 120/240 | |
| | | BLHF | 1 | 15-30 | 120 | |
| | | QEH, BLEH | 1 | 15-30 | 120 | |
| | | QEH, BLEH | 2 | 15-60 | 120/240 | |
| | | QAF, BQAF, BAF | 1 | 15-20 | 120 | |
| | | QAFH, BQAFH | 1 | 15-20 | 120 | |
| | | BAFH | 1 | 15-20 | 120 | |
| | | QAF2, BAF2 | 1 | 15-20 | 120 | |
| | | QAFH2, BAFH2 | 1 | 15-20 | 120 | |
| | | HQAF2, HBAF2 | 1 | 15-20 | 120 | |
| | | QFGA2, BFGA2 | 1 | 15-20 | 120 | |
| | | QFGAH2, BFGAH2 | 1 | 15-20 | 120 | |
| | | HQFGA2, HBFGA2 | 1 | 15-20 | 120 | |
| | | ED4 | 1 | 15-100 | 120 | |
| | | ED4, ED6 | 2 | 15-125 | 240 | |
| | | HED4 | 1 | 15-100 | 120 | |
| | | HED4, HED6 | 2 | 15-125 | 240 | |
| | | CED6 (3P) | Q, P, BQ, BL | 3 | 15-100 | 240 |
| | | | QPH | 3 | 15-100 | 240 |
| | | | BQH, BLH | 3 | 15-100 | 240 |
| | | | HQP | 3 | 15-100 | 240 |
| | | | HBO, HBL | 3 | 15-100 | 240 |
| | | | ED4, ED6 | 3 | 15-125 | 240 |
| | | | HED4, HED6 | 3 | 15-125 | 240 |
| | | 150 | LDGA (2, 3P) | 1 | 15-125 | 120 |
| | | | | 2 | 15-125 | 240 |
| 2 | 50-150 | | | 240 | | |
| LDGA (3P) | 1 | | 15-125 | 240 | | |
| | 3 | | 15-125 | 240 | | |
| | 3 | | 50-150 | 240 | | |
| LDGB (2, 3P) | 1 | | 15-125 | 120 | | |
| | 2 | | 15-125 | 240 | | |
| | 2 | | 50-150 | 240 | | |
| LDGB (3P) | 1 | | 15-125 | 240 | | |
| | 3 | | 15-125 | 240 | | |
| | 3 | | 50-150 | 240 | | |
| 250 | LFGA (2, 3P) | 1 | 15-125 | 120 | | |
| | | 2 | 15-125 | 240 | | |
| | | 2 | 50-150 | 240 | | |
| | | 2 | 50-150 | 240 | | |
| | | 2 | 70-250 | 240 | | |
| | | 2 | 70-250 | 240 | | |
| | | 2 | 70-250 | 240 | | |
| | | 2 | 70-250 | 240 | | |
| | | 2 | 70-250 | 240 | | |
| | | 2 | 70-250 | 240 | | |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|----------------|--------------|------------------|----------------|--------------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 250 | LFGB (3P) | 1 | 15-125 | 120 | |
| | | | 2 | 15-125 | 240 | |
| | | | 3 | 15-125 | 240 | |
| | | | 3 | 50-150 | 240 | |
| | | | 3 | 50-150 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | LFGB (2, 3P) | 1 | 15-125 | 120 | |
| | | | 2 | 15-125 | 240 | |
| | | | 2 | 50-150 | 240 | |
| | | | 2 | 50-150 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | 2 | 70-250 | 240 | |
| | | | LFGB (3P) | 1 | 15-125 | 120 |
| | | 2 | | 15-125 | 240 | |
| | | 2 | | 50-150 | 240 | |
| | | 2 | | 50-150 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | 2 | | 70-250 | 240 | |
| | | CFD6(-A) (2, 3P) | | Q, P, BQ, BL | 1 | 15-70 |
| | | | 2 | 15-125 | 120/240 | |
| | | | QPH | 1 | 15-70 | 120/240 |
| | | | 2 | 15-125 | 120/240 | |
| | | | BQH, BLH | 1 | 15-70 | 120/240 |
| | | | 2 | 15-125 | 120/240 | |
| | | | HQP | 1 | 15-70 | 120/240 |
| | | | 2 | 15-125 | 120/240 | |
| | | | HBO, HBL | 1 | 15-70 | 120/240 |
| | | | 2 | 15-125 | 120/240 | |
| | | | Q, P, BQ, BL | 3 | 15-100 | 240 |
| QPH | 3 | | 15-100 | 240 | | |
| BQH, BLH | 3 | | 15-100 | 240 | | |
| HQP | 3 | | 15-100 | 240 | | |
| HBO, HBL | 3 | | 15-100 | 240 | | |
| ED4, ED6 | 3 | | 15-125 | 240 | | |
| HED4, HED6 | 3 | | 15-125 | 240 | | |
| QAF, BQAF, BAF | 1 | | 15-20 | 120 | | |
| QAFH, BQAFH | 1 | | 15-20 | 120 | | |
| BAFH | 1 | | 15-20 | 120 | | |
| QAF2, BAF2 | 1 | | 15-20 | 120 | | |
| QAFH2, BAFH2 | 1 | | 15-20 | 120 | | |
| HQAF2, HBAF2 | 1 | | 15-20 | 120 | | |
| QFGA2, BFGA2 | 1 | | 15-20 | 120 | | |
| QFGAH2, BFGAH2 | 1 | 15-20 | 120 | | | |
| HQFGA2, HBFGA2 | 1 | 15-20 | 120 | | | |
| OPP | 2 | 125-225 | 120/240 | | | |
| QPPH | 2 | 125-225 | 120/240 | | | |
| QJ2 | 2 | 60-225 | 240 | | | |
| QJH2 | 2 | 60-225 | 240 | | | |
| QJ2H | 2 | 60-225 | 240 | | | |
| ED2 | 1 | 15-100 | 120 | | | |
| ED2 | 2 | 15-100 | 240 | | | |
| ED4 | 1 | 15-100 | 120 | | | |
| ED4, ED6 | 2 | 15-125 | 240 | | | |
| HED4 | 1 | 15-100 | 120 | | | |
| HED4, HED6 | 2 | 15-125 | 240 | | | |
| NDGB, HDGB | 2 | 50-150 | 240 | | | |
| NDGA, HDGA | 2 | 50-150 | 240 | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|------------------|----------------|---------|--------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 250 | CFD6(-A) (2, 3P) | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 240 |
| | | | FXD6,FD6 | 2 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | CFD6(-A) (3P) | QPBO,BL | 3 | 15-100 | 240 |
| | | | QPH | 3 | 15-100 | 240 |
| | | | BQH,BLH | 3 | 15-100 | 240 |
| | | | HQP | 3 | 15-100 | 240 |
| | | | HBQ,HBL | 3 | 15-100 | 240 |
| | | | QJ2 | 3 | 60-225 | 240 |
| | | | QJH2 | 3 | 60-225 | 240 |
| | | | QJ2H | 3 | 60-225 | 240 |
| | | | ED2 | 3 | 15-100 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | HED4,HED6 | 3 | 15-125 | 240 |
| | | | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | NFGB,HFGB | 3 | 70-250 | 240 | |
| | FXD6-A,FD6-A | 3 | 70-250 | 240 | | |
| | FXD6,FD6 | 3 | 70-250 | 240 | | |
| | HFD6,HFXD6 | 3 | 70-250 | 240 | | |
| | LJGA (2, 3P) | 1 | 15-125 | 120 | | |
| | | 2 | 15-125 | 240 | | |
| | | NDGB,HDGB | 2 | 50-150 | 240 | |
| | | NDGA,HDGA | 2 | 50-150 | 240 | |
| | | NFGA,HFGA | 2 | 70-250 | 240 | |
| | | NFGB,HFGB | 2 | 70-250 | 240 | |
| | | HFD6,HFXD6 | 2 | 70-250 | 240 | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | HJGA | 2 | 200-400 | 240 | |
| | | LJGA (3P) | 3 | 15-125 | 240 | |
| | NDGB,HDGB | | 3 | 50-150 | 240 | |
| | NDGA,HDGA | | 3 | 50-150 | 240 | |
| | NFGA,HFGA | | 3 | 70-250 | 240 | |
| | NFGB,HFGB | | 3 | 70-250 | 240 | |
| | HFD6,HFXD6 | | 3 | 70-250 | 240 | |
| | NJGA,NJJA | | 3 | 200-400 | 240 | |
| | HJGA | 3 | 200-400 | 240 | | |
| | 400 | HHJD6 (2, 3P) | 2 | 50-150 | 240 | |
| | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| FXD6-A,FD6-A | | | 2 | 70-250 | 240 | |
| FXD6,FD6 | | 2 | 70-250 | 240 | | |
| HFXD6,HFD6 | | 2 | 70-250 | 240 | | |
| NJGA,NJJA | | 2 | 200-400 | 240 | | |
| HJGA | | 2 | 200-400 | 240 | | |
| HHJD6 (3P) | | 3 | 50-150 | 240 | | |
| | NDGA,HDGA | 3 | 50-150 | 240 | | |
| | NFGA,HFGA | 3 | 70-250 | 240 | | |
| | NFGB,HFGB | 3 | 70-250 | 240 | | |
| | FXD6-A,FD6-A | 3 | 70-250 | 240 | | |
| | FXD6,FD6 | 3 | 70-250 | 240 | | |
| | HFXD6,HFD6 | 3 | 70-250 | 240 | | |
| | NJGA,NJJA | 3 | 200-400 | 240 | | |
| HJGA | 3 | 200-400 | 240 | | | |
| HHJXD6(2, 3P) | 2 | 50-150 | 240 | | | |
| | NDGA,HDGA | 2 | 50-150 | 240 | | |
| | NFGA,HFGA | 2 | 70-250 | 240 | | |
| | NFGB,HFGB | 2 | 70-250 | 240 | | |
| | FXD6-A,FD6-A | 2 | 70-250 | 240 | | |

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|----------------------|-------------------------|---------------|----------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 400 | HHJXD6(2, 3P) | FXD6,FD6 | 2 | 70-250 | 240 |
| | | | HFXD6,HFD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | HJGA | 2 | 200-400 | 240 |
| | | | NDGB,HDGB | 3 | 50-150 | 240 |
| | | HHJXD6 (3P) | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 240 |
| | | | FXD6,FD6 | 3 | 70-250 | 240 |
| | | | HFXD6,HFD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | HJGA | 3 | 200-400 | 240 |
| | | | QPH | 2 | 100-125 | 120/240 |
| | | | BQH,BLH | 2 | 100-125 | 120/240 |
| | | HQP | 2 | 100-125 | 120/240 | |
| | | HBQ,HBL | 2 | 100-125 | 120/240 | |
| | | QT | 1,2 | 15-30 | 120/240 | |
| | | ED4,ED6 | 2 | 15-125 | 240 | |
| | | NDGB,HDGB | 2 | 50-150 | 240 | |
| | NDGA,HDGA | 2 | 50-150 | 240 | | |
| | NFGA,HFGA | 2 | 70-250 | 240 | | |
| | NFGB,HFGB | 2 | 70-250 | 240 | | |
| | FXD6-A,FD6-A | 2 | 70-250 | 240 | | |
| | FXD6,FD6 | 2 | 70-250 | 240 | | |
| | HFD6,HFXD6 | 2 | 70-250 | 240 | | |
| | CJD6(-A) (2, 3P) | 2 | 70-250 | 240 | | |
| | | 2 | 70-250 | 240 | | |
| | | NDGB,HDGB | 2 | 50-150 | 240 | |
| | | NDGA,HDGA | 2 | 50-150 | 240 | |
| | | NFGA,HFGA | 2 | 70-250 | 240 | |
| | | NFGB,HFGB | 2 | 70-250 | 240 | |
| | | FXD6-A,FD6-A | 2 | 70-250 | 240 | |
| | | FXD6,FD6 | 2 | 70-250 | 240 | |
| | | HFD6,HFXD6 | 2 | 70-250 | 240 | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | HJGA | 2 | 200-400 | 240 | | |
| | CJD6(-A) (3P) | 3 | 100 | 240 | | |
| | | 3 | 100 | 240 | | |
| | | HQP | 3 | 100 | 240 | |
| | | HBQ,HBL | 3 | 100 | 240 | |
| | | ED4,ED6 | 3 | 15-125 | 240 | |
| | | NDGB,HDGB | 3 | 50-150 | 240 | |
| | | NDGA,HDGA | 3 | 50-150 | 240 | |
| NFGA,HFGA | | 3 | 70-250 | 240 | | |
| NFGB,HFGB | | 3 | 70-250 | 240 | | |
| FXD6-A,FD6-A | | 3 | 70-250 | 240 | | |
| 600 | LLGA (2, 3P) | 1 | 15-125 | 120 | | |
| | | 2 | 15-125 | 240 | | |
| | | NDGB,HDGB | 2 | 50-150 | 240 | |
| | | NDGA,HDGA | 2 | 50-150 | 240 | |
| | | NFGA,HFGA | 2 | 70-250 | 240 | |
| | CJD6(-A),CJD6-A (2, 3P) | 1 | 15-125 | 120 | | |
| | | 2 | 15-125 | 240 | | |
| | | NFGA,HFGA | 3 | 70-250 | 240 | |
| | | NFGB,HFGB | 3 | 70-250 | 240 | |
| | | FXD6-A,FD6-A | 3 | 70-250 | 240 | |
| CJD6(-A),CJD6-A (3P) | 3 | 15-125 | 240 | | | |
| | 1 | 15-125 | 120 | | | |
| | 2 | 15-125 | 240 | | | |
| | NDGB,HDGB | 2 | 50-150 | 240 | | |
| | NDGA,HDGA | 2 | 50-150 | 240 | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|----------------|----------------|-------|---------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 600 | LLGA (2, 3P) | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | HJGA | 2 | 200-400 | 240 |
| | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | | NLGB,HLGB | 2 | 400-600 | 240 |
| | | LLGA (3P) | NGB,HGB,LGB | 3 | 15-125 | 240 |
| | | | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | HJGA | 3 | 200-400 | 240 |
| | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | | NLGB,HLGB | 3 | 400-600 | 240 |
| | | LLGB (2, 3P) | NGB,HGB,LGB | 1 | 15-125 | 120 |
| | | | | 2 | 15-125 | 240 |
| | | | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | HJGA | 2 | 200-400 | 240 |
| | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | LLGB (3P) | NGB,HGB,LGB | 3 | 15-125 | 240 |
| | | | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | HJGA | 3 | 200-400 | 240 |
| | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | | NLGB,HLGB | 3 | 400-600 | 240 |
| | | HHL6 (2, 3P) | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 240 |
| | | | FXD6,FD6 | 2 | 70-250 | 240 |
| | | | HFXD6,HFD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | HJGA | 2 | 200-400 | 240 |
| | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | HHL6 (3P) | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 240 |
| | | | FXD6,FD6 | 3 | 70-250 | 240 |
| | | | HFXD6,HFD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | HJGA | 3 | 200-400 | 240 |
| | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | HHLXD6 (2, 3P) | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|------------------|----------------|-----------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 200,000 | 600 | HHLXD6 (2, 3P) | NFGB,HFGB | 2 | 70-250 | 240 | |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 240 | |
| | | | FXD6,FD6 | 2 | 70-250 | 240 | |
| | | | HFXD6,HFD6 | 2 | 70-250 | 240 | |
| | | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | | HJGA | 2 | 200-400 | 240 | |
| | | | NLGA,HLGA | 2 | 400-600 | 240 | |
| | | | NLGB,HLGB | 2 | 400-600 | 240 | |
| | | | HHLXD6 (3P) | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | NFGA,HFGA | | 3 | 70-250 | 240 | |
| | | NFGB,HFGB | | 3 | 70-250 | 240 | |
| | | FXD6-A,FD6-A | | 3 | 70-250 | 240 | |
| | | FXD6,FD6 | | 3 | 70-250 | 240 | |
| | | HFXD6,HFD6 | | 3 | 70-250 | 240 | |
| | | NJGA,NJJA | | 3 | 200-400 | 240 | |
| | | HJGA | | 3 | 200-400 | 240 | |
| | | NLGA,HLGA | | 3 | 400-600 | 240 | |
| | | CLD6(-A) (2, 3P) | QPH | 2 | 100-125 | 120/240 | |
| | | | BQH,BLH | 2 | 100-125 | 120/240 | |
| | | | HQP | 2 | 100-125 | 120/240 | |
| | | | HBO,HBL | 2 | 100-125 | 120/240 | |
| | | | QT | 1,2 | 15-30 | 120/240 | |
| | | | NGB,HGB,LGB | 1 | 15-125 | 120 | |
| | | | | 2 | 15-125 | 240 | |
| | | | ED4,ED6 | 2 | 15-125 | 240 | |
| | | | NDGB,HDGB | 2 | 50-150 | 240 | |
| | | | NDGA,HDGA | 2 | 50-150 | 240 | |
| | | CLD6(-A) (3P) | NFGA,HFGA | 2 | 70-250 | 240 | |
| | | | NFGB,HFGB | 2 | 70-250 | 240 | |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 240 | |
| | | | FXD6,FD6 | 2 | 70-250 | 240 | |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 | |
| | | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | | HJGA | 2 | 200-400 | 240 | |
| | | | JXD2-A | 3 | 200-400 | 240 | |
| | | | JXD2 | 3 | 200-400 | 240 | |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 240 | |
| | | CLD6(-A) (3P) | JD6,JXD6 | 2 | 200-400 | 240 | |
| | | | HJD6-A | 2 | 200-400 | 240 | |
| | | | HJXD6-A | 2 | 200-400 | 240 | |
| | | | HJD6,HJXD6 | 2 | 200-400 | 240 | |
| | | | NLGA,HLGA | 2 | 400-600 | 240 | |
| | | | NLGB,HLGB | 2 | 400-600 | 240 | |
| | | | LD6-A | 2 | 200-600 | 240 | |
| | | | LD6 | 2 | 200-600 | 240 | |
| | | | LXD6-A | 2 | 450-600 | 240 | |
| | | | LXD6 | 2 | 450-600 | 240 | |
| | | CLD6(-A) (3P) | HLD6-A | 2 | 200-600 | 240 | |
| | | | HLD6 | 2 | 200-600 | 240 | |
| | | | HLXD6-A | 2 | 450-600 | 240 | |
| | | | HLXD6 | 2 | 450-600 | 240 | |
| | | | QPH | 3 | 100 | 240 | |
| | | | BQH,BLH | 3 | 100 | 240 | |
| | | | HQP | 3 | 100 | 240 | |
| | | | HBO,HBL | 3 | 100 | 240 | |
| | | | NGB,HGB,LGB | 3 | 15-125 | 240 | |
| | | | ED4,ED6 | 3 | 15-125 | 240 | |
| | | CLD6(-A) (3P) | NDGB,HDGB | 3 | 50-150 | 240 | |
| | | | NDGA,HDGA | 3 | 50-150 | 240 | |
| | | | NFGA,HFGA | 3 | 70-250 | 240 | |
| | | | NFGB,HFGB | 3 | 70-250 | 240 | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|---------------|----------------|---------|---------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 600 | CLD6(-A) (3P) | FXD6-A,FD6-A | 3 | 70-250 | 240 |
| | | | FXD6,FD6 | 3 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | HJGA | 3 | 200-400 | 240 |
| | | | JXD2-A | 2 | 200-400 | 240 |
| | | | JXD2 | 2 | 200-400 | 240 |
| | | | JD6-A,JXD6-A | 3 | 200-400 | 240 |
| | | | JD6,JXD6 | 3 | 200-400 | 240 |
| | | | HJD6-A | 3 | 200-400 | 240 |
| | | | HJXD6-A | 3 | 200-400 | 240 |
| | | | HJD6,HJXD6 | 3 | 200-400 | 240 |
| | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | | NLGB,HLGB | 3 | 400-600 | 240 |
| | | | LD6-A | 3 | 200-600 | 240 |
| | | | LD6 | 3 | 200-600 | 240 |
| | | | LXD6-A | 3 | 450-600 | 240 |
| | | | LXD6 | 3 | 450-600 | 240 |
| | | | HLD6-A | 3 | 200-600 | 240 |
| | | | HLD6 | 3 | 200-600 | 240 |
| | | | HLXD6-A | 3 | 450-600 | 240 |
| | HLXD6 | 3 | 450-600 | 240 | | |
| | 800 | LMG (2, 3P) | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | HJGA | 2 | 200-400 | 240 |
| | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | | NLGB,HLGB | 2 | 400-600 | 240 |
| | | | MD6,MXD6 | 2 | 400-800 | 240 |
| | | HMD6,HMXD6 | 2 | 400-800 | 240 | |
| | | LMG (3P) | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 3 | 70-250 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | HJGA | 3 | 200-400 | 240 |
| | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | | NLGB,HLGB | 3 | 400-600 | 240 |
| MD6,MXD6 | | | 3 | 400-800 | 240 | |
| HMD6,HMXD6 | 3 | 400-800 | 240 | | | |
| CMD6 (2, 3P) | ED4,ED6 | 2 | 15-125 | 240 | | |
| | HED4,HED6 | 2 | 15-125 | 240 | | |
| | NDGB,HDGB | 2 | 50-150 | 240 | | |
| | NDGA,HDGA | 2 | 50-150 | 240 | | |
| | NFGA,HFGA | 2 | 70-250 | 240 | | |
| | NFGB,HFGB | 2 | 70-250 | 240 | | |
| | FXD6-A,FD6-A | 2 | 70-250 | 240 | | |
| | FXD6,FD6 | 2 | 70-250 | 240 | | |
| | HFD6,HFXD6 | 2 | 70-250 | 240 | | |
| | NJGA,NJJA | 2 | 200-400 | 240 | | |
| HJGA | 2 | 200-400 | 240 | | | |
| JXD2-A | 2 | 200-400 | 240 | | | |
| JXD2 | 2 | 200-400 | 240 | | | |
| JD6-A | 2 | 200-400 | 240 | | | |
| JD6 | 2 | 200-400 | 240 | | | |
| JXD6-A | 2 | 200-400 | 240 | | | |
| JXD6 | 2 | 200-400 | 240 | | | |
| HJD6-A | 2 | 200-400 | 240 | | | |
| HJXD6-A | 2 | 200-400 | 240 | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|----------------|--------------|--------------|----------------|---------|---------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 800 | CMD6 (2, 3P) | HJD6,HJXD6 | 2 | 200-400 | 240 |
| | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | | NLGB,HLGB | 2 | 400-600 | 240 |
| | | | LD6-A | 2 | 200-600 | 240 |
| | | | LD6 | 2 | 200-600 | 240 |
| | | | LXD6-A | 2 | 450-600 | 240 |
| | | | LXD6 | 2 | 450-600 | 240 |
| | | | HLD6-A | 2 | 200-600 | 240 |
| | | | HLD6 | 2 | 200-600 | 240 |
| | | | HLXD6-A | 2 | 450-600 | 240 |
| | | | HLXD6 | 2 | 450-600 | 240 |
| | | | MD6,MXD6 | 2 | 500-800 | 240 |
| | | | HMD6,HMXD6 | 2 | 500-800 | 240 |
| | | | ED4,ED6 | 3 | 15-125 | 240 |
| | | | HED4,HED6 | 3 | 15-125 | 240 |
| | | | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 240 |
| | | | FXD6,FD6 | 3 | 70-250 | 240 |
| | HFD6,HFXD6 | 3 | 70-250 | 240 | | |
| | NJGA,NJJA | 3 | 200-400 | 240 | | |
| | HJGA | 3 | 200-400 | 240 | | |
| | JXD2-A | 3 | 200-400 | 240 | | |
| | JXD2 | 3 | 200-400 | 240 | | |
| | JD6-A | 3 | 200-400 | 240 | | |
| | JD6 | 3 | 200-400 | 240 | | |
| | JXD6-A | 3 | 200-400 | 240 | | |
| | JXD6 | 3 | 200-400 | 240 | | |
| | HJD6-A | 3 | 200-400 | 240 | | |
| | HJXD6-A | 3 | 200-400 | 240 | | |
| | 800 | CMD6 (3P) | HJD6-A | 3 | 200-400 | 240 |
| | | | HJXD6-A | 3 | 200-400 | 240 |
| | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | | NLGB,HLGB | 3 | 400-600 | 240 |
| | | | LD6-A | 3 | 200-600 | 240 |
| | | | LD6 | 3 | 200-600 | 240 |
| | | | LXD6-A | 3 | 450-600 | 240 |
| | | | LXD6 | 3 | 450-600 | 240 |
| | | | HLD6-A | 3 | 200-600 | 240 |
| | | | HLD6 | 3 | 200-600 | 240 |
| HLXD6-A | | 3 | 450-600 | 240 | | |
| HLXD6 | | 3 | 450-600 | 240 | | |
| MD6,MXD6 | | 3 | 500-800 | 240 | | |
| HMD6,HMXD6 | | 3 | 500-800 | 240 | | |
| SCMD6(-A) (3P) | | NDGB,HDGB | 2 | 50-150 | 240 | |
| | | NDGA,HDGA | 2 | 50-150 | 240 | |
| | | NFGA,HFGA | 2 | 70-250 | 240 | |
| | | NFGB,HFGB | 2 | 70-250 | 240 | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | HJGA | 2 | 200-400 | 240 | |
| | | NLGA,HLGA | 2 | 400-600 | 240 | |
| | NLGB,HLGB | 2 | 400-600 | 240 | | |
| | MD6,MXD6 | 2 | 500-800 | 240 | | |
| | HMD6,HMXD6 | 2 | 500-800 | 240 | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|--------------|----------------|-----------|----------|--------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 1200 | LNG (2, 3P) | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | HJGA | 2 | 200-400 | 240 |
| | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | | NLGB,HLGB | 2 | 400-600 | 240 |
| | | | MD6,MXD6 | 2 | 400-800 | 240 |
| | | | HMD6,HMXD6 | 2 | 400-800 | 240 |
| | | | ND6,NXD6 | 2 | 600-1200 | 240 |
| | | | HND6,HNXD6 | 2 | 600-1200 | 240 |
| | | | LNG (3P) | NDGB,HDGB | 3 | 50-150 |
| | | NDGA,HDGA | | 3 | 50-150 | 240 |
| | | NFGA,HFGA | | 3 | 70-250 | 240 |
| | | NFGB,HFGB | | 3 | 70-250 | 240 |
| | | HFD6,HFXD6 | | 3 | 70-250 | 240 |
| | | NJGA,NJJA | | 3 | 200-400 | 240 |
| | | HJGA | | 3 | 200-400 | 240 |
| | | NLGA,HLGA | | 3 | 400-600 | 240 |
| | | NLGB,HLGB | | 3 | 400-600 | 240 |
| | | MD6,MXD6 | | 3 | 400-800 | 240 |
| | | HMD6,HMXD6 | | 3 | 400-800 | 240 |
| | | ND6,NXD6 | | 3 | 600-1200 | 240 |
| | | HND6,HNXD6 | | 3 | 600-1200 | 240 |
| | | CND6 (2, 3P) | | ED4,ED6 | 2 | 15-125 |
| | | | HED4,HED6 | 2 | 15-125 | 240 |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 240 |
| | | | FXD6,FD6 | 2 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | JXD2-A | 2 | 200-400 | 240 |
| | | | JXD2 | 2 | 200-400 | 240 |
| | | | JD6-A | 2 | 200-400 | 240 |
| | | | JD6 | 2 | 200-400 | 240 |
| | | | JXD6-A | 2 | 200-400 | 240 |
| | | | JXD6 | 2 | 200-400 | 240 |
| | | | HJD6-A | 2 | 200-400 | 240 |
| | | | HJXD6-A | 2 | 200-400 | 240 |
| | | | HJD6,HJXD6 | 2 | 200-400 | 240 |
| | | | LD6-A | 2 | 200-600 | 240 |
| | | | LD6 | 2 | 200-600 | 240 |
| | | | LXD6-A | 2 | 450-600 | 240 |
| | | | LXD6 | 2 | 450-600 | 240 |
| | | | HLD6-A | 2 | 200-600 | 240 |
| | | | HLD6 | 2 | 200-600 | 240 |
| | | | HLXD6-A | 2 | 450-600 | 240 |
| | | | HLXD6 | 2 | 450-600 | 240 |
| | | MD6,MXD6 | 2 | 500-800 | 240 | |
| | | HMD6,HMXD6 | 2 | 500-800 | 240 | |
| | | ND6,NXD6 | 2 | 500-1200 | 240 | |
| | | HND6,HNXD6 | 2 | 500-1200 | 240 | |
| | | CND6 (3P) | ED4,ED6 | 3 | 15-125 | 240 |
| | | | HED4,HED6 | 3 | 15-125 | 240 |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 240 |
| | | | FXD6,FD6 | 3 | 70-250 | 240 |
| | | | HFD6,HFXD6 | 3 | 70-250 | 240 |
| | | | JXD2-A | 3 | 200-400 | 240 |
| | | | JXD2 | 3 | 200-400 | 240 |
| | | | JD6-A | 3 | 200-400 | 240 |
| | | | JD6 | 3 | 200-400 | 240 |
| | | | JXD6-A | 3 | 200-400 | 240 |
| | | | JXD6 | 3 | 200-400 | 240 |

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|------------|----------------|------------|----------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 200,000 | 1200 | CND6 (3P) | HJD6-A | 3 | 200-400 | 240 | |
| | | | HJXD6-A | 3 | 200-400 | 240 | |
| | | | HJD6,HJXD6 | 3 | 200-400 | 240 | |
| | | | LD6-A | 3 | 200-600 | 240 | |
| | | | LD6 | 3 | 200-600 | 240 | |
| | | | LXD6-A | 3 | 450-600 | 240 | |
| | | | LXD6 | 3 | 450-600 | 240 | |
| | | | HLD6-A | 3 | 200-600 | 240 | |
| | | | HLD6 | 3 | 200-600 | 240 | |
| | | | HLXD6-A | 3 | 450-600 | 240 | |
| | | | HLXD6 | 3 | 450-600 | 240 | |
| | | | MD6,MXD6 | 3 | 500-800 | 240 | |
| | | | HMD6,HMXD6 | 3 | 500-800 | 240 | |
| | | | ND6,NXD6 | 3 | 500-1200 | 240 | |
| | | | HND6,HNXD6 | 3 | 500-1200 | 240 | |
| | | | SCND6(-A) (3P) | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | | NJGA,NJJA | 3 | 200-400 | 240 |
| | | | | HJGA | 2 | 200-400 | 240 |
| | | | | HJGA | 3 | 200-400 | 240 |
| | | | | NLGA,HLGA | 2 | 400-600 | 240 |
| | | | | NLGA,HLGA | 3 | 400-600 | 240 |
| | | | | NLGB,HLGB | 2 | 400-600 | 240 |
| | | | | NLGB,HLGB | 3 | 400-600 | 240 |
| | | | | MD6,MXD6 | 2 | 500-800 | 240 |
| | | | | MD6,MXD6 | 3 | 500-800 | 240 |
| | | | | SMD6 | 3 | 500-800 | 240 |
| | | | | HMD6,HMXD6 | 2 | 500-800 | 240 |
| | | | | HMD6,HMXD6 | 3 | 500-800 | 240 |
| | | | | SHMD6 | 3 | 500-800 | 240 |
| | | ND6,NXD6 | | 2 | 500-1200 | 240 | |
| | | ND6,NXD6 | | 3 | 500-1200 | 240 | |
| | | SND6 | | 3 | 500-1200 | 240 | |
| | | HND6,HNXD6 | | 2 | 500-1200 | 240 | |
| | | HND6,HNXD6 | | 3 | 500-1200 | 240 | |
| | | SHND6 | | 3 | 500-1200 | 240 | |
| | | LPG (3P) | | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | | NDGB,HDGB | 3 | 50-150 | 240 |
| | | | | NDGA,HDGA | 2 | 50-150 | 240 |
| | | | | NDGA,HDGA | 3 | 50-150 | 240 |
| | | | | NFGA,HFGA | 2 | 70-250 | 240 |
| | | | | NFGA,HFGA | 3 | 70-250 | 240 |
| | | | | NFGB,HFGB | 2 | 70-250 | 240 |
| | | | | NFGB,HFGB | 3 | 70-250 | 240 |
| | | | | HFD6,HFXD6 | 2 | 70-250 | 240 |
| | | | | HFD6,HFXD6 | 3 | 70-250 | 240 |
| | | | | NJGA,NJJA | 2 | 200-400 | 240 |
| | | | NJGA,NJJA | 3 | 200-400 | 240 | |
| | | | HJGA | 2 | 200-400 | 240 | |
| | | | HJGA | 3 | 200-400 | 240 | |
| | | | NLGA,HLGA | 2 | 400-600 | 240 | |
| | | | NLGA,HLGA | 3 | 400-600 | 240 | |
| | | | NLGB,HLGB | 2 | 400-600 | 240 | |
| | | | NLGB,HLGB | 3 | 400-600 | 240 | |
| | | | MD6,HMXD6 | 2 | 400-800 | 240 | |
| | | | MD6,HMXD6 | 3 | 400-800 | 240 | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240V Series Ratings (Continued)

240V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|--------------|----------------|---------|-----------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 1600 | LPG (3P) | HMD6,HMXD6 | 2 | 400-800 | 240 |
| | | | | 3 | 400-800 | 240 |
| | | | ND6,NXD6 | 2 | 600-1200 | 240 |
| | | | | 3 | 600-1200 | 240 |
| | | | HND6,HNXD6 | 2 | 600-1200 | 240 |
| | | | | 3 | 600-1200 | 240 |
| | | | PD6,PXD6 | 2 | 1200-1600 | 240 |
| | | | | 3 | 1200-1600 | 240 |
| | | | HPD6,HPXD6 | 2 | 1200-1600 | 240 |
| | | | | 3 | 1200-1600 | 240 |
| | | | NDGB,HDGB | 2 | 50-150 | 240 |
| | | | | 3 | 50-150 | 240 |
| | | NDGA,HDGA | 2 | 50-150 | 240 | |
| | | | 3 | 50-150 | 240 | |
| | | NFGA,HFGA | 2 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | NFGB,HFGB | 2 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | FXD6-A,FD6-A | 2 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | FXD6,FD6 | 2 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | HFD6,HFXD6 | 2 | 70-250 | 240 | |
| | | | 3 | 70-250 | 240 | |
| | | NJGA,NJJA | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | HJGA | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | JXD2-A | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | JXD2 | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | JD6,JXD6 | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | HJD6-A | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | HJXD6-A | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | HJD6,HJXD6 | 2 | 200-400 | 240 | |
| | | | 3 | 200-400 | 240 | |
| | | NLGA,HLGA | 2 | 400-600 | 240 | |
| | | | 3 | 400-600 | 240 | |
| | | NLGB,HLGB | 2 | 400-600 | 240 | |
| | | | 3 | 400-600 | 240 | |
| | | LD6-A | 2 | 200-600 | 240 | |
| | | | 3 | 200-600 | 240 | |
| | | LD6 | 2 | 200-600 | 240 | |
| | | | 3 | 200-600 | 240 | |
| | | LXD6-A | 2 | 450-600 | 240 | |
| | | | 3 | 450-600 | 240 | |
| LXD6 | 2 | 450-600 | 240 | | | |
| | 3 | 450-600 | 240 | | | |
| HLD6-A | 2 | 200-600 | 240 | | | |
| | 3 | 200-600 | 240 | | | |
| HLD6 | 2 | 200-600 | 240 | | | |
| | 3 | 200-600 | 240 | | | |
| HLXD6-A | 2 | 450-600 | 240 | | | |
| | 3 | 450-600 | 240 | | | |
| HLXD6 | 2 | 450-600 | 240 | | | |
| | 3 | 450-600 | 240 | | | |
| MD6,MXD6 | 2 | 500-800 | 240 | | | |
| | 3 | 500-800 | 240 | | | |

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|--------------|-----------|----------------|-------|----------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 200,000 | 1600 | CPD6 (3P) | HMD6,HMXD6 | 2 | 500-800 | 240 |
| | | | | 3 | 500-800 | 240 |
| | | | ND6,NXD6 | 2 | 500-1200 | 240 |
| | | | | 3 | 500-1200 | 240 |
| | | | HND6,HNXD6 | 2 | 500-1200 | 240 |
| | | | | 3 | 500-1200 | 240 |

5

MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|-------------------|---------------------|----------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 25,000 | 125 | NGB,HGB,LGB (2,3P) | BQD,CQD | 1 | 15-100 | 277 |
| | | | | 2 | 15-100 | 277/480 |
| 30,000 | 125 | NGB,HGB,LGB (3P) | BQD,CQD | 3 | 15-100 | 277/480 |
| | | | | | | |
| 35,000 | 250 | FD6-A,FXD6-A (2,3P) | ED4 | 1 | 15-100 | 277 |
| | | | ED4,ED6 | 2 | 15-125 | 480 |
| | 400 | FD6-A,FXD6-A (3P) | ED4,ED6 | 3 | 15-125 | 480 |
| | | | | | | |
| | | JD6-A,JXD6-A (2,3P) | ED4 | 1 | 15-125 | 277 |
| | | | ED4 | 2 | 15-125 | 277/480 |
| 600 | JD6-A,JXD6-A (3P) | ED4 | 3 | 15-125 | 277/480 | |
| | | | | | | |
| 42,000 | 125 | HED4 (2,3P) | ED4 | 1 | 15-100 | 277 |
| | | | ED4,ED6 | 2 | 15-125 | 480 |
| | | | ED4,ED6 | 3 | 15-125 | 480 |
| | 400 | HJD6-A (2,3P) | NGB,HGB | 1 | 15-125 | 277 |
| | | | NGB,HGB | 2 | 15-125 | 277/480 |
| | | HJD6-A (3P) | NGB,HGB | 3 | 15-125 | 277/480 |
| | | | | | | |
| | | HJXD6-A (2,3P) | NGB,HGB | 1 | 15-125 | 277 |
| | | | NGB,HGB | 2 | 15-125 | 277/480 |
| | | | NGB,HGB | 3 | 15-125 | 277/480 |
| 50,000 | 250 | HFD6,HFXD6 (2,3P) | NGB,HGB | 1 | 15-125 | 277 |
| | | | NGB,HGB | 2 | 15-125 | 277/480 |
| | 400 | HFD6,HFXD6 (3P) | NGB,HGB | 3 | 15-125 | 277/480 |
| | | | | | | |
| | | HJD6-A (2,3P) | HED4 | 2 | 15-50 | 480 |
| | | | HED4 | 3 | 15-50 | 480 |
| | | HJXD6-A (2,3P) | HED4 | 2 | 15-50 | 480 |
| | | | HED4 | 3 | 15-50 | 480 |
| | 600 | HLD6-A (2,3P) | HED4 | 2 | 15-50 | 480 |
| | | | HED4 | 3 | 15-50 | 480 |
| | | HLXD6-A (2,3P) | HED4 | 2 | 15-50 | 480 |
| | | | HED4 | 3 | 15-50 | 480 |
| | | HLD6,HLXD6 (2,3P) | HED4 | 2 | 15-50 | 480 |
| | | | HED4 | 3 | 15-50 | 480 |
| 800 | MD6,MXD6 (2,3P) | NDGA,NDGB | 2 | 50-150 | 480 | |
| | | NFGA,NFGB | 2 | 70-250 | 480 | |
| | | FXD6,FD6 | 2 | 70-250 | 480 | |
| | | FXD6-A,FD6-A | 2 | 70-250 | 480 | |
| | | NJGA | 2 | 250-400 | 480 | |
| | | JXD6,JD6 | 2 | 200-400 | 480 | |
| | | JXD6-A,JD6-A | 2 | 200-400 | 480 | |
| | | NLGA,NLGB | 2 | 400-600 | 480 | |
| | | LD6 | 2 | 200-600 | 480 | |
| | | LD6-A | 2 | 200-600 | 480 | |
| | MD6,MXD6 (3P) | LXD6 | 2 | 450-600 | 480 | |
| | | LXD6-A | 2 | 450-600 | 480 | |
| | | SJD6-A | 3 | 200-400 | 480 | |
| | | SJD6 | 3 | 200-400 | 480 | |
| | | SLD6-A | 3 | 400-600 | 480 | |
| | | SLD6 | 3 | 400-600 | 480 | |
| | | LMD6,LMXD6 | 2 | 600-800 | 480 | |
| | | NMG | 2 | 600-800 | 480 | |
| | | NDGA,NDGB | 3 | 50-150 | 480 | |
| | | NFGA,NFGB | 3 | 70-250 | 480 | |
| FXD6,FD6 | 3 | 70-250 | 480 | | | |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|---------------|-----------------|--------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 50,000 | 800 | MD6,MXD6 (3P) | FXD6-A,FD6-A | 3 | 70-250 | 480 | |
| | | | NJGA | 3 | 250-400 | 480 | |
| | | | JXD6,JD6 | 3 | 200-400 | 480 | |
| | | | JXD6-A,JD6-A | 3 | 200-400 | 480 | |
| | | | NLGA,NLGB | 3 | 400-600 | 480 | |
| | | | LD6 | 3 | 200-600 | 480 | |
| | | | LD6-A | 3 | 200-600 | 480 | |
| | | | LXD6 | 3 | 450-600 | 480 | |
| | | | LXD6-A | 3 | 450-600 | 480 | |
| | | | SJD6-A | 3 | 200-400 | 480 | |
| | | | SJD6 | 3 | 200-400 | 480 | |
| | | | SLD6-A | 3 | 400-600 | 480 | |
| | | | SLD6 | 3 | 400-600 | 480 | |
| | | | LMD6,LMXD6 | 3 | 600-800 | 480 | |
| | | | NMG | 3 | 600-800 | 480 | |
| | | | SMD6 (3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | | | NJGA | 2 | 250-400 | 480 |
| | | | | NJGA | 3 | 250-400 | 480 |
| | | | | JD6,JD6 | 2 | 200-400 | 480 |
| | | | | JD6,JD6 | 3 | 200-400 | 480 |
| | | | | JD6-A,JXD6-A | 2 | 200-400 | 480 |
| | | | | JD6-A,JXD6-A | 3 | 200-400 | 480 |
| | | | | NLGA,NLGB | 2 | 400-600 | 480 |
| | | | NLGA,NLGB | 3 | 400-600 | 480 | |
| | | | LD6-A | 2 | 200-600 | 480 | |
| | | | LD6-A | 3 | 200-600 | 480 | |
| | | | LD6 | 2 | 200-600 | 480 | |
| | | | LD6 | 3 | 200-600 | 480 | |
| | | | LXD6-A | 2 | 450-600 | 480 | |
| | | | LXD6-A | 3 | 450-600 | 480 | |
| | | | LXD6 | 2 | 450-600 | 480 | |
| | | | LXD6 | 3 | 450-600 | 480 | |
| | | SJD6-A | 3 | 200-400 | 480 | | |
| | | SJD6 | 3 | 200-400 | 480 | | |
| | | SLD6-A | 3 | 400-600 | 480 | | |
| | | SLD6 | 3 | 400-600 | 480 | | |
| | | LMD6,LMXD6 | 2 | 600-800 | 480 | | |
| | | LMD6,LMXD6 | 3 | 600-800 | 480 | | |
| | | NMG | 2 | 600-800 | 480 | | |
| | | NMG | 3 | 600-800 | 480 | | |
| | | 1200 | ND6,NXD6 (2,3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | | FXD6,FD6 | 2 | 70-250 | 480 |
| FXD6-A,FD6-A | 2 | | | 70-250 | 480 | | |
| NJGA | 2 | | | 250-400 | 480 | | |
| JXD6,JD6 | 2 | | | 200-400 | 480 | | |
| JXD6-A,JD6-A | 2 | | | 200-400 | 480 | | |
| NLGA,NLGB | 2 | | | 400-600 | 480 | | |
| LD6 | 2 | | | 200-600 | 480 | | |
| LD6-A | 2 | | | 200-600 | 480 | | |
| LXD6 | 2 | | | 450-600 | 480 | | |
| LXD6-A | 2 | | | 450-600 | 480 | | |
| SJD6 | 2 | | | 200-600 | 480 | | |
| SJD6 | 3 | | | 200-400 | 480 | | |
| ND6,NXD6 (3P) | NDGA,NDGB | | | 3 | 50-150 | 480 | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|---------------|----------------|--------------|---------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 50,000 | 1200 | ND6,NXD6 (3P) | NFGA,NFGB | 3 | 70-250 | 480 | |
| | | | FXD6,FD6 | 3 | 70-250 | 480 | |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 | |
| | | | NJGA | 3 | 250-400 | 480 | |
| | | | JXD6,JD6 | 3 | 200-400 | 480 | |
| | | | JXD6-A,JD6-A | 3 | 200-400 | 480 | |
| | | | NLGA,NLGB | 3 | 400-600 | 480 | |
| | | | LD6 | 3 | 200-600 | 480 | |
| | | | LD6-A | 3 | 200-600 | 480 | |
| | | | LXD6 | 3 | 450-600 | 480 | |
| | | | LXD6-A | 3 | 450-600 | 480 | |
| | | | SJD6 | 3 | 200-400 | 480 | |
| | | | SJD6-A | 3 | 200-400 | 480 | |
| | | | SLD6 | 3 | 400-600 | 480 | |
| | | | SLD6-A | 3 | 400-600 | 480 | |
| | | | NMG | 3 | 600-800 | 480 | |
| | | | LMD6,LXMD6 | 3 | 600-800 | 480 | |
| | | | SND6 (3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | | | 3 | 50-150 | 480 |
| | | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | | | 3 | 70-250 | 480 |
| | | | | NJGA | 2 | 250-400 | 480 |
| | | | | | 3 | 250-400 | 480 |
| | | | | JD6,JXD6 | 2 | 200-400 | 480 |
| | | | | | 3 | 200-400 | 480 |
| | | | | JD6-A,JXD6-A | 2 | 200-400 | 480 |
| | | | | | 3 | 200-400 | 480 |
| | | | | NLGA,NLGB | 2 | 400-600 | 480 |
| | | | | | 3 | 400-600 | 480 |
| | | | | LD6 | 2 | 200-600 | 480 |
| | | | | | 3 | 200-600 | 480 |
| | | | | LD6-A | 2 | 200-600 | 480 |
| | | | | | 3 | 200-600 | 480 |
| | | | | LXD6 | 2 | 450-600 | 480 |
| | | 3 | | 450-600 | 480 | | |
| | LXD6-A | 2 | | 450-600 | 480 | | |
| | | 3 | | 450-600 | 480 | | |
| | SJD6 | 3 | | 200-400 | 480 | | |
| | SJD6-A | 3 | | 200-400 | 480 | | |
| | SLD6 | 3 | | 400-600 | 480 | | |
| | SLD6-A | 3 | | 400-600 | 480 | | |
| | NMG | 2 | | 600-800 | 480 | | |
| | | 3 | | 600-800 | 480 | | |
| | LMD6,LXMD6 | 2 | | 600-800 | 480 | | |
| | | 3 | | 600-800 | 480 | | |
| | 1600 | PD6,PXD6 (3P) | | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | | | 3 | 50-150 | 480 |
| | | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | | | 3 | 70-250 | 480 |
| | | | | FXD6,FD6 | 2 | 70-250 | 480 |
| | | | | 3 | 70-250 | 480 | |
| FXD6-A,FD6-A | | | 2 | 70-250 | 480 | | |
| | | | 3 | 70-250 | 480 | | |
| NJGA | | | 2 | 250-400 | 480 | | |
| | | | 3 | 250-400 | 480 | | |
| JD6,JXD6 | | | 2 | 200-400 | 480 | | |
| | | | 3 | 200-400 | 480 | | |
| JD6-A,JXD6-A | | | 2 | 200-400 | 480 | | |
| | | | 3 | 200-400 | 480 | | |
| NLGA,NLGB | | | 2 | 400-600 | 480 | | |
| | | | 3 | 400-600 | 480 | | |
| LD6 | | | 2 | 200-600 | 480 | | |
| | | | 3 | 200-600 | 480 | | |
| LD6-A | | | 2 | 200-600 | 480 | | |
| | | | 3 | 200-600 | 480 | | |
| LXD6 | | | 2 | 450-600 | 480 | | |
| | | | 3 | 450-600 | 480 | | |
| LXD6-A | | | 2 | 450-600 | 480 | | |
| | | | 3 | 450-600 | 480 | | |
| SJD6 | | | 3 | 200-400 | 480 | | |
| SJD6-A | | | 3 | 200-400 | 480 | | |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | | |
|---------------|--------------|-------------------|----------------|--------------|---------------|--------------|--------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | | |
| 50,000 | 1600 | PD6,PXD6 (3P) | SLD6 | 3 | 400-600 | 480 | | | |
| | | | SLD6-A | 3 | 400-600 | 480 | | | |
| | | | NMG | 2 | 600-800 | 480 | | | |
| | | | | 3 | 600-800 | 480 | | | |
| | | | NNG | 2 | 800-1200 | 480 | | | |
| | | | | 3 | 800-1200 | 480 | | | |
| | | | NPG | 2 | 1200-1600 | 480 | | | |
| | | | | 3 | 1200-1600 | 480 | | | |
| | | | SPD6 (3P) | JD6,JXD6 | 2 | 200-400 | 480 | | |
| | | | | | 3 | 200-400 | 480 | | |
| | | | | JD6-A,JXD6-A | 2 | 200-400 | 480 | | |
| | | | | | 3 | 200-400 | 480 | | |
| | | | | LD6 | 2 | 200-600 | 480 | | |
| | | | | | 3 | 200-600 | 480 | | |
| | | | | LD6-A | 2 | 200-600 | 480 | | |
| | | | | | 3 | 200-600 | 480 | | |
| | | | | LXD6 | 2 | 450-600 | 480 | | |
| | | | | | 3 | 450-600 | 480 | | |
| | | | | LXD6-A | 2 | 450-600 | 480 | | |
| | | | | | 3 | 450-600 | 480 | | |
| | | | | SJD6 | 3 | 200-400 | 480 | | |
| | | | | SJD6-A | 3 | 200-400 | 480 | | |
| | | | | SLD6 | 3 | 400-600 | 480 | | |
| | | | | SLD6-A | 3 | 400-600 | 480 | | |
| | | | | 2000 | RD6,RXD6 (3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | | | | | 3 | 50-150 | 480 |
| | | | | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | | | | | 3 | 70-250 | 480 |
| | | | | | | FXD6,FD6 | 2 | 70-250 | 480 |
| | | | | | | | 3 | 70-250 | 480 |
| | | | | | | FXD6-A,FD6-A | 2 | 70-250 | 480 |
| | | | | | | | 3 | 70-250 | 480 |
| | | | | | | NJGA | 2 | 250-400 | 480 |
| | | | | | | | 3 | 250-400 | 480 |
| | JD6-A,JXD6-A | 2 | | | | 200-400 | 480 | | |
| | | 3 | | | | 200-400 | 480 | | |
| | JD6,JXD6 | 2 | | | | 200-400 | 480 | | |
| | | 3 | | | | 200-400 | 480 | | |
| | NLGA,NLGB | 2 | | | | 400-600 | 480 | | |
| | | 3 | | | | 400-600 | 480 | | |
| | LD6-A | 2 | | | | 200-600 | 480 | | |
| | | 3 | | | | 200-600 | 480 | | |
| | LXD6-A | 2 | 450-600 | | | 480 | | | |
| | | 3 | 450-600 | | | 480 | | | |
| | SJD6 | 3 | 200-400 | | | 480 | | | |
| | SJD6-A | 3 | 200-400 | | | 480 | | | |
| | SLD6-A | 3 | 400-600 | | | 480 | | | |
| | SLD6 | 3 | 400-600 | | | 480 | | | |
| | NMG | 2 | 600-800 | | | 480 | | | |
| | | 3 | 600-800 | | | 480 | | | |
| LXD6 | 2 | 450-600 | 480 | | | | | | |
| | 3 | 450-600 | 480 | | | | | | |
| 65,000 | 150 | HDGA,HDGB (2,3P) | NDGA,NDGB | | | 2 | 50-150 | 480 | |
| | | HDGA,HDGB (3P) | NDGA,NDGB | | | 3 | 50-150 | 480 | |
| | | HFGA,HFGB (2,3P) | NDGA,NDGB | | | 2 | 50-150 | 480 | |
| | | | NFGA,NFGB | | | 2 | 70-250 | 480 | |
| | 250 | HFGA,HFGB (3P) | NDGA,NDGB | | | 3 | 50-150 | 480 | |
| | | | NFGA,NFGB | | | 3 | 70-250 | 480 | |
| | | HFD6,HFXD6 (2,3P) | ED4 | 1 | 15-100 | 277 | | | |
| | | | ED4,ED6 | 2 | 15-125 | 480 | | | |
| | | | HED4 | 1 | 15-100 | 277 | | | |
| | | | HED4,HED6 | 2 | 15-125 | 480 | | | |
| | | | NDGA,NDGB | 2 | 50-150 | 480 | | | |
| | | | NFGA,NFGB | 2 | 70-250 | 480 | | | |

5
MOLDED CASE
CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|-------------------|----------------|-----------------|----------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 65,000 | 250 | HFD6,HFXD6 (3P) | ED4,ED6 | 3 | 15-125 | 480 |
| | | | HED4,HED6 | 3 | 15-125 | 480 |
| | | | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | HJGA (2,3P) | NGB,HGB | 1 | 15-125 | 277 |
| | | | | 2 | 15-125 | 277/480 |
| | | | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | NJGA | 2 | 250-400 | 480 |
| | | | | 2 | 250-400 | 480 |
| | HJGA (3P) | NGB,HGB | 3 | 15-125 | 277/480 | |
| | | NDGA,NDGB | 3 | 50-150 | 480 | |
| | | NFGA,NFGB | 3 | 70-250 | 480 | |
| | | 3 | 250-400 | 480 | | |
| | HJD6-A (2,3P) | ED4 | 1 | 15-100 | 277 | |
| | | HED4 | 1 | 15-100 | 277 | |
| | HJD6-A (2,3P) | NDGA,NDGB | 2 | 50-150 | 480 | |
| | | NFGA,NFGB | 2 | 70-250 | 480 | |
| | | FD6-A,FXD6-A | 2 | 70-250 | 480 | |
| | | FD6,FXD6 | 2 | 70-250 | 480 | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 480 | |
| | | | 2 | 200-400 | 480 | |
| | HJD6-A (3P) | NDGA,NDGB | 3 | 50-150 | 480 | |
| | | NFGA,NFGB | 3 | 70-250 | 480 | |
| | | FD6-A,FXD6-A | 3 | 70-250 | 480 | |
| FD6,FXD6 | | 3 | 70-250 | 480 | | |
| NJGA | | 3 | 250-400 | 480 | | |
| JD6-A,JXD6-A | | 3 | 200-400 | 480 | | |
| | 3 | 200-400 | 480 | | | |
| 400 | HJXD6-A (2,3P) | ED4 | 1 | 15-100 | 277 | |
| | | HED4 | 1 | 15-100 | 277 | |
| | | NDGA,NDGB | 2 | 50-150 | 480 | |
| | | NFGA,NFGB | 2 | 70-250 | 480 | |
| | | FD6-A,FXD6-A | 2 | 70-250 | 480 | |
| | | FD6,FXD6 | 2 | 70-250 | 480 | |
| | | JD6-A,JXD6-A | 2 | 200-400 | 480 | |
| | | NJGA | 2 | 250-400 | 480 | |
| | | JD6,JXD6 | 2 | 200-400 | 480 | |
| | | | 2 | 200-400 | 480 | |
| HJXD6-A (3P) | NDGA,NDGB | 3 | 50-150 | 480 | | |
| | NFGA,NFGB | 3 | 70-250 | 480 | | |
| | FD6-A,FXD6-A | 3 | 70-250 | 480 | | |
| | FD6,FXD6 | 3 | 70-250 | 480 | | |
| | NJGA | 3 | 250-400 | 480 | | |
| | JD6-A,JXD6-A | 3 | 200-400 | 480 | | |
| | 3 | 200-400 | 480 | | | |
| HJD6,HJXD6 (2,3P) | ED4 | 1 | 15-100 | 277 | | |
| | HED4 | 1 | 15-100 | 277 | | |
| | FD6-A,FXD6-A | 2 | 70-250 | 480 | | |
| | FD6,FXD6 | 2 | 70-250 | 480 | | |
| HJD6,HJXD6 (3P) | JD6,JXD6 | 2 | 200-400 | 480 | | |
| | FD6-A,FXD6-A | 3 | 70-250 | 480 | | |
| | FD6,FXD6 | 3 | 70-250 | 480 | | |
| | 3 | 200-400 | 480 | | | |
| 600 | HHJD6 (2,3P) | NGB,HGB | 1 | 15-125 | 277 | |
| | | | 2 | 15-125 | 277/480 | |
| | HHJD6 (3P) | NGB,HGB | 3 | 15-125 | 277/480 | |
| | | | 3 | 15-125 | 277/480 | |
| | HHJXD6 (2,3P) | NGB,HGB | 1 | 15-125 | 277 | |
| | | | 2 | 15-125 | 277/480 | |
| | HHJXD6 (3P) | NGB,HGB | 3 | 15-125 | 277/480 | |
| | | | 3 | 15-125 | 277/480 | |
| | 600 | HLD6-A (2,3P) | ED4 | 1 | 15-100 | 277 |
| | | | NGB,HGB | 1 | 15-125 | 277 |
| HLGA,HLGB (2,3P) | | NGB,HGB | 2 | 15-125 | 277/480 | |
| | | NDGA,NDGB | 2 | 50-150 | 480 | |
| | | NFGA,NFGB | 2 | 70-250 | 480 | |
| | | NJGA | 2 | 250-400 | 480 | |
| | | NLGA,NLGB | 2 | 400-600 | 480 | |
| | | | 2 | 400-600 | 480 | |
| HLGA,HLGB (3P) | | NGB,HGB | 3 | 15-125 | 277/480 | |
| | | NDGA,NDGB | 3 | 50-150 | 480 | |
| | NFGA,NFGB | 3 | 70-250 | 480 | | |
| | NJGA | 3 | 250-400 | 480 | | |
| | NLGA,NLGB | 3 | 400-600 | 480 | | |
| | | 3 | 400-600 | 480 | | |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|----------------|--------------|---------------|----------------|---------|---------|-------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 65,000 | 600 | HLD6-A (2,3P) | HED4 | 1 | 15-100 | 277 |
| | | | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 480 |
| | | | FD6,FXD6 | 2 | 70-250 | 480 |
| | | | NJGA | 2 | 200-400 | 480 |
| | | | NLGA,NLGB | 2 | 400-600 | 480 |
| | | | JXD6-A,JD6-A | 2 | 200-400 | 480 |
| | | | LD6-A | 2 | 200-600 | 480 |
| | | | LXD6-A | 2 | 450-600 | 480 |
| | | HLD6-A (3P) | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | | FD6-A,FXD6-A | 3 | 70-250 | 480 |
| | | | FD6,FXD6 | 3 | 70-250 | 480 |
| | | | NJGA | 3 | 200-400 | 480 |
| | | | NLGA,NLGB | 3 | 400-600 | 480 |
| | | HLD6 (2,3P) | JXD6-A,JD6-A | 3 | 200-400 | 480 |
| | | | LD6-A | 3 | 200-600 | 480 |
| | | | LXD6-A | 3 | 450-600 | 480 |
| | | | ED4 | 1 | 15-100 | 277 |
| | | | HED4 | 1 | 15-100 | 277 |
| | | | FD6-A,FXD6-A | 2 | 70-250 | 480 |
| | | HLD6 (3P) | FD6,FXD6 | 2 | 70-250 | 480 |
| | | | JXD6,JD6 | 2 | 200-400 | 480 |
| | | | LD6 | 2 | 200-600 | 480 |
| LXD6 | 2 | | 450-600 | 480 | | |
| FD6-A,FXD6-A | 3 | | 70-250 | 480 | | |
| FD6,FXD6 | 3 | | 70-250 | 480 | | |
| HLXD6-A (2,3P) | JXD6,JD6 | 3 | 200-400 | 480 | | |
| | LD6 | 3 | 200-600 | 480 | | |
| | LXD6 | 3 | 450-600 | 480 | | |
| | ED4 | 1 | 15-100 | 277 | | |
| | HED4 | 1 | 15-100 | 277 | | |
| | NDGA,NDGB | 2 | 50-150 | 480 | | |
| | NFGA,NFGB | 2 | 70-250 | 480 | | |
| | FD6-A,FXD6-A | 2 | 70-250 | 480 | | |
| | FD6,FXD6 | 2 | 70-250 | 480 | | |
| | HLXD6-A (3P) | NJGA | 2 | 250-400 | 480 | |
| JXD6-A,JD6-A | | 2 | 200-400 | 480 | | |
| JXD6,JD6 | | 2 | 200-400 | 480 | | |
| NLGA,NLGB | | 2 | 400-600 | 480 | | |
| LD6-A | | 2 | 200-600 | 480 | | |
| LD6 | | 2 | 200-600 | 480 | | |
| HLXD6 (2,3P) | LXD6-A | 2 | 450-600 | 480 | | |
| | LXD6 | 2 | 450-600 | 480 | | |
| | NDGA,NDGB | 3 | 50-150 | 480 | | |
| | NFGA,NFGB | 3 | 70-250 | 480 | | |
| | FD6-A,FXD6-A | 3 | 70-250 | 480 | | |
| | FD6,FXD6 | 3 | 70-250 | 480 | | |
| HLXD6 (3P) | NJGA | 3 | 250-400 | 480 | | |
| | JXD6-A,JD6-A | 3 | 200-400 | 480 | | |
| | JXD6,JD6 | 3 | 200-400 | 480 | | |
| | NLGA,NLGB | 3 | 400-600 | 480 | | |
| | LD6-A | 3 | 200-600 | 480 | | |
| | LD6 | 3 | 200-600 | 480 | | |
| HHLXD6 (2,3P) | LXD6 | 3 | 450-600 | 480 | | |
| | | 3 | 450-600 | 480 | | |
| HHLXD6 (2,3P) | ED4 | 1 | 15-100 | 277 | | |
| | HED4 | 1 | 15-100 | 277 | | |
| HHLXD6 (2,3P) | FD6-A,FXD6-A | 2 | 70-250 | 480 | | |
| | FD6,FXD6 | 2 | 70-250 | 480 | | |
| HHLXD6 (2,3P) | JXD6,JD6 | 2 | 200-400 | 480 | | |
| | LD6 | 2 | 200-600 | 480 | | |
| HHLXD6 (2,3P) | LXD6 | 2 | 450-600 | 480 | | |
| | | 2 | 450-600 | 480 | | |
| HHLXD6 (2,3P) | NGB,HGB | 1 | 15-125 | 277 | | |
| | | 2 | 15-125 | 277/480 | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | |
|---------------|-------------------|-------------------|----------------|---------|----------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts |
| 65,000 | 600 | HHLXD6 (3P) | NGB,HGB | 3 | 15-125 | 277/480 |
| | | HHLD6 (2,3P) | NGB,HGB | 2 | 15-125 | 277/480 |
| | | HHLD6 (3P) | NGB,HGB | 3 | 15-125 | 277/480 |
| | 800 | HMG (2,3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | NJGA | 2 | 250-400 | 480 |
| | | | NLGA,NLGB | 2 | 400-600 | 480 |
| | | | NMG | 2 | 600-800 | 480 |
| | | | LMD6,LMXD6 | 2 | 600-800 | 480 |
| | | HMG (3P) | MD6,MXD6 | 2 | 400-800 | 480 |
| | | | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | | NJGA | 3 | 250-400 | 480 |
| | | | NLGA,NLGB | 3 | 400-600 | 480 |
| | | | NMG | 3 | 600-800 | 480 |
| | HMD6,HMXD6 (2,3P) | LMD6,LMXD6 | 3 | 600-800 | 480 | |
| | | MD6,MXD6 | 3 | 400-800 | 480 | |
| | | NDGA,NDGB | 2 | 50-150 | 480 | |
| | | NFGA,NFGB | 2 | 70-250 | 480 | |
| | | FXD6,FD6 | 2 | 70-250 | 480 | |
| | | FXD6-A,FD6-A | 2 | 70-250 | 480 | |
| | | NJGA | 2 | 250-400 | 480 | |
| | | JXD6,JD6 | 2 | 200-400 | 480 | |
| | | JXD6-A,JD6-A | 2 | 200-400 | 480 | |
| | | NLGA,NLGB | 2 | 400-600 | 480 | |
| | | LD6 | 2 | 200-600 | 480 | |
| | | LD6-A | 2 | 200-600 | 480 | |
| | | LXD6 | 2 | 450-600 | 480 | |
| | | LXD6-A | 2 | 450-600 | 480 | |
| | | LMD6,LMXD6 | 2 | 600-800 | 480 | |
| | | NMG | 2 | 600-800 | 480 | |
| | | MD6 | 2 | 500-800 | 480 | |
| | | HMD6,HMXD6 (3P) | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | | FXD6,FD6 | 3 | 70-250 | 480 |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 |
| | | | NJGA | 3 | 250-400 | 480 |
| | | | JXD6,JD6 | 3 | 200-400 | 480 |
| | | | JXD6-A,JD6-A | 3 | 200-400 | 480 |
| | NLGA,NLGB | | 3 | 400-600 | 480 | |
| | LD6 | | 3 | 200-600 | 480 | |
| | LD6-A | | 3 | 200-600 | 480 | |
| | LXD6 | | 3 | 450-600 | 480 | |
| | LXD6-A | | 3 | 450-600 | 480 | |
| | LMD6,LMXD6 | 3 | 600-800 | 480 | | |
| | NMG | 3 | 600-800 | 480 | | |
| | MD6 | 3 | 500-800 | 480 | | |
| | 1200 | HNG (2,3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | NJGA | 2 | 250-400 | 480 |
| | | | NLGA,NLGB | 2 | 400-600 | 480 |
| | | | NMG | 2 | 600-800 | 480 |
| | | | LMD6,LMXD6 | 2 | 600-800 | 480 |
| | | HNG (3P) | MD6,MXD6 | 2 | 400-800 | 480 |
| | | | NNG | 2 | 800-1200 | 480 |
| | | | ND6,NXD6 | 2 | 800-1200 | 480 |
| | | | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | | NJGA | 3 | 250-400 | 480 |
| | | HND6,HNXD6 (2,3P) | NLGA,NLGB | 3 | 400-600 | 480 |
| | | | NMG | 3 | 600-800 | 480 |
| | | | LMD6,LMXD6 | 3 | 600-800 | 480 |
| | | | MD6,MXD6 | 3 | 400-800 | 480 |
| | | | NNG | 3 | 800-1200 | 480 |
| | | | ND6,NXD6 | 3 | 800-1200 | 480 |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|-------------------|-----------------|-----------|-----------|--------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 65,000 | 1200 | HND6,HNXD6 (2,3P) | NLGA,NLGB | 2 | 400-600 | 480 | |
| | | | LD6 | 2 | 200-600 | 480 | |
| | | | LD6-A | 2 | 200-600 | 480 | |
| | | | LXD6 | 2 | 450-600 | 480 | |
| | | | LXD6-A | 2 | 450-600 | 480 | |
| | | | NMG | 2 | 600-800 | 480 | |
| | | | LMD6,LMXD6 | 2 | 600-800 | 480 | |
| | | | MD6,MXD6 | 2 | 500-800 | 480 | |
| | | | NNG | 2 | 800-1200 | 480 | |
| | | | ND6,NXD6 | 2 | 800-1200 | 480 | |
| | | | NDGA,NDGB | 3 | 50-150 | 480 | |
| | | | NFGA,NFGB | 3 | 70-250 | 480 | |
| | | | FXD6,FD6 | 3 | 70-250 | 480 | |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 | |
| | | | NJGA | 3 | 250-400 | 480 | |
| | | JXD6,JD6 | 3 | 200-400 | 480 | | |
| | | JXD6-A,JD6-A | 3 | 200-400 | 480 | | |
| | | NLGA,NLGB | 3 | 400-600 | 480 | | |
| | | LD6 | 3 | 200-600 | 480 | | |
| | | LD6-A | 3 | 200-600 | 480 | | |
| | | LXD6 | 3 | 450-600 | 480 | | |
| | | LXD6-A | 3 | 450-600 | 480 | | |
| | | LMD6,LMXD6 | 3 | 600-800 | 480 | | |
| | | NMG | 3 | 600-800 | 480 | | |
| | | MD6 | 3 | 500-800 | 480 | | |
| | | HPG (2,3P) | NDGA,NDGB | 2 | 50-150 | 480 | |
| | | | NFGA,NFGB | 2 | 70-250 | 480 | |
| | | | NJGA | 2 | 250-400 | 480 | |
| | | | NLGA,NLGB | 2 | 400-600 | 480 | |
| | | | NMG | 2 | 600-800 | 480 | |
| | MD6,MXD6 | | 2 | 400-800 | 480 | | |
| | LMD6,LMXD6 | | 2 | 600-800 | 480 | | |
| | NNG | | 2 | 800-1200 | 480 | | |
| | ND6,NXD6 | | 2 | 800-1200 | 480 | | |
| | NPG | | 2 | 1200-1600 | 480 | | |
| | HPG (3P) | | NDGA,NDGB | 3 | 50-150 | 480 | |
| | | | NFGA,NFGB | 3 | 70-250 | 480 | |
| | | | NJGA | 3 | 250-400 | 480 | |
| | | | NLGA,NLGB | 3 | 400-600 | 480 | |
| | | | NMG | 3 | 600-800 | 480 | |
| | | MD6,MXD6 | 3 | 400-800 | 480 | | |
| | | LMD6,LMXD6 | 3 | 600-800 | 480 | | |
| | | NNG | 3 | 800-1200 | 480 | | |
| | | ND6,NXD6 | 3 | 800-1200 | 480 | | |
| | | NPG | 3 | 1200-1600 | 480 | | |
| | | 1600 | HPD6,HPXD6 (3P) | NDGA,NDGB | 2 | 50-150 | 480 |
| | | | | NDGA,NDGB | 3 | 50-150 | 480 |
| | | | | NFGA,NFGB | 2 | 70-250 | 480 |
| | | | | NFGA,NFGB | 3 | 70-250 | 480 |
| | | | | FXD6,FD6 | 2 | 70-250 | 480 |
| | FXD6,FD6 | | | 3 | 70-250 | 480 | |
| | NMG | | FXD6-A,FD6-A | 2 | 70-250 | 480 | |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 | |
| | | | NJGA | 2 | 250-400 | 480 | |
| | | | NJGA | 3 | 250-400 | 480 | |
| | | | NLGA,NLGB | 2 | 400-600 | 480 | |
| | | | NLGA,NLGB | 3 | 400-600 | 480 | |
| | | | NMG | 2 | 600-800 | 480 | |
| | | | NMG | 3 | 600-800 | 480 | |
| | | | NNG | 2 | 800-1200 | 480 | |
| | NNG | 3 | 800-1200 | 480 | | | |
| | 2000 | HRD6,HRXD6 (3P) | NNG | 2 | 1200-1600 | 480 | |
| | | | NNG | 3 | 1200-1600 | 480 | |
| | | | NDGA,NDGB | 2 | 50-150 | 480 | |
| | 2000 | HRD6,HRXD6 (3P) | NDGA,NDGB | 3 | 50-150 | 480 | |
| NFGA,NFGB | | | 2 | 70-250 | 480 | | |
| NFGA,NFGB | | | 3 | 70-250 | 480 | | |
| FXD6,FD6 | | | 2 | 70-250 | 480 | | |
| FXD6,FD6 | | | 3 | 70-250 | 480 | | |
| FXD6,FD6 | | | 3 | 70-250 | 480 | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|---------------|------------------|----------------|-------------|-------------|---------|---------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 65,000 | 2000 | HRD6,HRXD6 (3P) | FXD6-A,FD6-A | 2 | 70-250 | 480 | | |
| | | | | 3 | 70-250 | 480 | | |
| | | | NJGA | 2 | 250-400 | 480 | | |
| | | | | 3 | 250-400 | 480 | | |
| | | | JD6,JXD6 | 2 | 200-400 | 480 | | |
| | | | | 3 | 200-400 | 480 | | |
| | | | JD6-A,JXD6-A | 2 | 200-400 | 480 | | |
| | | | | 3 | 200-400 | 480 | | |
| | | | NLGA,NLGB | 2 | 400-600 | 480 | | |
| | | | | 3 | 400-600 | 480 | | |
| | | | LD6 | 2 | 200-600 | 480 | | |
| | | | | 3 | 200-600 | 480 | | |
| | | | LD6-A | 2 | 200-600 | 480 | | |
| | | | | 3 | 200-600 | 480 | | |
| | | | LXD6 | 2 | 450-600 | 480 | | |
| | | | | 3 | 450-600 | 480 | | |
| | | | LXD6-A | 2 | 450-600 | 480 | | |
| | | | | 3 | 450-600 | 480 | | |
| | | | NMG | 2 | 600-800 | 480 | | |
| | | | | 3 | 600-800 | 480 | | |
| | | | NNG | 2 | 800-1200 | 480 | | |
| | | | | 3 | 800-1200 | 480 | | |
| | | | NPG | 2 | 1200-1600 | 480 | | |
| | | | | 3 | 1200-1600 | 480 | | |
| 100,000 | 150 | LDGA,LDGB (2,3P) | NGB,HGB,LGB | 1 | 15-125 | 277 | | |
| | | | | 2 | 15-125 | 277/480 | | |
| | 250 | LDGA,LDGB (3P) | NGB,HGB,LGB | NGB,HGB,LGB | 1 | 15-125 | 277 | |
| | | | | | 2 | 15-125 | 277/480 | |
| | | LFGA,LFGB (2,3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 1 | 15-125 | 277 |
| | | | | | | 2 | 15-125 | 277/480 |
| | | | | | | 2 | 50-150 | 480 |
| | | | | | | 2 | 50-150 | 480 |
| | | | | | | 2 | 70-250 | 480 |
| | | | | | | 2 | 70-250 | 480 |
| | | LFGA,LFGB (3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 3 | 15-125 | 277/480 |
| | | | | | | 3 | 50-150 | 480 |
| | | | | | | 3 | 50-150 | 480 |
| | | | | | | 3 | 70-250 | 480 |
| | | | | | | 3 | 70-250 | 480 |
| | | | | | | 3 | 70-250 | 480 |
| | | HHFD6 (2,3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 1 | 15-125 | 277 |
| | | | | | | 2 | 15-125 | 277/480 |
| | | HHFD6 (3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 3 | 15-125 | 277/480 |
| | | | | | | 3 | 15-125 | 277 |
| | | HHFXD6 (2,3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 1 | 15-125 | 277 |
| | | | | | | 2 | 15-125 | 277/480 |
| | | HHFXD6 (3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 3 | 15-125 | 277/480 |
| | | | | | | 3 | 15-125 | 277 |
| 400 | | CJD6(-A) (2,3P) | NGB,HGB,LGB | NGB,HGB,LGB | 1 | 15-125 | 277 | |
| | | | | | 2 | 15-125 | 277/480 | |
| | CJD6(-A) (3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 3 | 15-125 | 277/480 | |
| | | | | | 3 | 15-125 | 277/480 | |
| | LJGA (2,3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 2 | 50-150 | 480 | |
| | | | | | 2 | 50-150 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | LJGA (3P) | NGB,HGB,LGB | NGB,HGB,LGB | NGB,HGB,LGB | 3 | 50-150 | 480 | |
| | | | | | 3 | 50-150 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | HHJD6 (2,3P) | ED4,ED6 | HED4,HED6 | HED4,HED6 | 1 | 15-100 | 277 | |
| | | | | | 1 | 15-100 | 277 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | HHJD6 (3P) | FD6-A,FXD6-A | HFD6,HFXD6 | HFD6,HFXD6 | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| 3 | | | | | 70-250 | 480 | | |
| 3 | | | | | 70-250 | 480 | | |
| 3 | | | | | 70-250 | 480 | | |
| 3 | | | | | 70-250 | 480 | | |
| HHJXD6 (2,3P) | ED4,ED6 | HED4,HED6 | HED4,HED6 | 1 | 15-100 | 277 | | |
| | | | | 1 | 15-100 | 277 | | |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|--------------|------------------|----------------|-----------|-----------|--------|--------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 100,000 | 400 | HHJXD6 (2,3P) | FD6-A,FXD6-A | 2 | 70-250 | 480 | | |
| | | | | 2 | 70-250 | 480 | | |
| | | | FD6,FXD6 | 2 | 70-250 | 480 | | |
| | | | | 2 | 70-250 | 480 | | |
| | | | HFD6,HFXD6 | 2 | 70-250 | 480 | | |
| | | | | 2 | 70-250 | 480 | | |
| | | HHJXD6 (3P) | FD6-A,FXD6-A | 3 | 70-250 | 480 | | |
| | | | | 3 | 70-250 | 480 | | |
| | | | FD6,FXD6 | 3 | 70-250 | 480 | | |
| | | | | 3 | 70-250 | 480 | | |
| | | | HFD6,HFXD6 | 3 | 70-250 | 480 | | |
| | | | | 3 | 70-250 | 480 | | |
| | 600 | LLGA,LLGB (2,3P) | NDGB,HDGB | NDGA,HDGA | 2 | 50-150 | 480 | |
| | | | | | 2 | 50-150 | 480 | |
| | | | NFGB,HFGB | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | LLGA,LLGB (3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 3 | 50-150 | 480 |
| | | | | | | 3 | 50-150 | 480 |
| | | | NFGB,HFGB | NFGA,HFGA | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | NFGA,HFGA | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| HHL6 (2,3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 2 | 50-150 | 480 | | |
| | | | | 2 | 50-150 | 480 | | |
| | NFGB,HFGB | NFGA,HFGA | 2 | 70-250 | 480 | | | |
| | | | 2 | 70-250 | 480 | | | |
| | ED4,ED6 | HED4,HED6 | 1 | 15-100 | 277 | | | |
| | | | 1 | 15-100 | 277 | | | |
| HHL6 (3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 3 | 50-150 | 480 | | |
| | | | | 3 | 50-150 | 480 | | |
| | NFGB,HFGB | NFGA,HFGA | 3 | 70-250 | 480 | | | |
| | | | 3 | 70-250 | 480 | | | |
| | HFD6,HFXD6 | NFGA,HFGA | 3 | 70-250 | 480 | | | |
| | | | 3 | 70-250 | 480 | | | |
| 100,000 | 600 | HHL6 (2,3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 2 | 50-150 | 480 |
| | | | | | | 2 | 50-150 | 480 |
| | | | NFGB,HFGB | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | HHL6 (3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 3 | 50-150 | 480 |
| | | | | | | 3 | 50-150 | 480 |
| | | | NFGB,HFGB | NFGA,HFGA | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | NFGA,HFGA | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | 800 | HHL6 (2,3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 2 | 50-150 | 480 |
| | | | | | | 2 | 50-150 | 480 |
| | | | NFGB,HFGB | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | | | 2 | 70-250 | 480 | |
| | | HHL6 (3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 3 | 50-150 | 480 |
| | | | | | | 3 | 50-150 | 480 |
| | | | NFGB,HFGB | NFGA,HFGA | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | NFGA,HFGA | 3 | 70-250 | 480 | |
| | | | | | 3 | 70-250 | 480 | |
| LMG (2,3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 2 | 50-150 | 480 | | |
| | | | | 2 | 50-150 | 480 | | |
| | NFGB,HFGB | NFGA,HFGA | 2 | 70-250 | 480 | | | |
| | | | 2 | 70-250 | 480 | | | |
| | HFD6,HFXD6 | NFGA,HFGA | 2 | 70-250 | 480 | | | |
| | | | 2 | 70-250 | 480 | | | |
| LMG (3P) | NDGB,HDGB | NDGA,HDGA | NDGA,HDGA | 3 | 50-150 | 480 | | |
| | | | | 3 | 50-150 | 480 | | |
| | NFGB,HFGB | NFGA,HFGA | 3 | 70-250 | 480 | | | |
| | | | 3 | 70-250 | 480 | | | |
| | HFD6,HFXD6 | NFGA,HFGA | 3 | 70-250 | 480 | | | |
| | | | 3 | 70-250 | 480 | | | |
| ED4,ED6 | HED4,HED6 | 1 | 15-100 | 277 | | | | |
| | | 1 | 15-100 | 277 | | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | |
|---------------|--------------|------------|----------------|------------|-----------|---------|--------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | |
| 100,000 | 800 | LMG (3P) | NLGA,HLGA | 3 | 400-600 | 480 | | |
| | | | MD6,MXD6 | 3 | 400-800 | 480 | | |
| | | | HMD6,HMXD6 | 3 | 400-800 | 480 | | |
| | | CMD6 (3P) | NDGB,HDGB | 2 | 50-150 | 480 | | |
| | | | NDGA,HDGA | 3 | 50-150 | 480 | | |
| | | | NFGB,HFGB | 2 | 70-250 | 480 | | |
| | | | NFGA,HFGA | 3 | 70-250 | 480 | | |
| | | | FXD6,FD6 | 2 | 70-250 | 480 | | |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 | | |
| | | | HFD6,HFXD6 | 2 | 70-250 | 480 | | |
| | | | HFD6,HFXD6 | 3 | 70-250 | 480 | | |
| | | | NJGA,HJGA | 2 | 200-200 | 480 | | |
| | | | NJGA,HJGA | 3 | 200-200 | 480 | | |
| | | | JXD6,JD6 | 2 | 200-400 | 480 | | |
| | | | JXD6,JD6 | 3 | 200-400 | 480 | | |
| | | | JXD6-A,JD6-A | 2 | 200-400 | 480 | | |
| | | | JXD6-A,JD6-A | 3 | 200-400 | 480 | | |
| | | | HJD6,HJXD6 | 2 | 200-400 | 480 | | |
| | | | HJD6,HJXD6 | 3 | 200-400 | 480 | | |
| | | | HJD6-A | 2 | 200-400 | 480 | | |
| | | | HJXD6-A | 2 | 200-400 | 480 | | |
| | | | HJD6-A | 3 | 200-400 | 480 | | |
| | | | HJXD6-A | 3 | 200-400 | 480 | | |
| | | NLGB,HLGB | 2 | 400-600 | 480 | | | |
| | | NLGA,HLGA | 3 | 400-600 | 480 | | | |
| | | LD6 | 2 | 200-600 | 480 | | | |
| | | LD6 | 3 | 200-600 | 480 | | | |
| | | LD6-A | 2 | 200-600 | 480 | | | |
| | | LD6-A | 3 | 200-600 | 480 | | | |
| | | LXD6 | 2 | 450-600 | 480 | | | |
| | | LXD6 | 3 | 450-600 | 480 | | | |
| | | LXD6-A | 2 | 450-600 | 480 | | | |
| | | LXD6-A | 3 | 450-600 | 480 | | | |
| | | HLD6 | 2 | 200-600 | 480 | | | |
| | | HLD6 | 3 | 200-600 | 480 | | | |
| | | HLD6-A | 2 | 200-600 | 480 | | | |
| | | HLD6-A | 3 | 200-600 | 480 | | | |
| | | HLXD6 | 2 | 450-600 | 480 | | | |
| | | HLXD6 | 3 | 450-600 | 480 | | | |
| | | HLXD6-A | 2 | 450-600 | 480 | | | |
| | | HLXD6-A | 3 | 450-600 | 480 | | | |
| | | MD6,MXD6 | 2 | 500-800 | 480 | | | |
| | | MD6,MXD6 | 3 | 500-800 | 480 | | | |
| | | HMD6,HMXD6 | 2 | 500-800 | 480 | | | |
| | | HMD6,HMXD6 | 3 | 500-800 | 480 | | | |
| | | SCMD6 (3P) | HFD6,HFXD6 | 2 | 70-250 | 480 | | |
| | | | HFD6,HFXD6 | 3 | 70-250 | 480 | | |
| | | | 1200 | LNG (2,3P) | NDGB,HDGB | 2 | 50-150 | 480 |
| | | | | | NDGA,HDGA | 2 | 50-150 | 480 |
| | | | | | NFGB,HFGB | 2 | 70-250 | 480 |
| | NFGA,HFGA | | | | 2 | 70-250 | 480 | |
| | HFD6,HFXD6 | | | | 2 | 70-250 | 480 | |
| | NJGA,HJGA | | | | 2 | 200-400 | 480 | |
| | NLGB,HLGB | | | | 2 | 400-600 | 480 | |
| | NLGA,HLGA | | | | 2 | 400-600 | 480 | |
| | MD6,MXD6 | 2 | | | 400-800 | 480 | | |
| | HMD6,HMXD6 | 2 | | | 400-800 | 480 | | |
| | ND6,NXD6 | 2 | 600-1200 | | 480 | | | |
| | HND6,HNXD6 | 2 | 600-1200 | | 480 | | | |
| | NDGB,HDGB | 3 | 50-150 | | 480 | | | |
| | NDGA,HDGA | 3 | 50-150 | | 480 | | | |
| | NFGB,HFGB | 3 | 70-250 | | 480 | | | |
| | NFGA,HFGA | 3 | 70-250 | | 480 | | | |
| | LNG (3P) | NDGB,HDGB | 3 | | 50-150 | 480 | | |
| | | NFGB,HFGB | 3 | | 70-250 | 480 | | |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|--------------|----------------|------------|----------|----------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 100,000 | 1200 | LNG (3P) | HFD6,HFXD6 | 3 | 70-250 | 480 | |
| | | | NJGA,HJGA | 3 | 200-400 | 480 | |
| | | | NLGB,HLGB | 3 | 400-600 | 480 | |
| | | | NLGA,HLGA | 3 | 400-600 | 480 | |
| | | | MD6,MXD6 | 3 | 400-800 | 480 | |
| | | | HMD6,HMXD6 | 3 | 400-800 | 480 | |
| | | | ND6,NXD6 | 3 | 600-1200 | 480 | |
| | | | HND6,HNXD6 | 3 | 600-1200 | 480 | |
| | | | CND6 (3P) | NDGB,HDGB | 2 | 50-150 | 480 |
| | | | | NDGB,HDGB | 3 | 50-150 | 480 |
| | | | | NDGA,HDGA | 2 | 50-150 | 480 |
| | | | | NDGA,HDGA | 3 | 50-150 | 480 |
| | | | | NFGB,HFGB | 2 | 70-250 | 480 |
| | | | | NFGB,HFGB | 3 | 70-250 | 480 |
| | | | | NFGA,HFGA | 2 | 70-250 | 480 |
| | | NFGA,HFGA | | 3 | 70-250 | 480 | |
| | | FXD6,FD6 | | 2 | 70-250 | 480 | |
| | | FXD6,FD6 | | 3 | 70-250 | 480 | |
| | | FXD6-A,FD6-A | | 2 | 70-250 | 480 | |
| | | FXD6-A,FD6-A | | 3 | 70-250 | 480 | |
| | | HFD6,HFXD6 | | 2 | 70-250 | 480 | |
| | | HFD6,HFXD6 | | 3 | 70-250 | 480 | |
| | | NJGA,HJGA | | 2 | 200-400 | 480 | |
| | | NJGA,HJGA | | 3 | 200-400 | 480 | |
| | | JXD6,JD6 | | 2 | 200-400 | 480 | |
| | | JXD6,JD6 | | 3 | 200-400 | 480 | |
| | | JXD6-A,JD6-A | | 2 | 200-400 | 480 | |
| | | JXD6-A,JD6-A | | 3 | 200-400 | 480 | |
| | | HJD6,HJXD6 | 2 | 200-400 | 480 | | |
| | | HJD6,HJXD6 | 3 | 200-400 | 480 | | |
| | | HJD6-A | 2 | 200-400 | 480 | | |
| | | HJXD6-A | 2 | 200-400 | 480 | | |
| | | HJD6-A | 3 | 200-400 | 480 | | |
| | | HJXD6-A | 3 | 200-400 | 480 | | |
| | | NLGB,HLGB | 2 | 400-600 | 480 | | |
| | | NLGB,HLGB | 3 | 400-600 | 480 | | |
| | | NLGA,HLGA | 2 | 400-600 | 480 | | |
| | | NLGA,HLGA | 3 | 400-600 | 480 | | |
| | | LD6 | 2 | 200-600 | 480 | | |
| | | LD6 | 3 | 200-600 | 480 | | |
| | | LD6-A | 2 | 200-600 | 480 | | |
| | | LD6-A | 3 | 200-600 | 480 | | |
| | | LXD6 | 2 | 450-600 | 480 | | |
| | | LXD6 | 3 | 450-600 | 480 | | |
| | | LXD6-A | 2 | 450-600 | 480 | | |
| | | LXD6-A | 3 | 450-600 | 480 | | |
| | | HLD6 | 2 | 200-600 | 480 | | |
| | | HLD6 | 3 | 200-600 | 480 | | |
| | | HLD6-A | 2 | 200-600 | 480 | | |
| | | HLD6-A | 3 | 200-600 | 480 | | |
| | HLXD6 | 2 | 450-600 | 480 | | | |
| | HLXD6 | 3 | 450-600 | 480 | | | |
| | HLXD6-A | 2 | 450-600 | 480 | | | |
| | HLXD6-A | 3 | 450-600 | 480 | | | |
| | MD6,MXD6 | 2 | 500-800 | 480 | | | |
| | MD6,MXD6 | 3 | 500-800 | 480 | | | |
| | HMD6,HMXD6 | 2 | 500-800 | 480 | | | |
| | HMD6,HMXD6 | 3 | 500-800 | 480 | | | |
| | SCND6 (3P) | HFD6,HFXD6 | 2 | 70-250 | 480 | | |
| | | HFD6,HFXD6 | 3 | 70-250 | 480 | | |
| | | 1600 | LPG (2,3P) | ND6,NXD6 | 2 | 600-1200 | 480 |
| | | | | ND6,NXD6 | 3 | 600-1200 | 480 |
| | | | | HND6,HNXD6 | 2 | 600-1200 | 480 |
| | | | | HND6,HNXD6 | 3 | 600-1200 | 480 |
| | | | | ND6,NXD6 | 2 | 500-800 | 480 |
| | | | MD6,MXD6 | 3 | 500-800 | 480 | |
| | | | HMD6,HMXD6 | 2 | 500-800 | 480 | |
| | | | HMD6,HMXD6 | 3 | 500-800 | 480 | |
| | ND6,NXD6 | | 2 | 500-800 | 480 | | |
| | ND6,NXD6 | | 3 | 500-800 | 480 | | |
| | LPG (3P) | HND6,HNXD6 | 2 | 600-1200 | 480 | | |
| | | HND6,HNXD6 | 3 | 600-1200 | 480 | | |
| | | NDGB,HDGB | 2 | 50-150 | 480 | | |
| | | NDGA,HDGA | 2 | 50-150 | 480 | | |
| | | NFGB,HFGB | 2 | 70-250 | 480 | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | |
|---------------|--------------|-----------------|-----------------|------------|-----------|---------|-----|
| | Max. Amps | Type | Type | Poles | Amps | Volts | |
| 100,000 | 1600 | LPG (2,3P) | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | HFD6,HFXD6 | 2 | 70-250 | 480 | |
| | | | NJGA,HJGA | 2 | 200-400 | 480 | |
| | | | NLGB,HLGB | 2 | 400-600 | 480 | |
| | | | NLGA,HLGA | 2 | 400-600 | 480 | |
| | | | MD6,MXD6 | 2 | 400-800 | 480 | |
| | | | HMD6,HMXD6 | 2 | 400-800 | 480 | |
| | | | PD6,PXD6 | 2 | 1200-1600 | 480 | |
| | | | HPD6,HPXD6 | 2 | 1200-1600 | 480 | |
| | | | NDGB,HDGB | 3 | 50-150 | 480 | |
| | | NDGA,HDGA | 3 | 50-150 | 480 | | |
| | | NFGB,HFGB | 3 | 70-250 | 480 | | |
| | | NFGA,HFGA | 3 | 70-250 | 480 | | |
| | | HFD6,HFXD6 | 3 | 70-250 | 480 | | |
| | | NJGA,HJGA | 3 | 200-400 | 480 | | |
| | | NLGB,HLGB | 3 | 400-600 | 480 | | |
| | | NLGA,HLGA | 3 | 400-600 | 480 | | |
| | | MD6,MXD6 | 3 | 400-800 | 480 | | |
| | | HMD6,HMXD6 | 3 | 400-800 | 480 | | |
| | | PD6,PXD6 | 3 | 1200-1600 | 480 | | |
| | | HPD6,HPXD6 | 3 | 1200-1600 | 480 | | |
| | | CPD6 (3P) | NDGB,HDGB | 2 | 50-150 | 480 | |
| | | | | 3 | 50-150 | 480 | |
| | | | NDGA,HDGA | 2 | 50-150 | 480 | |
| | | | | 3 | 50-150 | 480 | |
| | | | NFGB,HFGB | 2 | 70-250 | 480 | |
| | | | | 3 | 70-250 | 480 | |
| | | | NFGA,HFGA | 2 | 70-250 | 480 | |
| | | | 3 | 70-250 | 480 | | |
| | FXD6,FD6 | | 2 | 70-250 | 480 | | |
| | | | 3 | 70-250 | 480 | | |
| | FXD6-A,FD6-A | | 2 | 70-250 | 480 | | |
| | | | 3 | 70-250 | 480 | | |
| | HFD6,HFXD6 | | 2 | 70-250 | 480 | | |
| | | | 3 | 70-250 | 480 | | |
| | NJGA,HJGA | | 2 | 200-400 | 480 | | |
| | | | 3 | 200-400 | 480 | | |
| | NLGB,HLGB | 2 | 400-600 | 480 | | | |
| | | 3 | 400-600 | 480 | | | |
| | NLGA,HLGA | 2 | 400-600 | 480 | | | |
| | | 3 | 400-600 | 480 | | | |
| | 150,000 | 400 | CJD6(-A) (2,3P) | ED4 | 1 | 15-100 | 277 |
| | | | | HFD6,HFXD6 | 2 | 70-250 | 480 |
| | | | | JXD6,JD6 | 2 | 200-400 | 480 |
| JXD6-A,JD6-A | | | | 2 | 200-400 | 480 | |
| HJD6,HJXD6 | | | | 2 | 200-400 | 480 | |
| HJD6-A | | | | 2 | 200-400 | 480 | |
| HJXD6-A | | | 2 | 200-400 | 480 | | |
| CJD6(-A) (3P) | | | HFD6,HFXD6 | 3 | 70-250 | 480 | |
| | | | JXD6,JD6 | 3 | 200-400 | 480 | |
| | | | JXD6-A,JD6-A | 3 | 200-400 | 480 | |
| | | HJD6,HJXD6 | 3 | 200-400 | 480 | | |
| HJD6-A | | 3 | 200-400 | 480 | | | |
| HJXD6-A | | 3 | 200-400 | 480 | | | |
| 600 | | CLD6(-A) (2,3P) | ED4 | 1 | 15-100 | 277 | |
| | | | HFD6,HFXD6 | 2 | 70-250 | 480 | |
| | | | JXD6,JD6 | 2 | 200-400 | 480 | |
| | | | JXD6-A,JD6-A | 2 | 200-400 | 480 | |
| | | | HJD6,HJXD6 | 2 | 200-400 | 480 | |
| | | | HJD6-A | 2 | 200-400 | 480 | |
| | | | HJXD6-A | 2 | 200-400 | 480 | |
| | LD6 | | 2 | 200-600 | 480 | | |
| | LD6-A | | 2 | 200-600 | 480 | | |
| | LXD6 | | 2 | 450-600 | 480 | | |
| LXD6-A | 2 | 450-600 | 480 | | | | |
| HLD6 | 2 | 200-600 | 480 | | | | |
| HLD6-A | 2 | 200-600 | 480 | | | | |
| HLXD6 | 2 | 450-600 | 480 | | | | |
| HLXD6-A | 2 | 450-600 | 480 | | | | |
| CLD6(-A) (3P) | HFD6,HFXD6 | 3 | 70-250 | 480 | | | |

480V Series Ratings (Continued)

| Series Rating | Main Breaker | | Branch Breaker | | | | | | |
|---------------|--------------|---------------|----------------|-------|-------------|-------------|---|--------|---------|
| | Max. Amps | Type | Type | Poles | Amps | Volts | | | |
| 150,000 | 600 | CLD6(-A) (3P) | JXD6,JD6 | 3 | 200-400 | 480 | | | |
| | | | JXD6-A,JD6-A | 3 | 200-400 | 480 | | | |
| | | | HJD6,HJXD6 | 3 | 200-400 | 480 | | | |
| | | | HJD6-A | 3 | 200-400 | 480 | | | |
| | | | HJXD6-A | 3 | 200-400 | 480 | | | |
| | | | LD6 | 3 | 200-600 | 480 | | | |
| | | | LD6-A | 3 | 200-600 | 480 | | | |
| | | | LXD6 | 3 | 450-600 | 480 | | | |
| | | | LXD6-A | 3 | 450-600 | 480 | | | |
| | | | HLD6 | 3 | 200-600 | 480 | | | |
| | | | HLD6-A | 3 | 200-600 | 480 | | | |
| | | | HLXD6 | 3 | 450-600 | 480 | | | |
| | | | HLXD6-A | 3 | 450-600 | 480 | | | |
| | | | 200,000 | 125 | CED6 (2,3P) | NGB,HGB,LGB | 1 | 15-125 | 277 |
| | | | | | | | 2 | 15-125 | 277/480 |
| | | | | | | ED4 | 1 | 15-100 | 277 |
| | | | | | | ED4,ED6 | 2 | 15-125 | 480 |
| | | | | | | HED4 | 1 | 15-100 | 277 |
| HED4,HED6 | 2 | 15-125 | | | | 480 | | | |
| CED6 (3P) | NGB,HGB,LGB | 3 | | | 15-125 | 277/480 | | | |
| | ED4,ED6 | 3 | | | 15-125 | 480 | | | |
| | HED4,HED6 | 3 | | | 15-125 | 480 | | | |
| | NGB,HGB,LGB | 1 | | | 15-125 | 277 | | | |
| | | 2 | | | 15-125 | 277/480 | | | |
| | ED4 | 1 | | | 15-100 | 277 | | | |
| 200,000 | 250 | CFD6 (2,3P) | ED4,ED6 | 2 | 15-50 | 480 | | | |
| | | | HED4 | 1 | 15-100 | 277 | | | |
| | | | HED4,HED6 | 2 | 15-125 | 480 | | | |
| | | | FXD6,FD6 | 2 | 70-250 | 480 | | | |
| | | | FXD6-A,FD6-A | 2 | 70-250 | 480 | | | |
| | | | HFD6,HFXD6 | 2 | 70-250 | 480 | | | |
| | | | NGB,HGB,LGB | 3 | 15-125 | 277/480 | | | |
| | | | ED4,ED6 | 3 | 15-50 | 480 | | | |
| | | | HED4,HED6 | 3 | 15-125 | 480 | | | |
| | | | FXD6,FD6 | 3 | 70-250 | 480 | | | |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 | | | |
| | | | HFD6,HFXD6 | 3 | 70-250 | 480 | | | |
| | | CFD6 (3P) | NGB,HGB,LGB | 3 | 15-125 | 277/480 | | | |
| | | | ED4,ED6 | 3 | 15-50 | 480 | | | |
| | | | HED4,HED6 | 3 | 15-125 | 480 | | | |
| | | | FXD6,FD6 | 3 | 70-250 | 480 | | | |
| | | | FXD6-A,FD6-A | 3 | 70-250 | 480 | | | |
| | | | HFD6,HFXD6 | 3 | 70-250 | 480 | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

600V Series Ratings

| Series Rating | Main Breaker/Fuse | | Branch Breaker | | | | |
|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------|---------|---------|---------|
| | Max. Amps | Type | Type | Number of Poles | Amperes | Voltage | |
| 14,000 | 125 | NGB2 (2,&3P) | BQD6 | 1 | 15-70 | 347 | |
| | | | | 2,3 | | 347/600 | |
| 18,000 | 125 | ED6, HED6 (1,2,&3P) | BQD6 | 1 | 15-70 | 347 | |
| | | | | 2,3 | | 347/600 | |
| | | ED6 (2,3P) | NGB, NGB2 | 1 | 15-125 | 347 | |
| | | | | 2,3 | | 347/600 | |
| 22,000 | 125 | HGB2 (2,&3P) | BQD6 | 1 | 15-70 | 347 | |
| | | | | 2,3 | | 347/600 | |
| | 250 | HFD6, HFXD6 (2,&3P) | NGB, NGB2 | 1 | 15-125 | 347 | |
| | | | | 2,3 | | 347/600 | |
| 25,000 | 125 | LGB2 (2,3P) | BQD6 | 1 | 15-70 | 347 | |
| | | | | 2,3 | | 347/600 | |
| | 250 | HFD6, HFXD6 (2,&3P) | BQD6 | 1 | 15-70 | 347 | |
| | | | | 2,3 | | 347/600 | |
| | | | ED6, HED6 | NGB, NGB2, HGB2 | 1 | 15-125 | 347 |
| | | | | | 2,3 | | 347/600 |
| 35,000 | 400 | HJD6 (-A) , HJXD6 (-A) (2,&3P) | HFD6 | 2,3 | 70-250 | 600 | |
| | 600 | HLD6 (-A) (2,&3P) | HFD6 | 2,3 | 70-250 | 600 | |
| | | | HLXD6 (-A) (2,&3P) | HFD6 | 2,3 | 70-250 | 600 |
| 50,000 | 800 | HMD6, HMXD6 (2,&3P) | HFD6 | 2,3 | 70 | 600 | |
| | | | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 | |
| | | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | |
| | | | HFD6 | 2,3 | 70 | 600 | |
| | 1200 | HND6, HNXD6 (2,&3P) | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 | |
| | | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | |
| | | | HFD6 | 2,3 | 70 | 600 | |
| | | | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | |
| 65,000 | 250 | CFD6 (2,&3P) | BQD6 | 2,3 | 15-70 | 347/600 | |
| | | | ED6, HED6 | 2,3 | 15-125 | 600 | |
| | | | HFD6 | 2,3 | 70 | 600 | |
| | 800 | CMD6 (2,&3P) | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 | |
| | | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | |
| | | | HFD6 | 2,3 | 70 | 600 | |
| | | | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | |
| | 1200 | CND6 (2,&3P) | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 | |
| | | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | |
| | | | HFD6 | 2,3 | 70 | 600 | |
| | | | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | |
| | | | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 | |
| | 1600 | PD6, HPXD6 (2,&3P) | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 | |
| | | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | |
| | | | HFD6 | 2,3 | 70 | 600 | |
| JD6 (-A), JXD6 (-A) | | | 2,3 | 200-400 | 600 | | |
| HJD6 (-A), HJXD6 (-A) | | | 2,3 | 200-400 | 600 | | |
| LD6 (-A), HLD6 (-A) | | | 2,3 | 200-600 | 600 | | |
| CPD6 (2,&3P) | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | | |
| | | HFD6 | 2,3 | 70 | 600 | | |
| | | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 | | |
| | | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 | | |
| | | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 | | |
| | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 | | |
| 100,000 | 125 | CED6 (2,&3P) | BQD6 | 1 | 15-70 | 347 | |
| | | | 2,3 | 347/600 | | | |
| | | | ED6, HED6 | 2,3 | 15-125 | 600 | |
| | | | NGB, NGB2, HGB2, LGB2 | 1 | 15-125 | 347 | |
| | | | 2,3 | 347/600 | | | |
| | | | 250 | CFD6 (3P) | BQD6 | 1 | 15-70 |
| | ED6, HED6 | 2,3 | | | 15-125 | 600 | |
| | HFD6 | 2,3 | | | 70-250 | 600 | |
| | NGB, NGB2, HGB2, LGB2 | 1 | | | 15-125 | 347 | |
| | 2,3 | 347/600 | | | | | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240 Volt Fuse Series Ratings

| Series Connected Rating | Main Fuse | | Branch Breaker | | | |
|-------------------------|----------------|-----------------|----------------|--------------|---------|-------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes | |
| 65,000 | J,R (1, 2, 3P) | 600 | QPH | 1 | 15-70 | |
| | | | BQH,BLH | 1 | 15-70 | |
| | | | QPH | 2 | 15-125 | |
| | BQH,BLH | | 2 | 15-125 | | |
| | QN,QNH | | 2 | 150-200 | | |
| | QNR,QNRH | | 2 | 150-200 | | |
| | J,R (2, 3P) | 1200 | QPH | 3 | 15-100 | |
| | | | BQH,BLH | 3 | 15-100 | |
| | | | QPH | 1 | 15-70 | |
| | BQH,BLH | | 1 | 15-70 | | |
| | QPH | | 2 | 15-125 | | |
| | BQH,BLH | | 2 | 15-125 | | |
| | J,R (3P) | 6000 | QN,QNH | 2 | 150-200 | |
| | | | QNR,QNRH | 2 | 150-200 | |
| | | | QPH | 3 | 15-100 | |
| | BQH,BLH | | 3 | 15-100 | | |
| | T (1, 2 3P) | | 200 | QPH | 1 | 15-70 |
| | BQH,BLH | | | 1 | 15-70 | |
| | QPH | 2 | | 15-125 | | |
| | BQH,BLH | 2 | | 15-125 | | |
| | QN,QNH | 2 | | 150-200 | | |
| | QNR,QNRH | 2 | | 150-200 | | |
| | T (2, 3P) | 6000 | QPH | 3 | 15-100 | |
| | | | BQH,BLH | 3 | 15-100 | |
| QPH | | | 1 | 15-70 | | |
| BQH,BLH | 1 | | 15-70 | | | |
| QPH | 2 | | 15-125 | | | |
| BQH,BLH | 2 | | 15-125 | | | |
| T (3P) | 6000 | QN,QNH | 2 | 150-200 | | |
| | | QNR,QNRH | 2 | 150-200 | | |
| | | QPH | 3 | 15-100 | | |
| BQH,BLH | | 3 | 15-100 | | | |
| L (1, 2 3P) | | 200 | QP,BQ,BL | 1 | 15-70 | |
| QT | | | 1,2 | 15-50 | | |
| QPF,BQF,BLF | 1 | | 15-30 | | | |
| QE,BE,BLE | 1 | | 15-30 | | | |
| QPHF,BQHF | 1 | | 15-30 | | | |
| BLHF | 1 | | 15-30 | | | |
| T(300V) (1, 2 3P) | 200 | QEH,BLEH | 1 | 15-30 | | |
| | | QPF2,BLF2 | 1 | 15-30 | | |
| | | QPHF2,BLHF2 | 1 | 15-30 | | |
| | | HQPF2,HBLF2 | 1 | 15-30 | | |
| | | QAF,BQAF,BAF | 1 | 15-20 | | |
| | | QAFH,BQAFH | 1 | 15-20 | | |
| | | BAFH | 1 | 15-20 | | |
| | | QAF2,BAF2 | 1 | 15-20 | | |
| | | QAFH2,BAFH2 | 1 | 15-20 | | |
| | | HQAF2,HBAF2 | 1 | 15-20 | | |
| | | QFGA2,BFGA2 | 1 | 15-20 | | |
| | | QFGAH2,BFGAH2 | 1 | 15-20 | | |
| | | HQFGA2,HBFGA2 | 1 | 15-20 | | |
| | | QP,BQ,BL | 2 | 15-125 | | |
| | | QP,BQ,BL | 2 | 15-125 | | |
| | | QPF,BLF | 2 | 15-60 | | |
| | | QE,BLE | 2 | 15-60 | | |
| | | T(300V) (2, 3P) | 200 | QPHF,BLHF | 2 | 15-60 |
| QEH,BLEH | 2 | | | 15-60 | | |
| QP,BQ,BL | 3 | | | 15-100 | | |
| QPH | 3 | | | 15-100 | | |
| BQH,BLH | 3 | | | 15-100 | | |
| HQP | 3 | | | 15-100 | | |
| T(300V) (3P) | 200 | HBQ,HBL | 3 | 15-100 | | |
| | | QPH | 1 | 15-70 | | |
| | | BQH,BLH | 1 | 15-70 | | |
| T(300V) (1, 2 3P) | 600 | HQP | 1 | 15-70 | | |
| | | QPH | 2 | 15-125 | | |
| | | BQH,BLH | 2 | 15-125 | | |
| | | HQP | 2 | 15-125 | | |
| | | HBQ,HBL | 2 | 15-125 | | |
| | | QR2,QRH2,HQR2 | 2 | 100-250 | | |
| T(300V) (2, 3P) | 600 | QR2,QRH2,HQR2 | 2 | 100-250 | | |
| | | ED4 | 1 | 15-100 | | |
| | | ED4,ED6 | 2 | 15-125 | | |
| | | HED4 | 1 | 15-100 | | |
| | | HED4,HED6 | 2 | 15-125 | | |
| | | FD6-A,FXD6-A | 2 | 70-250 | | |
| J,R (2, 3P) | 600 | FD6-A,FXD6-A | 2 | 70-250 | | |

240 Volt Series Ratings (Continued)

| Series Connected Rating | Main Fuse | | Branch Breaker | | |
|-------------------------|-------------|-----------------|----------------|--------------|---------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes |
| 100,000 | J,R (2, 3P) | 600 | FD6,FXD6 | 2 | 70-250 |
| | | | JXD2-A | 2 | 200-400 |
| | | | JXD2 | 2 | 200-400 |
| | | | JD6-A,JXD6-A | 2 | 200-400 |
| | | | JD6,JXD6 | 2 | 200-400 |
| | | | LD6-A | 2 | 200-600 |
| | | | LD6 | 2 | 200-600 |
| | | | LXD6-A | 2 | 450-600 |
| | | | LXD6 | 2 | 450-600 |
| | | | QR2,QRH2,HQR2 | 3 | 100-250 |
| | | | QR2,QRH2,HQR2 | 3 | 100-250 |
| | | | ED4,ED6 | 3 | 15-125 |
| | J,R (3P) | 600 | HED4,HED6 | 3 | 15-125 |
| | | | FD6-A,FXD6-A | 3 | 70-250 |
| | | | FD6,FXD6 | 3 | 70-250 |
| | | | JXD2-A | 3 | 200-400 |
| | | | JXD2 | 3 | 200-400 |
| | | | JD6-A,JXD6-A | 3 | 200-400 |
| | | | JD6,JXD6 | 3 | 200-400 |
| | | | SJD6-A | 3 | 200-400 |
| | | | SJD6 | 3 | 200-400 |
| | | | LD6-A | 3 | 200-600 |
| | | | LD6 | 3 | 200-600 |
| | | | LXD6-A | 3 | 450-600 |
| | T (2, 3P) | 1200 | LXD6 | 3 | 450-600 |
| | | | SLD6-A | 3 | 300-600 |
| | | | SLD6 | 3 | 300-600 |
| | | | ED4 | 1 | 15-100 |
| | | | ED4,ED6 | 2 | 15-125 |
| | | | HED4 | 1 | 15-100 |
| | | | HED4,HED6 | 2 | 15-125 |
| | | | FD6-A,FXD6-A | 2 | 70-250 |
| | | | FD6,FXD6 | 2 | 70-250 |
| | | | JXD2-A | 2 | 200-400 |
| | | | JXD2 | 2 | 200-400 |
| | | | JD6-A,JXD6-A | 2 | 200-400 |
| | T (3P) | 1200 | JD6,JXD6 | 2 | 200-400 |
| | | | LD6 | 2 | 200-600 |
| | | | LD6 | 2 | 200-600 |
| | | | LXD6-A | 2 | 450-600 |
| | | | LXD6 | 2 | 450-600 |
| | | | ED4,ED6 | 3 | 15-125 |
| | | | HED4,HED6 | 3 | 15-125 |
| | | | FD6-A,FXD6-A | 3 | 70-250 |
| | | | FD6,FXD6 | 3 | 70-250 |
| | | | JXD2-A | 3 | 200-400 |
| | | | JXD2 | 3 | 200-400 |
| | | | JD6-A,JXD6-A | 3 | 200-400 |
| T (2, 3P) | 6000 | JD6,JXD6 | 3 | 200-400 | |
| | | SJD6-A | 3 | 200-400 | |
| | | SJD6 | 3 | 200-400 | |
| | | LD6-A | 3 | 200-600 | |
| | | LD6 | 3 | 200-600 | |
| | | LXD6-A | 3 | 450-600 | |
| | | LXD6 | 3 | 450-600 | |
| | | SLD6-A | 3 | 300-600 | |
| | | SLD6 | 3 | 300-600 | |
| | | ED4 | 1 | 15-100 | |
| | | ED4,ED6 | 2 | 15-125 | |
| | | HED4 | 1 | 15-100 | |
| HED4,HED6 | 2 | 15-125 | | | |
| L (2, 3P) | 6000 | FD6-A,FXD6-A | 2 | 70-250 | |
| | | FD6,FXD6 | 2 | 70-250 | |
| | | JXD2-A | 2 | 200-400 | |
| | | JXD2 | 2 | 200-400 | |
| | | JD6-A,JXD6-A | 2 | 200-400 | |
| | | JD6,JXD6 | 2 | 200-400 | |
| | | LD6-A | 2 | 200-600 | |
| | | LD6 | 2 | 200-600 | |
| | | LXD6-A | 2 | 450-600 | |
| | | LXD6 | 2 | 450-600 | |

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

240 Volt Series Ratings (Continued)

| Series Connected Rating | Main Fuse | | Branch Breaker | | |
|-------------------------|----------------|-----------------|----------------|--------------|-----------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes |
| 100,000 | L (2, 3P) | 6000 | LXD6 | 2 | 450-600 |
| | | | PD6,PXD6 | 3 | 1200-1600 |
| | | | RD6,RXD6 | 3 | 1600-2000 |
| | | | ED4,ED6 | 3 | 15-125 |
| | | | HED4,HED6 | 3 | 15-125 |
| | | | FD6-A,FXD6-A | 3 | 70-250 |
| | | | FD6,FXD6 | 3 | 70-250 |
| | | | JXD2-A | 3 | 200-400 |
| | | | JXD2 | 3 | 200-400 |
| | | | JD6-A,JXD6-A | 3 | 200-400 |
| | | | JD6,JXD6 | 3 | 200-400 |
| | | | SJD6-A | 3 | 200-400 |
| | | | SJD6 | 3 | 200-400 |
| | | | LD6-A | 3 | 200-600 |
| | LD6 | 3 | 200-600 | | |
| | L (3P) | LXD6-A | 3 | 450-600 | |
| | | LXD6 | 3 | 450-600 | |
| | | SLD6-A | 3 | 300-600 | |
| | | SLD6 | 3 | 300-600 | |
| | | SMD6 | 3 | 500-800 | |
| | | SND6 | 3 | 500-1200 | |
| | | PD6,PXD6 | 3 | 1200-1600 | |
| | | SPD6 | 3 | 1400-1600 | |
| | | RD6,RXD6 | 3 | 1600-2000 | |
| | | QJ2 | 2 | 125-200 | |
| | | QJH2,QJ2H | 2 | 125-200 | |
| | | QJ2 | 3 | 125-200 | |
| | | QJH2,QJ2H | 3 | 125-200 | |
| QJ2 | | 2 | 125-225 | | |
| QJ2 | 3 | 125-225 | | | |
| 200,000 | R (2, 3P) | 200 | QJH2,QJ2H | 2 | 125-225 |
| | R (3P) | 200 | QJH2,QJ2H | 3 | 125-225 |
| | T,J (2, 3P) | 400 | QJ2 | 2 | 125-225 |
| | T,J (3P) | | QJ2 | 3 | 125-225 |
| | T,J (2, 3P) | 600 | QJH2,QJ2H | 2 | 125-225 |
| | T,J (3P) | | QJH2,QJ2H | 3 | 125-225 |
| | J,R (1, 2, 3P) | | NGB,HGB,LGB | 1 | 15-125 |
| | J,R (2, 3P) | | NGB,HGB,LGB | 2 | 15-125 |
| | | | NDGB,HDGB | 2 | 50-150 |
| | | | NDGA,HDGA | 2 | 50-150 |
| | | | NFGA,HFGA | 2 | 70-250 |
| | | | NFGB,HFGB | 2 | 70-250 |
| | | | HFD6,HFXD6 | 2 | 70-250 |
| | | | NJGA,NJJA | 2 | 200-400 |
| | | | HJGA | 2 | 200-400 |
| | | | NLGA,HLGA | 2 | 400-600 |
| | | | NLGB,HLGB | 2 | 400-600 |
| | | | NGB,HGB,LGB | 3 | 15-125 |
| | | NDGB,HDGB | 3 | 50-150 | |
| | | NDGA,HDGA | 3 | 50-150 | |
| | | NFGA,HFGA | 3 | 70-250 | |
| | NFGB,HFGB | 3 | 70-250 | | |
| | HFD6,HFXD6 | 3 | 70-250 | | |
| | NJGA,NJJA | 3 | 200-400 | | |
| | HJGA | 3 | 200-400 | | |
| | NLGA,HLGA | 3 | 400-600 | | |
| | NLGB,HLGB | 3 | 400-600 | | |
| | J,R (3P) | NGB,HGB,LGB | 1 | 15-125 | |
| NGB,HGB,LGB | | 2 | 15-125 | | |
| NDGB,HDGB | | 2 | 50-150 | | |
| NDGA,HDGA | | 2 | 50-150 | | |
| NFGA,HFGA | | 2 | 70-250 | | |
| NFGB,HFGB | | 2 | 70-250 | | |
| HFD6,HFXD6 | | 2 | 70-250 | | |
| NJGA,NJJA | | 2 | 200-400 | | |
| HJGA | | 2 | 200-400 | | |
| NLGA,HLGA | | 2 | 400-600 | | |
| NLGB,HLGB | | 2 | 400-600 | | |
| NGB,HGB,LGB | | 3 | 15-125 | | |
| NDGB,HDGB | | 3 | 50-150 | | |
| NDGA,HDGA | | 3 | 50-150 | | |
| NFGA,HFGA | 3 | 70-250 | | | |
| NFGB,HFGB | 3 | 70-250 | | | |
| HFD6,HFXD6 | 3 | 70-250 | | | |
| T (1, 2, 3P) | NGB,HGB,LGB | 1 | 15-125 | | |
| | NGB,HGB,LGB | 2 | 15-125 | | |
| | NDGB,HDGB | 2 | 50-150 | | |
| | NDGA,HDGA | 2 | 50-150 | | |
| | NFGA,HFGA | 2 | 70-250 | | |
| | NFGB,HFGB | 2 | 70-250 | | |
| | HFD6,HFXD6 | 2 | 70-250 | | |
| | NJGA,NJJA | 2 | 200-400 | | |
| | HJGA | 2 | 200-400 | | |
| | NLGA,HLGA | 2 | 400-600 | | |
| | NLGB,HLGB | 2 | 400-600 | | |
| | NGB,HGB,LGB | 3 | 15-125 | | |
| | NDGB,HDGB | 3 | 50-150 | | |
| | NDGA,HDGA | 3 | 50-150 | | |
| NFGA,HFGA | 3 | 70-250 | | | |
| NFGB,HFGB | 3 | 70-250 | | | |
| HFD6,HFXD6 | 3 | 70-250 | | | |
| T (2, 3P) | NGB,HGB,LGB | 1 | 15-125 | | |
| | NGB,HGB,LGB | 2 | 15-125 | | |
| | NDGB,HDGB | 2 | 50-150 | | |
| | NDGA,HDGA | 2 | 50-150 | | |
| | NFGA,HFGA | 2 | 70-250 | | |
| | NFGB,HFGB | 2 | 70-250 | | |
| | HFD6,HFXD6 | 2 | 70-250 | | |
| | NJGA,NJJA | 2 | 200-400 | | |
| | HJGA | 2 | 200-400 | | |
| | NLGA,HLGA | 2 | 400-600 | | |
| | NLGB,HLGB | 2 | 400-600 | | |
| | NGB,HGB,LGB | 3 | 15-125 | | |
| | NDGB,HDGB | 3 | 50-150 | | |
| | NDGA,HDGA | 3 | 50-150 | | |
| NFGA,HFGA | 3 | 70-250 | | | |
| NFGB,HFGB | 3 | 70-250 | | | |
| HFD6,HFXD6 | 3 | 70-250 | | | |
| T (3P) | NGB,HGB,LGB | 1 | 15-125 | | |
| | NGB,HGB,LGB | 2 | 15-125 | | |
| | NDGB,HDGB | 2 | 50-150 | | |
| | NDGA,HDGA | 2 | 50-150 | | |
| | NFGA,HFGA | 2 | 70-250 | | |
| | NFGB,HFGB | 2 | 70-250 | | |
| | HFD6,HFXD6 | 2 | 70-250 | | |
| | NJGA,NJJA | 2 | 200-400 | | |
| | HJGA | 2 | 200-400 | | |
| | NLGA,HLGA | 2 | 400-600 | | |
| | NLGB,HLGB | 2 | 400-600 | | |
| | NGB,HGB,LGB | 3 | 15-125 | | |
| | NDGB,HDGB | 3 | 50-150 | | |
| | NDGA,HDGA | 3 | 50-150 | | |
| NFGA,HFGA | 3 | 70-250 | | | |
| NFGB,HFGB | 3 | 70-250 | | | |
| HFD6,HFXD6 | 3 | 70-250 | | | |

240 Volt Series Ratings (Continued)

| Series Connected Rating | Main Fuse | | Branch Breaker | | |
|-------------------------|-----------|-----------------|----------------|--------------|----------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes |
| 200,000 | T (3P) | 1200 | NJGA,NJJA | 3 | 200-400 |
| | | | HJGA | 3 | 200-400 |
| | | | NLGA,HLGA | 3 | 400-600 |
| | | | NLGB,HLGB | 3 | 400-600 |
| | | | NDGB,HDGB | 2 | 50-150 |
| | | | NDGA,HDGA | 2 | 50-150 |
| | | | NFGA,HFGA | 2 | 70-250 |
| | | | NFGB,HFGB | 2 | 70-250 |
| | | | HFD6,HFXD6 | 2 | 70-250 |
| | | | NJGA,NJJA | 2 | 200-400 |
| | | | HJGA | 2 | 200-400 |
| | | | NLGA,HLGA | 2 | 400-600 |
| | L (2, 3P) | 6000 | NLGB,HLGB | 2 | 400-600 |
| | | | MD6,MXD6 | 2 | 500-800 |
| | | | HMD6,HMXD6 | 2 | 500-800 |
| | | | ND6,NXD6 | 2 | 500-1200 |
| | | | HND6,HNXD6 | 2 | 500-1200 |
| | | | NDGB,HDGB | 3 | 50-150 |
| | | | NDGA,HDGA | 3 | 50-150 |
| | | | NFGA,HFGA | 3 | 70-250 |
| | | | NFGB,HFGB | 3 | 70-250 |
| | | | HFD6,HFXD6 | 3 | 70-250 |
| | | | NJGA,NJJA | 3 | 200-400 |
| | | | HJGA | 3 | 200-400 |
| | L (3P) | 6000 | NLGA,HLGA | 3 | 400-600 |
| | | | NLGB,HLGB | 3 | 400-600 |
| | | | MD6,MXD6 | 3 | 500-800 |
| | | | HMD6,HMXD6 | 3 | 500-800 |
| | | | ND6,NXD6 | 3 | 500-1200 |
| | | | HND6,HNXD6 | 3 | 500-1200 |
| | | | NDGB,HDGB | 3 | 50-150 |
| | | | NDGA,HDGA | 3 | 50-150 |
| | | | NFGA,HFGA | 3 | 70-250 |
| | | | NFGB,HFGB | 3 | 70-250 |
| | | | HFD6,HFXD6 | 3 | 70-250 |
| | | | NJGA,NJJA | 3 | 200-400 |
| HJGA | 3 | 200-400 | | | |
| NLGA,HLGA | 3 | 400-600 | | | |
| NLGB,HLGB | 3 | 400-600 | | | |
| MD6,MXD6 | 3 | 500-800 | | | |
| HMD6,HMXD6 | 3 | 500-800 | | | |
| ND6,NXD6 | 3 | 500-1200 | | | |
| HND6,HNXD6 | 3 | 500-1200 | | | |

480 Volt Fuse Series Ratings

| Series Connected Rating | Main Breaker | | Branch Breaker | | |
|-------------------------|--------------|-----------------|----------------|--------------|---------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes |
| 50,000 | J (1,2,3P) | 400 | ED4 | 1 | 60-100 |
| | J (2,3P) | | ED4 | 2 | 15-100 |
| | J (3P) | | ED4 | 3 | 15-100 |
| 100,000 | J (1,2,3P) | 600 | ED4 | 1 | 15-50 |
| | T,J (2,3P) | | FXD6,FD6 | 2 | 70-250 |
| | | | FXD6-A,FD6-A | 2 | 70-250 |
| | | | FXD6,FD6 | 3 | 70-250 |
| | | | FXD6-A,FD6-A | 3 | 70-250 |
| | | | HFD6,HFXD6 | 2 | 70-250 |
| | | | NDGB,HDGB | 2 | 50-150 |
| | | | NDGA,HDGA | 2 | 50-150 |
| | | | NFGB,HFGB | 2 | 70-250 |
| | | | NFGA,HFGA | 2 | 70-250 |
| | | | NJGA,HJGA | 2 | 200-400 |
| | | | NLGB,HLGB | 2 | 400-600 |
| | | | NLGA,HLGA | 2 | 400-600 |
| | | | HFD6,HFXD6 | 3 | 70-250 |
| | | | NDGB,HDGB | 3 | 50-150 |
| | NDGA,HDGA | | 3 | 50-150 | |
| | NFGB,HFGB | | 3 | 70-250 | |
| | NFGA,HFGA | | 3 | 70-250 | |
| | NJGA,HJGA | | 3 | 200-400 | |
| | NLGB,HLGB | | 3 | 400-600 | |
| | NLGA,HLGA | | 3 | 400-600 | |
| | J,R (3P) | | JD6,JXD6 | 2 | 200-400 |
| | | | JD6-A,JXD6-A | 2 | 200-400 |
| | | | LD6 | 2 | 200-600 |
| | | | LD6-A | 2 | 200-600 |
| | | | LXD6 | 2 | 450-600 |
| | | | LXD6-A | 2 | 450-600 |
| | | | HJD6,HJXD6 | 2 | 200-400 |
| HJD6-A | | 2 | 200-400 | | |
| HJXD6-A | | 2 | 200-400 | | |
| HJXD6-A | | 2 | 200-400 | | |
| HLD6 | | 2 | 200-600 | | |
| T,J,R (2,3P) | | | | | |

5 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

Series Connected Short Circuit Ratings

General

480 Volt Fuse Series Ratings (continued)

| Series Connected Rating | Main Breaker | | Branch Breaker | | |
|-------------------------|--------------|-----------------|----------------|--------------|---------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes |
| 100,000 | T,J,R (2,3P) | 600 | HLD6-A | 2 | 200-600 |
| | | | HLXD6 | 2 | 450-600 |
| | HLXD6-A | | 2 | 450-600 | |
| | JD6,JXD6 | | 3 | 200-400 | |
| | JD6-A,JXD6-A | | 3 | 200-400 | |
| | LD6 | | 3 | 200-600 | |
| | LD6-A | | 3 | 200-600 | |
| | LXD6 | | 3 | 450-600 | |
| | LXD6-A | | 3 | 450-600 | |
| | HJD6,HJXD6 | | 3 | 200-400 | |
| | HJD6-A | 3 | 200-400 | | |
| | HJXD6-A | 3 | 200-400 | | |
| | HLD6 | 3 | 200-600 | | |
| | HLD6-A | 3 | 200-600 | | |
| | HLXD6 | 3 | 450-600 | | |
| | HLXD6-A | 3 | 450-600 | | |
| | T (2,3P) | 1200 | HFD6,HFXD6 | 2 | 70-250 |
| | | | NDGB,HDGB | 2 | 50-150 |
| | | | NDGA,HDGA | 2 | 50-150 |
| | | | NFGB,HFGB | 2 | 70-250 |
| | | | NFGA,HFGA | 2 | 70-250 |
| | | | NJGA,HJGA | 2 | 200-400 |
| | | | NLGB,HLGB | 2 | 400-600 |
| | | | NLGA,HLGA | 2 | 400-600 |
| | | | HFD6,HFXD6 | 3 | 70-250 |
| | | | NDGB,HDGB | 3 | 50-150 |
| | NDGA,HDGA | 3 | 50-150 | | |
| | NFGB,HFGB | 3 | 70-250 | | |
| | NFGA,HFGA | 3 | 70-250 | | |
| | NJGA,HJGA | 3 | 200-400 | | |
| | NLGB,HLGB | 3 | 400-600 | | |
| | NLGA,HLGA | 3 | 400-600 | | |
| | T,L (2,3P) | 1200 | JD6,JXD6 | 2 | 200-400 |
| | | | JD6-A,JXD6-A | 2 | 200-400 |
| | | | LD6 | 2 | 200-600 |
| | | | LD6-A | 2 | 200-600 |
| | | | LXD6 | 2 | 450-600 |
| | | | LXD6-A | 2 | 450-600 |
| | | | HJD6,HJXD6 | 2 | 200-400 |
| | | | HJD6-A | 2 | 200-400 |
| | | | HJXD6-A | 2 | 200-400 |
| | | | HLD6 | 2 | 200-600 |
| | HLD6-A | 2 | 200-600 | | |
| | HLXD6 | 2 | 450-600 | | |
| | HLXD6-A | 2 | 450-600 | | |
| | T,L (3P) | 1200 | JD6,JXD6 | 3 | 200-400 |
| | | | JD6-A,JXD6-A | 3 | 200-400 |
| | | | LD6 | 3 | 200-600 |
| | | | LD6-A | 3 | 200-600 |
| | | | LXD6 | 3 | 450-600 |
| | | | LXD6-A | 3 | 450-600 |
| | | | HJD6,HJXD6 | 3 | 200-400 |
| | | | HJXD6-A | 3 | 200-400 |
| | | | HLD6 | 3 | 200-600 |
| | | | HLD6-A | 3 | 200-600 |
| | HLXD6 | 3 | 450-600 | | |
| | HLXD6-A | 3 | 450-600 | | |
| | L (2,3P) | 600 | NDGB,HDGB | 2 | 50-150 |
| | | | NDGA,HDGA | 2 | 50-150 |
| | | | NFGB,HFGB | 2 | 70-250 |
| | | | NFGA,HFGA | 2 | 70-250 |
| | | | HFD6,HFXD6 | 2 | 70-250 |
| | | | NJGA,HJGA | 2 | 200-400 |
| | | | NLGB,HLGB | 2 | 400-600 |
| | | | NLGA,HLGA | 2 | 400-600 |
| | | | MD6,MXD6 | 2 | 500-800 |
| | | | HMD6,HMXD6 | 2 | 500-800 |
| | ND6,NXD6 | 2 | 500-1200 | | |
| | HND6,HNXD6 | 2 | 500-1200 | | |
| | L (3P) | 600 | NDGB,HDGB | 3 | 50-150 |

480 Volt Fuse Series Ratings (continued)

| Series Connected Rating | Main Breaker | | Branch Breaker | | |
|-------------------------|--------------|-----------------|----------------|--------------|-----------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes |
| 100,000 | L (3P) | 600 | NDGA,HDGA | 3 | 50-150 |
| | | | NFGB,HFGB | 3 | 70-250 |
| | | | NFGA,HFGA | 3 | 70-250 |
| | | | HFD6,HFXD6 | 3 | 70-250 |
| | | | NJGA,HJGA | 3 | 200-400 |
| | | | NLGB,HLGB | 3 | 400-600 |
| | | | NLGA,HLGA | 3 | 400-600 |
| | | | MD6,MXD6 | 3 | 500-800 |
| | | | HMD6,HMXD6 | 3 | 500-800 |
| | | | ND6,NXD6 | 3 | 500-1200 |
| | | | HND6,HNXD6 | 3 | 500-1200 |
| | | | PD6,HPD6 | 3 | 1200-1600 |
| | | | HPD6,HPXD6 | 3 | 1200-1600 |

600 Volt Fuse Series Ratings

| Series Connected Rating | Main Breaker | | Branch Breaker | | | |
|-------------------------|----------------------|-----------------|-----------------------|--------------|---------|-------|
| | Type | Maximum Amperes | Type | No. of Poles | Amperes | Volts |
| 100,000 | J, R, T Fuse (2,&3P) | 600 | JD6 (-A), JXD6 (-A) | 2,3 | 200-400 | 600 |
| | | | HJD6 (-A), HJXD6 (-A) | 2,3 | 200-400 | 600 |
| | | | LD6 (-A), HLD6 (-A) | 2,3 | 200-600 | 600 |
| | | | LXD6 (-A), HLXD6 (-A) | 2,3 | 450-600 | 600 |
| | J Fuse (2,&3P) | 600 | FD6-A, FXD6-A | 2,3 | 70-250 | 600 |

Molded Case Circuit Breakers

IEC 947-2[®] AC Interrupting Ratings, 50/60 HZ KA

Reference

| Ampere Rating | Breaker Frame | Breaker Type | 220/240 Volts | | 380/415 Volts | | 500 Volts | |
|---------------|---------------|--------------|---------------|-----|---------------|-----|-----------|-----|
| | | | Icu | Ics | Icu | Ics | Icu | Ics |
| 15-125 | ED | ED6 | 65 | 17 | 35 | 9 | — | — |
| 70-250 | FD | FXD6 | 65 | 33 | 35 | 18 | — | — |
| | | FD6 | 65 | 33 | 35 | 18 | — | — |
| | | HFD6 | 100 | 50 | 65 | 33 | — | — |
| | | HFXD6 | 100 | 50 | 65 | 33 | — | — |
| | | HHFD6 | 200 | 100 | 100 | 50 | — | — |
| | | HHFXD6 | 200 | 100 | 100 | 50 | — | — |
| 250-400 | JD | JXD6(A) | 65 | 33 | 40 | 20 | — | — |
| | | JD6(A) | 65 | 33 | 40 | 20 | — | — |
| | | HJD6(A) | 100 | 50 | 65 | 33 | — | — |
| | | HJXD6(A) | 100 | 50 | 65 | 33 | — | — |
| | | HHJD6 | 200 | 100 | 100 | 50 | — | — |
| 400-600 | LD | HHJXD6 | 200 | 100 | 100 | 50 | — | — |
| | | LXD6(A) | 65 | 33 | 40 | 20 | — | — |
| | | LD6(A) | 65 | 33 | 40 | 20 | — | — |
| | | HLD6(A) | 100 | 50 | 65 | 33 | — | — |
| | | HLXD6(A) | 100 | 50 | 65 | 33 | — | — |
| | | HHLD6(A) | 200 | 100 | 100 | 50 | — | — |
| 600-800 | MD | HHLXD6 | 200 | 100 | 100 | 50 | — | — |
| | | MXD6 | 65 | 33 | 40 | 20 | — | — |
| | | MD6 | 65 | 33 | 40 | 20 | — | — |
| | | HMXD6 | 100 | 50 | 65 | 33 | — | — |
| 800-1200 | ND | HMD6 | 100 | 50 | 65 | 33 | — | — |
| | | NXD6 | 65 | 33 | 40 | 20 | — | — |
| | | ND6 | 65 | 33 | 40 | 20 | — | — |
| | | HNXD6 | 100 | 50 | 65 | 33 | — | — |
| | | HND6 | 100 | 50 | 65 | 33 | — | — |

Molded Case Circuit Breakers

Typical Specifications

Reference

General Specifications

Molded case circuit breakers shall provide circuit overcurrent protection with inverse time and instantaneous tripping characteristics and shall be Siemens Sentron, Sensitrip or approved equal.

All circuit breakers shall be CSA Certified and conform to applicable requirements of NEMA Standard Publication No. AB1.

All circuit breakers shall have a quick-make, quick-break over center toggle type mechanism and the handle mechanism shall be trip free to prevent holding contacts closed against a short circuit or sustained overload. All circuit breaker handles shall assume a position between "ON" and "OFF" when tripped automatically. Multi-pole circuit breakers shall be common-trip such that an overload or short circuit on any one pole will result in all poles opening simultaneously. Arc extinction is to be accomplished by magnetic arc chutes. All ratings are to be clearly visible. When reverse feed is indicated on the drawings, in accordance with CSA, circuit breakers with sealed trip units shall be supplied.

Thermal Magnetic Specifications

Unless otherwise noted on the drawings, all Circuit breakers 2000 Ampere and below shall have thermal-magnetic trip units, with inverse time-current characteristics. Automatic operation of these circuit breakers shall be obtained by means of thermal-magnetic tripping devices located in each pole providing inverse time delay and instantaneous circuit protection. Circuit breakers shall be ambient compensating in that, as the ambient temperature increases over 40°C, the circuit breaker automatically derates itself so as to better protect its associated conductor. Thermal magnetic breakers from 250 to 2000A frames shall have thermal interchangeable trip units, with instantaneous magnetic trip settings that are adjustable and accessible from the front of all circuit breakers on frame sizes 250 Amperes and above. Where indicated, provide circuit breakers CSA Certified for application at 100% of their continuous ampere rating in their intended enclosure.

Motor Circuit Protectors

Where indicated on the drawings and in the combination motor starter/motor control center schedule, furnish instantaneous magnetic trip only circuit breakers for motor short circuit protection. The magnetic trips shall be adjustable and accessible from the front of all circuit breakers frames. The continuous current rating shall be between 1 and 800 Amperes as indicated on the drawing.

The interrupting rating of the circuit breakers shall be as indicated in the specifications, and shown on the drawing or single line diagram. The interrupting rating of the circuit breakers shall be at least equal to the available short circuit current at the line terminals of the circuit breaker and correspond to the CSA Certified integrated short circuit current rating specified.

Internal Accessories

Provide shunt trips, bell alarms, and auxiliary switches as shown on the contract drawings. Gold plated auxiliary switches shall be supplied for PLC connection. Internal accessories for all breakers shall be CSA Certified for field installation and modification.

Connection Accessories

Unless otherwise noted, Mechanical lugs shall be provided with all Molded Case Breakers. Where indicated on the drawings, compression lugs shall be provided on 1200 Ampere frame and below circuit breakers. All compression lugs shall be supplied by the Circuit Breaker Manufacturer. Where indicated on the drawings, CSA Certified plug-in or rear connectors shall be supplied.

Solid State Sensing Specifications

As indicated on the drawings, circuit breaker frames 400 Ampere through 3200-Ampere shall have microprocessor-based RMS sensing trip units, with the capability to measure through to the 21st harmonic. Automatic operation of all circuit breaker frames 400A and larger shall be obtained by means of solid state tripping elements providing inverse time delay and (instantaneous) and/or (short-time delay) circuit protection. Continuous current ratings shall be adjustable from 20% to 100% of the trip unit rating, without the need for a rating plug. Long-time delay and instantaneous trip shall be adjustable. The optional short-time trip function shall have adjustable pick-up settings, three fixed times, and I_t ramp. Circuit breaker frames 400A and larger, and where indicated on the drawings, shall be 100% equipment rated.

Integral Ground Fault Option

Main and feeder circuit breakers, as indicated on the drawings, shall be provided with integral ground fault protection. Ground fault pick-up shall be adjustable from 20% to 70% of the circuit breakers maximum continuous current rating. Ground fault time delay shall be adjustable with three 1 τ ramps.

Metering Option

When indicated on the drawings, solid state trip breakers shall be furnished with a plug-in or panel mounted metering device. This device shall simultaneously display all three phase currents, as well as average current, ground current, and phase unbalance. In addition it shall display breaker status, a max log, and a trip log. The trip log will retain and display date, time and type of trip (overload, short circuit or ground fault) for the most recent 5 trip events.

Current Limiting Specifications

Where indicated on the drawings, Siemens current limiting circuit breakers are to be furnished. Current limiting circuit breakers shall limit the let-through I_t to a value less than the I_t of one-half cycle wave of the symmetrical prospective current without any fusible elements when operating within its current range.

Series Connected Combination Specifications

Where protective devices are applied in series combination, such that the prospective available fault current exceeds the interrupting rating (AIR) of the downstream protective devices, such combinations shall be CSA Certified combinations. All electrical equipment using these CSA Certified circuit breaker combinations shall be clearly marked.

Molded Case Circuit Breakers

Superseded Breakers

Reference

| Sentron Series | Note | Superseded | Note | Superseded |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| CED62B015-CED62B125 CED62S100A CED63A001-CED63A125 CED63B015-CED63B125 CED63S100A HHED63B015-HHED63B125" | ① ① ① ① ① ① | CLE62B015-CLE62B100 CLE62S100 CLE63A001-CLE63A125 CLE63B015-CLE63B100 CLE63S100 HED63B015-HED63B125 | ③ ③ ③ ③ | CE2B015-CE2B100 CE2S100 CE3B015-CEB100 CE3S100 |
| CFD62A150, CFD62L150, CFD62A250 CFD62B070-CFD62B250 CFD62S250A CFD63A150, CFD63L150, CFD63A250 CFD63B070-CFD63B250 CFD63S250A | ① ① ① ① ① ① | CLF62A150, CLF62A250 CLF62B070-CLF62B240 CLF62S250 CLF63A150, CLF63A250 CLF63B070-CLF63B250 CLF63S250 | ③ ③ | CJ2B125-CJ2B250 CJ3B125-CJ3B250 |
| CJD62B200-CJD62B400 CJD62H400, CJD62L400 CJD62S400A CJD63B200-CJD63B400 CJD63H400, CJD63L400 CJD63S400A | ① ① ① ① ① ① | CLJ62B100-CLJ62B400 CLJ62L400, CLJ62H400 CLJ62S400 CLJ63B200-CLJ63B400 CLJ63L400, CLJ63H400 CLJ63S400 | ④ ④ ④ ④ | CJ2B300-CJ2B400 CJ2S400 CJ3B300-CJ3B400 CJ3S400 |
| CPD63B120-CPD63B160 | ⑤ | CP3B120-CP3B160 | | |
| ED21B015-ED21B100 ED22B015-ED22B100 ED22S100A ED23B015-ED23B100 ED23S100A | ① ① ① ① ① | E21B015-E21B100 E22B015-E22B100 E22S100A E23B015-E23B100 E23S100A | ② ② ② ② ② | EE1B015-EE1B100 EE2B015-EE2B100 EE2S100 EE3B015-EE3B100 EE3S100 |
| ED41B015-ED41B100 ED42B015-ED42B125 ED42S100A ED43B015-ED43B125 ED43S100A | ① ① ① ① ① | E41B015-E41B100 E42B015-E42B100 E42S100 E43B015-E43B100 E43S100 | ② ② ② ② ② | EH1B015-EH1B100 EH2B015-ED2B125 EH2S100 EH3B015-EH3B100 EH3S100 |
| ED61B015-ED61B100 ED62B015-ED62B125 ED62S100A ED63A001-ED63A125 ED63B015-ED63B125 ED63S100A HHED63B015-HHED63B125 | ① ① ① ① ① ① ① | E61B015-E61B100 E62B015-E62B100 E62S100A E63A001-E63A125 E63B015-E63B100 E63S100A HED63B015-HED63B125 | ② ② ② ② ② ② ② | EF1B015-EF1B020 EF2B015-EF2B100 EF2S100 EF3A003, EF3J050, EF3L050-EF3A100, EF3H1 EF3B015-EF3B100 EF3S100 |
| FD62B070-FD62B250f FD63B070-FD63B250f | ① ① | F62B070, F62B250 F63B070-F63B250 | | |
| FXD62A150, FXD62L150, FXD62A250 FXD62B070-FXD62B250f FXD62S250A FXD63A150, FXD63L150, FXD63A250 FXD63B070-FXD63B250f FXD63S250A | ① ① ① ① ① ① | FJ62A150, FJ62L150-FJ62A250 FJ62B070-FJ62B250 FJ62S250 FJ63A150, FJ63L150-FJ63A250 FJ63B070-FJ63B250 FJ63S250 | ② ② ② ② ② ② | FJ2B070-FJ2B225 FJ2S225 FJ3A225 FJ3B070-FJ3B225 FJ3S225 |
| HED41B015-HED41B100 HED42B015-HED42B125 HED43B015-HED43B125 | ① ① ① | HE41B015-HE41B100 HE42B015-HE42B100 HE43B015-HE43B100 | | |
| HED61B015-HED61B100 HED63B015-HED63B125 | ① ① | HE61B015-HE61B100 HE63B015-HE63B100 | ② ② | HE2B015-HE2B100 HE3B015-HE3B100 |
| HFD62B070-HFD62B250 HFD63B070-HFD63B250 | ① ① | HF62B070-HF62B250 HF63B070-HF63B250 | | |
| HHED63B015-HHED63B125 | ① | HED63B015-HED63B125 | | |
| HJD63B200-HJD63B400 | ① | HJ63B200-HJ63B400 | ② | HJ3B125-HJ3B400 |
| HLD63B250-HLD63B600 | ① | HL63B450-HL63B600 | ② | HL3B450-HL3B600 |
| HMD63B500-HMD63B800 | ② | HN3B500-HN3B800 | | |
| HND63B100-HND63B120 | ② | HK3B100-HK3B120 | | |
| HPD63B120-HPD63B160 | ② | HP3B120-HP3B160 | | |
| HRD63B160-HRD63B200 | ② | HR3B160-HR3B200 | | |

① Mechanically and electrically interchangeable.

② Electrically interchangeable only, refer to sales office for further details.

③ Electrically interchangeable only if the system interrupting capacity is less than or equal to:
200 kA at 240V AC
200 kA at 480V AC
100 kA at 600V AC

④ Electrically interchangeable only if the system interrupting capacity is less than or equal to:
200 kA at 240V AC
150 kA at 480V AC
100 kA at 600V AC

⑤ Refer to local sales office for replacement information.

⑥ Effective 1994 — The FD6 and FXD6 types have been replaced by FD6-A and FXD6-A type thermal / magnetic circuit breakers — mechanically and electrically interchangeable with the exception that FXD6-A and FD6-A have 22kA at 600V AC ratings versus 18kA at 600V AC for types FXD6 and FD6.

Molded Case Circuit Breakers

Superseded Breakers

General

| Sentron Series | Note | Superseded | Note | Superseded |
|---------------------------------|------|------------------------------|------|---------------------------|
| JD62B200-JD62B400 | ① | JLB200-JL62B400 | ② | JL2B070-JL2B400 |
| JD63B200-JD63B400 | ① | JL63B200-JL63B400 | ② | JL3B0L0-JL3B400 |
| JXD22B200-JXD22B400 | ① | JD22B200-JD22B400 | ② | JD2B250-JD2B400 |
| JXD22S400A | ① | JD22S400 | ② | JD2S400 |
| JXD23B200-JXD23B400 | ① | JD23B200-JD23B400 | ② | JD3B250-JD3B400 |
| JXD23S400A | ① | JD23S400 | ② | JD3S400 |
| JXD62B200-JXD62B400 | ① | JJ62B200-JJ62B400 | ② | JJ2B250-JJ2B400 |
| JXD62H400, JXD62L400 | ① | JL62L400, JL62H400 | ② | JL2L400-JL2H400 |
| JXD62S400A | ① | JJ62S400A | | |
| JXD63B200-JXD63B400 | ① | JJ63B200-JJ63B400 | ② | JJ3B200-JJ3B400 |
| JXD63H400, JXD63L400 | ① | JL63A400, JL63H400, JL63L400 | ② | JL3H400, JL3L400, JL3A225 |
| JXD63S400A | ① | JJ63S400A | | |
| LD62B250-LD62B500 | ① | LL63B250-LL62B600 | ② | LL2B450-LL2B600 |
| LD62B250-LD63B600 | ① | LL63B250-LL63B600 | ② | LL3B450-LL3B600 |
| LXD62B450-LXD62B600 | ① | LJ62B450-LJ62B600 | | |
| LXD62J600, LXD62L600 | ② | LL2H600, LL2U600, LL2X600 | | |
| LXD62S600A | ① | LJ62S600 | | |
| LXD63B450-LXD63B600 | ① | LJ63B450-LJ63B600 | | |
| LXD64H600, LXD63L600 | ① | LL63H600, LL63L600 | ② | LL3A450, LL3H600 |
| LXD63S600A | ① | LJ63S600A | ② | LL3S600 |
| MD62B500-MD62B800 | ② | KM2B500-KM2B800 | | |
| MD63B500-MD63B800 | ② | KM3B500-KM3B800 | | |
| MXD62A800, MXD62H800, MXD62L800 | ② | KM2A800, KM2H800, KM2L800 | | |
| MXD62S800A | ② | KM2S800 | | |
| MXD63A800, MXD63H800, MXD63L800 | ② | KM3A600, KM3H800, KM3L800 | | |
| MXD63S800A | ② | KM3S800 | | |
| ND63B100-ND63B900 | ② | KP3B100-KP3B900 | | |
| NXD63S120A | ② | KP3S120 | | |
| PD63B120-PD63B160 | ② | HP3B120-HP3B160 | | |
| PXD63S160A | ② | HP3S160 | | |
| RD63B160-RD63B200 | ② | HR3B160-HR3B200 | | |
| QR22B100 – QR22B225 | | QJ22B060-QJ22B225 | | |
| QR22B100H – QR22B225H | | QJ22B060H-QJ22B225H | | |
| HQR23S250HA | | QJ22S225 | | |
| QJ23B100 – QR23B225 | | QJ23B060-QJ23B225 | | |
| QR23B100H – QR23B225H | | QJ23B060H-QJ23B225H | | |
| QRH22B100 – QRH22B225 | | QJH22B060-QJH22B225 | | |
| QRH23B100 – QRH23B225 | | QJH23B060-QJH23B225 | | |
| HQR23S250HA | | QJH23S225 | ① | |
| QJH22B060-QJH22B225 | ① | QJ2H125-QJ2B225 | | |
| QJH23B060-QJH23B225 | ① | QJ3H125-QJ3H225 | | |
| QJH23S225 | ① | QJ3S225 | | |
| RD63B160-RD63B200 | ② | HR3B160-HR3B200 | | |
| RXD63S200A | ② | HR3S200 | | |
| SCJD6B200LI-SCJD6B400LI | ① | SCJD69200-SCJD69400 | | |
| SCJD6B200LIG-SCJD6B400LIG | ① | SCJD69200G-SCJD69400G | | |
| SCJD6B200LSIG-SCJD6B400LSIG | ① | SCJD69200NGT-SCJD69400NGT | | |
| SCJD6B200LSI-SCJD6B400LSI | ① | SCJD69200NT-SCJD69400NT | | |
| SCLD6B300LI-SCLD6B600LI | ① | SCLD69300-SCLD69600 | | |
| SCLD6B300LIG-SCLD6B600LIG | ① | SCLD69300G-SCLD69600G | | |
| SCLD6B300LSIG-SCLD6B600LSIG | ① | SCLD69300NGT-SCLD69600NGT | | |
| SCLD6B300LSI-SCLD6B600LSI | ① | SCLD69300NT-SCLD69600NT | | |
| SCMD6B600LI-SCMD6B800LI | ① | SCMD69600A-SCMD69800A | | |
| SCMD6B600LIG-SCMD6B800LIG | ① | SCMD69600AG-SCMD69800AG | | |
| SCMD6B600LSIG-SCMD6B800LSIG | ① | SCMD69600ANGT-SCMD69800ANGT | | |
| SCMD6B600LSI-SCMD6B800LSI | ① | SCMD69600ANT-SCMD69800ANT | | |
| SCND6B800LI-SCND6B120LI | ① | SCND69800A-SCND69120A | | |
| SCND6B800LIG-SCND6B120LIG | ① | SCND69800AG-SCND69120AG | | |
| SCND6B800LSIG-SCND6B120LSIG | ① | SCND69800ANGT-SCND69120ANGT | | |
| SCND6B800LSI-SCND6B120LSI | ① | SCND69800ANT-SCND69120ANT | | |

① Mechanically and electrically interchangeable.

② Electrically interchangeable only, refer to sales office for further details.

③ Electrically interchangeable only if the system interrupting capacity is less than or equal to:

200 kA at 240V AC
200 kA at 480V AC
100 kA at 600V AC

④ Electrically interchangeable only if the system interrupting capacity is less than or equal to:

200 kA at 240V AC
150 kA at 480V AC
100 kA at 600V AC

⑤ Refer to local sales office for replacement information.

Molded Case Circuit Breakers

Superseded Breakers

General

| Sentron Series | Note | Superseded | Note | Superseded |
|-----------------------------|------|------------------------------------|------|-------------------------|
| SHJD6B200LI-SHJD6B400LI | ① | SHJD69200-SHJD69400 | ① | SHJ63B200-SHJ63B400G |
| SHJD6B200LIG-SHJD6B400LIG | ① | SHJD69200G-SHJD69400G | ① | SHJ63B200G-SHJ63B400G |
| SHJD6B200LSIG-SHJD6B400LSIG | ① | SHJD69200NGT-SHJD69400NGT | ① | SHJ63N200G-SHJ63N400G |
| SHJD6B200LSI-SHJD6B400LSI | ① | SHJD69200NT-SHJD69400NT | ① | SHJ63N200-SHJ63N400 |
| SHLD6B300LI-SHLD6B600LI | ① | SHLD69300-SHLD69600 | ① | SHL63B300-SHL63B600 |
| SHLD6B300LIG-SHLD6B600LIG | ① | SHLD69300G-SHLD69600G | ① | SHL63B300G-SHL63B600G |
| SHLD6B300LSIG-SHLD6B600LSIG | ① | SHLD69300NGT-SHLD69600NG | ① | SHL63N300G-SHL63N600G |
| SHLD6B300LSI-SHLD6B600LSI | ① | SHLD69300NT-SHLD69600NT | ① | SHL63N300-SHL63N600 |
| SHND6B100LI-SHND6B120LI | ① | SHND69100A-SHND69120A | ① | SHND69100-SHND69800 |
| SHND6B100LIG-SHND6B120LIG | ① | SHND69100AG-SHND69120AG | ① | SHND69100G-SHND69800G |
| SHPD6B140LI-SHPD6B160LI | ① | SHPD69140-SHPD69160 | ② | SHPF3B120-SHPF3B160 |
| SHPD6B140LIG-SHPD6B160LIG | ① | SHPD69140G-SHPD69160G | ② | SHPF3B120G-SHPF3B160G |
| SHND6B100LSIG-SHND6B120LSIG | ① | SHND69100NGT-SHND69800NGT | ① | SHKF3N100G-SHKF3N800G |
| SHND6B100LSI-SHND6B120LSI | ① | SHND69100NT-SHND69800NT | ② | SHKF3N100-SHKF3N800 |
| SJD6B200LI-SJD6B400LI | ① | SJD69200-SJ369400 | ① | SJL63B200-SJL63B400 |
| SJD6B200LIG-SJD6B400LIG | ① | SJD69200G-SJD69400G | ① | SJL63B200G-SJL63B400G |
| SJD6B200LSIG-SJD6B400LSIG | ① | SJD69200NGT-SJD69400NGT | ① | SJL63N200G-SJL63N400G |
| SJD6B200LSI-SJD6B400LSI | ① | SJD69200NT-SJD69400NT | ① | SJL63N200-SJL63N400 |
| SLD6B300LI-SLD6B600LI | ① | SLD69300-SLD69600 | ① | SLL63B300-SLL63B600 |
| SLD6B300LIG-SLD6B600LIG | ① | SLD69300G-SLD69600G | ① | SLL63B300G-SLL63B600G |
| SLD6B300LSIG-SLD6B600LSIG | ① | SLD69300NGT-SLD69600NGT | ① | SLL63N300G-SLL63N600G |
| SLD6B300LSI-SLD6B600LSI | ① | SLD69300NT-SLD69600NT | ① | SLL63N300-SLL63N600 |
| SMD6B600LI-SMD6B800LI | ① | SMD69600A-SMD69800A | ① | SMD69600-SMD69800 |
| SMD6B600LIG-SMD6B800LIG | ① | SMD69600AG-SMD69800AG | ① | SMD69600G-SMD69800G |
| SMD6B600LSIG-SMD6B800LSIG | ① | SMD69600ANGT-SMD69800ANGT | ① | SMD69600NGT-SMD69800NGT |
| SMD6B600LSI-SMD6B800LSI | ① | SMD69600ANT-SMD69800ANT | ① | SMD69600NT-SMD69800NT |
| SND6B800LI-SND6B120LI | ① | SND69800A-SND69120A | ① | SND69100-SND69800 |
| SND6B800LIG-SND6B120LIG | ① | SND69800AG-SND69120AG | ① | SND69100G-SND69800G |
| SND6B800LSIG-SND6B120LSIG | ① | SND69800ANGT-SND69120ANGT | ① | SND69100NGT-SND69800NGT |
| SND6B800LSI-SND6B120LSI | ① | SND69800ANT-SND69120ANT | ① | SND69100NT-SND69800NT |
| SHPD6B140LI-SHPD6B160LI | ① | SPD69140-SPD69160 | ② | SHPF3B120-SHPF3B160 |
| SHPD6B140LIG-SHPD6B160LIG | ① | SPD69140G-SPD69160G | ② | SHPF3B120G-SHPF3B160G |
| SHPD6B140LSIG-SHPD6B160LSIG | ① | SPD69140NGT-SPD69160NGT | ② | SHPF3N120-SHPF3N160G |
| SHPD6B140LSI-SHPD6B160LSI | ① | SPD69140NT-SPD69160NT | ② | SHPF3N120G-SHPF3N160G |
| — | ④ | BQCC1B015-BQC1B030 | | |
| — | ④ | CC1B015-CC1B030 | | |
| — | ④ | CC2B015-CC2B030 | | |
| — | ④ | CC3B015-CC3B030 | | |
| — | ④ | EF2A003, EF2H050, EF2L050, EF2A100 | | |
| — | ④ | EF2H150, EF2L150 | | |
| — | ④ | EH1B015-EH1B100 | | |
| — | ④ | EH2B015-EH2B100 | | |
| — | ④ | EH3B015-EH3B100 | | |
| — | ③ | HE2A003, HE2H050, HE2L050-HE2A100 | | |
| — | ③ | HE3A003, HE3H050, HE3L050-HE3A100 | | |
| — | ③ | HE3B015-HE3B100 | | |

①Mechanically and electrically interchangeable.
 ②Electrically interchangeable only, refer to sales office for further details.
 ③These units are for replacement purposes only. Consult sales office for availability.

④These units are no longer manufactured, and no replacement is available.

Notes
