

# RMQ Titan

Moeller Electric's  
New 22 mm  
Pilot Devices



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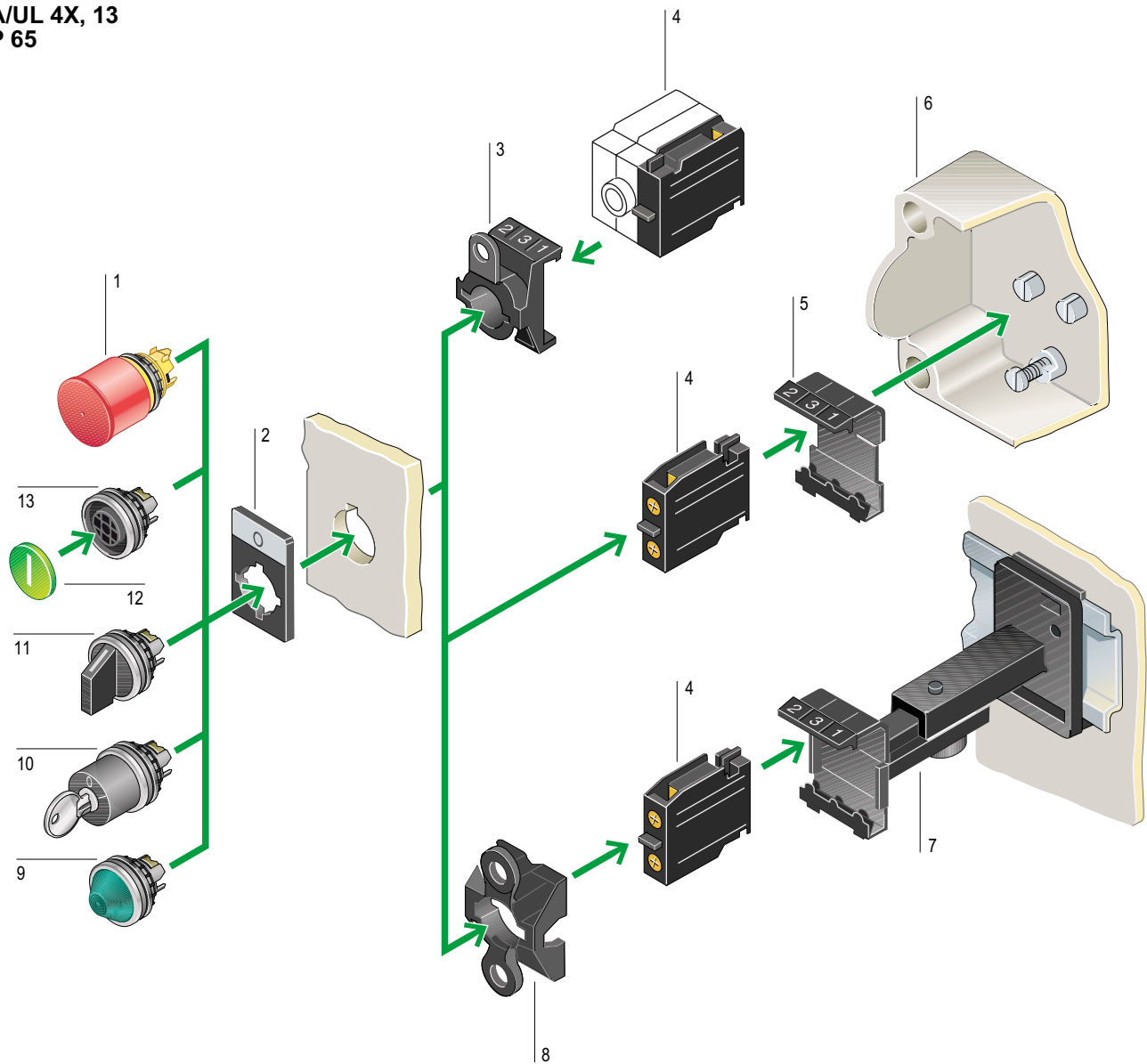
For Immediate Delivery call K... at (8... 95-9616

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NEMA/UL 4X, 13  
IEC IP 65

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5



- Snap together modular system, up to six contacts per operator.
- Easy "One Person" mounting
- Round or round on square style
- Black or chromed front ring
- Mounting diameter: 22.5 mm
- Minimum grid dimensions 30 x 40 mm
- Environmental Rating: UL/NEMA 3R, 12, 4X, 13, IP 65
- UL Listed, CSA Certified
- Global Conformity: IEC/EN 60 947-5-1, CE
- Safety feature. N.C. contacts have positive opening operation per IEC/EN 60 947-5-1. Watch for the symbol! ⊖
- Tamper-Proof Emergency-Off button to EN 418, suitable for machinery built in accordance with the Machinery Directive (CE).

**1 Operators**

Tamper proof to EN 418, suitable for CE Machinery  
Can be viewed through sealable shroud  
Available in push/pull, key release, and foot/palm versions


**2 Legend Plates**

For insert plates with or without text  
Colors: grey, black

**3 Mounting Adapter**

For cover or door mounting  
Used to mount contact and lamp socket elements

**4 Contact Elements**

Heavy duty contacts also suitable for PLC electronic circuits  
With one or two contacts.  
N.C. contacts with positive opening operation   
per IEC/EN 60 947-5-1

**4 Lamp Socket Elements**

For filament bulbs, neon bulbs and LED's  
Integral lamp test  
Lamp transformers primary voltage: 115-500 V AC

**5 Mounting Adapter**

For surface or base mounting  
Used to mount contact and lamp socket elements

**6 Enclosures**

Surface mounting enclosure with a maximum of five mounting locations, UL indoor 4X, IP 65  
Flush mounting plate with a maximum of eight mounting locations, IP 54  
Shrouds for mounting plate, IP 40  
Operator diaphragms for increased protection to IP 67

**7 Telescopic bracket/telescopic clip**

For depth adjustment of rear-mounting devices in CI enclosures and panels  
Bracket for mounting depths of 116-147 mm  
Clip for mounting depths of 125-157 mm

**8 Centering Adapter**

For centering operators and indicating devices using telescopic bracket and telescopic clip

**9 Indicating Lights**

Flush and conical versions  
For filament bulbs, neon bulbs, and LED's  
Colors: white, green, red, yellow, blue  
Digital display lens assemblies

**10 Key-operated Selector Switches**

Two or three position  
Programmable maintained/spring return function and key removal  
Suitable for master key systems

**11 Selector Switches**

Two or three position  
Available with rotary head, thumb-grip handle, rotary lever and as a toggle switch  
Programmable maintained/spring return function  
Available in illuminated version with transparent thumb-grip handle  
Color: white, green, red, yellow, blue

**12 Marking Plates/Insert Plates**

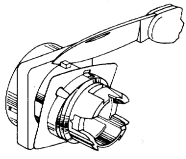
With standard text and symbols  
Abrasion proof plates for pushbuttons, selector switches and double actuators  
Transparent plates for illuminated pushbuttons and flush indicator lights

**13 Pushbuttons**

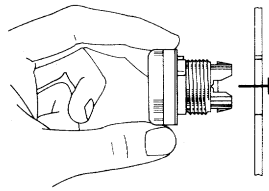
Maintained or momentary operation  
Available as flush, extended, mushroom and double pushbuttons  
With or without guard ring  
Available in illuminated versions with transparent insert plate  
Color: white, green, red, yellow, blue

# Control Circuit Devices RMQ 22 – Mounting Instructions

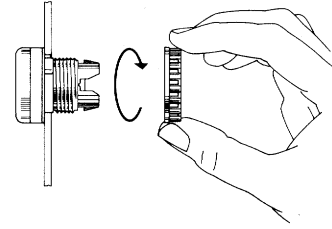
## Easy Mounting Front Elements



Front elements have a locating lug which can be cut off, if required, to allow them to be fitted into mounting apertures of 22 mm diameter with or without locating slots.



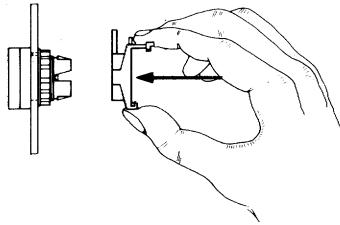
The front element has a notch on the back, to identify the top when fitting, while the lug on the sealing ring holds the element in place in the mounting aperture.



The milled nut can then be positioned and tightened, without needing to hold the front element.

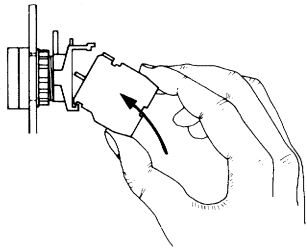
## Easy Mounting Function Modules

The mounting adapter snaps securely in place by simply pushing it straight onto the front element.

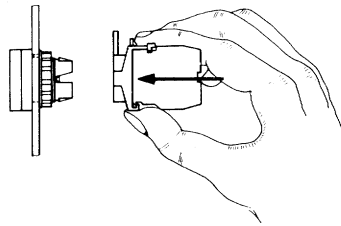


## Contact Element/Blocks

### Installation

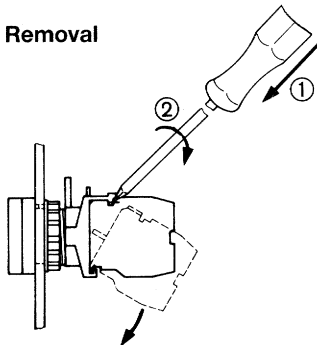


Hook the bottom of the contact element into the mounting adapter and clip into place.

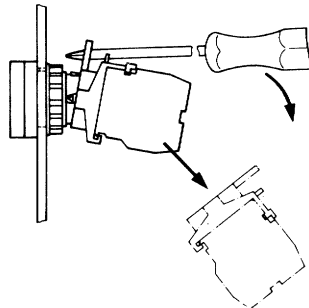


Contact blocks are installed in the same manner as mounting adapters.

### Removal



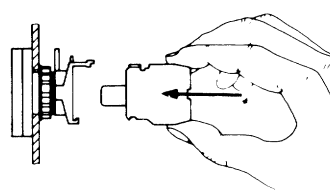
Insert a screwdriver under the lip of the mounting adapter and rotate the screwdriver.



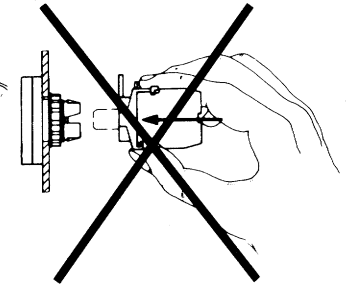
Insert a screwdriver into the hole in the top of the mounting adapter and push down the handle of the screwdriver.

## Lamp Socket Elements/Blocks

### Installation

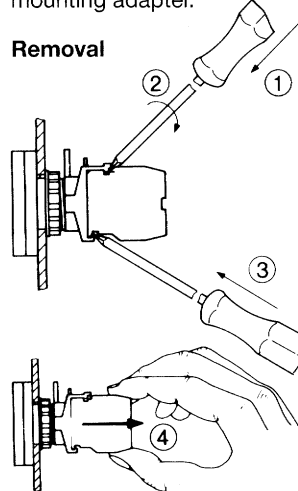


With bulb already installed, simply push the lamp socket element straight onto the mounting adapter.

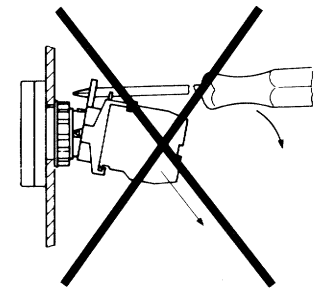


Do not install bulbs into lamp socket blocks prior to mounting on the front element.

### Removal



Insert a screwdriver under the lip of the mounting adapter as shown, to loosen the lamp socket element. Pull straight out to remove.

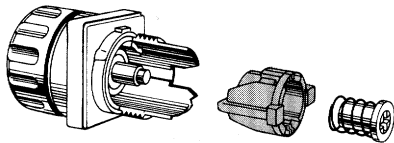


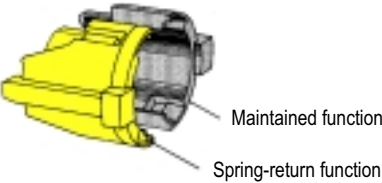
Remove bulbs from lamp socket elements before removing lamp socket blocks.

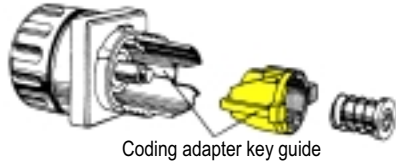
### Conversion of selector switches and key-operated selector switches

It is possible to convert between maintained and spring-return functions on selector switches, and change the position in which the key can be removed on key-operated selector switches, simply by changing the coding adapters. Yellow coding adapters are used for the spring-return function and black for the maintained function. Using a red coding adapter on a key-operated selector switch prevents removal of the key. On three-position switches, the switch positions to the right and left of the OFF position can be modified independently of each other.

### Changing the coding adapters

1. 





1. The retaining screw is loosened and the coding adapters removed.
2. 

2. A new coding combination is selected (for a three-position switch, in the case illustrated).
3. 

3. The keys on the coding adapters are simply inserted into the grooves in the body. A spring on the retaining screw then holds them in place until the screw is tightened.



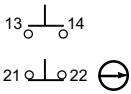
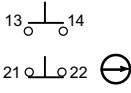

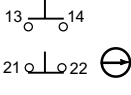
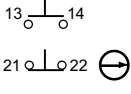

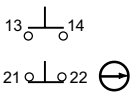
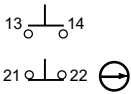

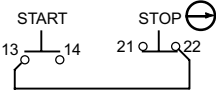

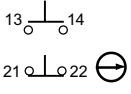

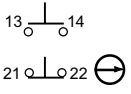
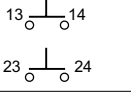
### Bulb Selection Chart

#### Filament Bulbs, Neon Bulbs, LED's Selection Guide

Type of Bulb	Rated Life-span in hours	Color Fidelity	Illuminating Power	Temperature Rise	Immunity to Vibration
 <p>Filament Bulbs (GL) 6 V 12 V 24 V  48 V 60 V  130 V</p>	<p>~ 5,000 ~ 5,000 ~ 5,000  ~ 5,000 ~ 5,000  ~ 2,000</p>	<p>good  good  good</p>	<p>good  good  good</p>	<p>high  high  high</p>	<p>good  good  fair</p>
 <p>Neon Bulbs (GIL) 110 V 220 V</p>	<p>~ 20,000 ~ 20,000</p>	<p>fair</p>	<p>weak</p>	<p>low</p>	<p>very good</p>
 <p>New! All voltage types Single chip LED's 18 - 30 V AC/DC</p>	<p>~ 100,000</p>	<p>good</p>	<p>Newly improved!</p>	<p>low</p>	<p>Excellent</p>
 <p>24 V DC (LED...24 B) (flashing)</p>	<p>~ 20,000</p>	<p>good</p>	<p>good</p>	<p>low</p>	<p>Excellent</p>

**22.5 mm Control Circuit Devices  
RMQ 22 – Complete Units**



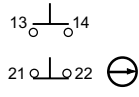

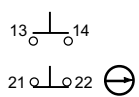
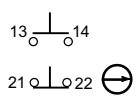

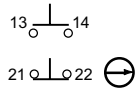
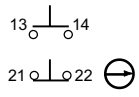

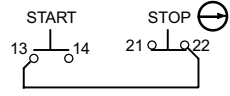
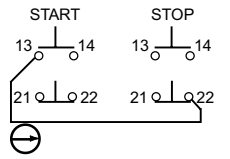

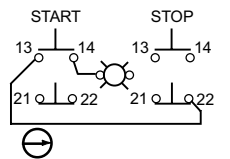

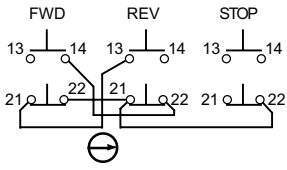
**NEMA/UL 4/4X/13; IEC IP 65; CE**

1	2	3	4	5	6
	Number of locations	Contact Arrangement Positive Opening Contact  IEC/EN 60 947-5-1	Color	Type Front ring Matt chromed	Price \$
<b>Complete units for surface mounting, UL Indoor 4X enclosures</b>					
<b>Pushbuttons</b>					
<b>Flush</b>					
	1	START 	Green	RD-111/KC/I	See Price List
	1	STOP 	Red	RD-110/KC/I	See Price List
<b>Extended</b>					
	1	START 	Green	RDH-GN 111/KC/I	See Price List
	1	STOP 	Red	RDH-RT 110/KC/I	See Price List
<b>Mushroom head buttons</b>					
	1	START 	Green	RP-GN 111/KC/I	See Price List
	1	STOP 	Red	RP-RT 110/KC/I	See Price List
<b>Double pushbuttons</b>					
	2	START STOP 	Green/ Red	QDD-111/110/K 11C/I	See Price List
<b>Emergency-stop buttons</b>					
Tamper- proof, non-tease operation to EN 418, suitable per Machinery Directive (CE). Red mushroom cap, yellow body with snap-action and positive opening. Pull to release.					
	1		Red	RPV/KC/I	See Price List
<b>Selector switches</b>					
	1		Black	RWKIV/KC/I	See Price List
2-position, maintained	1		Black	RWK3R/K20C/I	See Price List
3-position, maintained	1				See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5
















1	2	3	4	5	6
	Number of locations	Contact Arrangement Positive Opening Contact  IEC/EN 60 947-5-1	Color	Type Front ring Matt chromed	Price
<b>Complete units for surface mounting, UL Indoor 4X enclosures</b>					
<b>Key-release mushroom head buttons</b> With two keys, KMS 1 lock mechanism					
	1		Red	RPSR/KC/I	See Price List See Price List
<b>Key-operated selector switches</b> With two keys, KMS 1 lock mechanism					
	Two-position, maintained	1		Black	RS/KC/I
	Three-position, maintained	1		Black	RS 3/K 20C/I
<b>Enclosures</b> With contact elements, without operator					
	1		Grey cover	1M/I	See Price List See Price List
	1		Yellow cover	1M/IGE	See Price List See Price List
<b>Two-unit pushbutton stations</b>					
	2		Green/ Red	R2 M/11/I	See Price List See Price List
	2		Green/ Red	R2 M/I	See Price List See Price List
<b>Two-unit pushbutton stations</b> With indicating light, 2.4 W, 130 V filament bulb					
	2		Green/ White lens/ Red	R3 M-L/I	See Price List See Price List
<b>Three-unit pushbutton stations</b>					
	3		Green/ Red/ Green	R3 M/I	See Price List See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches



**22.5 mm Control Circuit Devices  
RMQ 22 – Complete Units**

**NEMA/UL 4/4X/13; IEC IP 65; CE**

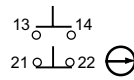
1	2	3	4	5	6
	Contact Arrangement Positive Opening Contact IEC/EN 60 947-5	Button plate Style/Type	Plunger Color	Type Front ring Matt chromed	Price \$
<b>Complete units for cover mounting</b>					
<b>Pushbuttons</b>					
<b>Flush</b>					
	13 14	START	/111T	—	RD-111/K 10
	21 22	STOP	/110T	—	RD-110/K 01
	13 14	START	/111T	—	RD-111/K 11
	21 22	STOP	/110T	—	RD-110/K 11
<b>Extended</b>					
	13 14	START	/111T	Green	RDH-GN 111/K 10
	21 22	STOP	/110T	Red	RDH-RT 110/K 01
	13 14	START	/111T	Green	RDH-GN 111/K 11
	21 22	STOP	/110T	Red	RDH-RT 110/K 11
<b>Mushroom head buttons</b>					
	13 14	START	/111T	Green	RP-GN 111/K 10
	21 22	STOP	/110T	Red	RP-RT 110/K 01
	13 14	START	/111T	Green	RP-GN 111/K 11
	21 22	STOP	/110T	Red	RP-RT 110/K 11
<b>Key-release mushroom head buttons</b> With two keys, KMS 1 lock mechanism					
	21 22	—	—	Red	RPSR/K 01
	13 14	—	—	Red	RPSR/K 11

See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

1	2	3	4	5	6
	Contact Arrangement	Button plate	Plunger	Type Front ring Matt chromed	Price
	Positive Opening Contact IEC/EN 60 947-5-1	Style/Type	Color		

**Complete units for cover mounting**  
**Double Pushbuttons**



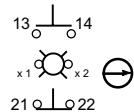
START /111D  
STOP /110D

Green  
Red

QDD-111/110/K 11

**Double Pushbuttons**

With indicator lights, 130 V filament bulb



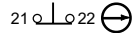
START /111D  
STOP /110D

Green  
White lens  
Red

QDDL-111/110/K 11/F1

**Emergency-stop buttons**

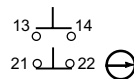
Tamper-proof, non-tease operation to EN 418, suitable per Machinery Directive (CE). Red mushroom cap, yellow body. With snap-action and positive opening. Pull to release.



—

Red

RPV/K 01



—

Red

RPV/K 11

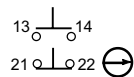
**Selector switches**  
**2-position maintained**



—

Black

RWK 1V/K 10



—

Black

RWK 1V/K 11

**3-position maintained**



—

Black

RWK 3R/K 20

**Key-operated selector switches**

With two keys, KMS 1 lock mechanism

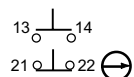
**2-position maintained**



—

Black

RS/K 10



—

Black

RS/K 11

**3-position maintained**



—

Red

RS 3/K 20

See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

**22.5 mm Control Circuit Devices  
RMQ 22 – Complete Units**

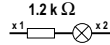
**NEMA/UL 4/4X/13; IEC IP 65; CE**

1	2	3	4	5
	Arrangement	Indicating light lens	Type Front ring Matt chromed	Price
		Color		\$

**Complete units for cover mounting  
Indicating lights, full voltage**

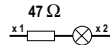
**Conical**

With BA 9's filament bulb, 2.4 W/130 V



- Green    **RL-GN/F1**
- Red    **RL-RT/F1**

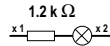
With BA 9's filament bulb, 2.0 W/24 V



- Green    **RL-GN/F0**
- Red    **RL-RT/F0**

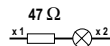
**Low profile**

With BA 9's filament bulb, 2.4 W/130 V



- Green    **RLF-GN/F1**
- Red    **RLF-RT/F1**

With BA 9's filament bulb, 2.0 W/24 V

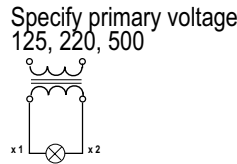


- Green    **RLF-GN/F0**
- Red    **RLF-RT/F0**

**Indicating lights, transformer type**

**Conical**

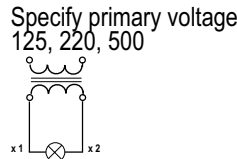
With BA 9's filament bulb, 2.0 W/6 V



- Green    **RL-GN/FT.../6**
- Red    **RL-RT/FT.../6**

**Low profile**

With BA 9's filament bulb, 2.0 W/6 V



- Green    **RLF-GN/FT.../6**
- Red    **RLF-RT/FT.../6**

See Price List   See Price List   See Price List   See Price List   See Price List   See Price List   See Price List   See Price List   See Price List   See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

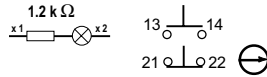
5

1	2	3	4	5
	Arrangement	Illuminated Pushbutton	Type Front ring Matt chromed	Price
	Positive Opening Contact IEC/EN 60 947-5	Color/Type of plate		

**Complete units for cover mounting  
Illuminated pushbuttons, full voltage**

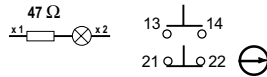
**Flush**

With BA 9's filament bulb, 2.4 W/130 V



- Green / 01 LT Green RLT-GN/K11/F1
- Red / 01 LT Red RLT-RT/K11/F1

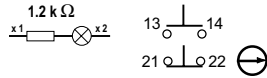
With BA 9's filament bulb, 2.0 W/24 V



- Green / 01 LT Green RLT-GN/K11/F0
- Red / 01 LT Red RLT-RT/K11/F0

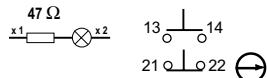
**Extended**

With BA 9's filament bulb, 2.4 W/130 V



- Green / 01 LT Green RLTH-GN/K11/F1
- Red / 01 LT Red RLTH-RT/K11/F1

With BA 9's filament bulb, 2.0 W/24 V



- Green / 01 LT Green RLTH-GN/K11/F0
- Red / 01 LT Red RLTH-RT/K11/F0

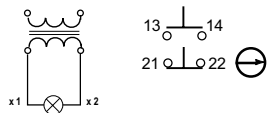
**Indicating lights, transformer type**

**Flush**

With BA 9's filament bulb, 2.0 W/6 V  
Two contact elements are installed 1 NO, 1 NC



Specify primary voltage  
125, 220, 500

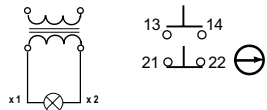


- Green / 01 LT Green RLT-GN/K11/FT.../6
- Red / 01 LT Red RLT-RT/K11/FT.../6

**Extended**

With BA 9's filament bulb, 2.0 W/6 V  
Two contact elements are installed 1 NO, 1 NC

Specify primary voltage  
125, 220, 500



- Green / 01 LT Green RLTH-GN/K11/FT.../6
- Red / 01 LT Red RLTH-RT/K11/FT.../6

See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

1	2	4	5	6
	Contact arrangement NO = Normally Open NC = Normally Closed ⊖ = Positive opening safety function to <b>IEC/EN 60-947-5-1</b>	Color	Type	Price
				\$

**Foot and palm switches**

**Surface mounting spring return**

Enclosure base black, enclosure top light grey  
 Mushroom head -



1 NO		Black	<b>FAK-SW/KC10/I</b>	See Price List
1 NO 1 NC ⊖		Black	<b>FAK-SW/KC11/I</b>	See Price List
2 NC ⊖		Red	<b>FAK-RT/KC02/I</b>	See Price List
1 NO 1 NC ⊖		Red	<b>FAK-RT/KC11/I</b>	See Price List
1 NO 2 NC ⊖		Red	<b>FAK-RT/KC12/I</b>	See Price List
1 NO 1 NC ⊖		Yellow	<b>FAK-GE/KC11/I</b>	See Price List

**Maintained**

Enclosure base black, enclosure top light grey  
 Pull to release, Mushroom head -



1 NO 1 NC ⊖		Yellow	<b>FAK-GE/V/KC11/I</b>	See Price List
----------------	--	--------	------------------------	----------------

**Emergency-stop foot and palm switch in conformity with CE machinery directive, tamper-proof to EN 418**

Enclosure base black, enclosure top yellow  
 Pull to release, Mushroom head -



totally insulated



1 NC ⊖		Red	<b>FAK-RT/V/KC01/I</b>	See Price List
1 NO 1 NC ⊖		Red	<b>FAK-RT/V/KC11/I</b>	See Price List
2 NC ⊖		Red	<b>FAK-RT/V/KC02/I</b>	See Price List
1 NO 2 NC ⊖		Red	<b>FAK-RT/V/KC12/I</b>	See Price List

**Indicator lights, conical (without bulb)**

For incandescent, neon, or LED GL Base max. 2 W bulb



Red lens	<b>L-R</b>
White lens	<b>L-W</b>
Green lens	<b>L-G</b>
Yellow lens	<b>L-Y</b>

**PG 13.5 cable gland, IP68, 69 K**





With integral strain relief to VDE 0169,  
 cable diameter 6-12 mm



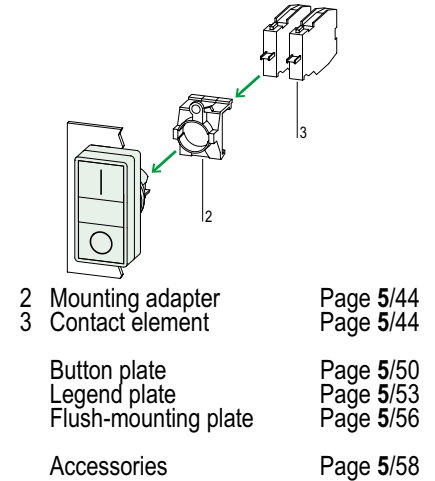
Note: **IP 69 K** allows the **FAK** to be cleaned using high pressure and steam jet equipment. Special PG 13,5 conduit adapter necessary for IP 69K.

**STBZ13,5**

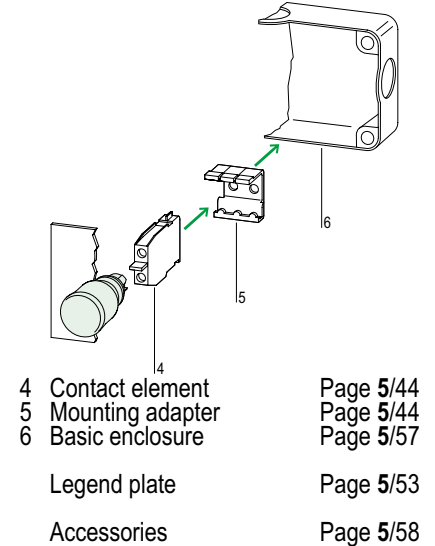
See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List

1	2	3	4	5	6
	Button plate	Type Front ring Matt chromed	Type Front ring Matt black	Price	
	Style/Type			\$	
<b>Double pushbuttons</b>					
	START /111D	QDD-111/110	QDD-111/110-S	See Price List	See Price List
	STOP /110D			See Price List	See Price List
	Without	QDD-X	QDD-X-S	See Price List	See Price List
<b>With indicating lights</b> White lens, for LED's, neon and filament bulbs up to 2 W					
	START /111D	QDDL-111/110	QDDL-111/110-S	See Price List	See Price List
				See Price List	See Price List
	STOP /110D			See Price List	See Price List
	Without	QDDL-X	QDDL-X-S	See Price List	See Price List
<b>Emergency-stop buttons</b> In conformity with SUVA and CE machinery directive, tamper-proof to EN 418 Mushroom head - red body, yellow collar with snap-action and positive opening. Button remains in the actuated position. Pull to release.					
		RPV	—	See Price List	See Price List
	Transparent with "collapse" point, reusable after emergency-stop operation. For RPV emergency-stop buttons and RPSR key-release mushroom head buttons			See Price List	See Price List
		PL-RPV	—	See Price List	See Price List
				See Price List	See Price List

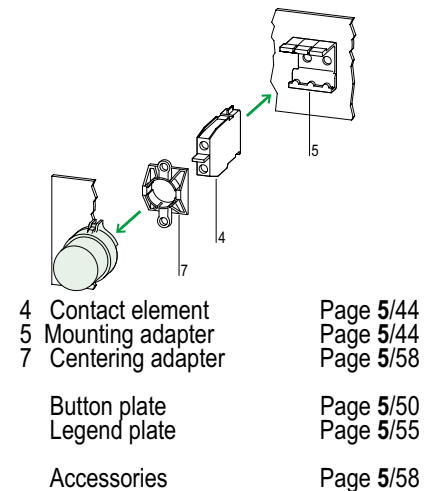
Mounting form: Cover mounting
























Mounting form: Surface mounting



Mounting form: Base mounting



1	2	3	4	5	6	7	
	Plunger	Button plate		<b>Round style</b>		<b>Price</b>	
	Color	Style/Type		<b>Type Front ring</b> Matt chromed	<b>Type Front ring</b> Matt black	\$	
<b>Operators</b>							
<b>Flush</b>							
—		 /111T		RD-111	RD-111-S	See Price List See Price List	
—		 /110T		RD-110	RD-110-S		
—		 /01T		RD-01	RD-01-S		
—		Without		RD-X	RD-X-S		
<b>Extended</b>							
	Green	 /111T		RDH-GN111	RDH-GN111-S	See Price List See Price List	
	Red	 /110T		RDH-RT110	RDH-RT110-S		
	Black	 /01T		RDH-SW01	RDH-SW01-S		
	Green	Without		RDH-GNX	RDH-GNX-S		
	Red	Without		RDH-RTX	RDH-RTX-S		
	Black	Without		RDH-SWX	RDH-SWX-S		
<b>With guard ring</b>							
		Without		RDK-X	RDK-X-S	See Price List See Price List	
<b>With rubber protective cap</b> For severe environmental conditions With button plates Red/Green/Blue							
		Without		—	RD-M-D		
<b>Mushroom head operators</b>							
	Green	 /111T		RP-GN111	RP-GN111-S	See Price List See Price List	
	Red	 /110T		RP-RT110	RP-RT110-S		
	Black	 /01T		RP-SW01	RP-SW01-S		
	Yellow	 /05T		RP-GE05	RP-GE05-S		
	Green	Without		RP-GNX	RP-GNX-S	See Price List See Price List	
	Red	Without		RP-RTX	RP-RTX-S		
	Black	Without		RP-SWX	RP-SWX-S		
	Yellow	Without		RP-GEX	RP-GEX-S		
<b>Key-release mushroom head operators</b>							
With two keys, can be used as <b>emergency stop buttons</b>							
<b>KMS 1 Individual lock mechanism</b> Cannot be used in master key system							
				RPSR	RPSR-S	See Price List See Price List	
<b>KMS 2...10, 201...400 individual lock mechanism</b> Cannot be used in master key system							
				RPSR-KMS...	RPSR-KMS...-S		
<b>Lock mechanism suitable for master key system<sup>1)</sup></b> With CES half-cylinder 17 mm							
<b>Key for individual lock mechanism</b>							
				RPSR-SA(...)	RPSR-SA(...)-S	See Price List See Price List	
<b>Keys for master key system</b>							
Standard key							
Master key							
General master key							
				NS-SA(...)-...	NS-SA(...)-...		
				HS-SA(...)-...	HS-SA(...)-...		
				GHS-SA(...)-...	GHS-SA(...)-...		

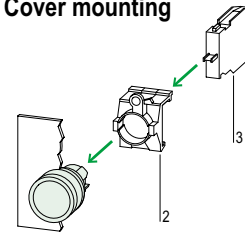
1) Order on Form FO 276, page 5/47

KMS 201...400 and master key systems: delivery 6 to 8 weeks



8		9		10		11		12	
		Round-on-square style 				Price			
		Type Front ring Matt chromed	Type Front ring Matt black			\$			
	MD-111	MD-111-S	MD-111-S	See Price List	See Price List	See Price List	See Price List		
	MD-110	MD-110-S	MD-110-S	See Price List	See Price List	See Price List	See Price List		
	MD-01	MD-01-S	MD-01-S	See Price List	See Price List	See Price List	See Price List		
	MD-X	MD-X-S	MD-X-S	See Price List	See Price List	See Price List	See Price List		
	MDH-GN111	MDH-GN111-S	MDH-GN111-S	See Price List	See Price List	See Price List	See Price List		
	MDH-RT110	MDH-RT110-S	MDH-RT110-S	See Price List	See Price List	See Price List	See Price List		
	MDH-SW01	MDH-SW01-S	MDH-SW01-S	See Price List	See Price List	See Price List	See Price List		
	MDH-GNX	MDH-GNX-S	MDH-GNX-S	See Price List	See Price List	See Price List	See Price List		
	MDH-RTX	MDH-RTX-S	MDH-RTX-S	See Price List	See Price List	See Price List	See Price List		
	MDH-SWX	MDH-SWX-S	MDH-SWX-S	See Price List	See Price List	See Price List	See Price List		
	MDK-X	MDK-X-S	MDK-X-S	See Price List	See Price List	See Price List	See Price List		
	—	MD-M-D	MD-M-D	See Price List	See Price List	See Price List	See Price List		
	MP-GN111	MP-GN111-S	MP-GN111-S	See Price List	See Price List	See Price List	See Price List		
	MP-RT110	MP-RT110-S	MP-RT110-S	See Price List	See Price List	See Price List	See Price List		
	MP-SW01	MP-SW01-S	MP-SW01-S	See Price List	See Price List	See Price List	See Price List		
	MP-GE05	MP-GE05-S	MP-GE05-S	See Price List	See Price List	See Price List	See Price List		
	MP-GNX	MP-GNX-S	MP-GNX-S	See Price List	See Price List	See Price List	See Price List		
	MP-RTX	MP-RTX-S	MP-RTX-S	See Price List	See Price List	See Price List	See Price List		
	MP-SWX	MP-SWX-S	MP-SWX-S	See Price List	See Price List	See Price List	See Price List		
	MP-GEX	MP-GEX-S	MP-GEX-S	See Price List	See Price List	See Price List	See Price List		
	MPSR	MPSR-S	MPSR-S	See Price List	See Price List	See Price List	See Price List		
	MPSR-KMS...	MPSR-KMS...-S	MPSR-KMS...-S	See Price List	See Price List	See Price List	See Price List		
	MPSR-SA(...)-ES-KMS...	MPSR-SA(...)-S	MPSR-SA(...)-S	See Price List	See Price List	See Price List	See Price List		
	NS-SA(...)-...	NS-SA(...)-...	NS-SA(...)-...	See Price List	See Price List	See Price List	See Price List		
	HS-SA(...)-...	HS-SA(...)-...	HS-SA(...)-...	See Price List	See Price List	See Price List	See Price List		
	GHS-SA(...)-...	GHS-SA(...)-...	GHS-SA(...)-...	See Price List	See Price List	See Price List	See Price List		

Mounting form: Cover mounting

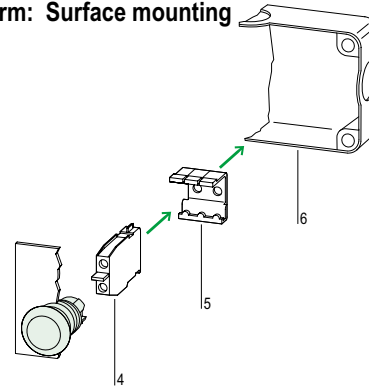


- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44

- Button plate Page 5/50
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56

- Accessories Page 5/58

Mounting form: Surface mounting

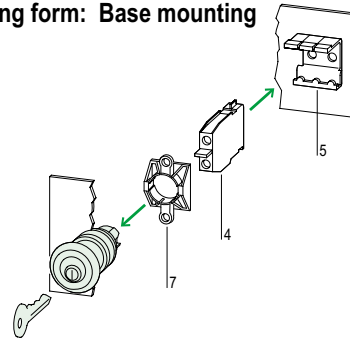


- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57

- Button plate Page 5/50
- Legend plate Page 5/53

- Accessories Page 5/58

Mounting form: Base mounting











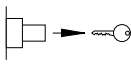






- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 7 Centering adapter Page 5/58

- Legend plate Page 5/53
- Telescopic bracket Page 5/58

- Accessories Page 5/58

**22.5 mm Control Circuit Devices**  
**RMQ 22 – Selector Switches, 2 Position**

**NEMA/UL 4/4X/13; IEC IP 65; CE**

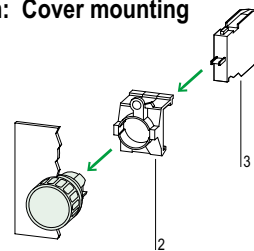
1	2	3	4	5	6	7			
	Function	Button plate		<b>Round style</b> 		<b>Price</b>			
	∨ = Main- tained ∽ = Spring- return	Style/Type		Type Front ring Matt chromed	Type Front ring Matt black	\$			
<b>Selector switches, 2 position</b>									
<b>Rotary head</b> Black  <b>Thumb-grip handle</b> Black  <b>Rotary lever</b> Black	∨ 60° ∽ 45°	 /96T  /96T			RW1R RW1	RW1R-S RW1-S	See Price List		
	∨ 60° ∽ 45°	Without Without			RW1R-X RW1-X	RW1R-X-S RW1-X-S	See Price List		
	∨ 60° ∽ 45°	— —			RWK1R RWK1	RWK1R-S RWK1-S	See Price List		
	∨ 60° ∽ 45°	— —			RWH1R RWH1	RWH1R-S RWH1-S	See Price List		
	<b>Coding adapters</b>								
	To convert between maintained and spring-return functions			∨ ∽			SP-RMQ-SW	SP-RMQ-SW	See Price List
				∨	—		SP-RMQ-RT	SP-RMQ-RT	See Price List
				∽	—		SP-RMQ-GE	SP-RMQ-GE	See Price List
	<b>Selector switches, 2 position</b>								
	Maintained Coding cannot be changed <b>Thumb-grip handle</b> Black	∨ 90°	—			RWK1V	RWK1V-S	See Price List	
	<b>Rotary lever</b> Black	∨ 90°	—			RWH1V	RWH1V-S	See Price List	
	<b>Toggle switches, 2 position</b>								
White lever Coding cannot be changed	∨	—			RKSR	RKSR-S	See Price List		
	∽	—			RKS	RKS-S	See Price List		

Heavy Duty Oiltight Pilot Devices  
 Limit Switches, Safety Interlock Switches

5

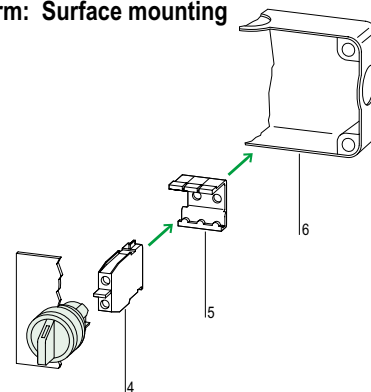
8	9		10	11	12
	Type Front ring Matt chromed	Type Front ring Matt black		Price \$	
	MW1R MW1	MW1R-S MW1-S		See Price List	See Price List
	MW1R-X MW1-X	MW1R-X-S MW1-X-S		See Price List	See Price List
	MWK1R MWK1	MWK1R-S MWK1-S		See Price List	See Price List
	MWH1R MWH1	MWH1R-S MWH1-S		See Price List	See Price List
	SP-RMQ-SW	SP-RMQ-SW		See Price List	See Price List
	SP-RMQ-RT	SP-RMQ-RT		See Price List	See Price List
	SP-RMQ-GE	SP-RMQ-GE		See Price List	See Price List
	MWK1V	MWK1V-S		See Price List	See Price List
	MWH1V	MWH1V-S		See Price List	See Price List
	MKSR	MKSR-S		See Price List	See Price List
	MKS	MKS-S		See Price List	See Price List

Mounting form: Cover mounting



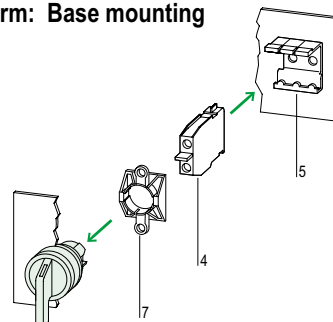
- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44
- Button plate Page 5/50
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56
- Accessories Page 5/58

Mounting form: Surface mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57
- Legend plate Page 5/53
- Accessories Page 5/58






















Mounting form: Base mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 7 Centering adapter Page 5/58
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
- Accessories Page 5/58

**22.5 mm Control Circuit Devices  
RMQ 22 – Selector Switches, 3 Position**

**NEMA/UL 4/4X/13; IEC IP 65; CE**

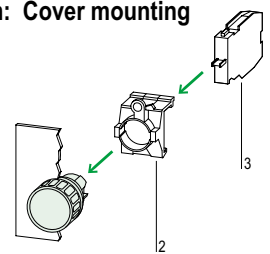
1	2	3	4	5	6	7	
	Function	Button plate		Round style 		Price	
	∨ = Main- tained ∇ = Spring- return	Style/Type		Type Front ring Matt chromed	Type Front ring Matt black	\$	
<b>Selector switches, 3 position</b> One or two contact elements can be mounted							
<b>Rotary head</b> Black	60° ∨ 60°	 /32T		RW3R	RW3R-S	See Price List	
	45° ∇ 45°	 /32T		RW3	RW3-S		See Price List
	60° ∇ 45°	 /32T		RW3R1	RW3R1-S	See Price List	
	45° ∇ 60°	 /32T		RW3R2	RW3R2-S		See Price List
	60° ∨ 60°	Without		RW3R-X	RW3R-X-S	See Price List	
	45° ∇ 45°	Without		RW3-X	RW3-X-S		See Price List
	60° ∇ 45°	Without		RW3R1-X	RW3R1-X-S	See Price List	
	45° ∇ 60°	Without		RW3R2-X	RW3R2-X-S		See Price List
	<b>Thumb-grip handle</b> Black	60° ∨ 60°	—		RWK3R	RWK3R-S	See Price List
		45° ∇ 45°	—		RWK3	RWK3-S	
60° ∇ 45°		—		RWK3R1	RWK3R1-S	See Price List	
45° ∇ 60°		—		RWK3R2	RWK3R2-S		See Price List
<b>Rotary lever</b> Black		60° ∨ 60°	—		RWH3R	RWH3R-S	See Price List
		45° ∇ 45°	—		RWH3	RWH3-S	
	60° ∇ 45°	—		RWH3R1	RWH3R1-S	See Price List	
	45° ∇ 60°	—		RWH3R2	RWH3R2-S		See Price List
<b>Coding adapters</b> To convert between maintained and spring-return functions							
					SP-RMQ-SW	SP-RMQ-SW	See Price List
		—	SP-RMQ-RT		SP-RMQ-RT	See Price List	
		—	SP-RMQ-GE		SP-RMQ-GE	See Price List	

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

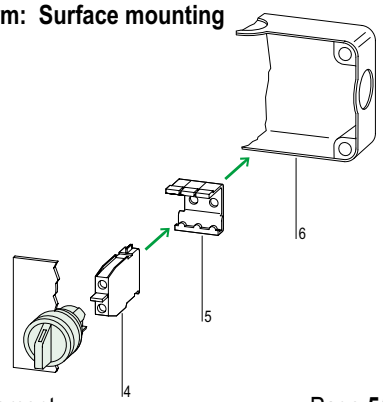
Round-on-square style 		Price
Type Front ring Matt chromed	Type Front ring Matt black	\$
	MW3R MW3	MW3R-S MW3-S See Price List See Price List
	MW3R1 MW3R2	MW3R1-S MW3R2-S See Price List See Price List
	MW3R-X MW3-X	MW3R-X-S MW3-X-S See Price List See Price List
	MW3R1-X MW3R2-X	MW3R1-X-S MW3R2-X-S See Price List See Price List
	MWK3R MWK3	MWK3R-S MWK3-S See Price List See Price List
	MWK3R1 MWK3R2	MWK3R1-S MWK3R2-S See Price List See Price List
	MWH3R MWH3	MWH3R-S MWH3-S See Price List See Price List
	MWH3R1 MWH3R2	MWH3R1-S MWH3R2-S See Price List See Price List
	SP-RMQ-SW	SP-RMQ-SW See Price List See Price List
	SP-RMQ-RT	SP-RMQ-RT See Price List See Price List
	SP-RMQ-GE	SP-RMQ-GE See Price List See Price List

Mounting form: Cover mounting



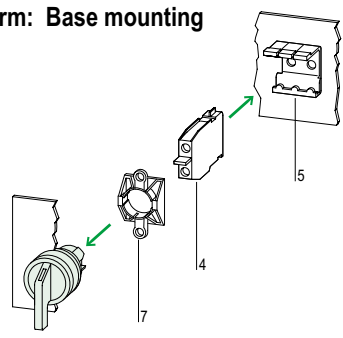
- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44
- Button plate Page 5/50
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56
- Accessories Page 5/58

Mounting form: Surface mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57
- Legend plate Page 5/53
- Accessories Page 5/58




Mounting form: Base mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 7 Centering adapter Page 5/58
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
- Accessories Page 5/58

**22.5 mm Control Circuit Devices**  
**RMQ 22 – Illuminated Selector Switches**

**NEMA/UL 4/4X/13; IEC IP 65; CE**

1	2	3	4	5	6	7
	Function	Handle		<b>Round style</b> 		<b>Price</b>
	 = Maintained  = Spring-return	Color		<b>Type</b> Front ring Matt chromed	<b>Type</b> Front ring Matt black	\$






**Illuminated selector switches, 2 position**

One or two contact elements can be mounted

**Thumb-grip handle**

45° 

No conversion possible between maintained and spring-return function






-  White
-  Green
-  Red
-  Yellow
-  Blue



- RLWK1R-WS
- RLWK1R-GN
- RLWK1R-RT
- RLWK1R-GE
- RLWK1R-BL

- RLWK1R-WS-S
- RLWK1R-GN-S
- RLWK1R-RT-S
- RLWK1R-GE-S
- RLWK1R-BL-S

45° 

-  White
-  Green
-  Red
-  Yellow
-  Blue



- RLWK1-WS
- RLWK1-GN
- RLWK1-RT
- RLWK1-GE
- RLWK1-BL

- RLWK1-WS-S
- RLWK1-GN-S
- RLWK1-RT-S
- RLWK1-GE-S
- RLWK1-BL-S


**Illuminated selector switches, 3 position**

One or two contact elements can be mounted

**Thumb-grip handle**

45°  45°

No conversion possible between maintained and spring-return function





-  White
-  Green
-  Red
-  Yellow
-  Blue



- RLWK3R-WS
- RLWK3R-GN
- RLWK3R-RT
- RLWK3R-GE
- RLWK3R-BL

- RLWK3R-WS-S
- RLWK3R-GN-S
- RLWK3R-RT-S
- RLWK3R-GE-S
- RLWK3R-BL-S

45°  45°


-  White
-  Green
-  Red
-  Yellow
-  Blue



- RLWK3-WS
- RLWK3-GN
- RLWK3-RT
- RLWK3-GE
- RLWK3-BL

- RLWK3-WS-S
- RLWK3-GN-S
- RLWK3-RT-S
- RLWK3-GE-S
- RLWK3-BL-S

45°  45°

-  White
-  Green
-  Red
-  Yellow
-  Blue



- RLWK3R1-WS
- RLWK3R1-GN
- RLWK3R1-RT
- RLWK3R1-GE
- RLWK3R1-BL

- RLWK3R1-WS-S
- RLWK3R1-GN-S
- RLWK3R1-RT-S
- RLWK3R1-GE-S
- RLWK3R1-BL-S

45°  45°

-  White
-  Green
-  Red
-  Yellow
-  Blue



- RLWK3R2-WS
- RLWK3R2-GN
- RLWK3R2-RT
- RLWK3R2-GE
- RLWK3R2-BL

- RLWK3R2-WS-S
- RLWK3R2-GN-S
- RLWK3R2-RT-S
- RLWK3R2-GE-S
- RLWK3R2-BL-S

See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List

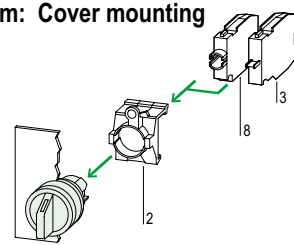
Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5



Round-on-square style 		Price
Type Front ring Matt chromed	Type Front ring Matt black	\$
	MLWK1R-WS MLWK1R-GN MLWK1R-RT MLWK1R-GE MLWK1R-BL	MLWK1R-WS-S MLWK1R-GN-S MLWK1R-RT-S MLWK1R-GE-S MLWK1R-BL-S
	MLWK1-WS MLWK1-GN MLWK1-RT MLWK1-GE MLWK1-BL	MLWK1-WS-S MLWK1-GN-S MLWK1-RT-S MLWK1-GE-S MLWK1-BL-S
	MLWK3R-WS MLWK3R-GN MLWK3R-RT MLWK3R-GE MLWK3R-BL	MLWK3R-WS-S MLWK3R-GN-S MLWK3R-RT-S MLWK3R-GE-S MLWK3R-BL-S
	MLWK3-WS MLWK3-GN MLWK3-RT MLWK3-GE MLWK3-BL	MLWK3-WS-S MLWK3-GN-S MLWK3-RT-S MLWK3-GE-S MLWK3-BL-S
	MLWK3R1-WS MLWK3R1-GN MLWK3R1-RT MLWK3R1-GE MLWK3R1-BL	MLWK3R1-WS-S MLWK3R1-GN-S MLWK3R1-RT-S MLWK3R1-GE-S MLWK3R1-BL-S
	MLWK3R2-WS MLWK3R2-GN MLWK3R2-RT MLWK3R2-GE MLWK3R2-BL	MLWK3R2-WS-S MLWK3R2-GN-S MLWK3R2-RT-S MLWK3R2-GE-S MLWK3R2-BL-S

Mounting form: Cover mounting

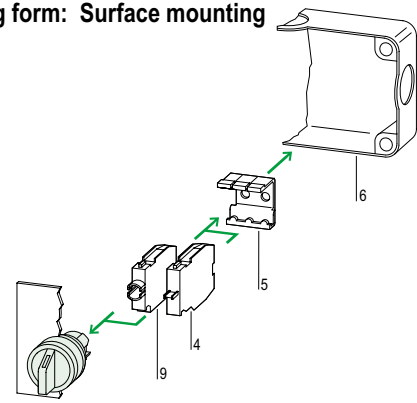


- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44
- 8 Lamp socket element Page 5/46

- Filament or neon bulb/LED Page 5/59
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56

Accessories Page 5/58

Mounting form: Surface mounting

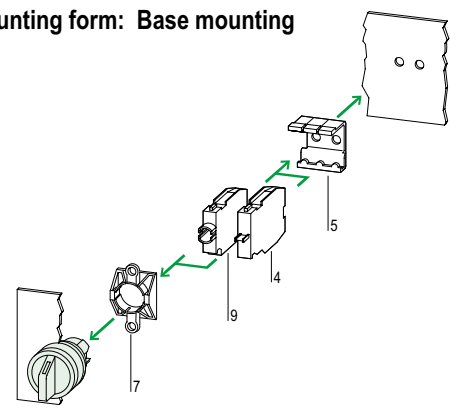


- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57
- 9 Lamp socket element Page 5/46

- Filament or neon bulb/LED Page 5/59
- Legend plate Page 5/53

Accessories Page 5/58

Mounting form: Base mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 9 Lamp socket element Page 5/46




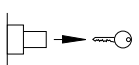
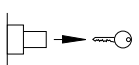

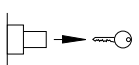


- Filament or neon bulb/LED Page 5/59
- Legend plate Page 5/53

Accessories Page 5/58



# 22.5 mm Control Circuit Devices RMQ 22 – Key-operated Selector Switches

NEMA/UL 4/4X/13; IEC IP 65; CE







1	2	3	4	5	6	7									
	Function	Key removable in position:		<b>Round style</b> 		<b>Price</b>									
	√ = Maintained ▷ = Spring-return			<b>Type</b> Front ring Matt chromed	<b>Type</b> Front ring Matt black	\$									
<b>Key-operated selector switches, two position</b>															
Individual lock mechanism not suitable for use with master key systems. With two keys, maintained/spring-return function and removable key position Can be changed using SP-RMQ coding adapters															
<b>KMS 1 Mechanism</b>	√ 60° √ 45° ▷ 45°	0, I 0 0		RS RS-KMS1-A1 RS-KMS1-A2	RS-S RS-KMS1-A1-S RS-KMS1-A2-S	See Price List See Price List See Price List									
<b>KMS 2...10, 201...400</b>	√ 60° √ 45° ▷ 45°	0, I 0 0		RS-KMS... RS-KMS...-A1 RS-KMS...-A2	RS-KMS...-S RS-KMS...-A1-S RS-KMS...-A2-S	See Price List See Price List See Price List									
<b>Key for individual lock mechanism</b> Specify the KMS number e.g. ES-KMS 1, ES-KMS 200 etc...				ES-KMS...	ES-KMS...	See Price List See Price List									
To convert between maintained and spring-return functions and change the removable key position. Not suitable for Master Key Systems.	<table border="1"> <tr> <td><b>BLACK</b></td> <td>√</td> <td></td> </tr> <tr> <td><b>RED</b></td> <td>√</td> <td>—</td> </tr> <tr> <td><b>YELLOW</b></td> <td>▷</td> <td>—</td> </tr> </table>	<b>BLACK</b>	√		<b>RED</b>	√	—	<b>YELLOW</b>	▷	—			SP-RMQ-SW SP-RMQ-RT SP-RMQ-GE	SP-RMQ-SW SP-RMQ-RT SP-RMQ-GE	See Price List See Price List See Price List
<b>BLACK</b>	√														
<b>RED</b>	√	—													
<b>YELLOW</b>	▷	—													
<b>Lock mechanism suitable for Master key systems<sup>1)</sup></b>	√ 45° ▷ 45°	0 0		RS-SA(...)-A1 RS-SA(...)-A2	RS-SA(...)-A1-S RS-SA(...)-A2-S	See Price List See Price List									
<b>Keys for master key systems</b>				NS-SA(...)-... HS-SA(...)-... GHS-SA(...)-...	NS-SA(...)-... HS-SA(...)-... GHS-SA(...)-...	See Price List See Price List See Price List									

<sup>1) Master key systems</sup> are custom made arrangements with individualized certificates to insure protection against unauthorized acquisition of keys. When ordering, submit a scheme or plan showing your particular requirements. This "Master key plan" accompanies Moeller Order form **FO 276** (available on request, see sample on p. 5/61) when submitting an order. The back of FO 276 can also be used to sketch out the Master key plan requirements. Each Master key system certificate is assigned an identification number which must be presented when ordering additional keys. For more details, refer to pages 5/60 and 5/61.

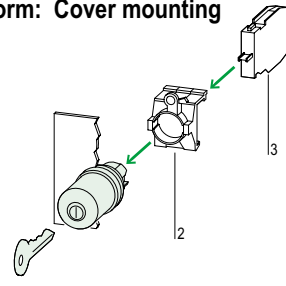
**KMS 201...400 and Master key systems:** Allow 4 to 6 weeks delivery.

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

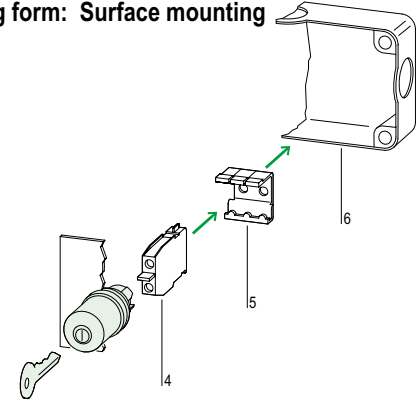
8	9	10	11	12		
	Round-on-square style 		Price			
	Type Front ring Matt chromed	Type Front ring Matt black	\$			
	<b>MS</b>	<b>MS-S</b>	See Price List	See Price List		
	MS-KMS1-A1	MS-KMS1-A1-S				
	MS-KMS1-A2	MS-KMS1-A2-S				
	<b>MS-KMS...</b>	<b>MS-KMS...-S</b>	See Price List	See Price List		
	MS-KMS...-A1	MS-KMS...-A1-S				
	MS-KMS...-A2	MS-KMS...-A2-S				
	<b>ES-KMS...</b>	<b>ES-KMS...</b>	See Price List	See Price List		
	<b>SP-RMQ-SW</b>	<b>SP-RMQ-SW</b>			See Price List	See Price List
	SP-RMQ-RT	SP-RMQ-RT				
SP-RMQ-GE	SP-RMQ-GE					
	<b>MS-SA(...)-A1</b>	<b>MS-SA(...)-A1-S</b>	See Price List	See Price List		
	MS-SA(...)-A2	MS-SA(...)-A2-S				
	<b>NS-SA(...)-...</b>	<b>NS-SA(...)-...</b>	See Price List	See Price List		
	HS-SA(...)-...	HS-SA(...)-...				
	GHS-SA(...)-...	GHS-SA(...)-...				

**Mounting form: Cover mounting**



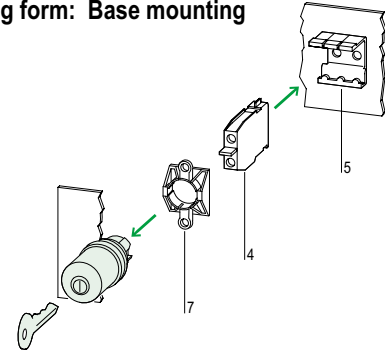
- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44
  
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56
  
- Accessories Page 5/58

**Mounting form: Surface mounting**



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57
  
- Legend plate Page 5/53
  
- Accessories Page 5/58


**Mounting form: Base mounting**



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 7 Centering adapter Page 5/58
  
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
  
- Accessories Page 5/58

# 22.5 mm Control Circuit Devices RMQ 22 – Key-operated Selector Switches

NEMA/UL 4/4X/13; IEC IP 65; CE

1	2	3	4	5	6	7
	Function	Key removable in position:		<b>Round style</b> 		<b>Price</b>
	∨ = Maintained			<b>Type</b>	<b>Type</b>	
	∨ = Spring-return			Front ring Matt chromed	Front ring Matt black	\$

## Key-operated selector switches, 3 position

Individual lock mechanism not suitable for use with master key systems. With two keys, maintained/spring-return function and removable key position can be changed using SP-RMQ coding adapters, one or two contact elements can be mounted

### KMS 1 Mechanism

60°	∨	60°	I, 0, II
45°	∨	45°	0
60°	∨	45°	I, 0
45°	∨	60°	0, II
45°	∨	45°	0
60°	∨	45°	I, 0
45°	∨	45°	0
45°	∨	60°	0, II
45°	∨	45°	0



RS3  
RS3-KMS1-A1  
RS3-KMS1-A2  
RS3-KMS1-A3  
RS3-KMS1-A4  
RS3-KMS1-A5  
RS3-KMS1-A6  
RS3-KMS1-A7  
RS3-KMS1-A8

RS3-S  
RS3-KMS1-A1-S  
RS3-KMS1-A2-S  
RS3-KMS1-A3-S  
RS3-KMS1-A4-S  
RS3-KMS1-A5-S  
RS3-KMS1-A6-S  
RS3-KMS1-A7-S  
RS3-KMS1-A8-S

See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List

### KMS 2...10, 201...400

60°	∨	60°	I, 0, II
45°	∨	45°	0
60°	∨	45°	I, 0
45°	∨	60°	0, II
45°	∨	45°	0
60°	∨	45°	I, 0
45°	∨	45°	0
45°	∨	60°	0, II
45°	∨	45°	0

RS3-KMS...  
RS3-KMS...-A1  
RS3-KMS...-A2  
RS3-KMS...-A3  
RS3-KMS...-A4  
RS3-KMS...-A5  
RS3-KMS...-A6  
RS3-KMS...-A7  
RS3-KMS...-A8

RS3-KMS...-S  
RS3-KMS...-A1-S  
RS3-KMS...-A2-S  
RS3-KMS...-A3-S  
RS3-KMS...-A4-S  
RS3-KMS...-A5-S  
RS3-KMS...-A6-S  
RS3-KMS...-A7-S  
RS3-KMS...-A8-S

See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List

### Key for individual lock mechanism

Specify the KMS number  
e.g. ES-KMS 1, ES-KMS 200 etc...



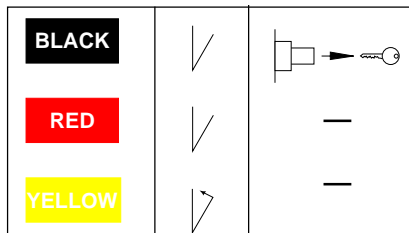
ES-KMS...

ES-KMS...

See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List

### Coding Adapters

To convert between maintained and spring-return functions and change the removable key position.  
Not suitable for Master Key Systems.



SP-RMQ-SW

SP-RMQ-SW

SP-RMQ-RT

SP-RMQ-RT

SP-RMQ-GE

SP-RMQ-GE

### Lock mechanism suitable for master key systems<sup>1)</sup>

45°	∨	45°	0
45°	∨	45°	0
45°	∨	45°	0
45°	∨	45°	0



RS3-SA(...)-A1  
RS3-SA(...)-A4  
RS3-SA(...)-A6  
RS3-SA(...)-A8

RS3-SA(...)-A1-S  
RS3-SA(...)-A4-S  
RS3-SA(...)-A6-S  
RS3-SA(...)-A8-S

### Keys for master key systems

Standard Key  
Master Key  
General Master Key



NS-SA(...)-...  
HS-SA(...)-...  
GHS-SA(...)-...

NS-SA(...)-...  
HS-SA(...)-...  
GHS-SA(...)-...







See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List  
See Price List

<sup>1)</sup> **Master key systems** are custom made arrangements with individualized certificates to insure protection against unauthorized acquisition of keys. When ordering, submit a scheme or plan showing your particular requirements. This "Master key plan" accompanies Moeller Order form **FO 276** (available on request, see sample on p. 5/61 when submitting an order. The back of FO 276 can also be used to sketch out the Master key plan requirements.) Each Master key system certificate is assigned an identification number which must be presented when ordering additional keys. For more details, refer to pages 5/60 and 5/61.

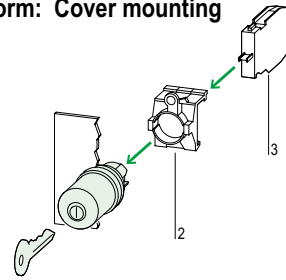
**KMS 201...400 mechanisms and Master key systems:** Allow 4 to 6 weeks delivery.

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

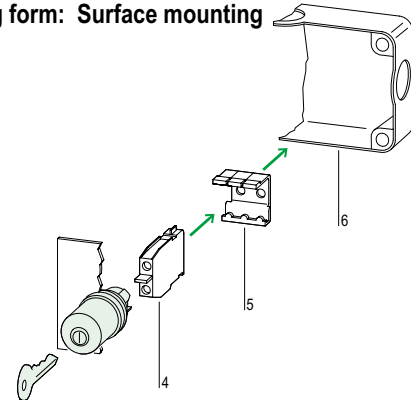
8	9	10	11	12
Round-on-square style 			Price	
Type Front ring	Type Front ring		\$	
Matt chromed	Matt black			
	<b>MS3</b> MS3-KMS1-A1 MS3-KMS1-A2 MS3-KMS1-A3 MS3-KMS1-A4 MS3-KMS1-A5 MS3-KMS1-A6 MS3-KMS1-A7 MS3-KMS1-A8	<b>MS3-S</b> MS3-KMS1-A1-S MS3-KMS1-A2-S MS3-KMS1-A3-S MS3-KMS1-A4-S MS3-KMS1-A5-S MS3-KMS1-A6-S MS3-KMS1-A7-S MS3-KMS1-A8-S	See Price List	See Price List
	MS3-KMS... MS3-KMS...-A1 MS3-KMS...-A2 MS3-KMS...-A3 MS3-KMS...-A4 MS3-KMS...-A5 MS3-KMS...-A6 MS3-KMS...-A7 MS3-KMS...-A8	MS3-KMS...-S MS3-KMS...-A1-S MS3-KMS...-A2-S MS3-KMS...-A3-S MS3-KMS...-A4-S MS3-KMS...-A5-S MS3-KMS...-A6-S MS3-KMS...-A7-S MS3-KMS...-A8-S	See Price List	See Price List
	ES-KMS...	ES-KMS...	See Price List	See Price List
	SP-RMQ-SW	SP-RMQ-SW	See Price List	See Price List
	SP-RMQ-RT	SP-RMQ-RT	See Price List	See Price List
	SP-RMQ-GE	SP-RMQ-GE	See Price List	See Price List
	MS3-SA(...)-A1 MS3-SA(...)-A4 MS3-SA(...)-A6 MS3-SA(...)-A8	MS3-SA(...)-A1-S MS3-SA(...)-A4-S MS3-SA(...)-A6-S MS3-SA(...)-A8-S	See Price List	See Price List
	NS-SA(...)-... HS-SA(...)-... GHS-SA(...)-...	NS-SA(...)-... HS-SA(...)-... GHS-SA(...)-...	See Price List	See Price List

Mounting form: Cover mounting



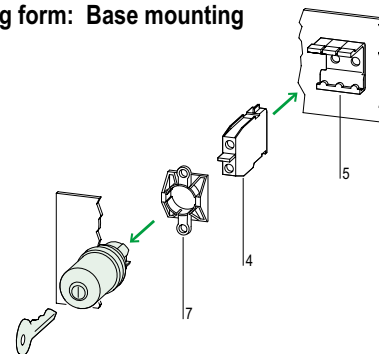
- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44
- Legend plate Page 5/53
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Mounting form: Surface mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57
- Legend plate Page 5/53
- Accessories Page 5/58
































Mounting form: Base mounting



- 4 Contact element Page 5/44
- 5 Mounting adapter Page 5/44
- 7 Centering adapter Page 5/58
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
- Accessories Page 5/58

**22.5 mm Control Circuit Devices**  
**RMQ 22 – Illuminated Operators, Indicating Lights**

UL / CSA / IEC / CE

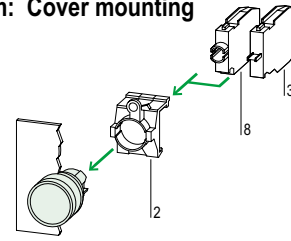
1	2	3	4	5	6
	Illuminated pushbutton and indicating light		<b>Round style</b> 		<b>Price</b>
	Color		<b>Type</b> Front ring Matt chromed	<b>Type</b> Front ring Matt black	\$
<b>Illuminated pushbutton operators</b> NEMA/UL 3R, 12; IEC IP 65					
<b>Flush</b>	 White  Green  Red  Yellow  Blue		RLT-WS RLT-GN RLT-RT RLT-GE RLT-BL	RLT-WS-S RLT-GN-S RLT-RT-S RLT-GE-S RLT-BL-S	See Price List See Price List See Price List See Price List See Price List
<b>Extended</b>	 White  Green  Red  Yellow  Blue		RLTH-WS RLTH-GN RLTH-RT RLTH-GE RLTH-BL	RLTH-WS-S RLTH-GN-S RLTH-RT-S RLTH-GE-S RLTH-BL-S	See Price List See Price List See Price List See Price List See Price List
<b>Maintained Illuminated pushbutton operators</b> NEMA/UL type 3R, 12; IEC IP 65					
<b>Flush</b> Button remains in the operated position, press again to release.	 White  Green  Red  Yellow  Blue		RLTR-WS RLTR-GN RLTR-RT RLTR-GE RLTR-BL	RLTR-WS-S RLTR-GN-S RLTR-RT-S RLTR-GE-S RLTR-BL-S	See Price List See Price List See Price List See Price List See Price List
<b>Indicating light lens assemblies</b> NEMA/UL 4/4X/13; IEC IP 65					
<b>Flush</b> Without front ring	 White  Green  Red  Yellow  Blue		— — — — —	RLF-WS RLF-GN RLF-RT RLF-GE RLF-BL	See Price List See Price List See Price List See Price List See Price List
<b>Conical</b>	 White  Green  Red  Yellow  Blue		RL-WS RL-GN RL-RT RL-GE RL-BL	RL-WS-S RL-GN-S RL-RT-S RL-GE-S RL-BL-S	See Price List See Price List See Price List See Price List See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

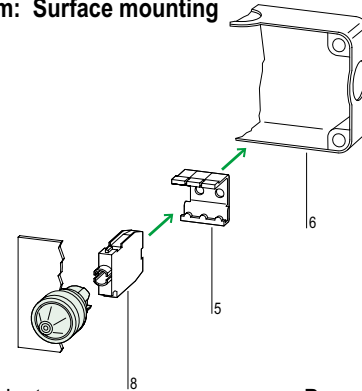
	Round-on-square style 		Price
	Type Front ring Matt chromed	Type Front ring Matt black	\$
	MLT-WS	MLT-WS-S	See Price List See Price List See Price List See Price List See Price List
	MLT-GN	MLT-GN-S	
	MLT-RT	MLT-RT-S	
	MLT-GE	MLT-GE-S	
	MLT-BL	MLT-BL-S	
	MLTH-WS	MLTH-WS-S	See Price List See Price List See Price List See Price List See Price List
	MLTH-GN	MLTH-GN-S	
	MLTH-RT	MLTH-RT-S	
	MLTH-GE	MLTH-GE-S	
	MLTH-BL	MLTH-BL-S	
	MLTR-WS	MLTR-WS-S	See Price List See Price List See Price List See Price List See Price List
	MLTR-GN	MLTR-GN-S	
	MLTR-RT	MLTR-RT-S	
	MLTR-GE	MLTR-GE-S	
	MLTR-BL	MLTR-BL-S	
	—	MLF-WS	See Price List See Price List See Price List See Price List See Price List
	—	MLF-GN	
	—	MLF-RT	
	—	MLF-GE	
	—	MLF-BL	
	ML-WS	ML-WS-S	See Price List See Price List See Price List See Price List See Price List
	ML-GN	ML-GN-S	
	ML-RT	ML-RT-S	
	ML-GE	ML-GE-S	
	ML-BL	ML-BL-S	

Mounting form: Cover mounting



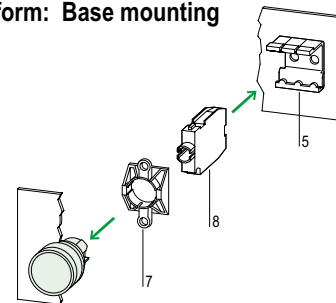
- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44
- 8 Lamp socket element Page 5/46
- Filament or neon bulb/LED Page 5/59
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56
- Accessories Page 5/58

Mounting form: Surface mounting



- 5 Mounting adapter Page 5/44
- 6 Basic enclosure Page 5/57
- 8 Lamp socket element Page 5/46
- Filament or neon bulb/LED Page 5/59
- Legend plate Page 5/53
- Accessories Page 5/58

Mounting form: Base mounting





- 5 Mounting adapter Page 5/44
- 7 Centering adapter Page 5/58
- 8 Lamp socket element Page 5/46
- Filament or neon bulb/LED Page 5/59
- Insert plate Page 5/50
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
- Accessories Page 5/58






# 22.5 mm Control Circuit Devices RMQ 22 – Digital Display Assemblies

NEMA/UL 4/4X/13; IEC IP 65; CE

1	2	3	4	5	6	7
	Color		Round style 		Round-on-square style 	Price
			Type		Type	\$

## Digital display assemblies

Single-decade display consisting of seven segments and a decimal point. Height of digits 14.2 mm. Operated via **BCE 24** or **BCEL 24** digital display operating block.

-  Green
-  Red
-  Yellow



- RZA-GN
- RZA-RT
- RZA-GE



- MZA-GN
- MZA-RT
- MZA-GE

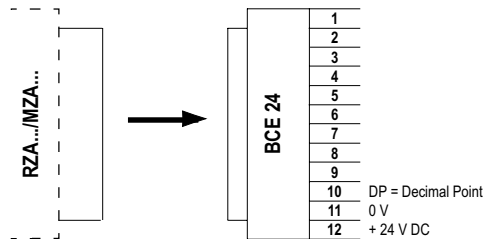
See Price List See Price List See Price List See Price List

## Digital display operating block

Without memory  
Operates one decade: with integral adapter for front mounting.  
Display via **RZA...** or **MZA...** digital display assembly



BCE 24



### BCE 24 truth table (H = high signal, L = low signal)

1 to 10 operation

Inputs									Display
1	2	3	4	5	6	7	8	9	
L	L	L	L	L	L	L	L	L	0
H	L	L	L	L	L	L	L	L	1
L	H	L	L	L	L	L	L	L	2
L	L	H	L	L	L	L	L	L	3
L	L	L	H	L	L	L	L	L	4
L	L	L	L	H	L	L	L	L	5
L	L	L	L	L	H	L	L	L	6
L	L	L	L	L	L	H	L	L	7
L	L	L	L	L	L	L	H	L	8
L	L	L	L	L	L	L	L	H	9

BCD/hexadecimal operation (to F).  
Terminals 3, 5, 6, 7 and 9 are not connected.

Inputs					Display	Inputs				Display
1	2	4	8	Display		1	2	4	8	
L	L	L	L	0	L	H	L	H	A	
H	L	L	L	1	H	H	L	H	B	
L	H	L	L	2	L	L	H	H	C	
H	H	L	L	3	H	L	H	H	D	
L	L	H	L	4	L	H	H	H	E	
H	L	H	L	5	H	H	H	H	F	
L	H	H	L	6						
H	H	H	L	7						
L	L	L	H	8						
H	L	L	H	9						



8 9 10 11

Type	Price
	\$

See Price List	See Price List	See Price List	See Price List
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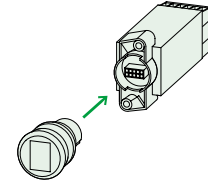
**Digital display operating block**

With memory  
Operates one decade: with integral adapter for front mounting.  
Display via **RZA...** or **MZA...** digital display assembly

**BCEL 24**

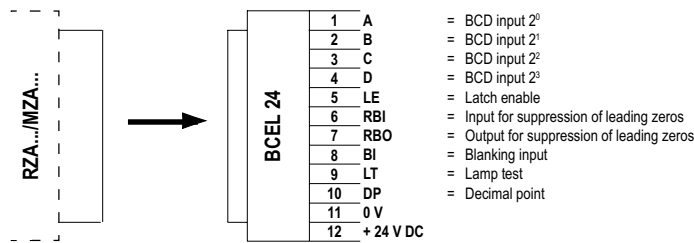
See Price List See Price List See Price List See Price List

**Mounting form: Cover mounting**



Legend plate  
Flush-mounting plate  
Accessories

Page 5/53  
Page 5/56  
Page 5/58



**BCEL 24 truth table**

(H = high signal, L = low signal, X = undefined signal, H or L)

Inputs								Outputs	
1	2	3	4	5	8	9	6	7	Display
A	B	C	D	LE	BI	LT	RBI	RBO	
X	X	X	X	X	X	H	X	/	8 (Lamp test)
X	X	X	X	X	H	L	X	/	Dark
L	L	L	L	L	L	L	H	H	Dark (Suppression of leading zeros)
L	L	L	L	L	L	L	L	L	0
L	L	L	L	L	L	L	X	L	1
L	H	L	L	L	L	L	X	L	2
H	H	L	L	L	L	L	X	L	3
L	L	H	L	L	L	L	X	L	4
H	L	H	L	L	L	L	X	L	5
L	H	H	L	L	L	L	X	L	6
H	H	H	L	L	L	L	X	L	7
L	L	L	H	L	L	L	X	L	8
H	L	L	H	L	L	L	X	L	9
L	H	L	H	L	L	L	X	L	Dark
L	L	H	H	L	L	L	X	L	
H	L	H	H	L	L	L	X	L	
L	H	H	H	L	L	L	X	L	
X	X	X	X	H	L	L	X	/	Display of number in memory

**Operation of BCEL 24**

The BCD code is entered via inputs 1, 2, 3, and 4. The operating blocks of several decades can be controlled via a common bus.

When the "High" signal is at input 5 (LE) the digit on the bus is latched.

Each operating block must be connected to the + 24 V DC supply voltage.









The leading zero can be suppressed. To do this, the first input for the suppression of leading zeros (RBI) must be connected to the supply voltage and passed through the output for the suppression of leading zeros (RBO).

If input 8 (BI) of the element is set to "High" the display is extinguished.

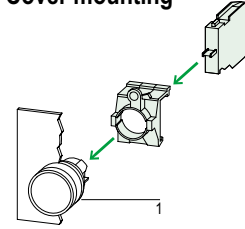
A function test of the display segments can be carried out via input 9 (LT) of the operating blocks.

The decimal point can be operated via input 10 (DP).



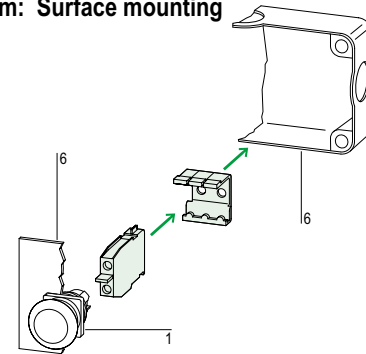
8	9	10	11	12			
Surface/Base Mounting		Type	Price				
Position of contact elements on mounting adapter		Base mounting	\$				
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		BE 3C	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EK 10C	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EK 01C	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EK 10PC	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EK 01RC	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		BK 11C	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		BK 10C	See Price List	See Price List
2	3	1					
<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		BK 01C	See Price List	See Price List
2	3	1					

Mounting form: Cover mounting



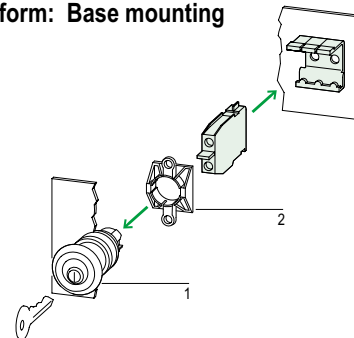
- 1 Operator Page 5/28
- Button plate Page 5/50
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56
- Accessories Page 5/58

Mounting form: Surface mounting



- 1 Operator Page 5/28
- 6 Basic enclosure Page 5/57
- Button plate Page 5/50
- Legend plate Page 5/53
- Accessories Page 5/58




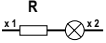

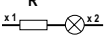

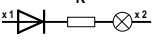

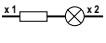



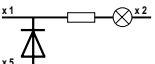




Mounting form: Base mounting



- 1 Operator Page 5/28
- 2 Centering adapter Page 5/58
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
- Accessories Page 5/58











# 22.5 mm Control Circuit Devices RMQ 22 – Mounting Adapters and Lamp Elements - Cover Mounted

UL / CSA / IEC / CE

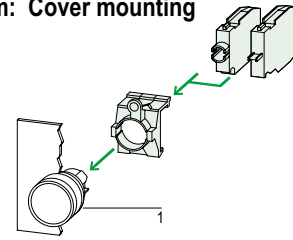
1	2	3	4	5	6	7																		
		Maximum bulb Wattage/ Resistance	<b>Cover Mounting</b> Position of elements on mounting adapter in accordance with EN 50 013		<b>Type</b>  Front fixing	<b>Price</b>  \$																		
<b>Mounting adapter</b> For the following elements		Sequence numbers on mounting adapter	1 3 2		<b>BE 3</b>	See Price List																		
<b>Lamp socket elements BA 9's</b> , without bulb For <b>BE 3</b> and <b>BE 3C</b> mounting adapters																								
	For filament/neon bulbs or multiple LED's	2 W	1 3 2		<b>EF</b>	See Price List																		
	For 130 V filament bulb, for connection to 110 - 130 V for increased lifespan	2.6 W R = 1.2 k Ω	1 3 2		<b>EF 1</b>	See Price List																		
	For 130 V filament bulb, for connection to 220 - 240 V	2.4 W R = 7.5 k Ω	1 3 2		<b>EFR</b>	See Price List																		
	For 130 V filament bulb, for connection to 220 - 240 V AC	2.4 W R = 3.0 k Ω	1 3 2		<b>EF 3</b>	See Price List																		
	For 24 V filament bulb, to limit in-rush peak currents in electronic systems	2 W R = 47 Ω	1 3 2		<b>EF 0</b>	See Price List																		
<b>With lamp test</b>																								
	For filament bulbs, for decoupled lamp test function	2 W	1 3 2		<b>EFD</b>	See Price List																		
	For 130 V filament bulb, for connection to 220 - 240 V for decoupled lamp test function	2.4 W R = 7.5 k Ω	1 3 2		<b>EFDR</b>	See Price List																		
<b>For BE 3 and BE 3C mounting adapter</b>																								
<b>Diode element</b>		For decoupled lamp test function when BA 9's lamp socket elements are mounted separately	1 3 2		<b>ED</b>	See Price List																		
<b>Lamp transformer elements</b> 2 VA, 50...60 Hz, short circuit proof																								
	<table border="1"> <thead> <tr> <th>Primary (V AC)</th> <th>Secondary (V AC)</th> </tr> </thead> <tbody> <tr> <td>115 - <b>125</b></td> <td><b>6</b></td> </tr> <tr> <td><b>220</b> - 240</td> <td><b>6</b></td> </tr> <tr> <td><b>380</b> - 400</td> <td><b>6</b></td> </tr> <tr> <td>415 - <b>440</b></td> <td><b>6</b></td> </tr> <tr> <td>115 - 125</td> <td><b>24</b></td> </tr> <tr> <td><b>220</b> - 240</td> <td><b>24</b></td> </tr> <tr> <td><b>380</b> - 400</td> <td><b>24</b></td> </tr> <tr> <td>415 - <b>440</b></td> <td><b>24</b></td> </tr> </tbody> </table>	Primary (V AC)	Secondary (V AC)	115 - <b>125</b>	<b>6</b>	<b>220</b> - 240	<b>6</b>	<b>380</b> - 400	<b>6</b>	415 - <b>440</b>	<b>6</b>	115 - 125	<b>24</b>	<b>220</b> - 240	<b>24</b>	<b>380</b> - 400	<b>24</b>	415 - <b>440</b>	<b>24</b>		1 3 2		<b>ET 125/6</b> <b>ET 220/6</b> <b>ET 380/6</b> <b>ET 440/6</b>  <b>ET 125/24</b> <b>ET 220/24</b> <b>ET 380/24</b> <b>ET 440/24</b>	See Price List
Primary (V AC)	Secondary (V AC)																							
115 - <b>125</b>	<b>6</b>																							
<b>220</b> - 240	<b>6</b>																							
<b>380</b> - 400	<b>6</b>																							
415 - <b>440</b>	<b>6</b>																							
115 - 125	<b>24</b>																							
<b>220</b> - 240	<b>24</b>																							
<b>380</b> - 400	<b>24</b>																							
415 - <b>440</b>	<b>24</b>																							
Bold figures appear in type number at right						See Price List																		

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

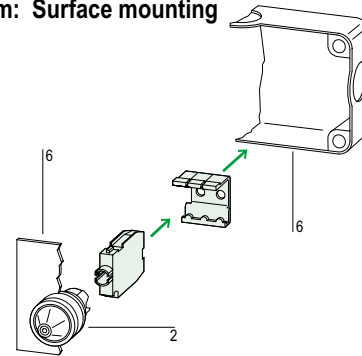
8	9	10	11	12	13			
Maximum bulb Wattage/Resistance	Surface/ Base Mounting		Type	Price				
	Position of elements on mounting adapter in accordance with EN 50 013		Base	\$				
	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		BE 3C	See Price List	See Price List
2	3	1						
2 W	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EFC	See Price List	See Price List
2	3	1						
2.6 W R = 1.2 k Ω	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EF 1C	See Price List	See Price List
2	3	1						
2.6 W R = 6.8 k Ω	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EFRC	See Price List	See Price List
2	3	1						
2.6 W R = 2.4 k Ω	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EF 3C	See Price List	See Price List
2	3	1						
2 W R = 47 Ω	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EF 0C	See Price List	See Price List
2	3	1						
2 W	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EFDC	See Price List	See Price List
2	3	1						
2.6 W R = 6.8 k Ω	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		EFDC	See Price List	See Price List
2	3	1						
	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		ED	See Price List	See Price List
2	3	1						
	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		ET 125/6 ET 220/6 ET 380/6 ET 440/6  ET 125/24 ET 220/24 ET 380/24 ET 440/24	See Price List	See Price List
2	3	1						

Mounting form: Cover mounting



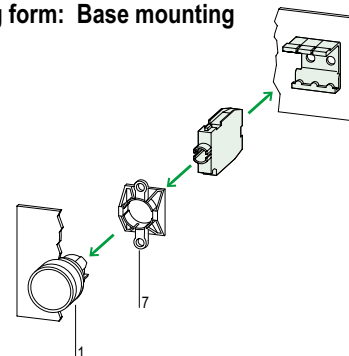
- 1 Illuminated pushbutton operator Page 5/40
- Filament or neon bulb/LED Page 5/59
- Insert plate Page 5/50
- Legend plate Page 5/53
- Flush-mounting plate Page 5/56
- Accessories Page 5/58

Mounting form: Surface mounting



- 2 Indicating light lens assembly Page 5/40
- 6 Basic enclosure Page 5/57
- Filament or neon bulb/LED Page 5/59
- Legend plate Page 5/53
- Accessories Page 5/58



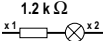

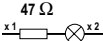

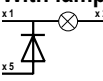

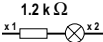


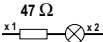



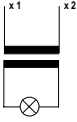
Mounting form: Base mounting




- 1 Indicating light lens assembly Page 5/40
- Filament or neon bulb/LED Page 5/59
- Insert plate Page 5/50
- Legend plate Page 5/53
- Telescopic bracket Page 5/58
- Accessories Page 5/58

# UL / CSA / IEC / CE

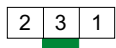
## 22.5 mm Control Circuit Devices RMQ 22 – Lamp Socket/Contact Assemblies, Transformer blocks - Cover mounted

1	2	3	4	5	6	7																														
		Maximum bulb Wattage	<b>Cover Mounting</b>		<b>Type</b>	<b>Price</b>																														
			Position of elements on mounting adapter in accordance with EN 50 013 <sup>1)</sup>		Front fixing	\$																														
<b>Lamp socket blocks BA 9's</b> , without bulb Combination of lamp socket element and mounting adapter																																				
	For filament/neon bulbs or multiple LED's	2 W	<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BF</b>	See Price List																								
1	3	2																																		
	For 130 V filament bulb, for connection to 110 - 130 V for increased lifespan	2.6 W	<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BF 1</b>	See Price List																								
1	3	2																																		
	For 24 V filament bulb, to limit in-rush peak currents in electronic systems	2 W	<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BF 0</b>	See Price List																								
1	3	2																																		
<b>With lamp test</b> 	For filament bulbs, for decoupled lamp test function	2 W	<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BFD</b>	See Price List																								
1	3	2																																		
<b>Lamp socket blocks with contacts BA 9's</b> , without bulb Combination of lamp socket element, contact element and mounting adapter																																				
	For 130 V filament bulb, for connection to 110 - 130 V for increased lifespan	2.6 W	<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BK 10/F 1</b>	See Price List																								
1	3	2																																		
	One N.O. contact					See Price List																														
	For 24 V filament bulb, to limit inrush peak currents in electronic systems	2 W	<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BK 10/F 0</b>	See Price List																								
1	3	2																																		
	One N.O. contact					See Price List																														
<b>Lamp transformer blocks with contacts BA 9's</b> , without bulb With integral mounting adapter Two contact elements can be mounted																																				
2 V A, 50...60 Hz, short-circuit proof	<table border="1" style="display: inline-table;"> <thead> <tr> <th>Primary (V AC)</th> <th>Secondary (V AC)</th> </tr> </thead> <tbody> <tr><td>115 - <b>125</b></td><td><b>6</b></td></tr> <tr><td><b>220</b> - 240</td><td><b>6</b></td></tr> <tr><td><b>380</b> - 400</td><td><b>6</b></td></tr> <tr><td>415 - <b>440</b></td><td><b>6</b></td></tr> <tr><td>480 - <b>500</b></td><td><b>6</b></td></tr> <tr><td colspan="2"> </td></tr> <tr><td>115 - <b>125</b></td><td><b>24</b></td></tr> <tr><td><b>220</b> - 240</td><td><b>24</b></td></tr> <tr><td><b>380</b> - 400</td><td><b>24</b></td></tr> <tr><td>415 - <b>440</b></td><td><b>24</b></td></tr> <tr><td>480 - <b>500</b></td><td><b>24</b></td></tr> </tbody> </table>	Primary (V AC)	Secondary (V AC)	115 - <b>125</b>	<b>6</b>	<b>220</b> - 240	<b>6</b>	<b>380</b> - 400	<b>6</b>	415 - <b>440</b>	<b>6</b>	480 - <b>500</b>	<b>6</b>			115 - <b>125</b>	<b>24</b>	<b>220</b> - 240	<b>24</b>	<b>380</b> - 400	<b>24</b>	415 - <b>440</b>	<b>24</b>	480 - <b>500</b>	<b>24</b>		<table border="1" style="display: inline-table;"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td style="background-color: #008000;"></td><td></td><td></td></tr></table>	1	3	2					<b>BFT 125/6</b> <b>BFT 220/6</b> <b>BFT 380/6</b> <b>BFT 440/6</b> <b>BFT 500/6</b>  <b>BFT 125/24</b> <b>BFT 220/24</b> <b>BFT 380/24</b> <b>BFT 440/24</b> <b>BFT 500/24</b>	See Price List
Primary (V AC)	Secondary (V AC)																																			
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1	3	2																																		
	Bold figures appear in Type number at right					See Price List																														

1)  x = Sequence numbers on mounting adapter  
y = Function numbers on contact element

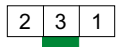
Surface/Base Mounting

Position of elements on mounting adapter in accordance with EN 50 013<sup>1)</sup>



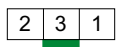
BFC

See Price List



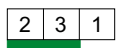
BF 1 C

See Price List



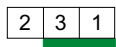
BF 0 C

See Price List



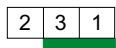
BFDC

See Price List



BK 10/F 1 C

See Price List



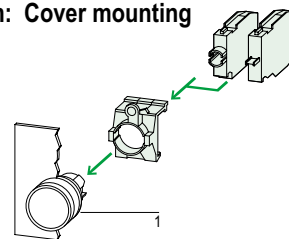
BK 10/F 0 C

See Price List

Type  
 Base mounting

Price  
 \$

Mounting form: Cover mounting

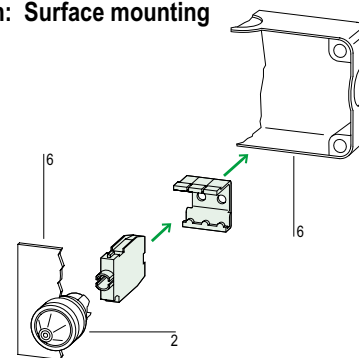


1 Indicating light lens assembly Page 5/40

Filament bulb Page 5/59  
 Legend plate Page 5/53  
 Flush-mounting plate Page 5/56

Accessories Page 5/58

Mounting form: Surface mounting

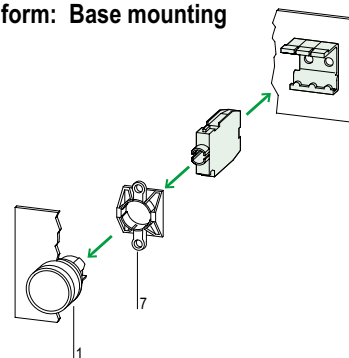


2 Indicating light lens assembly Page 5/40  
 6 Basic enclosure Page 5/57

Filament bulb Page 5/59  
 Insert plate Page 5/50  
 Legend plate Page 5/53

Accessories Page 5/58

Mounting form: Base mounting



1 Illuminated pushbutton operator Page 5/40

Filament bulb Page 5/59  
 Insert plate Page 5/50  
 Legend plate Page 5/53

Accessories Page 5/58





























































## 22.5 mm Control Circuit Devices RMQ 22 – Standard Marking Plates

1	2	3	4	5	6	7	8	9
Symbol meaning	Symbol designation	Type Button plates for: Pushbuttons and Selector switches		Type Double pushbuttons		Type Transparent insert plates for: Illuminated pushbuttons		Type Transparent insert plates for: Indicating light lens assembly, flush
Stop		10T		10D		10LT		10L
Start		11T		11D		—		—
		12T		—		—		—
		13T		—		—		—
		14T		—		—		—
		15T		—		—		—
Start or ON		21T		21D		11LT		11L
		22T		—		22LT		22L
		23T		—		23LT		23L
Increase		37T		37D		37LT		37L
Decrease		38T		38D		38LT		38L
Direction		32T		32D		32LT		32L
		36T		—		36LT		36L
Hand		40T		—		40LT		40L
Automatic		41T		—		41LT		41L
Setting		42T		—		42LT		42L
Inch		43T		—		43LT		43L
Fast		46T		—		46LT		46L
Advance		47T		—		47LT		47L
Unlock		52T		—		52LT		52L
Lock		53T		—		53LT		53L
Unclamp		54T		—		54LT		54L
Clamp		55T		—		55LT		55L
Brake		58T		—		58LT		58L
Release brake		59T		—		59LT		59L
Blow		60T		—		60LT		60L
Suck		61T		—		61LT		61L
Fluid pumps, general		62T		—		62LT		62L
Liquid		63T		—		63LT		63L
Horn		66T		—		—		—
<b>Selector switches</b>		90T		—		—		—
		91T		—		—		—
		92T		—		—		—
		93T		—		—		—
		99T		—		—		—
ON OFF		96T		—		—		—
AUTO HAND		97T		—		—		—

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

## 22.5 mm Control Circuit Devices RMQ 22 – Standard Marking Plates












1	2	3	4	5	6	7	8	9
Text		Type Button plates for: Pushbuttons and Selector switches		Type Double pushbuttons		Type Transparent insert plates for: Illuminated pushbuttons		Type Transparent insert plates for: Indicating light lens assembly, flush
STOP		110T		110D		110LT		—
START		111T		111D		111LT		—
OFF		217T		217D		217LT		217L
ON		221T		221D		221LT		221L
RAISE		232T		—		232LT		—
LOWER		233T		—		233LT		—
LEFT		234T		—		234LT		234L
RIGHT		235T		—		235LT		235L
HAND		140T		—		140LT		140L
AUTO		141T		—		141LT		141L
SET-UP		242T		—		—		—
JOGGING		243T		—		—		—
FAULT		—		—		250LT		250L
OPEN		252T		—		—		—
CLOSE		253T		253D		253LT		253L
BRAKE		258T		—		—		—
FORWARD		270T		—		—		—
REVERSE		271T		—		—		—
UP		272T		272D		272LT		272L
DOWN		273T		—		273LT		273L
HIGH		274T		—		—		—
LOW		275T		—		—		—
FAST		279T		—		—		—
SLOW		280T		—		—		—
RUN		283T		—		283LT		283L
TEST		284T		—		—		—
RESET		287T		—		—		—

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

# 22.5 mm Control Circuit Devices

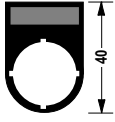
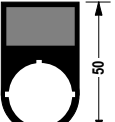
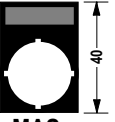
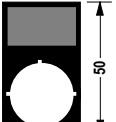
## RMQ 22 – Marking Plates and Standard Legend Plates - Blank

1	2	3	4	5	6	7	8
	Color	Type	Type Can be engraved	Price \$	Letter height mm	Lines Number	Letters per line Number
<b>Plates for pushbuttons</b>							
<b>Blank</b>							
...TG for engraving Engraving depth: 0.2 mm (05TG = 0.4 mm)		Black	01T	01TG	See Price List	5	2 max. 6
		White	02T	02TG	See Price List	5	2 max. 6
		Green	03T	03TG	See Price List	5	2 max. 6
		Red	04T	04TG	See Price List	5	2 max. 6
		Yellow	05T	05TG	See Price List	5	2 max. 6
		Blue	06T	06TG	See Price List	5	2 max. 6
<b>Plates for pushbuttons</b>							
<b>Blank</b>							
...DG for engraving		Black	01D	01DG	See Price List	5	2 max. 6
		White	02D	02DG	See Price List	5	2 max. 6
		Green	03D	03DG	See Price List	5	2 max. 6
		Red	04D	04DG	See Price List	5	2 max. 6
<b>Plates for illuminated pushbuttons</b>							
<b>Blank</b>							
User to inscribe Use dry transfer letters or marker pen			01LT	—	See Price List	5	2 max. 6
<b>Plates for indicating lights</b>							
<b>Blank</b>							
User to inscribe Use dry transfer letters or marker pen			01L	—	See Price List	5	2 max. 6

Heavy Duty Oiltight Pilot Devices  
 Limit Switches, Safety Interlock Switches

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## 22.5 mm Control Circuit Devices RMQ 22 – Marking Plates and Standard Legend Plates- Engraved

1	2	3	4	5	6	7	8	9	10
Black legend plates with aluminum colored insert plate, text: black		Type RAS-..., RBS-... Round Design		Type		Type MAS-..., MBS-... Round on Square design		Type	Price \$
0		RAS-10		RBS-10		MAS-10		MBS-10	See Price List
I		RAS-11		RBS-11		MAS-11		MBS-11	
0 I	RAS	RAS-90	RBS	RBS-90	MAS	MAS-90	MBS	MBS-90	See Price List
0 I		RAS-98		RBS-98		MAS-98		MBS-98	See Price List
I 0 II		RAS-93		RBS-93		MAS-93		MBS-93	See Price List
→		RAS-32		RBS-32		MAS-32		MBS-32	See Price List
←		RAS-33		RBS-33		MAS-33		MBS-33	See Price List
STOP		RAS-110		RBS-110		MAS-110		MBS-110	See Price List
START		RAS-111		RBS-111		MAS-111		MBS-111	See Price List
RUN		RAS-283		RBS-283		MAS-283		MBS-283	See Price List
FAULT		RAS-250		RBS-250		MAS-250		MBS-250	See Price List
ON		RAS-221		RBS-221		MAS-221		MBS-221	See Price List
OFF		RAS-217		RBS-217		MAS-217		MBS-217	See Price List
FAST		RAS-279		RBS-279		MAS-279		MBS-279	See Price List
SLOW		RAS-280		RBS-280		MAS-280		MBS-280	See Price List
RIGHT		RAS-235		RBS-235		MAS-235		MBS-235	See Price List
LEFT		RAS-234		RBS-234		MAS-234		MBS-234	See Price List
HAND/AUTO		RAS-195		RBS-195		MAS-195		MBS-195	See Price List
OFF/ON		RAS-296		RBS-296		MAS-296		MBS-296	See Price List
HAND 0 AUTO		RAS-197		RBS-197		MAS-197		MBS-197	See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

# 22.5 mm Control Circuit Devices RMQ 22 – Insert Plates, Legend Plates

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

1	2	3	4	5	6	7	8	9	
		Type For label mounts ...A...	Type For label mounts ...B...	Price \$			Type	Price \$	
<b>Insert plates</b> Aluminum-colored, black text		<b>10A</b>	<b>10B</b>	See Price List	<b>Legend plates</b> <b>For insert plates ...A</b> Color Black Grey <b>RAS-X RAG-X</b> Color Black Grey <b>MAS-X MAG-X</b> Double pushbutton Color Black Grey <b>QAS-X QAG-X</b> <b>For insert plates ...B</b> Color Black Grey <b>RBS-X RBG-X</b> Color Black Grey <b>MBS-X MBG-X</b> Double pushbutton Color Black Grey <b>QBS-X QBG-X</b>				
		<b>11A</b>	<b>11B</b>	See Price List					
		<b>90A</b>	<b>90B</b>	See Price List					
		<b>98A</b>	<b>98B</b>	See Price List					
		<b>93A</b>	<b>93B</b>	See Price List					
		<b>32A</b>	<b>32B</b>	See Price List					
		<b>33A</b>	<b>33B</b>	See Price List					
STOP		<b>110A</b>	<b>110B</b>	See Price List					
START		<b>111A</b>	<b>111B</b>	See Price List					
RUN		<b>283A</b>	<b>283B</b>	See Price List					
FAULT		<b>250A</b>	<b>250B</b>	See Price List					
ON		<b>221A</b>	<b>221B</b>	See Price List					
OFF		<b>217A</b>	<b>217B</b>	See Price List					
FAST		<b>279A</b>	<b>279B</b>	See Price List					
SLOW		<b>280A</b>	<b>280B</b>	See Price List					
RIGHT		<b>235A</b>	<b>235B</b>	See Price List					
LEFT		<b>234A</b>	<b>234B</b>	See Price List					
HAND/AUTO		<b>195A</b>	<b>195B</b>	See Price List					
OFF/ON		<b>296A</b>	<b>296B</b>	See Price List					
HAND 0 AUTO		<b>197A</b>	<b>197B</b>	See Price List					
<b>Blank</b>		<b>XA</b>	<b>XB</b>	See Price List					
<b>Non-standard plates<sup>1)</sup></b> Engraved (0.2 mm depth)		<b>XA-SOND-GV</b>	<b>XB-SOND-GV</b>	See Price List					
Hot-stamped		<b>XA-SOND-HP &gt; 24</b> <b>XA-SOND-HP &gt; 49</b> <b>XA-SOND-HP &gt; 499</b>	<b>XB-SOND-HP &gt; 24</b> <b>XB-SOND-HP &gt; 49</b> <b>XB-SOND-HP &gt; 499</b>	See Price List					
							<b>Order Quantity:</b> 1 – 24 pcs. 25 – 49 pcs. 50 – 499 pcs. ≥ 500 pcs.		

1) Special text: Allow 4 to 6 weeks delivery after clarification of order. Refer to table at right for text parameters and guidelines. Additional charges may apply for non-standard symbols and text. Consult Moeller Electric.

















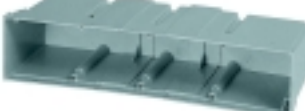
Ordering example: 100 pieces type **XA-SOND-HP > 49** 5/ Sander  
 Letter height Line 1

	Insert plate Size mm	Letter Height mm	Number of lines max.	Number of characters per line
...A...	8 x 27 mm	3.5	1	15
	8 x 27 mm	5	1	10
...B...	18 x 27 mm	3.5	3	15
	18 x 27 mm	5	2	10

22.5 mm Control Circuit Devices  
 RMQ 22 – Emergency-Stop Marking Plates

1	2	3	4
		Type	Price
<b>Emergency-stop plates</b>			
Yellow, text black Emergency Stop		ZK-299	See Price List
Emergency Stop		1AK-299	See Price List
Yellow, blank		ZK-05	See Price List
Yellow, blank		1AK	See Price List










## 22.5 mm Control Circuit Devices RMQ 22 – Flush-Mounting Plates, Shrouds, Basic Enclosures

1	2	3	4	5	6	7	8	9	10
Number of mounting locations for plates and shrouds			Type	Price	Cable entry knock-outs Number x PG...			Type	Price
				\$					\$
<b>Flush-mounting plates, Front IP 54</b>			<b>Shrouds, IP 40</b>						
Aluminum with yellow paint finish, for emergency-stop buttons	1		<b>EGE1M</b>	See Price List	Plastic, light grey	3 x 16		<b>H1M</b>	See Price List
Aluminum light anodized	1		<b>E1M</b>	See Price List	Note: <b>EC...</b> double contact elements and <b>BFT...</b> cover mount transformer blocks cannot be used.				See Price List
Legend plates cannot be used if pushbuttons are mounted in vertical columns	2		<b>E2M</b>	See Price List		4 x 16		<b>H2M</b>	See Price List
Undrilled plates are available	3		<b>E3M</b>	See Price List		4 x 16		<b>H3M</b>	See Price List
	4		<b>E4M</b>	See Price List		4 x 16		<b>H4M</b>	See Price List
	5		<b>E5M</b>	See Price List		5 x 16		<b>H5M</b>	See Price List
	6		<b>E6M</b>	See Price List		6 x 16		<b>H6M</b>	See Price List
	7		<b>E7M</b>	See Price List		6 x 16		<b>H7M</b>	See Price List
	8		<b>E8M</b>	See Price List		7 x 16		<b>H8M</b>	See Price List

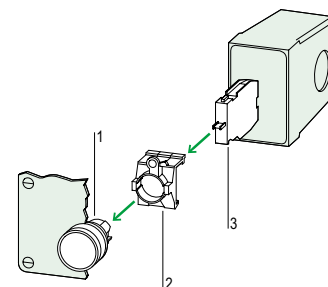
Limit Switches, Safety Interlock Switches

Heavy Duty Oiltight Pilot Devices



1	2	3	4	5	6	7	8
	Number of locations	Cable entry knockouts Bottom/Sides Number x PG...	Max. number of indicating lights ON simultaneously		Type	Price	
						\$	
<b>Basic enclosures</b> UL Indoor 4X/13; IEC IP 65 <sup>1)</sup> (When equipped with 4X/13/IP 65 operators)							
Enclosure cover, yellow for emergency-stop buttons	1X	1 x PG 13.5 3 x PG 16	—		IGE1M	See Price List	See Price List
Enclosure cover light grey Enclosure base charcoal grey	1	1 x PG 13.5 3 x PG 16	1		I1M	See Price List	See Price List
	2	2 x PG 13.5 3 x PG 16	1		I2M	See Price List	See Price List
	3	2 x PG 13.5 4 x PG 16	2		I3M	See Price List	See Price List
	4	2 x PG 13.5 4 x PG 16	3		I4M	See Price List	See Price List
	5	2 x PG 13.5 4 x PG 16	4		I5M	See Price List	See Price List
<b>Basic enclosures IP 65<sup>1)</sup> With quick-release fasteners</b>							
Enclosure, light grey	12	Top and bottom each: 2 x PG 29/16 1 x PG 21/16	4		I12M	See Price List	See Price List
Light grey					ES-IM	See Price List	
Yellow					ES-IGE	See Price List	

Mounting form: Cover mounting

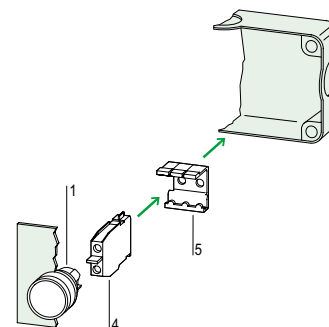


- 1 Operator Page 5/28
- 2 Mounting adapter Page 5/44
- 3 Contact element Page 5/44

Button plate Page 5/50  
Legend plate Page 5/53

Accessories Page 5/58

Mounting form: Surface mounting



- 1 Operator Page 5/28
- 4 Contact element Page 5/45
- 5 Mounting adapter Page 5/45

Button plate Page 5/50  
Legend plate Page 5/53

Accessories Page 5/58










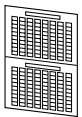
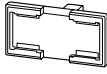

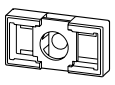
1) Enclosures cannot be used to mount EC..., BFT..., BCE 24, BCEL 24

# 22.5 mm Control Circuit Devices








## RMQ 22 – Accessories

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

1	2	3	4
		<b>Type</b>	<b>Price</b>
			\$
<p><b>Hole plug</b> To blank-off spare holes</p> <p>Round style                      Black    Grey</p> <p>Round-on-square style            Black    Grey</p>	  	<p><b>RB 22S</b> <b>RB 22G</b></p> <p><b>MB 22S</b> <b>MB 22G</b></p>	<p>See Price List</p> <p>See Price List</p> <p>See Price List</p> <p>See Price List</p>
<p><b>Operator diaphragms</b> <b>Increase environmental rating to IP 67, NEMA 4X</b> IP 67 = Dusttight, Watertight, temporarily immersible Transparent diaphragm for severe environmental conditions            For use with</p> <p>Round style                      <b>RD-...</b> operators    <b>RLT-...</b> <b>RLTR-...</b> illuminated operators    <b>RLF-...</b> indicating lights</p> <p><b>QDD, QDDL</b> double operators</p>	  	<p><b>MT-D</b></p> <p><b>MT-DD</b></p>	<p>See Price List</p> <p>See Price List</p> <p>See Price List</p> <p>See Price List</p>
<p><b>Telescopic brackets</b> For depth adjustment of base-mounting devices in corrosion resistant insulated enclosures (type <b>CI</b>) and panels having a mounting depth of 116 mm to 147 mm. Stepless adjustment from 52 mm to 84 mm by means of a scale. Screw mounting. When installing base mounting elements, use <b>BE 3C</b> mounting adapter. Maximum of ten brackets per CI enclosure, of which five can have maintained pushbuttons installed. <b>Not for use with Emergency-Stop</b> operators.</p>		<p><b>TW-RMQ</b></p>	<p>See Price List</p> <p>See Price List</p> <p>See Price List</p>
<p><b>Telescopic clips</b> For depth adjustment of base-mounting devices in corrosion resistant insulated enclosures (type <b>CI</b>) and panels having a mounting depth of 126 mm to 157 mm. Stepless adjustment from 64 mm to 95 mm by means of a scale. Screw and snap-on mounting. When installing base mounting elements, use <b>BE 3C</b> mounting adapter. Maximum of ten clips per CI enclosure, of which five can have maintained pushbuttons installed. <b>Not for use with Emergency-Stop</b> operators.</p>		<p><b>TC-RMQ</b></p>	<p>See Price List</p> <p>See Price List</p> <p>See Price List</p>
<p><b>Centering adapters</b> <b>Supplied with TW-RMQ and TC-RMQ</b> For centering operators and indicating devices using telescopic bracket and telescopic clip.</p>		<p><b>BE3Z</b></p>	<p>See Price List</p> <p>See Price List</p> <p>See Price List</p>
<p><b>Extensions</b> For telescopic clip: for mounting depths up to 207 mm.</p>		<p><b>TCV-RMQ</b></p>	<p>See Price List</p> <p>See Price List</p>
<p><b>Component labelling system</b></p> <p><b>Label mounts</b> 8 x 17.5 mm, for use on Moeller equipment with corresponding mounting hole Standard quantity: 500</p>		<p><b>XGKS-Z</b></p>	<p>See Price List</p>
<p><b>Adhesive labels</b> For inscription using laser printer, plotter, marker pen, photocopier. Standard quantity: Pad of 25 sheets, 240 labels per sheet, perforated and self-adhesive, for use with label plates.</p>		<p><b>XGKE-GE</b></p>	<p>See Price List</p> <p>See Price List</p>
<p><b>Clip-in adapter</b> Secures label type <b>XGKS-T</b> on Moeller equipment with corresponding mounting hole. Standard quantity: 250</p>		<p><b>XGKA-Z</b></p>	<p>See Price List</p> <p>See Price List</p>
<p><b>Label mounts</b> 8 x 10 mm, Clip-in label nameplate can be marked with felt-tip pen or adhesive labels. Standard quantity: 500 label mounts</p>		<p><b>KG-10<sup>1)</sup></b></p>	<p>See Price List</p> <p>See Price List</p>
<p><b>Universal mounting adapter</b> For mounting <b>XGKS</b> components to non-Moeller devices.</p>		<p><b>XGKA-U</b></p>	<p>See Price List</p> <p>See Price List</p>

1) Must be ordered in standard quantity.

1	2	3	4	5	6
	Bulb Average Lifespan (AC)	Color		Type	Price \$
<b>Adapter rings</b> For mounting 22.5 mm diameter buttons in 30.5 mm diameter holes 1 set consists of adapter ring and lock nut		Black Yellow		R 22/30-SW R 22/30-GE	See Price List See Price List
<b>Fast-on connectors</b> Blade terminals for 1 x 6.3 up to 25 A or 2 x 2.8 mm up to 6 A ferrules to DIN 46 244 for contact elements and lamp socket elements. Use insulated ferrules. Standard quantity: 100				BT 483 <sup>1)</sup>	See Price List See Price List
<b>Filament bulbs (BA 9s base)</b> Length 28 mm max., diameter 10 mm Selected high-performance type				GL 130 GL 6 GL 12 GL 24 GL 48 GL 60 GL 24-1.2	See Price List See Price List See Price List See Price List See Price List See Price List See Price List
2.4 W/110 - 130 V 2.0 W/6 V 2.0 W/12 V 2.0 W/24 V 2.0 W/48 V 2.0 W/60 V 1.2 W/24 V		2000 Hrs 5000 Hrs 5000 Hrs 5000 Hrs 5000 Hrs 5000 Hrs 5000 Hrs			
<b>Neon bulbs (BA 9s base)</b> Length 28 mm max., diameter 10 mm				GIL 110K GIL 220K	See Price List See Price List
0.1 W/110 - 130 V AC 0.33 W/220 - 240 V AC		20,000 Hrs 20,000 Hrs			
<b>LED's (BA 9s base)</b> New! Single-chip, universal voltage rated LED's (18 – 30 V, AC & DC) Longer life, Super bright intensity, more colors Length (with diffuser lens) 26 mm, diameter 10 mm (positive pole to X1), protected against polarity reversal				LED-W LED-R LED-G LED-Y LED-B	See Price List See Price List See Price List See Price List See Price List
0.5 W/18 – 30 V (AC & DC) 0.5 W/18 - 30 V (AC & DC) 0.5 W/18 - 30 V (AC & DC) 0.5 W/18 - 30 V (AC & DC) 0.5 W/18 - 30 V (AC & DC)		100,000 Hrs 100,000 Hrs 100,000 Hrs 100,000 Hrs 100,000 Hrs	White Red Green Yellow Blue		
<b>Blinking LED's (BA 9s base)</b> For DC supply (positive pole to X1), protected against polarity reversal  LED blinks at 1.1 Hz (approx.)				LED-GE 24 B LED-GN 24 B LED-RT 24 B	See Price List See Price List See Price List
0.5 W/24 V DC 0.5 W/24 V DC 0.5 W/24 V DC		20,000 Hrs 20,000 Hrs 20,000 Hrs	Yellow Green Red		
<b>Combination box wrench</b> For front rings, lock nuts, indicating light lens assemblies and bulb extractors. Two per set				R 22-MS	See Price List See Price List

1) Must be ordered in standard quantity.

## 22.5 mm Control Circuit Devices RMQ 22 – Individual and Master Key Locking Systems, Ordering Sample

### Individual lock mechanisms

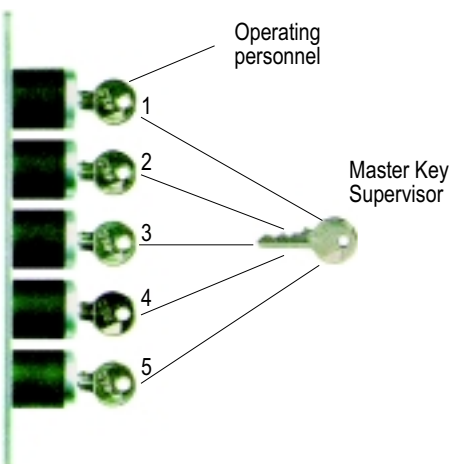
- Over two hundred different versions
- The keys are not interchangeable
- Individual lock mechanisms cannot be incorporated into a master key system, as master keys are not available for different individual lock mechanisms
- Individual lock mechanisms can be used for a wide range of Moeller Electric products, including rotary switches, manual motor starters and control panel doors

**Example:** it is possible both to open the control panel door and then to actuate the key-operated selector switch using just one key.

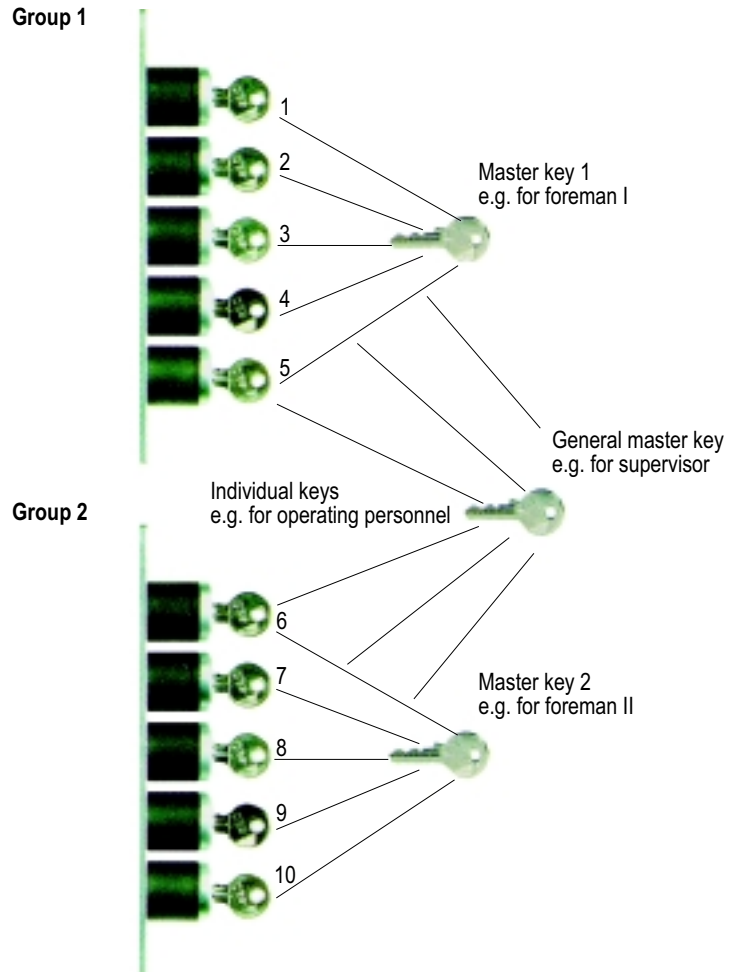
### Master key systems

- Eight hundred different lock mechanisms
- Standard keys for individual lock mechanisms
- Master keys for groups consisting of different individual lock mechanisms
- Security certificate ensures protection against unauthorized acquisition of keys
- General master keys for all individual lock mechanisms of all groups
- Special key profile, of which only the lock manufacturer has details
- Domestic locks cannot be included in Moeller Electric master key systems

HS master key system



GHS general master key system



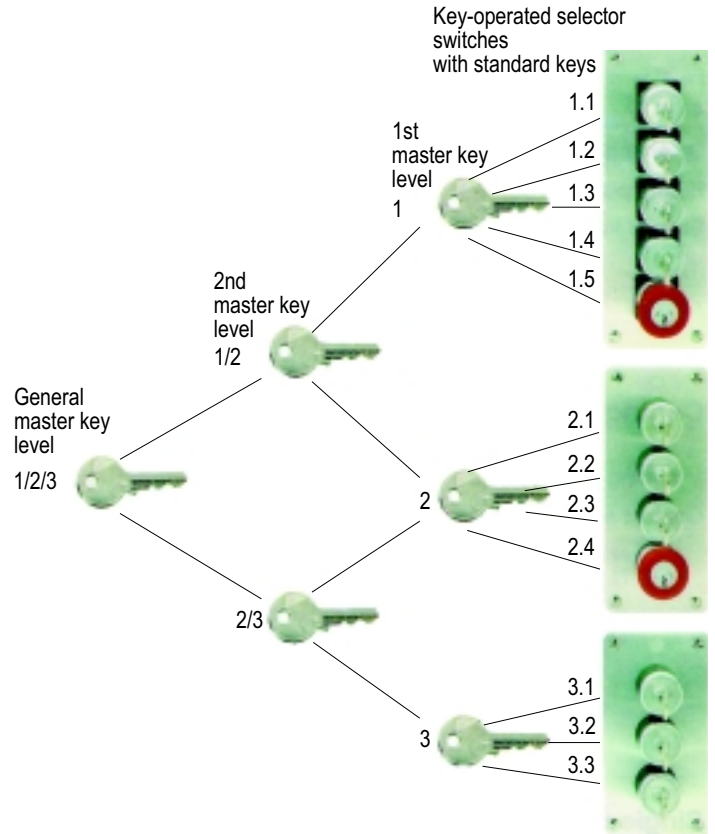
In the HS master key system, there is one key which will operate **all** locks. However, the keys for the individual locks will not operate any lock other than their own, unless this is specifically requested.

In the GHS general master key system comprises two or more master key systems, also known as groups. The GHS general master key will operate all locks in the entire installation. If required, several master key systems can be combined to give additional levels of supervisory control.

Lock arrangement scheme

Example of a GHS general master key system:

The system comprises twelve individual locks and their individual keys. On one level the locks are divided into three groups. Each of the three groups has a master key capable of operating all the locks in the group. On a second level, these three groups are re-arranged into two main groups, allowing the second level master keys to operate the locks of more than one group. The general master key combines the two main groups and can therefore operate all twelve locks in the master key system.



Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

Pos		Typ	Nr.	Anzahl	Preis	zuletzt	Preis	CES Nr.	Die obigen Schlüssel schließen				
									The a.m. keys operate				
									Les clés ci-dessus actionnent				
1	MS-SA	A1	A.1	1	*				X		X	X	
2	MS-SA	A1	A.2	1	*				X		X	X	
3	MS-SA	A3	A.3	1	*				X		X	X	
4	MS-SA	A3	A.4	1	*	2	*		X		X	X	
5	MSR-SA		A.5	1	*				X		X	X	
6	RS-SA	A1	2.1	1	*					X	X	X	
7	RS-SA	A2	2.2	1	*					X	X	X	
8	RS-SA	A3	2.3	1	*					X	X	X	
9	MSR-SA		2.4	1	*					X	X	X	
10	RS-SA	A2	3.1	1	*	1	*				X	X	
11	RS-SA	A2	3.2	1	*	1	*				X	X	
12	RS-SA	A2	3.3	1	*	1	*				X	X	
	-SA												
	-SA												
	-SA												
	-SA												
	-SA												
	-SA												
	-SA												
	-SA												
Σ (1), Σ (2):				12	*	5	*		Σ (1) + Σ (2) + Σ (3):			*	DM 34

The following points should be clarified before designing a master key system:

1. The final number of locks in the master key system
2. Whether every lock is to have a different mechanism
3. How many locks, if any, are to have the same mechanism
4. Draw up a lock arrangement scheme (refer to sample above)
5. Fill in order details (see FO 276)

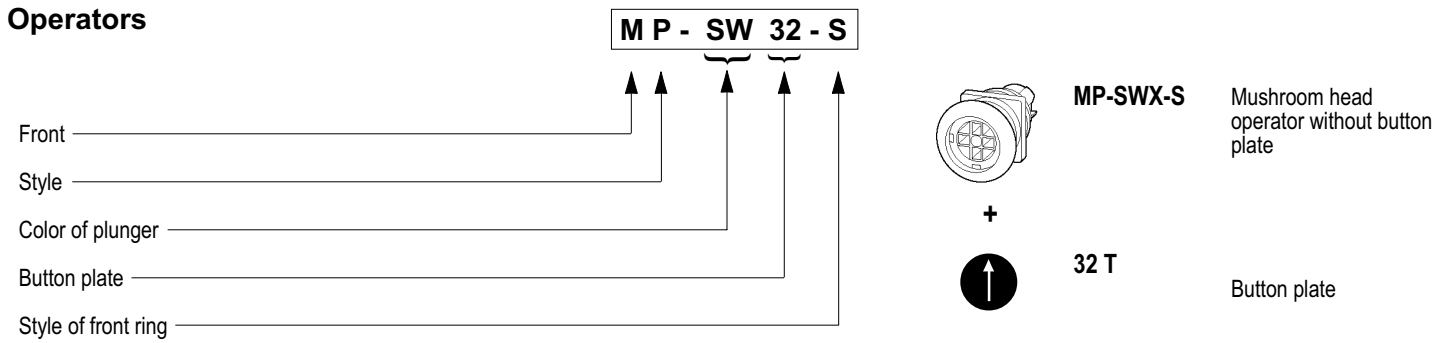
When ordering subsequently:

1. Provide Moeller Electric with a copy of the security certificate
2. Specify the quantity and key (cylinder) number
3. When extending the master key system, update the lock arrangement scheme (where possible)

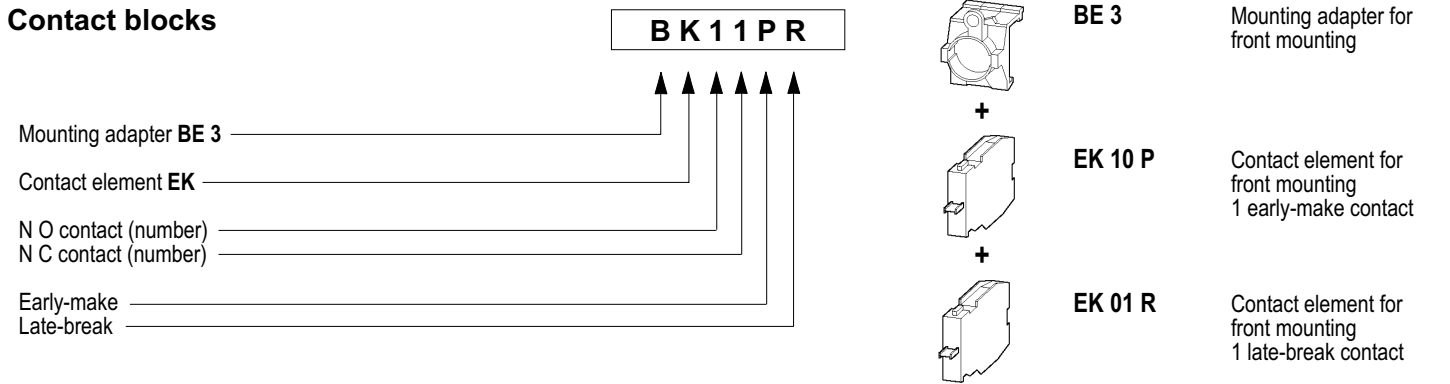
Position: Serial numbers  
 -SA ( ): The master key system number is entered in the brackets. This should be completed only when placing a subsequent order.  
 No.: Number of the lock in the master key system.  
 Price: The total price must always be quoted.  
 Keys: Number of the master and general master keys according to the master key system lock arrangement scheme.

# 22.5 mm Control Circuit Devices RMQ 22 – Type Number Configurations

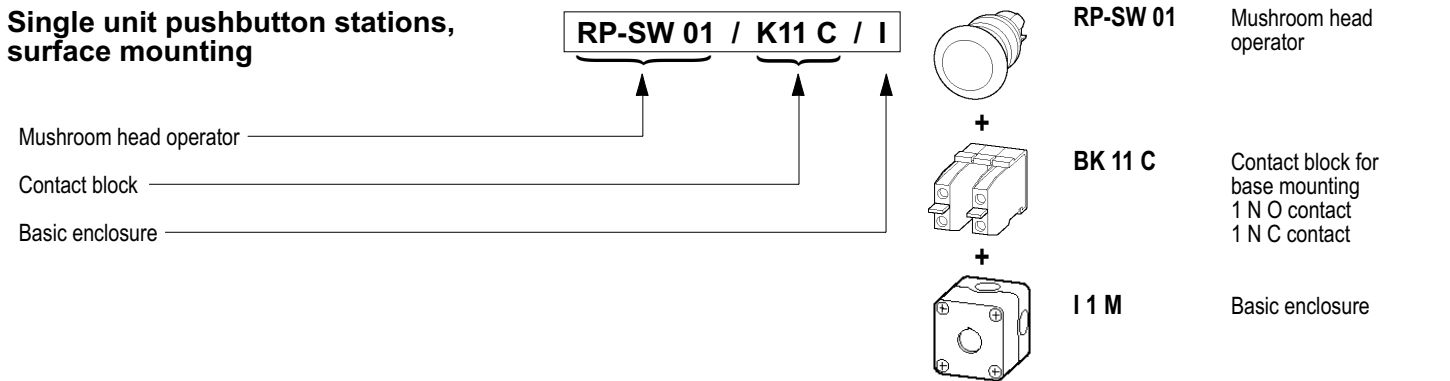
## Operators



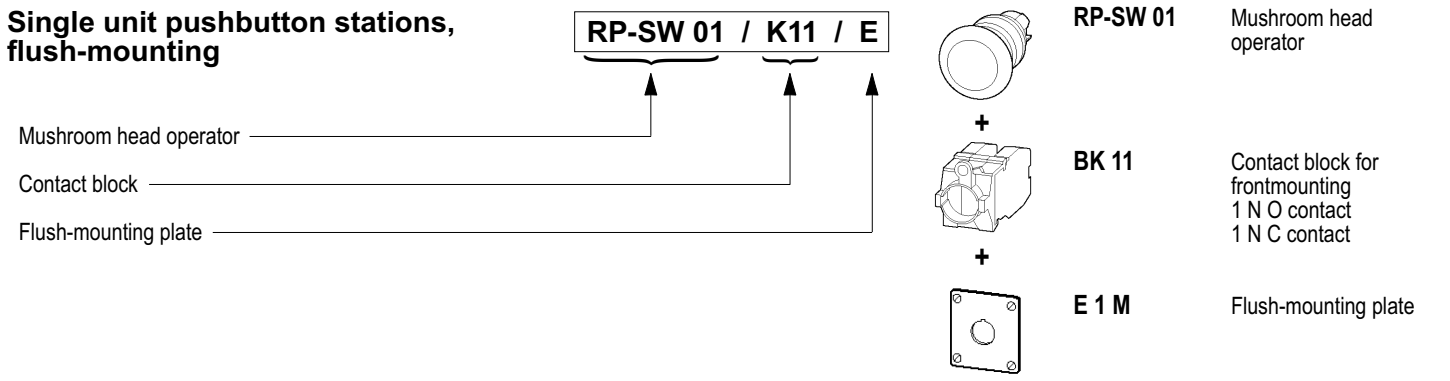
## Contact blocks



## Single unit pushbutton stations, surface mounting





## Single unit pushbutton stations, flush-mounting

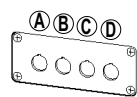




### Operators

Multi-unit pushbutton stations are available in flush mounting and surface mounting forms. Each order should be accompanied with order form FO 315 (available on request) on which detailed specifications of each location must be given. If non-standard engraving is required for labels or button plates the order should be accompanied by a layout of the wording required.

 													
<b>Bestellangaben für beliebige Tasten-Leuchtmelder-Kombinationen</b> Ordering data for push button-indicator lamp combinations Commande de combinaison de pousseurs et voyants				Kunde: customer/client: <i>Soc. Import Paris</i> TAB-No./TAB: <i>Paris</i> Bearbeiter: referent/employé: <i>H. Duval</i> Datum: date/date:				Auftr.-Nr.: <i>29/1234</i> Position: <i>2</i> kundenspez.-Nr. <i>5678</i>					
Typ										Preis DM			
Gehäuse/enclosure/bâtiment Einbauplatte/flush mounting plate/platine à encastrer Einbaubauelemente/housings/capots d'encastrement										E 4 M		XX	
Einbaustelle	Frontelement	Schild	Preis	Schildträger	Einlegeschild	Preis	Funktionsbaustein	Preis	GMh-Glimmlampe LED	↓			
Schriftgröße	Schriftgröße	Text	DM	Schriftgröße	Text	DM	B... BE3(B)(C)+E...	DM					
A	<i>RWK1V</i>		XX				<i>BK11</i>	XX					
B	<i>RL-WS</i>		XX	<i>RAS-X</i>	<i>XA-SOND-HP</i>	XX	<i>BF</i>	XX	<i>GL12</i>	XX			
C	<i>RD-11</i>		XX	<i>RAS 111</i>		XX	<i>BE6 + EC 11</i>	XX					
D	<i>RD-X10T-SOND-HP</i>		XX				<i>BK11</i>	XX					
Σ 1 XX			+ Σ 2 XX			+ Σ 3 XX			+ Σ 4 XX				
Ausführungen <input checked="" type="checkbox"/> Tastenzustand nicht über der Taste sondern darunter <input checked="" type="checkbox"/> Anordnung nicht verschränkt sondern senkrecht (von oben nach unten)				<input checked="" type="checkbox"/> Frontbefestigung <input type="checkbox"/> Bodenbefestigung				Lage der Einbaustellen <input checked="" type="checkbox"/> Aufbauplatze 11 M, 5 M, 12 M <input checked="" type="checkbox"/> Einbauplatze 1 M, 3 M				Σ ges. = XX	
<small>© MOELLER 2005 DM &amp; Printed in the Federal Republic of Germany</small>													



E 4 M

Flat-mounting plate

Location A



RWK 1V

90° selector switch with thumb-grip handle



BK 11

Contact block for cover mounting  
1 N O contact  
1 N C contact

Location B



RL-WS

Indicating light lens assembly, white



RAS-X

Legend plate



XA-SOND-HP (Cu-band)

Insert plate with non-standard inscription



BF

Lamp socket block for cover mounting



GL 12

Filament bulb, 12 V

Location C



RD-11

Operator, flush



RAS-111

Standard legend plate



BE 6

Mounting adapter for cover mounting



EC 11

Contact element for cover mounting  
1 N O contact  
1 N C contact

Location D



RD-X

Operator, flush without button plate



01T-SOND-HP (starting)

Button plate with non-standard inscription

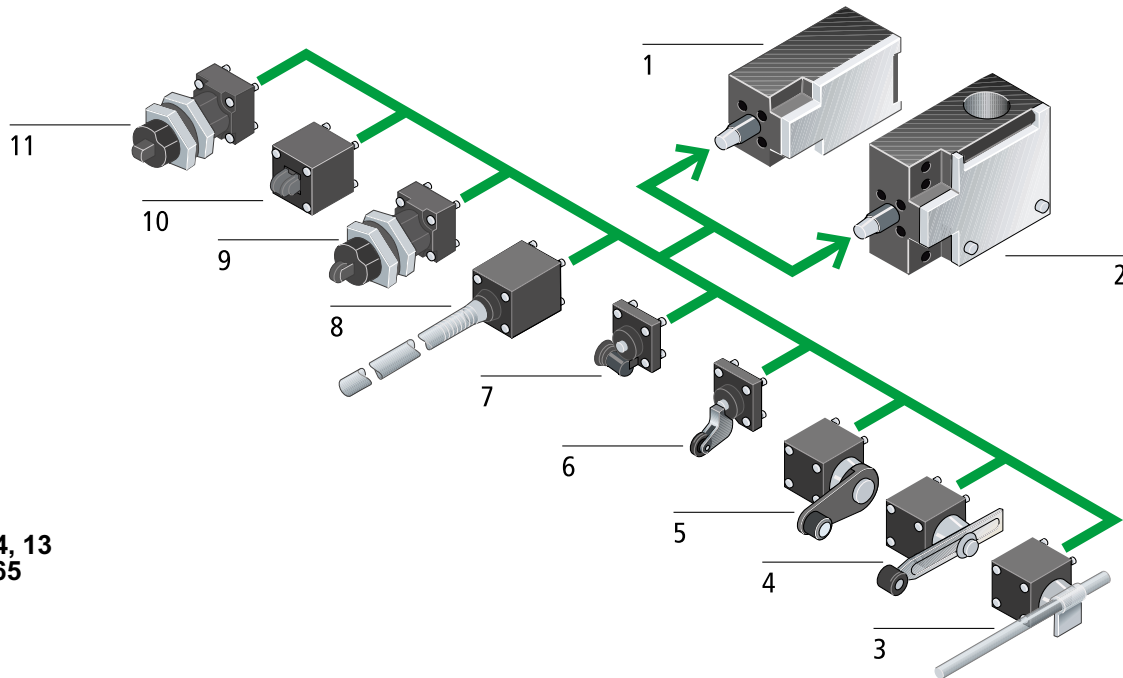


BK 11

Contact block for cover mounting  
1 N O contact  
1 N C contact



AT 0 Limit Switches



NEMA 4, 13  
IEC IP 65

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

AT 0 Limit Switches

Basic units

1, 2 [Page 5/72](#)

- Device for world markets: **UL/CSA/IEC/CE**
- Two sizes of housing
- Suitable for use in safety circuits, positive opening contacts to IEC/EN 60 947-5-1 ⊖
- **NEMA 4/13; IEC IP 65**
- Snap-fitting cover
- Multiple contact configurations: 1 N.O/1N.C.; 2 N.O.; 2 N.C.
- Snap or normal actuation contacts.



Standard limit switch with plunger  
Narrow enclosure  
Type AT 0-...-I



Standard limit switch with plunger  
Wide enclosure  
Type AT 0-...-IA



Single hole mounting roller plunger  
Type RS-AT 0



Roller lever  
Type AR-AT 0



Roller plunger  
Type RS-AT 0

AT 0 Limit Switches

Operating heads

3, 4, 5, 6, 7, 8, 9, 10, 11 [Page 5/77](#)

- Nine different operating heads
- Operating heads can be rotated in 90° stages

- Actuating Rod (Type H-AT 0)** 3  
Ideal on conveyor belts for light parts
- Adjustable Roller Lever (Type V-AT 0)** 4  
Length adjustment as required
- Side Roller Lever (Type R-AT 0)** 5  
Good for lateral and pendulum motion actuation
- Angled Roller Lever (Type WR-AT 0)** 6  
For actuation along device's position axis
- Roller Lever (Type AR-AT 0)** 7  
For high speed single sided actuation
- Spring-Rod Actuator (Type F-AT 0)** 8  
For flexible actuation from all sides
- Plunger for Single Hole mounting (Type ZS-AT 0)** 9  
For lateral and axial actuation when mounted in a through-hole
- Roller plunger (Type RS-AT 0)** 10  
For lateral actuation with minimal force
- Roller plunger for Single Hole mounting (Type ZRS-AT 0)** 11  
For lateral actuation when hole mounted

## High Control Circuit Reliability with Universal Contacts

With low control circuit voltage, an increased number of circuit failures can occur in electrical control systems. That is the reason why special universal contacts, with low contact resistance, are used on all Moeller Electric limit switches. It offers a high level of control circuit reliability with low circuit voltages and thus making these limit switches most suitable for use with electronic systems. The galvanically separated contacts permit circuit voltages as high as 300 V (A 300 contact rating).

### Contact Types

- normal action contacts
- overlapping contacts
- snap-action contacts

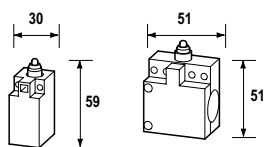
The normal and overlapping break contacts are activated directly by the actuating plunger. This makes these limit switches suitable for safety circuits where the control circuit must safely stop a machine even if the switch is damaged. Snap-action contacts close and open rapidly and are independent of the actuation speed. These are used when the activation speed is very slow ( $\leq 0.3$  m/s), when there is excessive machine vibration, when switching DC voltages or when make and break contacts must be switched simultaneously. Only with snap action contacts can the arc created in breaking a DC circuit be effectively extinguished. The uninterrupted (defined) change-over time of the limit switch make/break contacts makes the snap-action switch suitable for interfaces with electronic systems and assembly lines. The actuating rod or spring rod actuator operating head is only used with the snap-action switches.

## Versatile Modular System

### Flexibility in Application – Simplified Stocking

The modular system consists of standard and non-standard basic switches, enclosures, actuating heads and levers. This system allows the assembly of the required switch, on the spot, from the modules in stock. Therefore, if many

different model switches are required, the costs in storing assembled switches can be reduced. There are available, however, any standard models completely assembled as required.



### Enclosures

The enclosures are made of glass reinforced thermoplast. This enclosure design is totally insulated, corrosion resistant, has high mechanical impact strength and is extremely water, dust and oiltight.

### Actuating Heads

All actuating heads can be turned in 90° stops, to the position required. Also, in order to meet more applications, besides the standard actuating heads, other heads such as the angled lever roller, actuating rod and spring actuating rod are available.

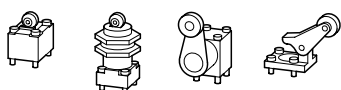
### Plunger



The plunger head can be actuated in the direction of the plunger axis and with a drive it can be actuated in every direction perpendicular to the plunger axis.

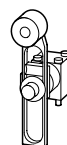
### Roller Plunger, Roller Lever

If the limit switch application has a high speed operating sequence or the drive cam has a long operating stroke, these actuating heads are ideal because of their long wear rollers.



### Angled Roller Lever

These actuating heads can be operated horizontally as well as vertically.



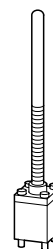
### Actuating Heads with adjustable Lever Length

If the mounting points of the limit switches are known during the planning of an application, but the kind of operation cam or its distance to the limit switch is not yet known, then the actuating heads with the adjustable lever or adjustable rod offer the flexibility for a final adjustment in the field.



### Spring Rod Actuator

This model can be actuated from any direction perpendicular to the spring rod axis. The head can be used with objects with irregular shapes; the spring rod absorbs strong vibrations and, therefore, the snap-action switch is actuated only as required.



# Limit Switches AT 0 – Compact, Oiltight

NEMA 4/13; IEC IP 65; CE

1	2	3	4	5	6	7	8	9
	Contact Sequence Contact ■ closed □ open Zw = Positive opening clearance to IEC/EN 60 947-5-1	Contacts NO = Normally open NC = Normally closed ⊕ = Positive opening safety function to IEC/EN 60 947-5-1		<b>Plunger EN 50 047 Form B Basic Unit</b>	<b>Price</b>		<b>Plunger Single hole mounting</b>	<b>Price</b>
				<b>Type</b>	<b>\$</b>		<b>Type</b>	<b>\$</b>

## Complete units totally insulated

### Narrow enclosures



1 NO  
1 NC ⊕



AT 0-11-1-I

See Price List

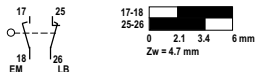
See Price List



AT 0-11-1-I/ZS

See Price List

See Price List



1 NO-EM<sup>1)</sup>  
1 NC-LB<sup>1)</sup> ⊕

AT 0-11-2-I

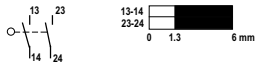
See Price List

See Price List

AT 0-11-2-I/ZS

See Price List

See Price List



2 NO

AT 0-20-1-I

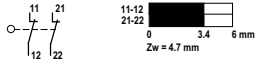
See Price List

See Price List

AT 0-20-1-I/ZS

See Price List

See Price List



2 NC ⊕

AT 0-02-1-I

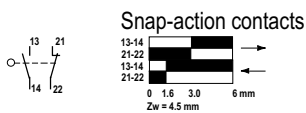
See Price List

See Price List

AT 0-02-1-I/ZS

See Price List

See Price List



1 NO  
1 NC ⊕

AT 0-11-S-I

See Price List

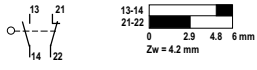
See Price List

AT 0-11-S-I/ZS

See Price List

See Price List

### Wide enclosures



1 NO  
1 NC ⊕



AT 0-11-1-IA

See Price List

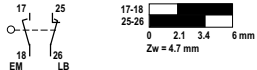
See Price List



AT 0-11-1-IA/ZS

See Price List

See Price List



1 NO-EM<sup>1)</sup>  
1 NC-LB<sup>1)</sup> ⊕

AT 0-11-2-IA

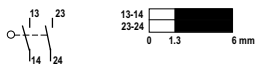
See Price List

See Price List

AT 0-11-2-IA/ZS

See Price List

See Price List



2 NO

AT 0-20-1-IA

See Price List

See Price List

AT 0-20-1-IA/ZS

See Price List

See Price List



2 NC ⊕

AT 0-02-1-IA

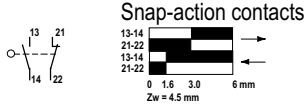
See Price List

See Price List

AT 0-02-1-IA/ZS

See Price List

See Price List



1 NO  
1 NC ⊕

AT 0-11-S-IA

See Price List



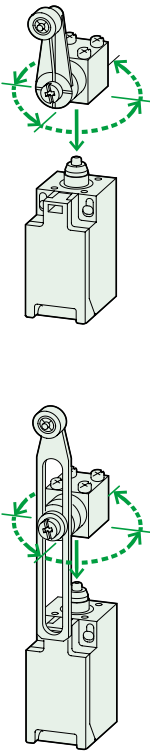


See Price List

AT 0-11-S-IA/ZS

See Price List

See Price List

1) EM = Early make  
LB = Late break

10	11	12	13	14	15	16
	Roller plunger EN 50 047 Form C	Price		Roller plunger Single hole mounting	Price	Remarks
	Type	\$		Type	\$	
	AT 0-11-1-I/RS	See Price List		AT 0-11-1-I/ZRS	See Price List	 <p>The operating head can be turned in 90° stages to match the specified direction of actuation. For IP 65 protection use cable entry clamp <b>STB 13.5</b>. For external applications and temperatures down to -40° C, use the sealing membrane <b>RBS-AT 0</b>.</p> <p><b>Accessories</b></p> <p>Cable entry clamp <b>STB 13.5</b>      5/83 Sealing membrane <b>RBS-AT 0</b>      5/83</p>
	AT 0-11-2-I/RS	See Price List		AT 0-11-2-I/ZRS	See Price List	
	AT 0-20-1-I/RS	See Price List		AT 0-20-1-I/ZRS	See Price List	
	AT 0-02-1-I/RS	See Price List		AT 0-02-1-I/ZRS	See Price List	
	AT 0-11-S-I/RS	See Price List		AT 0-11-S-I/ZRS	See Price List	
	AT 0-11-1-IA/RS	See Price List		AT 0-11-1-IA/ZRS	See Price List	
	AT 0-11-2-IA/RS	See Price List		AT 0-11-2-IA/ZRS	See Price List	
	AT 0-20-1-IA/RS	See Price List		AT 0-20-1-IA/ZRS	See Price List	
	AT 0-02-1-IA/RS	See Price List		AT 0-02-1-IA/ZRS	See Price List	
	AT 0-11-S-IA/RS	See Price List		AT 0-11-S-IA/ZRS	See Price List	

# Limit Switches AT 0 – Compact, Oiltight

NEMA 4/13; IEC IP 65; CE

1	2	3	4	5	6	7	8	9	10
	Contact Sequence Contact ■ closed □ open Zw = Positive opening clearance to IEC/EN 60 947-5-1	Contacts NO = Normally open NC = Normally closed ⊖ = Positive opening safety function to IEC/EN 60 947-5-1		Spring rod actuator head <sup>1)</sup>	Price			Roller lever EN 50 047 Form E	Price
				Type	\$			Type	\$

## Complete units totally insulated

### Narrow enclosures



1 NO  
1 NC ⊖



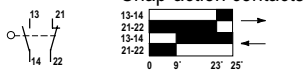
1 NO-EM<sup>2)</sup>  
1 NC-LB<sup>2)</sup> ⊖



2 NO



2 NC ⊖



1 NO  
1 NC ⊖



AT 0-11-S-I/F

See Price List	See Price List	See Price List	See Price List	See Price List	See Price List	See Price List	See Price List	See Price List	See Price List
								AT 0-11-1-I/AR	See Price List
								AT 0-11-2-I/AR	See Price List
								AT 0-20-1-I/AR	See Price List
								AT 0-02-1-I/AR	See Price List
								AT 0-11-S-I/AR	See Price List
								AT 0-11-1-IA/AR	See Price List
								AT 0-11-2-IA/AR	See Price List
								AT 0-20-1-IA/AR	See Price List
								AT 0-02-1-IA/AR	See Price List
								AT 0-11-S-IA/AR	See Price List

### Wide enclosures



1 NO  
1 NC ⊖



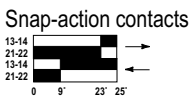
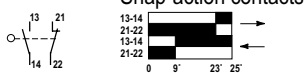
1 NO-EM<sup>2)</sup>  
1 NC-LB<sup>2)</sup> ⊖



2 NO



2 NC ⊖



1 NO  
1 NC ⊖



AT 0-11-S-IA/F

- 1) Not to be used as a safety switch. Use only with snap-action contacts.
- 2) EM = Early make  
LB = Late break

11	12	13	14	15	16	17	18	19
		Angled Roller Lever	Price			Side Roller Lever EN 50 047 Form A	Price	Remarks
		Type	\$			Type	\$	
13-14 21-22		AT 0-11-1-I/WR	See Price List	13-14 21-22		AT 0-11-1-I/R	See Price List	<p>The operating head can be turned in 90° stages to match the specified direction of actuation. For IP 65 protection use cable entry clamp <b>STB 13.5</b>. For external applications and temperatures down to -40 deg. C, use the sealing membrane <b>RBS-AT 0</b>.</p> <p><b>Accessories</b></p> <p>Cable entry clamp <b>STB 13.5</b> 5/83</p> <p>Sealing membrane <b>RBS-AT 0</b> 5/83</p>
17-18 25-26		AT 0-11-2-I/WR	See Price List	17-18 25-26		AT 0-11-2-I/R	See Price List	
13-14 23-24		AT 0-20-1-I/WR	See Price List	13-14 23-24		AT 0-20-1-I/R	See Price List	
11-12 21-22		AT 0-02-1-I/WR	See Price List	11-12 21-22		AT 0-02-1-I/R	See Price List	
13-14 21-22 13-14 21-22		AT 0-11-S-I/WR	See Price List	13-14 21-22 13-14 21-22		AT 0-11-S-I/R	See Price List	
			See Price List	13-14 21-22		AT 0-11-1-IA/R	See Price List	
			See Price List	17-18 25-26		AT 0-11-2-IA/R	See Price List	
			See Price List	13-14 23-24		AT 0-20-1-IA/R	See Price List	
			See Price List	11-12 21-22		AT 0-02-1-IA/R	See Price List	
			See Price List	13-14 21-22 13-14 21-22		AT 0-11-S-IA/R	See Price List	

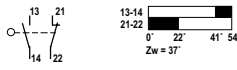
# Limit Switches AT 0 – Compact, Oiltight

NEMA 4/13; IEC IP 65; CE

1	2	3	4	5	6	7	8	9
	<b>Contact Sequence</b> Contact ■ closed □ open Zw = Positive opening clearance to IEC EN 60 947-5-1	<b>Contacts</b> NO = Normally open NC = Normally closed ⊖ = Positive opening safety function to IEC/EN 60 947-5-1		<b>Adjustable Roller Lever</b>  <b>Type</b>	<b>Price</b>  <b>\$</b>		<b>Actuating Rod</b>  <b>Type</b>	<b>Price</b>  <b>\$</b>

## Complete units totally insulated

### Narrow enclosures



1 NO  
1 NC ⊖



AT 0-11-1-I/V

See Price List

See Price List

AT 0-11-1-I/H

See Price List

See Price List



1 NO-EM<sup>2)</sup>  
1 NC-LB<sup>2)</sup> ⊖



AT 0-11-2-I/V

See Price List

See Price List



AT 0-11-2-I/H

See Price List

See Price List



2 NO

AT 0-20-1-I/V

See Price List

See Price List

AT 0-20-1-I/H

See Price List

See Price List



2 NC ⊖

AT 0-02-1-I/V

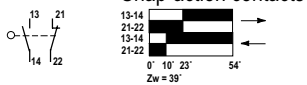
See Price List

See Price List

AT 0-02-1-I/H

See Price List

See Price List



1 NO  
1 NC ⊖

AT 0-11-S-I/V

See Price List

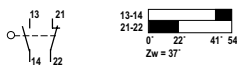
See Price List

AT 0-11-S-I/H

See Price List

See Price List

### Wide enclosures



1 NO  
1 NC ⊖



AT 0-11-1-IA/V

See Price List

See Price List



AT 0-11-1-IA/H

See Price List

See Price List



1 NO-EM<sup>2)</sup>  
1 NC-LB<sup>2)</sup> ⊖

AT 0-11-2-IA/V

See Price List

See Price List

AT 0-11-2-IA/H

See Price List

See Price List



2 NO

AT 0-20-1-IA/V

See Price List

See Price List

AT 0-20-1-IA/H

See Price List

See Price List



2 NC ⊖

AT 0-02-1-IA/V

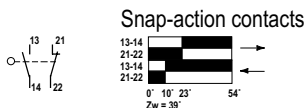
See Price List

See Price List

AT 0-02-1-IA/H

See Price List

See Price List



1 NO  
1 NC ⊖

AT 0-11-S-IA/V

See Price List

See Price List


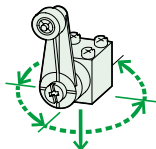
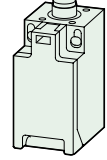
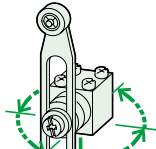
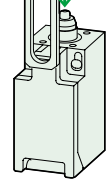








AT 0-11-S-IA/H

See Price List

See Price List

1) Not to be used as a safety switch.  
2) EM = Early make  
LB = Late break



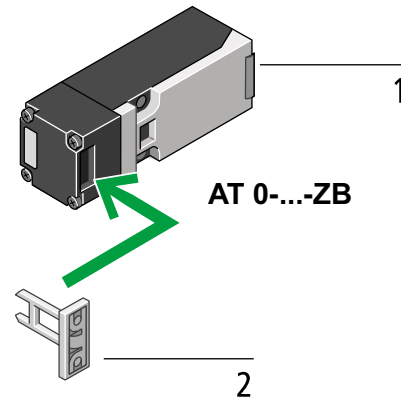
10	11	12	13	14
		Type	Price	Remarks
			\$	
<b>Operating heads</b>				
<b>With Roller Plunger</b> Form C to EN 50 047		RS-AT 0	See Price List	    <p>The operating head can be turned in 90° stages to match the specified direction of actuation. For IP 65 protection use cable entry clamp <b>STB 13.5</b>. For external applications and temperatures down to -40° C, use the sealing membrane <b>RBS-AT 0</b>.</p> <p><b>Accessories</b></p> <p>Cable entry clamp <b>STB 13,5</b>      5/83 Sealing membrane <b>RBS-AT 0</b>      5/83</p>
<b>With Roller Plunger</b> (single hole mounting)		ZRS-AT 0	See Price List	
<b>With Plunger</b> (single hole mounting)		ZS-AT 0	See Price List	
<b>With Spring-rod Actuator</b> <sup>1)2)</sup>		F-AT 0	See Price List	
<b>With Roller Lever</b> Form E to EN 50 047		AR-AT 0	See Price List	
<b>With Angled Roller Lever</b>		WR-AT 0	See Price List	
<b>With Side Roller Lever</b> Form A to EN 50 047		R-AT 0	See Price List	
<b>With Adjustable Roller Lever</b>		V-AT 0	See Price List	
<b>With Actuating Rod</b> <sup>1)</sup>		H-AT 0	See Price List	

1) Not to be used as a safety switch.  
2) For use only in conjunction with snap-action contacts.

**AT 0-...-ZB Safety Interlock Switches**  
 Door opens...Power OFF!

**Base unit 1** [Page 5/82](#)

- Device for world markets: **UL/CSA/IEC/CE**
- In conformity with **EN 1088**, Machinery Directive Safety Standard CE for safety interlocking provisions.
- Suitable for use in safety circuits, positive opening contacts to **IEC/EN 60 947-5-1** ⊖
- **NEMA 12/13; IEC IP 65**
- Multiple contact configurations: **1 N.O/1N.C.; 1 N.C.; 2 N.C.**
- Actuation from 5 different directions possible.
- For higher level of protection for personnel.
- Snap-fitting cover.



**NEMA 12, 13**  
**IEC IP 65**

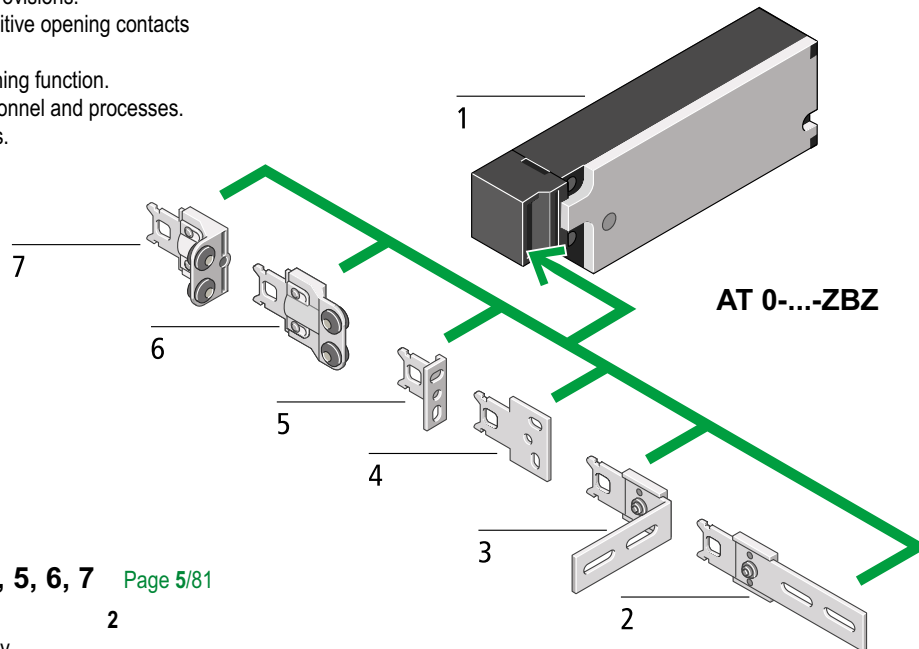
**Actuating Element 2** [Page 5/83](#)

Triple-coded Actuator prevents tampering

**AT 0-...-ZBZ Safety Interlock Switches with retaining function**  
 Interlocks with door to prevent opening

**Base unit 1** [Page 5/80](#)

- Device for world markets: **UL/CSA/IEC/CE**
- In conformity with **EN 1088**, Machinery Directive Safety Standard CE for safety interlocking provisions.
- Suitable for use in safety circuits, positive opening contacts to **IEC/EN 60 947-5-1** ⊖
- With spring or magnet powered retaining function.
- For higher level of protection for personnel and processes.
- Broad selection of actuating elements.

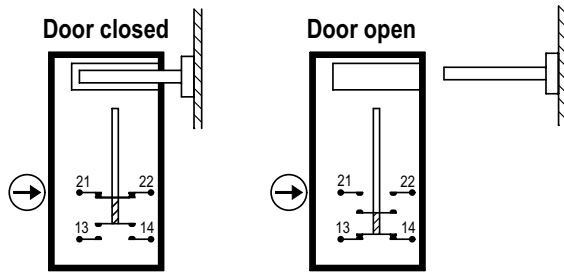


**NEMA 4, 12, 13**  
**IEC IP 65**

**Actuating Elements 2, 3, 4, 5, 6, 7** [Page 5/81](#)

- Straight, flexible Actuator 2**  
 For doors which do not close precisely
- Angled, flexible Actuator 3**  
 For doors which do not close precisely
- Straight Actuator 4**  
 For sliding doors
- Angled Actuator 5**  
 For swing doors
- Straight Actuator with overlap 6**  
 For increased tolerance in the closing direction of doors which do not close precisely
- Angled Actuator with overlap 7**  
 For increased tolerance in the closing direction of doors which do not close precisely

Type: AT 0-...-ZB (Position switch)

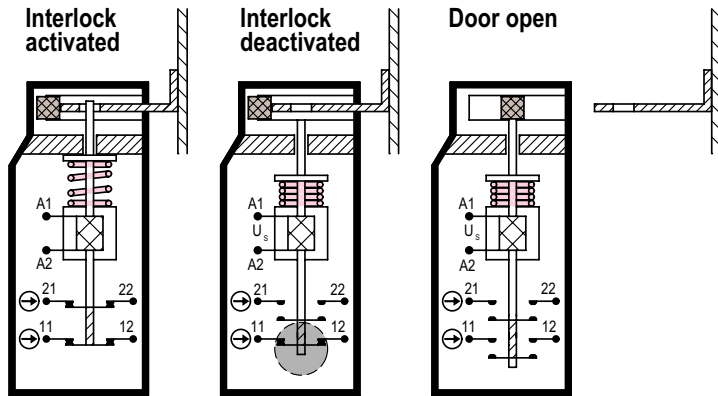


For Personnel safety

- Door is opened → Positive opening N.C. 21-22 contact opens
- Open Door → The N.C. 21-22 contact is safely open, even where attempts are made to tamper using basic tools
- Door is closed → The triple-coded Actuator element re-closes the N.C. contact

Type: AT 0-02-...FT-ZBZ (Spring powered)

Power required to deactivate interlock

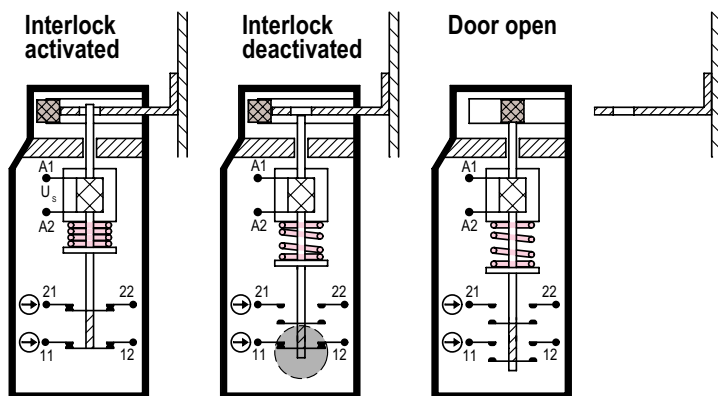


Higher degree of Personnel safety with separate monitoring of the door position

- Door is closed & Interlocked → Requires no power: Interlock also remains active under power loss or wire breakage. Interlocked door = Safe State N.C. enabling contact 21-22 is closed and allows an operation e.g. machine run, to start.
- To release Door → Apply voltage to the coil (A1, A2) e.g. from a motion detector. The N.C. enabling contact 21-22 opens. The N.C. door monitoring contact 11-12 remains closed as long as the door remains closed.
- Opening the door → Only possible once it is released. The N.C. door monitoring contact 11-12 opens to indicate the open door.
- Door is open → Both contacts are blocked open, even where attempts are made to tamper using basic tools
- Re-closing door → Triple-coded actuator removes the block on the N.C. enabling contact 21-22. The N.C. door monitoring contact 11-12 re-closes
- To interlock door → Remove voltage from coil:
  1. Actuator is locked in.
  2. The N.C. enabling contact 21-22 closes.
 → The enabling contact can only close when the door is interlocked

Type: AT 0-02-...MT-ZBZ (Magnet powered)

Power required to activate interlock















Process protection & Personnel safety with separate monitoring of the door position

- Door is closed (Activate Interlock) → Requires power: Voltage is applied to the coil to activate interlock: Quicker access possible in the event of a power loss or wire breakage Both the N.C. enabling contact 21-22 and the N.C. door monitoring 11-12 contact are closed
- To release Door → Remove voltage from the coil (A1, A2) e.g. from a motion detector. The N.C. enabling contact 21-22 opens. The N.C. door monitoring contact 11-12 remains closed as long as the door remains closed.
- Opening the door → Only possible once door is released (interlock deactivated). The N.C. door monitoring contact 11-12 opens to indicate the open door.
- Door is open → Both contacts are blocked open, even where attempts are made to tamper using basic tools
- Re-closing door → Triple-coded actuator removes the block on the N.C. enabling contact 21-22. The N.C. door monitoring contact 11-12 re-closes
- To interlock door (Re-Activate Interlock) → Reapply voltage to coil:
  1. Actuator is locked in.
  2. The N.C. enabling contact 21-22 closes.
 → The enabling contact can only close when the door is interlocked

# Safety Interlock Switches

## AT 0-...-ZBZ

NEMA 4/12/13; IEC IP 65; CE


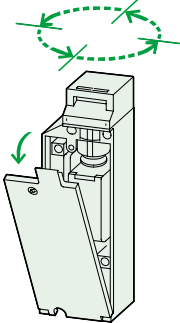
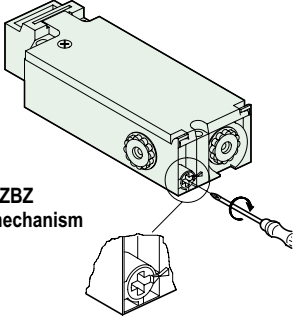


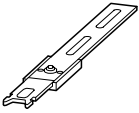



1	2	3	4	5
Contact Configuration NO = Normally open NC = Normally closed ⊖ Positive opening clearance to <b>IEC EN 60 947-5-1</b>		Control Voltage supply to magnetic coil  (A1-A2)	<b>Type</b>  Without Actuator Element	<b>Price</b>  \$
<b>AT 0-...FT-ZBZ, Spring-power activated Interlock switch</b> (Power required to deactivate interlock) <ul style="list-style-type: none"> <li>■ With Interlock monitoring and auxiliary release mechanism</li> <li>■ With continuous monitoring of door position</li> <li>■ Overview of additional features, see pages 5/78-79</li> </ul>				
1 NO	1 NC ⊖		24 VDC	AT 0-11-24 DFT-ZBZ/X
-	2 NC ⊖		24 VDC	AT 0-02-24 DFT-ZBZ/X
1 NO	1 NC ⊖		120 V 50/60 HZ	AT 0-11-120 AFT-ZBZ/X
-	2 NC ⊖		120 V 50/60 HZ	AT 0-02-120 AFT-ZBZ/X
1 NO	1 NC ⊖		230 V 50/60 HZ	AT 0-11-230 AFT-ZBZ/X
-	2 NC ⊖		230 V 50/60 HZ	AT 0-02-230 AFT-ZBZ/X
<b>AT 0-...-MT-ZBZ, Electromagnet activated Interlock switch</b> (Power required to activate interlock) <ul style="list-style-type: none"> <li>■ With Interlock monitoring</li> <li>■ With continuous monitoring of door position</li> <li>■ Overview of additional features, see pages 5/78-79</li> </ul>				
1 NO	1 NC ⊖		24 VDC	AT 0-11-24 DMT-ZBZ/X
-	2 NC ⊖		24 VDC	AT 0-02-24 DMT-ZBZ/X
1 NO	1 NC ⊖		120 V 50/60 Hz	AT 0-11-120 AMT-ZBZ/X
-	2 NC ⊖		120 V 50/60 Hz	AT 0-02-120 AMT-ZBZ/X
1 NO	1 NC ⊖		230 V 50/60 Hz	AT 0-11-230 AMT-ZBZ/X
-	2 NC ⊖		230 V 50/60 Hz	AT 0-02-230 AMT-ZBZ/X

Note: Actuator Element supplied separately. See page 5/81 for actuator selection to complete switch.

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

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See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List

6	7	8	9
	<b>Type</b>	<b>Price</b>	<b>Remarks</b>
		\$	
<p><b>Actuator Elements</b> To complete the basic switch <b>AT 0...-ZBZ/X</b></p>			
<p><b>Straight Actuator</b> for sliding doors</p> 	<b>G-ZBZ</b>	See Price List	<p>Care should be taken during mounting and operation that no foreign particles penetrate the entry point of the actuator element</p>  <p>The operating head can be turned manually in 90° stages to match the specified actuating surface and direction of operation.</p>  <p><b>AT 0...FT-ZBZ</b> release mechanism</p> <p>The spring-powered <b>AT 0...FT-ZBZ</b> is equipped with a release mechanism which can be accessed with a screw driver to deactivate the interlock in the event of a power loss (e.g. during start-up) The release mechanism should be sealed during normal operation. For IP 65 protection use cable entry clamp <b>STB 13.5</b></p> <p><b>Accessories</b></p> <p>Cable entry clamp <b>STB 13.5</b>      5/83</p>
<p><b>Angled Actuator</b> for swing doors of width ≥ 250 mm (~ 10 inches)</p> 	<b>W-ZBZ</b>	See Price List	
<p><b>Angled, flexible Actuator</b> for doors which do not close precisely</p> 	<b>F-ZBZ</b>	See Price List	
<p><b>Straight, flexible Actuator</b> for doors which do not close precisely</p> 	<b>FG-ZBZ</b>	See Price List	
<p><b>Straight Actuator with overlap</b> for increased tolerance in the closing direction of doors which do not close precisely</p> 	<b>NG-ZBZ</b>	See Price List	
<p><b>Angled Actuator with overlap</b> for increased tolerance in the closing direction of doors which do not close precisely</p> 	<b>NW-ZBZ</b>	See Price List	
<p><b>Dust protection cap</b> prevents foreign particles from getting into the actuator element.</p> 	<b>SK-ZBZ</b>	See Price List	

1	2	3	4	5	6
	Contact Configuration NO = Normally open NC = Normally closed Positive opening $\ominus$ clearance to <b>IEC EN 60 947-5-1</b>		<b>Type</b>	<b>Price</b>	Remarks
			Includes Actuator Element	\$	

**AT 0-...-ZB**  
(Complete switch, Including Actuator Element)



1 NC  $\ominus$



**AT 0-01-1-ZB**

1NO 1 NC  $\ominus$

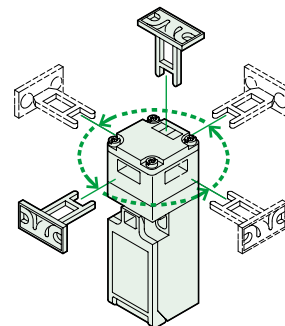


**AT 0-11-1-ZB**

2 NC  $\ominus$



**AT 0-02-1-ZB**



The operating head can be turned manually in 90° stages to match the specified actuating surface and direction of operation. Care should be taken during mounting and operation that no foreign particles penetrate the entry point of the actuator element. For IP 65 protection use cable entry clamp **STB 13.5**

**Accessories**

Cable entry clamp **STB 13.5** P. 5/83

See Price List See Price List See Price List See Price List See Price List See Price List







Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

- Device for world markets: **UL/CSA/IEC/CE**
- In conformity with **EN 1088**, Machinery Directive Safety Standard CE for safety interlocking provisions.
- Suitable for use in safety circuits, positive opening contacts to **IEC/EN 60 947-5-1**  $\ominus$
- Multiple contact configurations: **1 N.O/1N.C.; 1 N.C.; 2 N.C.**
- Actuation from 5 different directions possible.
- For higher level of protection for personnel.
- Snap-fitting cover.

Overview of additional features, see pages 5/78-79.

# AT 0... Limit Switches, AT 0...-ZB(Z) Safety Interlock Switches Accessories

1 Description	2 For use with Switch type	3 Type	4 Price
<b>Sealing membrane</b> For external applications and temperatures down to -40° C. (Color: Red) 	AT 0-...-i(A)	RBS-AT 0	\$ See Price List
<b>Locating plate</b> Useful for laterally actuated switches 	AT 0	FS-AT	See Price List
<b>Cable entry clamp, IP 65</b> For PG 13.5 cable entries. Made of insulating material. Accommodates conductor diameters of 11 – 13 mm Necessary for IP 65 protection. 	AT 0	STB 13.5	See Price List
<b>Conduit Adapter</b> To adapt PG 13.5 openings to 1/2" conduit hookups. 	AT 0	V 1/2"/PG13.5-NA	See Price List
<b>Threaded Hole plug, white</b> Threads into PG 13.5 opening, self-sealing grommet. Maintains IP 65 protection. 	AT 0	V 13.5	See Price List
<b>Actuator element</b> For AT 0...-ZB safety interlock switch. 	AT 0...-ZB	B-AT 0-ZB	See Price List

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

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# RMQ 16

## Technical Data

1	2	3	4	5	6	7	
			Contact elements	Illuminated Pushbutton operators (maintained)	Illuminated selector switches	Indicating lights	
<b>General technical data</b>							
Standards			UL, CSA, IEC/EN 60 947, VDE 0660, CE				
Lifespan, mechanical	Operations	x 10 <sup>5</sup>	100	30 (3)	3	–	
Maximum operating frequency		Ops/h	3600	3600 (1800)	1800	–	
Operating force		N	3	4	–	–	
Operating torque		Nm	–	–	≤ 0.2	–	
Degree of protection to IEC / EN 60 529			IP20 with ISH 2.8				
Climatic proofing			Damp heat, constant, to IEC 60 068-2-3 Damp heat, cyclical, to IEC 60 068-2-30				
Ambient temperature							
Open	Min./Max.	°C	-25 / +60	-25 / +60	-25 / +60	-25 / +60	
Enclosed	Min./Max.	°C	-25 / +40	-25 / +40	-25 / +40	-25 / +40	
Mechanical shock resistance to IEC 60 068-2-27 (half-sinusoidal shock, duration 11 ms)			g				
			40	40	40	40	
Terminal capacity	Min./Max.	mm <sup>2</sup>	0.5 / 1.0	0.5 / 1.0	0.5 / 1.0	0.5 / 1.0	
Blade terminal			2.8 x 0.8 mm to DIN 46 244				
Fast-on Connector			2.8 x 0.8 mm to IEC 60 760 or .110 x .032 fast-on receptacles: AMP # 60197-1, 62050-1 or equivalent UL / CSA listed fast-on receptacle				
Dimensions			See page 5/79	See page 5/78	See page 5/78	See page 5/78	
<b>Contacts</b>							
Rated impulse withstand voltage U <sub>imp</sub>			V	4000	800	800	800
Rated insulation voltage U <sub>i</sub>			V	250	250	250	250
Rated operational voltage max. AC			V	250	24	24	24
Thermal continuous test current			A	2.5	–	–	–
Overvoltage category / pollution degree				III/3	III/3	III/3	III/3
Control circuit reliability at							
24 V DC / 5 mA	Fault probability	H <sub>F</sub>	< 10 <sup>-7</sup> , < 1 fault in 10 <sup>7</sup> operations				
5 V DC / 1 mA	Fault probability	H <sub>F</sub>	< 5 x 10 <sup>-6</sup> , < 1 fault in 5 x 10 <sup>6</sup> operations				
Use of terminal insulator ISH 2.8							
From U <sub>e</sub>			> 24 V AC/DC recommended				
From U <sub>e</sub>			> 50 V AC or 120 V DC is mandatory, even on unused blade terminals				
Maximum short-circuit protective device							
Fuseless	Type		FAZ-B6	–	–	–	
Fuse	A gG/gL		10	–	–	–	
<b>Switching capacity</b>							
Rated operational current I <sub>e</sub>							
AC-15							
24 V	A		4	–	–	–	
48 V	A		4	–	–	–	
110 V	A		4	–	–	–	
230 V	A		4	–	–	–	
DC-13							
24 V	A		3	–	–	–	
42 V	A		1.0	–	–	–	
60 V	A		0.8	–	–	–	
110 V	A		0.5	–	–	–	
220 V	A		0.2	–	–	–	
<b>UL/CSA data</b>			UL listed file No. E 29 184, Guide No. NKCR CSA certified File No. 46 552 Class No. 321103				
Pilot duty rating							
E10	AC/DC		C300 / Q300	–	–	–	
E01	AC/DC		C300 / R300	–	–	–	

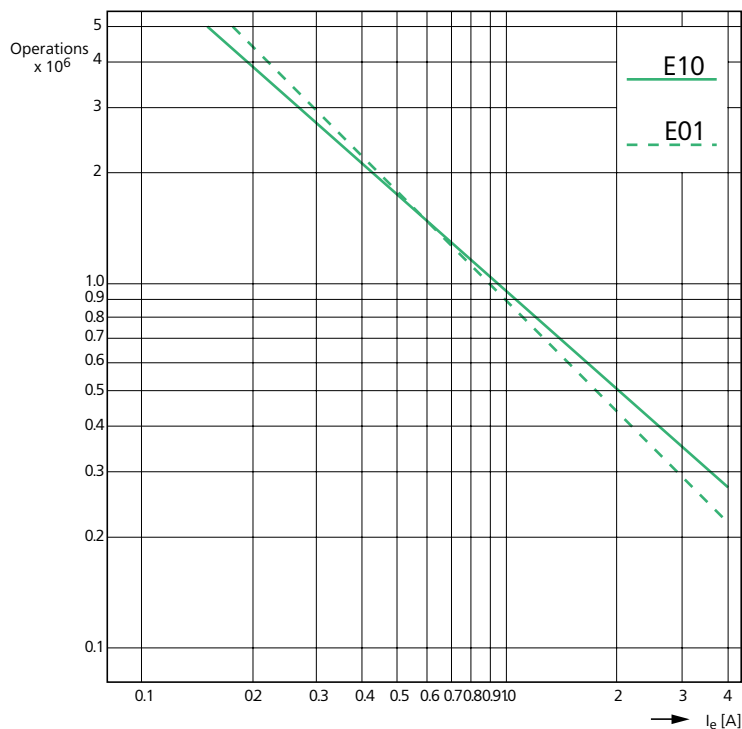
8	9	10	11	12
<b>Pushbutton operators (maintained)</b>	<b>Selector switches</b>	<b>Key-released operators</b>	<b>Emergency-Stop operators</b>	<b>Emergency-Stop operators<sup>1)</sup> illuminated</b>
UL, CSA, IEC/EN 60 947, VDE 0660, CE				
30 (3)	3	3	0.5	0.5
3600 (1800)	1800	1800	600	600
4	—	—	25	25
—	≤ 0.2	≤ 0.4	—	—
IP65	IP65	IP65	IP65	IP65
Damp heat, constant, to IEC 60 068-2-3				
Damp heat, cyclical, to IEC 60 068-2-30				
-25 / +60	-25 / +60	-25 / +60	-25 / +60	-25 / +60
-25 / +40	-25 / +40	-25 / +40	-25 / +40	-25 / +40
40	40	40	40	40
—	—	—	—	0.5 / 1.0
—	—	—	—	2.8 x 0.8 mm
—	—	—	—	2.8 x 0.8 mm
See page 5/78	See page 5/78	See page 5/78	See page 5/78	See page 5/78

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

Electrical lifespan AC-15 to IEC/EN 60 947-5-1 at 230 V

$I_e$  = Rated operational current



Notes

- 1) See illuminated selector switches for contact values

# 22.5 mm Control Circuit Devices

## RMQ 22 – Technical Data

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

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				Contact Elements	Lamp Socket Elements, Front Mounting	Lamp Transformers	Foot and Palm Switches		
							Spring return	Maintained	
<b>General Specifications</b>				UL, CSA, IEC/EN 60 947, CE, DIN VDE 0660					
Mechanical lifespan		Operations x 10 <sup>6</sup>		10	—	—	1	0.1	
Maximum operating frequency		Ops./h		6000	—	—	3600	600	
Operating force		N		≤ 5	—	—	≤ 40	≤ 60	
		N		EC 11 : ≤ 7.3	—	—	—	—	
		N		EC 20 : ≤ 9	—	—	—	—	
		N		EC 02 : ≤ 5.5	—	—	—	—	
Operating torque		Nm		—	—	—	—	—	
Climatic proofing				Damp heat, constant, to DIN EN 60 068 Part 2-3					
Ambient temperature				Damp heat, cyclic, to DIN EN 60 068 Part 2-30					
	Open	max/min °C		+60/-25	+60/-25	+60/-25	+60/-25		
	Enclosed	max/min °C		+40/-25	+40/-25	+40/-25	+40/-25		
Impact resistance (duration 11 ms, IEC 60 068-2-27)		g		>30	>30	>30	>15		
Terminal capacity, Cu only, 75°C	1 or 2 Wire	AWG		18...12	18...12	18...12	18...12		
Environmental protection rating				NEMA/UL IEC/EN 60 529					
Mounting position				—	—	—	4/4X/13		
Dimensions				IP 20	IP 20	—	IP 67/IP 69K		
				As desired	As desired	As desired	As desired		
				5/92	5/92	5/92	5/92		
<b>Electrical ratings, IEC Data</b>									
Rated Impulse withstand voltage U <sub>imp</sub>		V		6000	4000 <sup>1)</sup>	6000	6000		
Overvoltage Category/Pollution degree				III/3	III/3	III/3	III/3		
Control Circuit Reliability at	24 V DC/5 mA	Error frequency H <sub>F</sub>		< 10 <sup>-7</sup> , < 1 failure per 10,000,000 operations					
	5 V DC/1 mA	Error frequency H <sub>F</sub>		< 5 x 10 <sup>-6</sup> , < 1 failure per 5,000,000 operations					
Max. Short Circuit Protection	Fuseless	Type		PKZM 0-10 or FAZ B6	—	Short-circuit proof	PKZM-10 or FAZ B6		
	Fuses	A gL		10	—	Short-circuit proof	10		
Rated Operational Current I <sub>e</sub>									
AC-15	115 V	A		6	—	—	6		
	230 V	A		6	—	—	6		
	400 V	A		4	—	—	4		
	500 V	A		2	—	—	2		
DC-13	24 V	A		6	—	—	6		
	60 V	A		3	—	—	3		
	110 V	A		0.8	—	—	0.8		
	220 V	A		0.3	—	—	0.3		
Electrical Life									
AC-15	230 V/0.5 A	Operations x 10 <sup>6</sup>		1.6	—	—	1.6		
	230 V/1 A	Operations x 10 <sup>6</sup>		1.0	—	—	1.0		
	230 V/3 A	Operations x 10 <sup>6</sup>		0.7	—	—	0.7		
DC-13	12 V/2.8 A	Operations x 10 <sup>6</sup>		1.2	—	—	1.2		
<b>Electrical ratings, UL/CSA Data</b>									
Pilot Duty ratings				A 600	—	—	—		
				Q 300	—	—	—		
General Use				10 A @ 600 V AC	—	—	—		
				1 A @ 250 V DC	—	—	—		

1) EF 1(C): 2500 V, EF 0(C): 800 V

## 22.5 mm Control Circuit Devices RMQ 22 – Technical Data

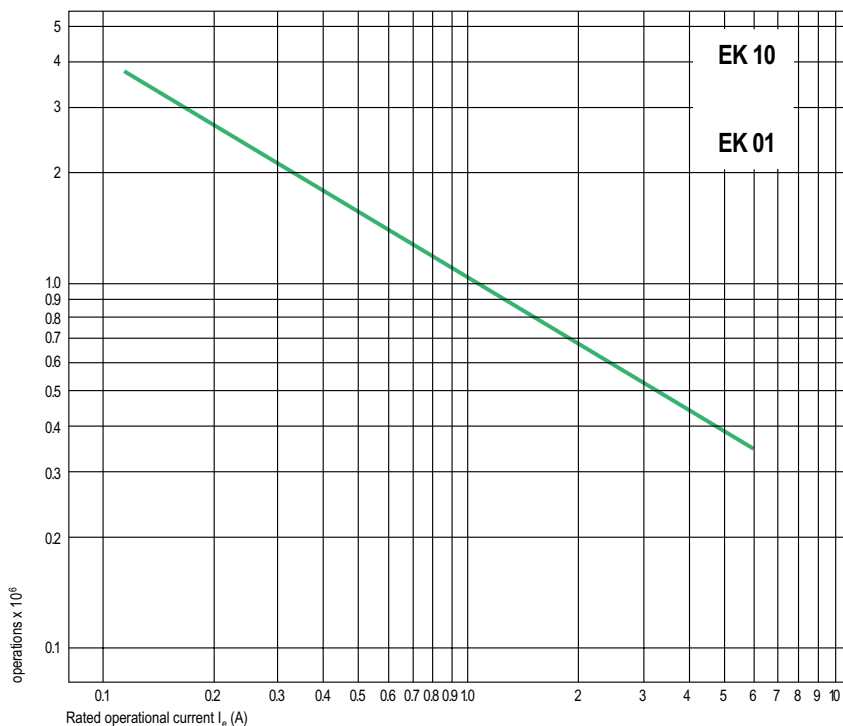
Pushbutton Operators Mushroom Head Operators	Double Pushbutton Operators <sup>2)</sup>	Selector Switches Illuminated Selector Switches <sup>3)</sup>	Toggle Switches	Key-operated Switches	Indicator Lights	Illuminated Pushbutton Operators Maintained <sup>3)</sup>	Key-operated Mushroom Head Operators	Emergency-stop Operators
UL, CSA, IEC/EN 60 947, CE, DIN VDE 0660	60 947, CE, DIN VDE 0660	0.1	0.1	0.1	—	3 <sup>4)</sup>	0.1	0.1
5	0.2	0.1	0.1	0.1	—	6000	100	600
6000	6000	2000	2500	100	—	≤ 5	≤ 7	≤ 50
≤ 5	≤ 5	—	≤ 2	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	≤ 0.2	—	≤ 0.4	—	—	—	—
Damp heat, constant, to DIN EN 60 068 Part 2-3 Damp heat, cyclic, to DIN EN 60 068 Part 2-30								
+60/-25	+60/-25	+60/-25	+60/-25	+60/-25	+60/-25	+60/-25	+60/-25	+60/-25
+40/-25	+40/-25	+40/-25	+40/-25	+40/-25	+40/-25	+40/-25	+40/-25	+40/-25
>30	>30	>30	>30	>30	—	>30	>30	>50
—	—	—	—	—	—	—	—	—
4/4X/13	4/4X/13	4/4X/13	4/4X/13	4/4X/13	4/4X/13	3R/12	4/4X/13	4/4X/13
IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
As desired	As desired	As desired	As desired	As desired	As desired	As desired	As desired	As desired
5/92	5/92	5/92	5/92	5/92	5/92	5/92	5/92	5/92

- 2) Suitable for max. 2 W bulbs
- 3) Suitable for max. 2 W bulbs
- 4) 0.3 x 10<sup>6</sup> operations for **RLTR, MLTR**

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

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Electrical lifespan AC-15 to IEC/EN 60 947-5-1 at 230 V



# RMQ 22

## Technical Data

				Digital Display Actuating Block (without memory)	Digital Display Actuating Block (with memory)		
<b>General Specifications</b>				EN 50 178	EN 50178		
Degree of protection to IEC/EN 60 529				IP 20	IP 20		
Climatic proofing				Damp heat, constant, to IEC/EN 60 068-2-3			
Ambient temperature				Damp heat, cyclic, to IEC/EN 60 068-2-30			
	Open	Max./Min.	°C	+60/-25	+60/-25		
	Enclosed	Max./Min.	°C	+60/-25	+60/-25		
Mounting Position				As required	As required		
Dimensions				See page 5/93	See page 5/93		
Mechanical shock resistance (shock duration 11 ms) to IEC/EN 60/068-2-27				g	>30		
Terminal capacity				mm <sup>2</sup>	2 X 1.5; 1 X 2.5	2 X 1.5; 1 X 2.5	
	Solid		mm <sup>2</sup>	2 X 0.5; 1 X 1.5	2 X 0.5; 1 X 1.5		
	Stranded						
<b>UL/CSA Data</b>							
Input ratings				AWG	80 mA max. at 30 V DC max.		
Terminal capacity					12...22		
<b>IEC Voltage ratings</b>							
Rated insulation voltage U <sub>i</sub>				V DC	30 ( to VDE 0110 group A )		
Rated operational voltage				V DC	24	24	
Permissible range				V DC	18-30	18-30	
Signal voltage ranges				V DC	13-30	13-30	
	H range		V DC	-30 to +4 or not connected			
	L range						
<b>IEC Current ratings</b>							
Operational current				mADC	80	80	
	at 18 V		mADC	60	60		
	at 30 V						
Signal current					1 - 10	1 - 6	8 - 10
	Input		mADC	1.2	0.03	0.25	
	at 4 V		mADC	20	0.25	2.30	
	at 30 V						

Note:  
The voltage supply and latch enable signal of the **BCEL 24** must be stabilized. Should an undefined display result from interferences in the voltage supply, the latch enable signal (LE) must be set to "Low", so that the undefined signal does not continue to be displayed.

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

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# SL... Stack Lights

## Technical Data

1	2	3	4
<b>General technical data</b>			
Standards			UL, CSA, IEC/EN 60 947, VDE 0660, CE
Degree of protection to IEC/EN 60 529, NEMA/UL			IP54, Type 12 <sup>1)</sup>
Climatic proofing			Damp heat, constant, to IEC 60 068-2-3 Damp heat, cyclical, to IEC 60 068-2-30
Ambient temperature			
Open	Min./Max.	°C	–
Enclosed	Min./Max.	°C	-25 / +50
Mounting position			As required
Mechanical shock resistance to IEC 60 068-2-27 (half-sinusoidal shock, duration 11 ms)		g	15
Terminal capacity			
	Solid	mm <sup>2</sup>	2 x 1.5; 1 x 2.5
	Stranded	mm <sup>2</sup>	2 x 0.5; 1 x 1.5
Screw terminal		AWG	16...18
Cage Clamp <sup>2)</sup>		AWG	14...22
Dimensions			See page 5/81
<b>Contacts</b>			
Rated impulse withstand voltage U <sub>imp</sub>		V	4000
Rated insulation voltage U <sub>i</sub>		V	250
Overvoltage category / pollution degree			III/3

### Notes

- 1) Ratings increase to NEMA/UL Type 4X and IEC IP65 with the addition of SL-IP65 gasket kit
- 2) Cage Clamp is a registered trademark of Wago Contact Technik GmbH, Minden, Germany

# Control Circuit Devices Limit Switches, Safety Interlock Switches – Technical Data

				AT 0...	AT 0...-ZB	AT 0...-ZBZ
<b>General</b>						
Specifications				UL, CSA, IEC 60 947, EN 60 947		
Climatic Proofing				Damp heat, constant, to DIN EN 60 068 Part 2-3 Damp heat, cyclic, to DIN EN 60 068 Part 2-30		
Ambient Temperature	Max./Min.	°C		+70/-25	+70/-25	+40/-25
Mounting				As required	As required	As required
Environmental Protection		NEMA IEC 529		4/12/13 IP 65	12/13 IP 65	4/12/13 IP 65
Terminal Capacity		AWG		12...18	12...18	12...18
<b>Electrical Ratings, IEC</b>						
Rated impulse withstand voltage $U_{imp}$		V		6000	6000 <sup>1)</sup>	4000
Rated insulation voltage $U_i$		V		500	500 <sup>1)</sup>	400
Rated operational voltage $U_e$		V		500	500	400
Rated operational current $I_e$						
AC-15	24 V	A	10	10	10	6
	230 V	A	6	6	6	6
	400 V	A	4	4	4	4
	500 V	A	2	2	2	—
DC-13	24 V DC	A	10	10	10	10
	110 V DC	A	1	1	1	1
	220 V DC	A	0.5	0.5	0.5	1.5
Supply Frequency				≤ 400	≤ 400	≤ 400
Short circuit protection in closed position to IEC/EN 60 947-5-1	Fuseless	Type		<b>PKZM 0-10 or FAZN B6</b>	<b>PKZM 0-10 or FAZN B6</b>	<b>PKZM 0-10 or FAZN B6</b>
Short circuit protection to IEC/EN 60 947-5-1	Max. Fuse	A gL		10	10	10
Repetition accuracy of switching point	Max. Fuse	A gL		6	6	6
		mm		± 0,02	—	—
<b>Electrical Ratings, UL/CSA Data</b>						
Pilot duty				A 300/Q 300	A 300/Q 300	A 300/Q 300
General Use				10 A @ 300 V AC	10 A @ 300 V AC	10 A @ 300 V AC
<b>Mechanical Ratings</b>						
Lifespan	Standard contacts	Operations x 10 <sup>6</sup>		20 <sup>2)</sup>	10	1
	Snap-action contacts	Operations x 10 <sup>6</sup>		20 <sup>2)</sup>	—	—
Contact temperature of roller head		°C		≤ 100	—	—
Mechanical shock resistance (duration 20 ms)						
	Standard contacts	g		25	25	10
	Snap-action contacts	g		2	—	—
Actuating frequency		Ops./h		6000	1800	800
Dimensions				See page 5/97	See page 5/97	See page 5/97
<b>Mechanical Actuation</b>						
Operating force at beginning/end of stroke						
	Basic device	N		1.0/8.0	—	—
	<b>RS</b>	N		1.0/8.0	—	—
	<b>AR (WR)</b>	N		1.0/8.0	—	—
	<b>ZB/ZBZ (entry/removal)</b>	N		—	10/5	25/15
Holding force	<b>ZBZ/GW</b>	N		—	—	2000
	<b>ZBZ/G/NW</b>	N		—	—	1000
	<b>ZBZ/FG/NG</b>	N		—	—	1800
Actuating torque of rotary drives		Nm		0.2	—	—
Max. actuating speed	Approach Angle					
	Basic device	m/s		1/0.5	—	—
	<b>R</b>	m/s		1.5	—	—
	<b>V</b>	m/s		1.5	—	—
	<b>H</b>	m/s		1.5	—	—
	<b>AR</b>	m/s		1	—	—
	<b>WR</b>	m/s		1	—	—
	<b>RS, ZRS</b>	m/s		1/1	—	—
	<b>S, ZS</b>	m/s		1/0.5	—	—
<b>Electromechanical Actuation</b>						
Electromagnet	AC (50/60 Hz)	V/VA		—	—	230/11
		V/VA		—	—	120/8
	DC	V/W		—	—	24/8
Voltage tolerance range				—	—	0.85 - 1.1 x $U_s$
Duty factor rating of the electromagnet		DF		—	—	100 %

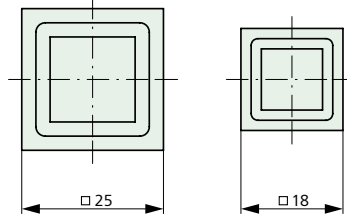
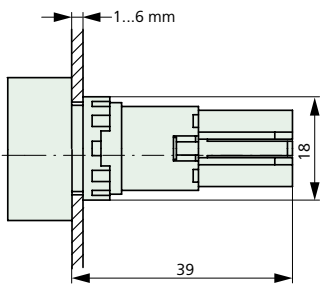
1) AT0-02-1-ZB:  $U_{imp} = 4$  kV,  $U_i = 400$  V

2) AT...-...(IA) with operation from the side:  $6 \times 10^6$ ; .../WR:  $15 \times 10^6$ ; .../F:  $6 \times 10^6$ ; .../ZS:  $1 \times 10^6$

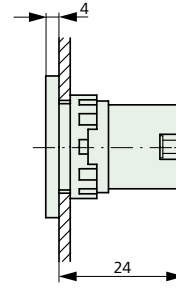


**Pushbutton operators and indicating lights**

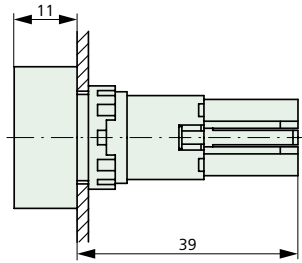
**Square style**



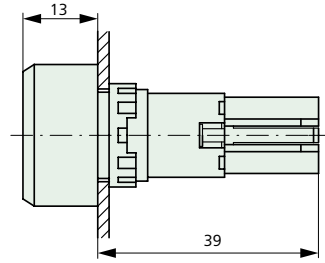
**Q...BS**



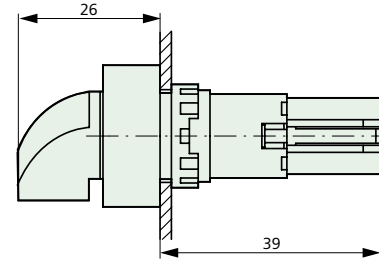
**Q...D-...  
 Q...DR-...**



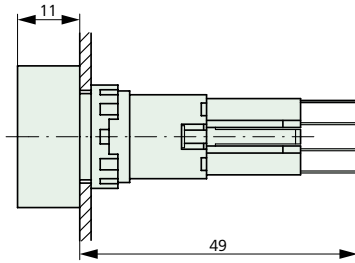
**Q...S...**



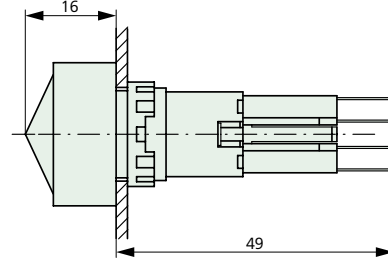
**Q...WK...**



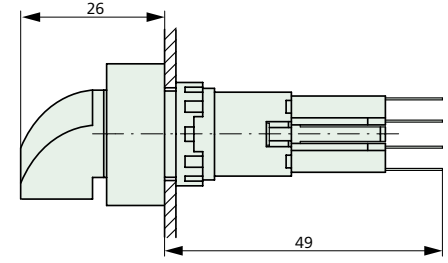
**Q...LT-...  
 Q...LTR-...  
 Q...LF-...**



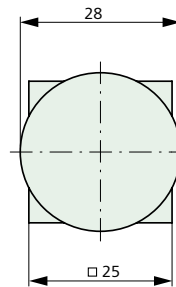
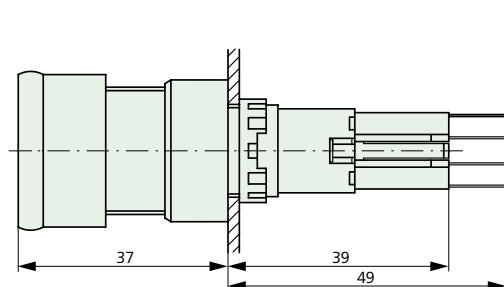
**Q...LH-...**



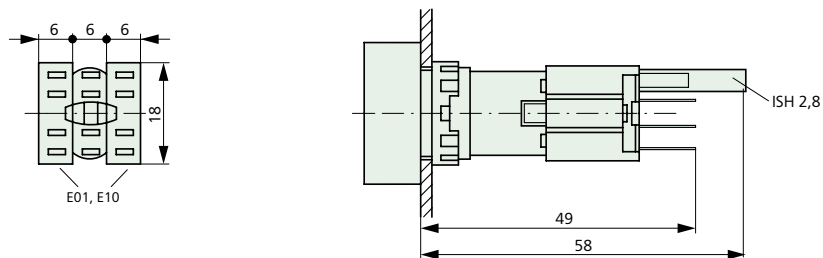
**Q...LWK-...**



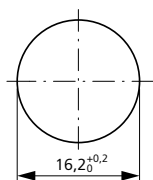
**Q25PV  
 Q25LPV**



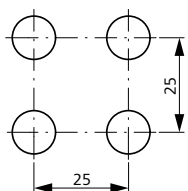
**Front mounting**



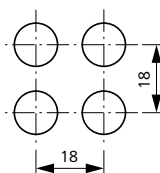
**Drilling dimension**



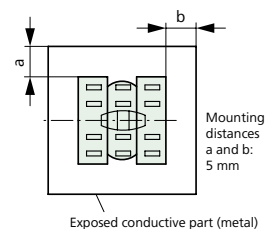
**Grid dimensions to IEC/EN 60 947 Q25...**



**Minimum grid dimensions Q18...**

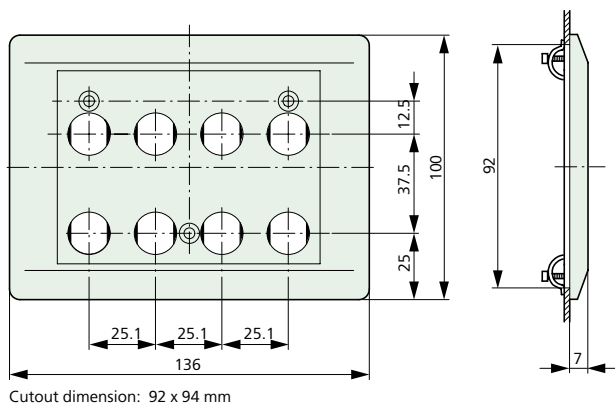


**Mounting distances**



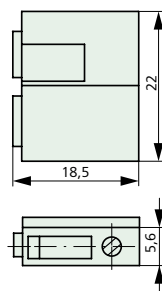
**Flush mounting panels**

**E8/E8-SW**



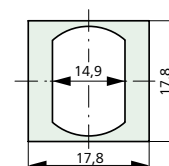
**Screw adapter**

**SRA...**



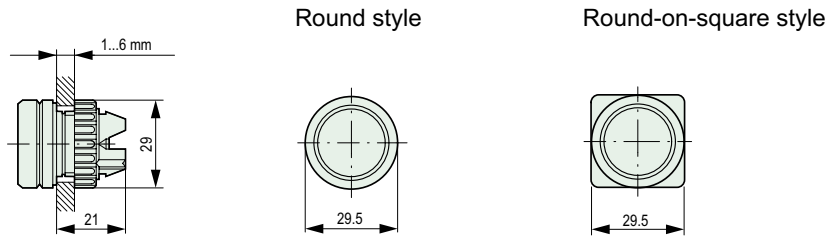
**Anti-rotation feature**

**VS**



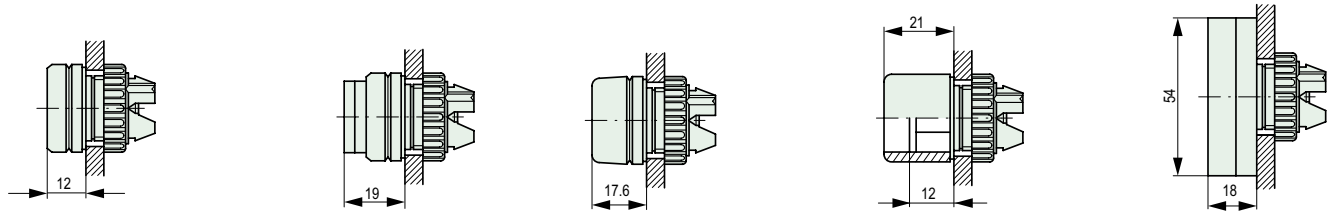
# 22.5 mm Control Circuit Devices RMQ 22 - Dimensions (in mm)

## Actuators and Indicators



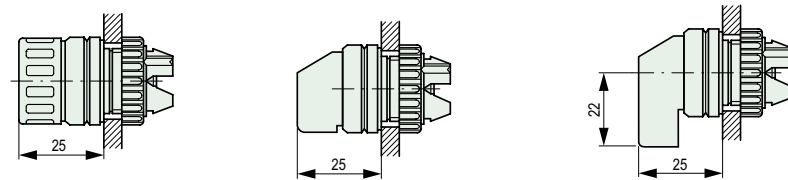
## Push-Button Actuators

- |                                 |                  |                |                      |                   |
|---------------------------------|------------------|----------------|----------------------|-------------------|
| RD-..., MD-...                  | RDH-..., MDH-... | RD-M-D, MD-M-D | RDK-X-..., MDK-X-... | QDD-..., QDDL-... |
| <b>Digital Display Assembly</b> |                  |                |                      |                   |
| RZA-..., MZA-...                |                  |                |                      |                   |



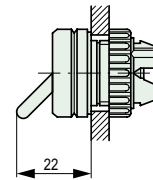
## Selector Switch Actuators

- |                |  |                  |
|----------------|--|------------------|
| RW-..., MW-... | RWK-..., MWK-...<br>RLWK-..., MLWK-... | RWH-..., MWH-... |
|----------------|--|------------------|



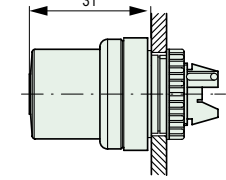
## Toggle Switches

- RKS-..., MKS-...



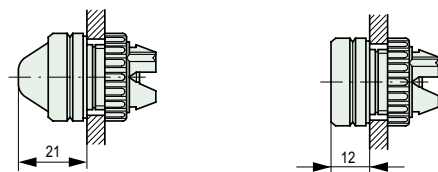
## Key-Operated Actuators

- RS-..., MS-...



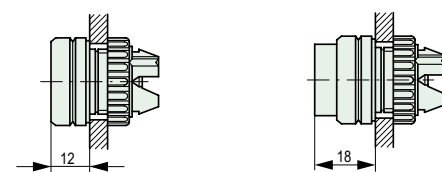
## Indicator Lights

- |                |                  |
|----------------|------------------|
| RL-..., ML-... | RLF-..., MLF-... |
|----------------|------------------|



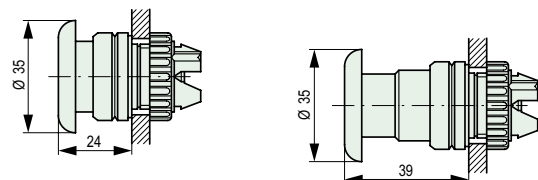
## Illuminated Pushbutton Actuators

- |   |                    |
|---|--------------------|
| RLT-..., MLT-...,<br>RLTR-..., MLTR-... | RLTH-..., MLTH-... |
|---|--------------------|



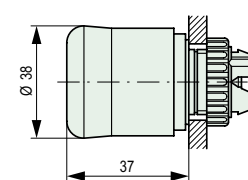
## Mushroom Actuators

- |                |                    |
|----------------|--------------------|
| RP-..., MP-... | RPSR-..., MPSR-... |
|----------------|--------------------|



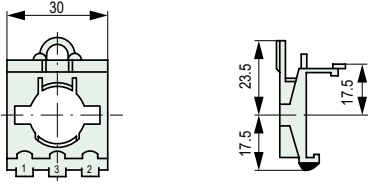
## Emergency Stop Actuator

- RPV

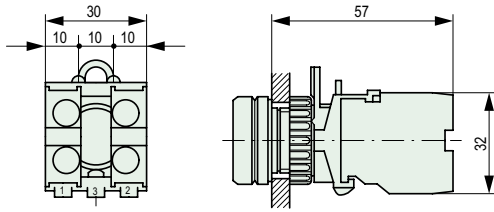


**Flush Mounting Fixing Adapter**

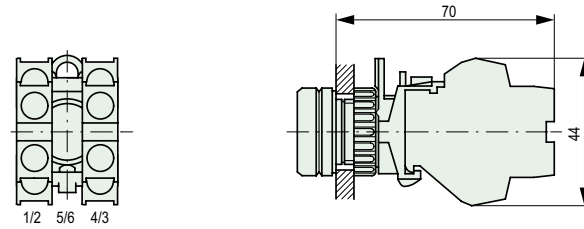
BE 3



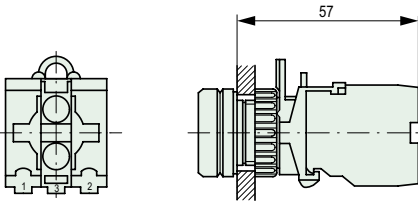
**Pushbutton with EK...**



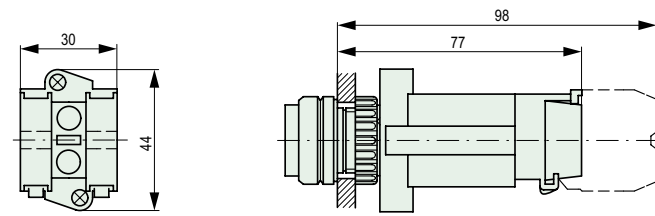
**Pushbutton with EC...**



**Indicator Lights / Illuminated Pushbuttons**



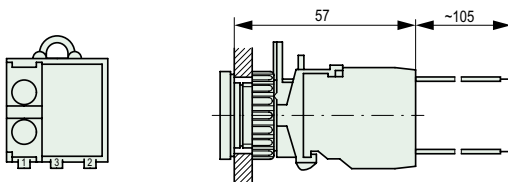
**Indicator Lights / Illuminated Pushbuttons with BFT**



**Lamp Transformers**

For mounting with blanking plug

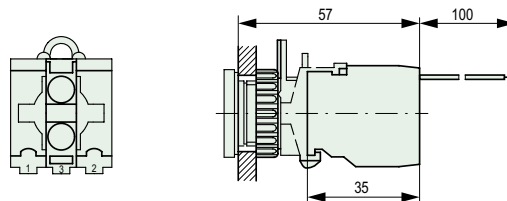
ET



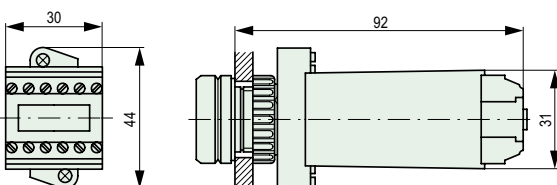
**Diode Element**

For mounting with blanking plug

ED



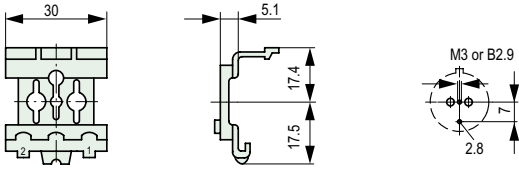
**Digital Display with BCE**



# 22.5 mm Control Circuit Devices RMQ 22 - Dimensions (in mm)

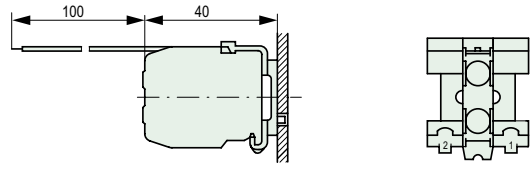
## Surface / Rear Mounting Fixing Adapter

BE 3 C



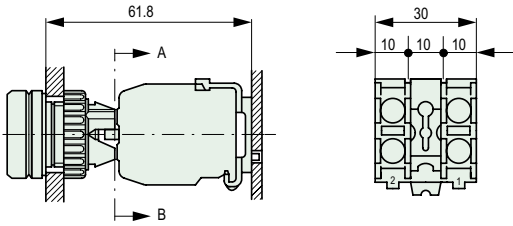
## Diode Element

ED



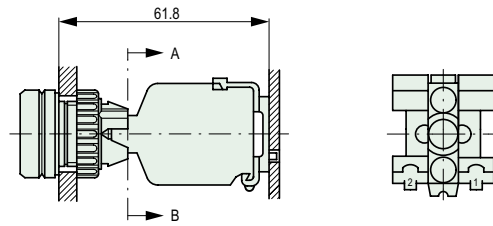
## Button

View A-B



## Indicator Light / Illuminated Pushbutton

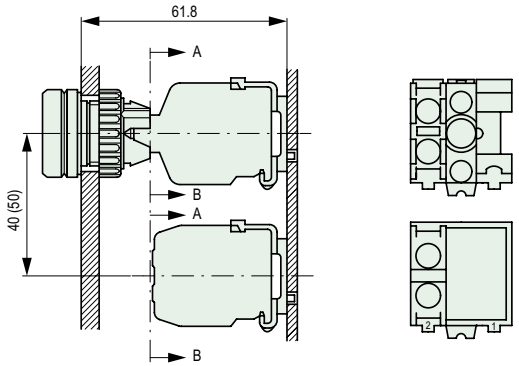
View A-B



## Indicator Light / Illuminated Pushbutton

With separate lamp transformer

View A-B

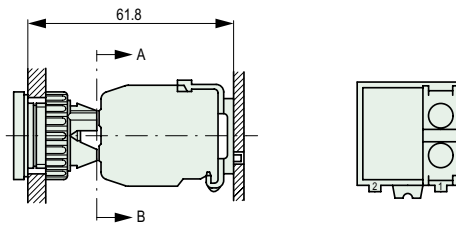


## Lamp Transformer

For mounting separately with blanking plug

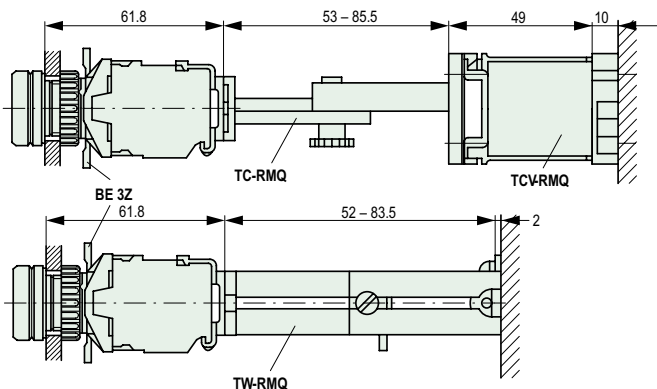
ET

View A-B



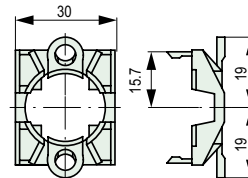
## Button, Illuminated Pushbutton, Indicator Light

With telescopic clip or telescopic bracket



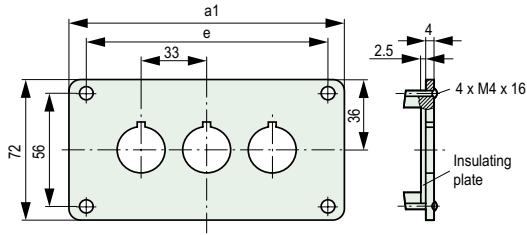
## Centering Adapter

BE 3 Z



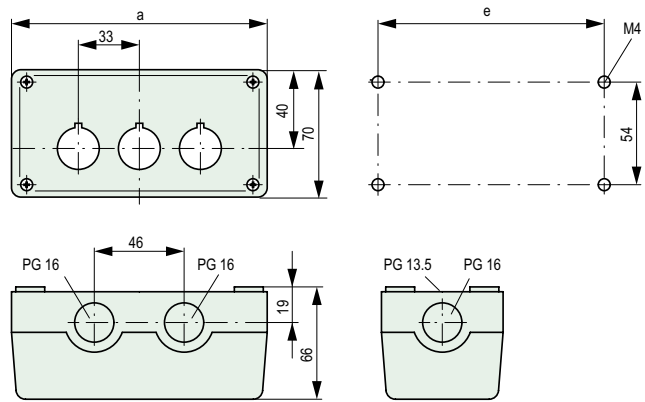
Flush Mounting Plates

E...M



Type	a1	e
E(GE)1 M	72	56
E2M	105	89
E3M	138	122
E4M	171	155
E5M	204	188
E6M	237	221
E7M	270	254
E8M	303	287

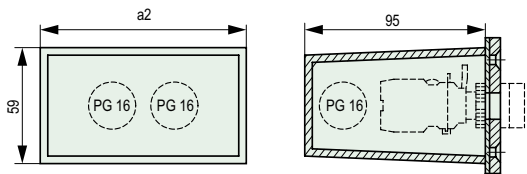
I...M



Type	Number of locations	a	e	Cable entries	
I(GE) 1M	1	72	54	3 x PG 16	1 x PG 13.5
I 2M	2	120	100	3 x PG 16	2 x PG 13.5
I 3M	3	153	133	4 x PG 16	2 x PG 13.5
I 4M	4	186	166	4 x PG 16	2 x PG 13.5
I 5M	5	219	200	4 x PG 16	2 x PG 13.5

Shroud

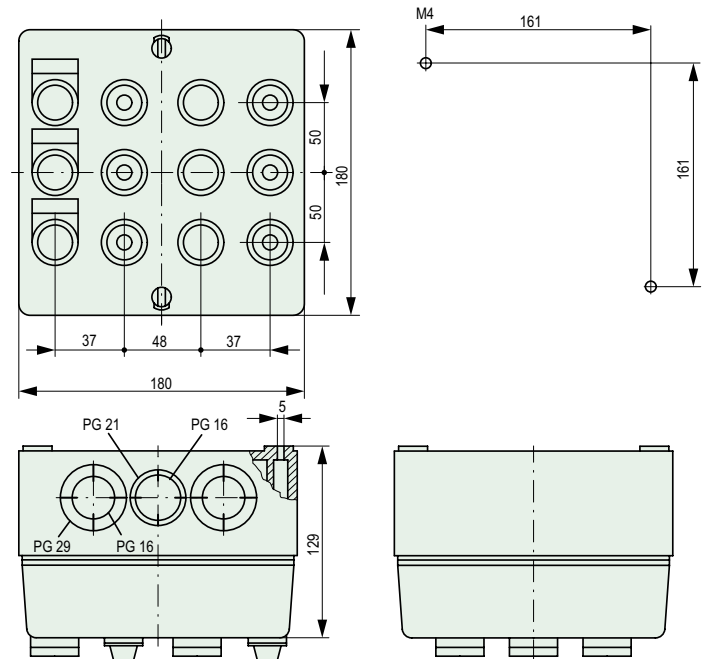
H...M



Type	a2	Cable entries
H 1M	42	3 x PG 16
H 2M	75	4 x PG 16
H 3M	108	4 x PG 16
H 4M	141	4 x PG 16
H 5M	174	5 x PG 16
H 6M	207	6 x PG 16
H 7M	240	6 x PG 16
H 8M	273	7 x PG 16

Surface Mounting Enclosures, 12 Locations

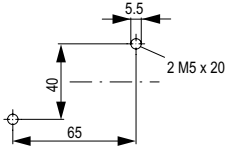
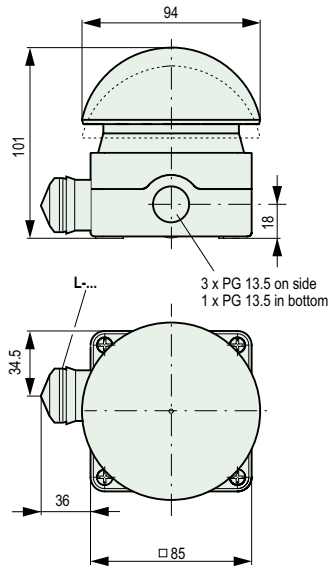
I 12M



# 22.5 mm Control Circuit Devices RMQ 22 - Dimensions (in mm)

## Foot and Palm Switches

FAK...



Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

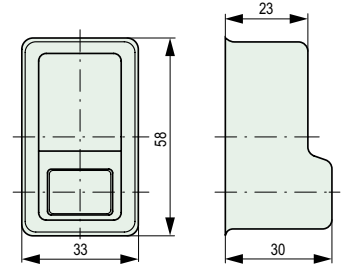
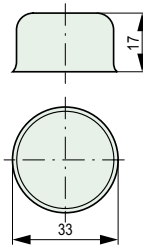
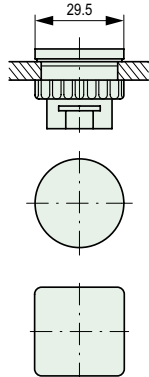
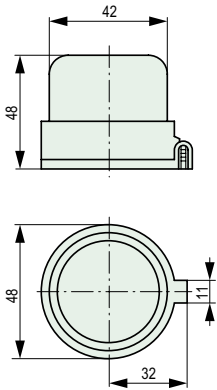
## Accessories

PL-RPV

RB22..., MB22...

MT-D

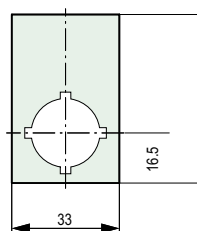
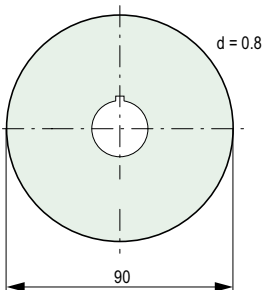
MT-DD



## Emergency Stop Label Mount

1 AK...

ZK...





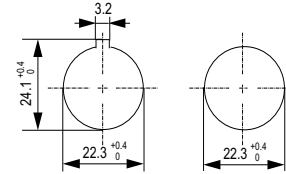
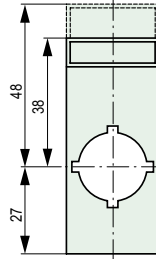
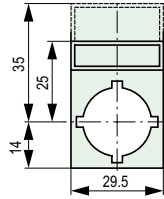
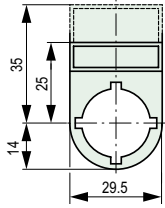
Label Mounts

Mounting Holes with/without Lug Slot

RA..., RB...

MA..., MB...

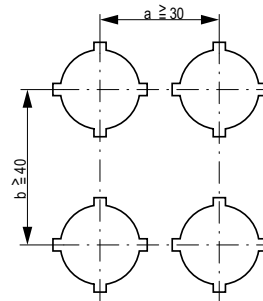
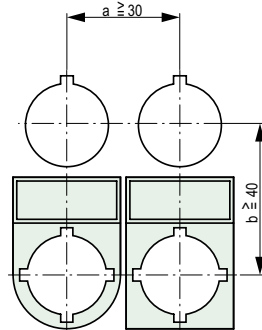
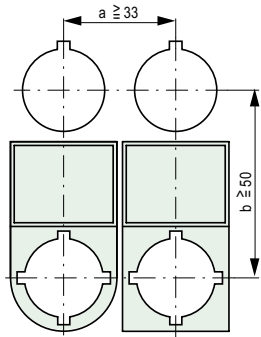
QA..., QB



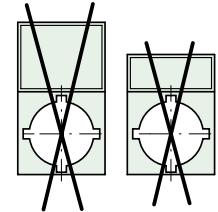
Grid dimension of IEC 947

Minimum grid dimension  
(not applicable if EC... is used)

Grid dimension for RD + double actuators  
with MT-D diaphragms

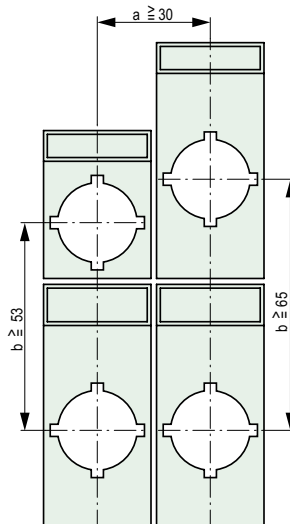
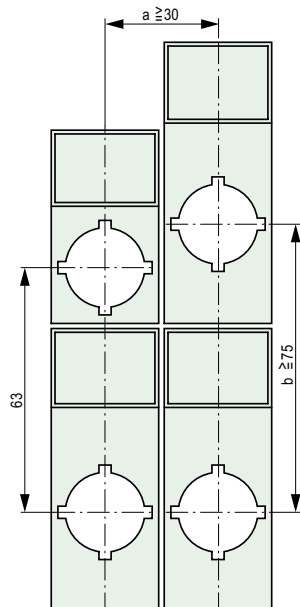


Do not use actuator diaphragm with label mounts since the mounts do not conform to IP 67.

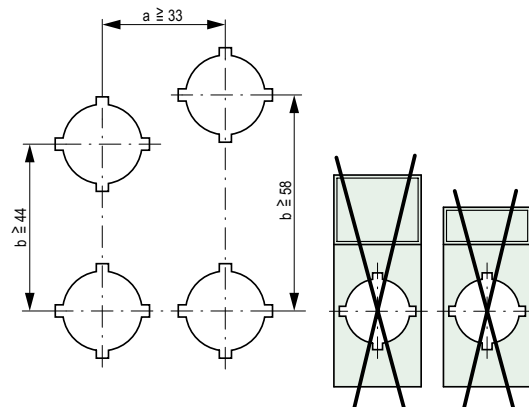


Grid dimension for  
QDD...

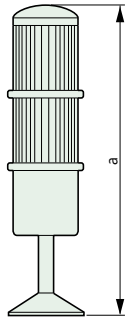
	a ≥	b ≥
IEC 947/EN 50 007	30	50
RMQ 22 min.	30	40
<b>RD + MT-D</b>	33	
<b>RP, MP</b>	35	
<b>RPSR, MPSR</b>	35	
<b>RPV</b>	38	
<b>PL-RPV</b>	48	56
<b>QDD + MT-DD</b>	33	58
<b>QDD, QDDL</b>		54
<b>EC...</b>		50
<b>BCE 24, BCEL 24, BFT...</b>		44



Grid dimension for  
QDD + double actuators  
with MT-DD diaphragms

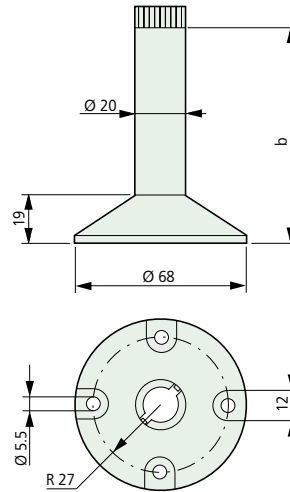


SL-100-... complete units



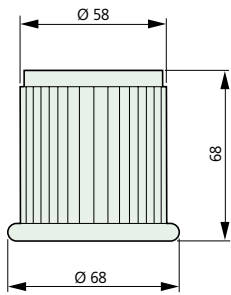
Number of modules	a
1	227
2	289
3	351
4	413
5	475

SL-F... base  
With tube

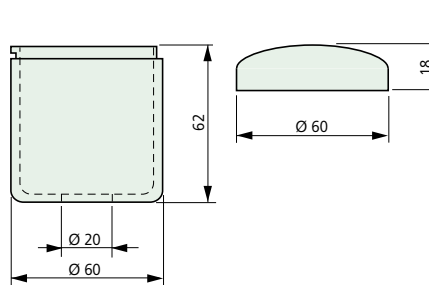


	b
SL-F100	85
SL-F250	235
SL-F400	402
SL-F800	802

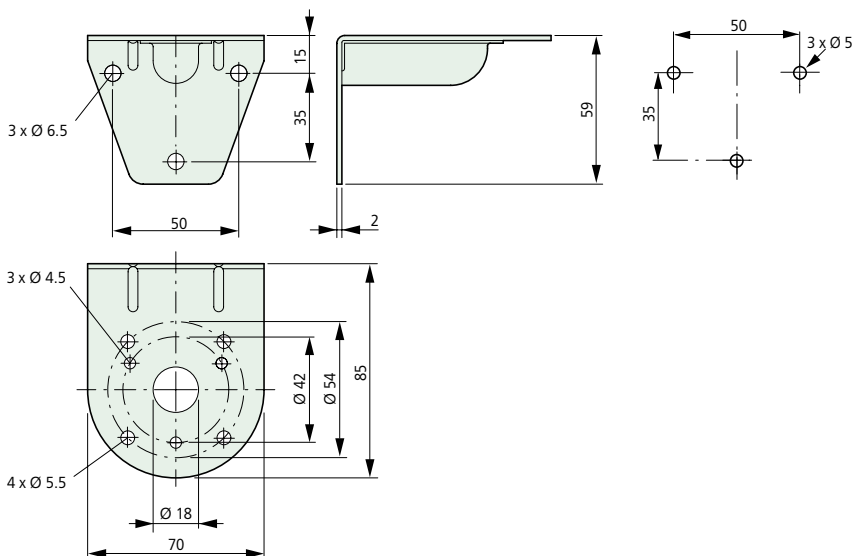
SL-L-..., SL-FL-...  
SL-BL-..., SL-A... modules



SL-B basic module  
With top cover

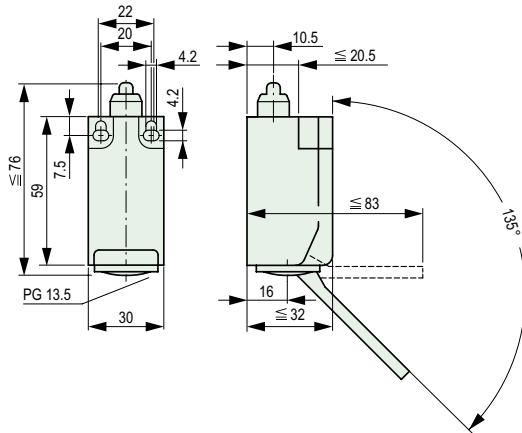


SL-FW mounting bracket

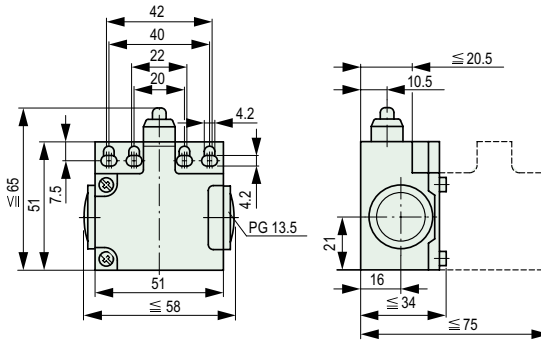


Position Switches

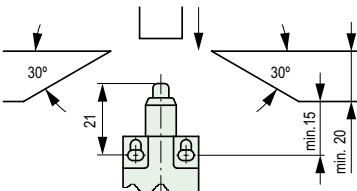
AT 0-...-I



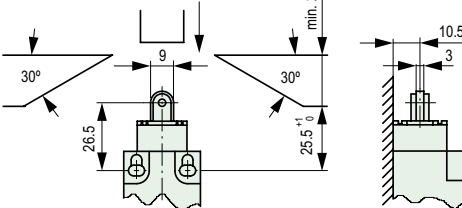
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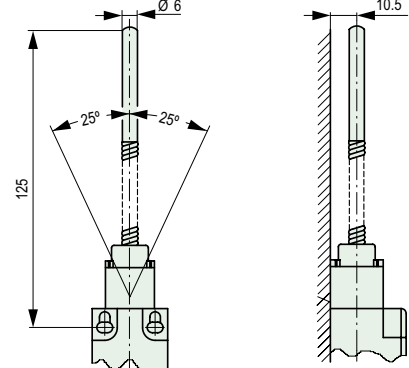
AT 0-...-I(A)



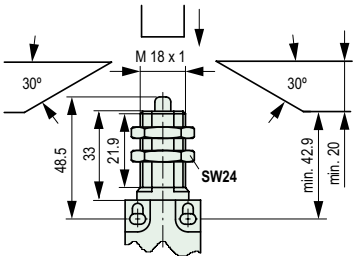
AT 0-...-I(A)/RS



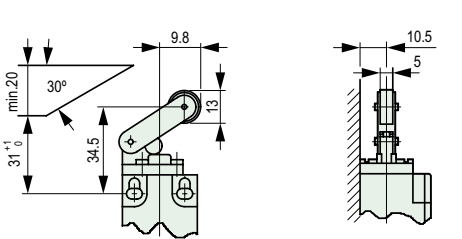
AT 0-11-S-I(A)/F



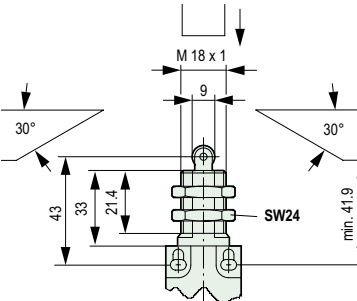
AT 0-...-I(A)/ZS



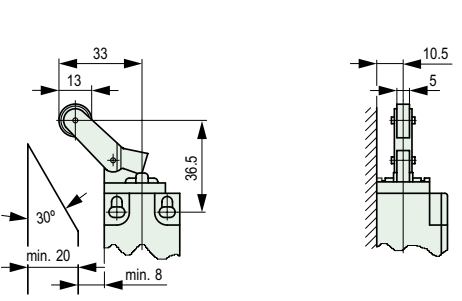
AT 0-...-I(A)/AR



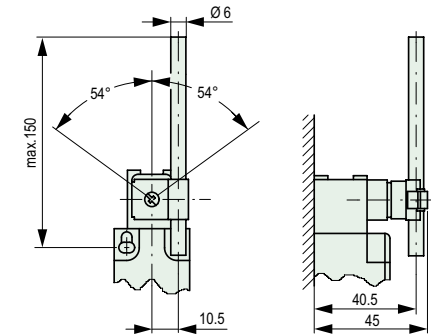
AT 0-...-I(A)/ZRS



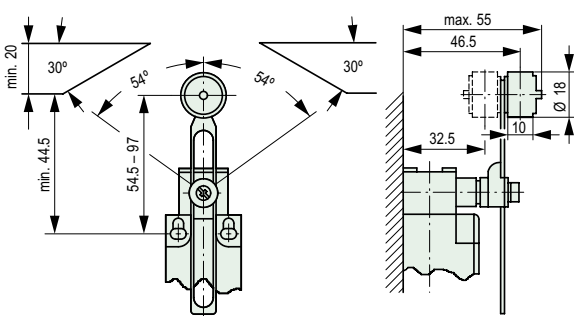
AT 0-...-I(A)/WR



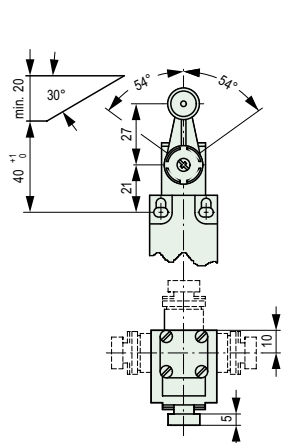
AT 0-...-I(A)/H



AT 0-...-I(A)/V



AT 0-...-I(A)/R



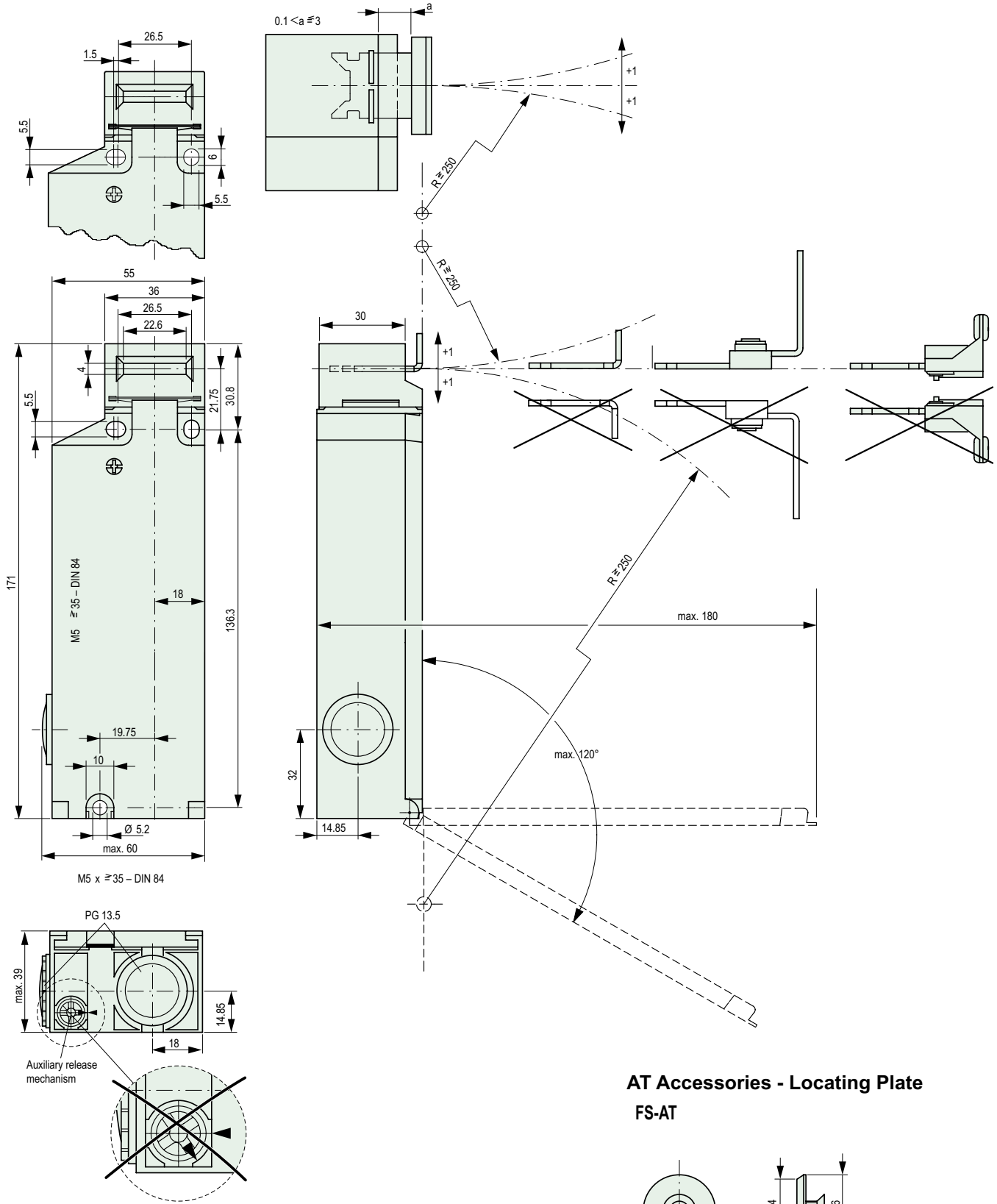
# Control Circuit Devices AT 0...-ZBZ Safety Position Switch Dimensions

## Safety Position Switches

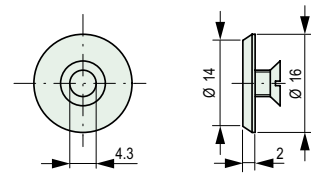
AT 0...-ZBZ

Heavy Duty Oiltight Pilot Devices  
Limit Switches, Safety Interlock Switches

5

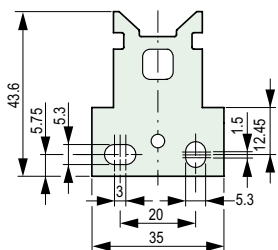


### AT Accessories - Locating Plate FS-AT

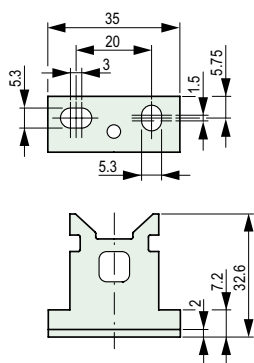


Actuating Fingers for AT0...-ZBZ Safety Position Switches

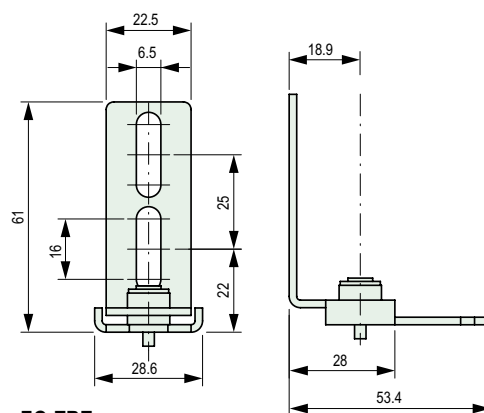
G-ZBZ



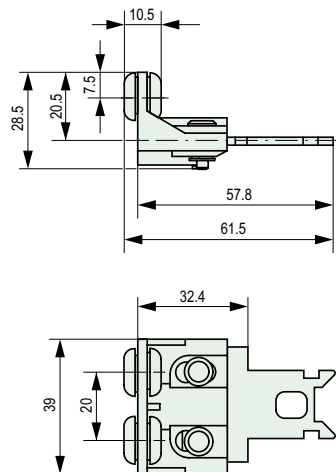
W-ZBZ



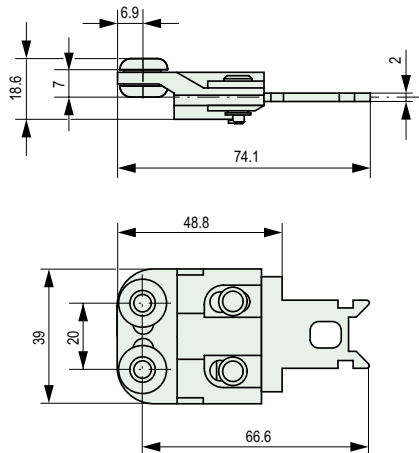
F-ZBZ



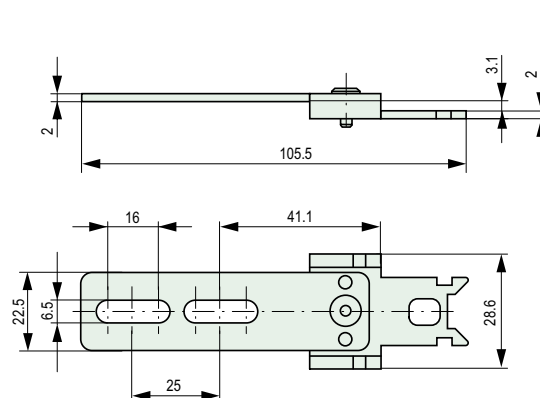
NW-ZBZ



NG-ZBZ



FG-ZBZ



Safety Position Switch

AT 0...-ZB

