Accessories

- Ethernet Adaptor Cards
- Surge Protectors
- Industrial Power Supplies
- Power Adaptors
- Hardened SFP Fiber Tranceivers
- TransRack

Table of Contents

Network Interface Card Glossary

ACPI (Advanced Configuration and Power Interface)

ACPI establishes industry-standard interfaces that enable the OS-directed configuration, power management, and thermal management of mobile, desktop, and server platforms.

Fiber Optics

Fiber optic cables are used in high noise environments because their transmissions are unaffected by electromagnetic and radio frequency interference. With their flexibility for various types of fiber optic interfaces, EtherWAN's Fiber Ethernet adapter series utilizes fiber optic signals to extend transmission distances and greatly improve the communication quality of the signals, as part of a secure fiber optic infrastructure that resists electromagnetic and radio frequency interference.

IEEE 802.1Q VLAN Tagging & IEEE 802.1p Layer 2 Priority

EtherWAN's Fiber PCI Express Gigabit Ethernet adapter GE3000 and Fiber PCI Fast Ethernet adapter EN301 can support IEEE 802.1Q VLAN tagging to segment the network and improve performance and security. EtherWAN's Fiber PCI Express Gigabit Ethernet adapter GE3000 and Fiber PCI Fast Ethernet adapter EN301 can also support IEEE802.1p Layer 2 priority to prioritize traffic, which enables packet streams to be prioritized to the adapters.

PCI Fast Ethernet

EtherWAN's Fiber PCI Fast Ethernet adapter EN301 series complies with PCI specifications v2.1 and v2.2 and provides a direct connection to the 32-bit parallel PCI bus. The PCI bus provides superior performance and can transfer information in burst mode, since multiple sets of data can be transmitted in a row. It also supports bus mastering of multiple devices on the bus simultaneously, and it can be setup either synchronously or asynchronously. The PCI bus runs at half of the memory bus speed in a synchronized setup, but the speed of the PCI bus can be set independently of the memory bus speed in an asynchronous setup. In addition, multiple devices can share one communication channel managed by the PCI bus.

PCI Express Gigabit Ethernet

EtherWAN's Fiber PCI Express Gigabit Ethernet adapter GE3000 series supports the PCI Express 1.0a bus interface and provides high-bandwidth performance that is significantly better than existing conventional PCI architectures. PCI Express utilizes high-bandwidth serial interconnect technology. The bidirectional PCI Express link is composed of pairs of lanes, which are serial unidirectional point-to-point connections. Thus, the bandwidth of the PCI Express link can be scaled by adding signal pairs to form multiple lanes between two devices.

Preboot Execution Environment (PXE)

The Preboot Execution Environment (PXE) is an industry standard client/server interface that allows networked computers without an operating system to be configured and booted remotely by an administrator. The PXE code is typically delivered with a new computer on a read-only memory chip or boot disk that allows the computer (the client) to communicate with the network server and be remotely configured or have its operating system remotely booted.

Wake-on-LAN (WOL)

Wake-on-LAN (WOL) is an Ethernet computer networking standard that allows a computer to be turned on or woken up by a network message.

Accessoies Connection Guide

Nic Cards >>			
Model Name	GE3100	EN301	EN400
Ethernet Interface			
Max. 10/100 BASE-TX	-	-	-
Max. 100 BASE-FX	-	1	1
Max. 100BASE SFP	-	-	1
Max. 1000 BASE-T	1	-	-
Max. 1000 BASE-SX/LX	1	-	-
Max. 1000BASE SFP	1	-	-
Bus Interface			
PCI Express	√	-	√
PCI	-	√	-
Mode of Operations			
Auto-negotiation, Auto-MDI/MDI-X	√	-	-
Flow Control	√	√	√
Store & Forward	-	-	-
Mechanical			
Dimensions (mm) (L x W)	125 x 121	133 x 117.5 / 133 x 80	80 x 119.2 / 117.5 x 119.2
Management Function			
ACPI*	√	√	√
Wake-on -LAN remote wake-up	√	-	√
IEEE802.1Q VLAN	√	√	√
IEEE802.1P Layer 2 Priority Tagging	√	√	√
NDIS5 Checksum Offload	√	√	√
RFC1157 SNMP v1	√	-	-
Preboot Execution Environment	√	-	-
Cable Diagnostic Utility	√ (Only TX model)	-	-
Jumbo Frame	√ (Only TX model)	-	-
Operating Temperature			
0˚C to 45˚C	√	√	√
Driver Supports			
Windows	Windows Vista, Windows 2003, Windows XP, Windows 2000, Windows 7/8	Windows XP, Windows 2000, Windows ME, Windows 98, Windows 95, Windows NT 3.51/4.0, Work Group 3.11	Microsoft Windows 98, Windows ME, Windows XP, Windows 2000, Windows 2003, Windows 2008, Windows Vista, and Windows 7
Novell	-	Netware 3.11, 3.12, 4.x, 5.x, 6.0 Clinet 32, Netware Client	Novell server driver (Support OS 6.x, 5.x), client for DOS (ODIdriver)
Unix	Linux 2.4/2.6/3.x	RedHat Linux 6.2, 7.0, 7.1 UnixWare 8.0, SCO UNIX 5.0	SCO Unix 5.0.6/5.0.7, SCO OpenServer 6, UnixWare 7.1.x and Linux kernel 2.6.x and 2.4.x (Support x86 and x64)
Others	Mac OS, 10.4, 10.5, 10.6 and 10.7 (Intel-based)	LAN Manager, LANtastic, PC-NFC, NCSA Telnet, FreeBSD 3.2, 4.0, 4.11, 4.2	MacOS 10.4/10.5 on Intel-based Mac computer, 10.6 on Intel-based Mac computer, FreeBSD 7.x/8.0
Regulatory Approvals			
CE / FCC	Class B	Class B	Class B

* Advanced Configuration & Power Interface

Surge Protector >>		
Model Name	PD1041 NEW	PD3041 NEW
Interface		
Max. Continuous Operating Voltage Uc	≤ 3.3VDC	≤ 185VDC
Max. Continuous Operating Voltage Uc, PoE	± 60VDC	-
Nominal Discharge Surge Current I_n (8/20) μs (Core-Core)	100A	≤ 5KA
Nominal Discharge Surge Current I_n (8/20) μs (Core-Earth)	2KA (per signal pair)	≤ 5KA
Total Surge Current (8/20) μs	10KA	10KA
Nominal Pulse Current I_{an} (Core-Core)	≤ 40A, (10/700) μs	100A, (10/1000) μs
Nominal Pulse Current I_{an} ((Core-Earth)	≤ 160A, (10/700) μs	100A, (10/1000) μs
Connector input/output	RJ45 / RJ45	RJ11 / RJ11 Terminal Block / Terminal Block
Mechanical		
Casing	aluminum	aluminum
Installation*	D	D
Dimensions (mm) (W x D x H)	30 x 63 x 100	30 x 63 x 100
Operating Temperature		
-40˚C to 75˚C	√	√
Regulatory Approvals		
CE / FCC / VCCI	√	√
UL497B	√	√
EN / IEC61643-21 (pending)	√	√

* D: DIN-Rail Mounting, P: Panel Mounting, R: Rack Mounting, W: Wall Mounting

Industrial Power Supplies >>						
Model Name	DR-75-48	DR-120-48	SDR-120-48	SDR-240-48	SDR-480-48	MDR-40-48
Output						
DC Voltage	48 - 53VDC	48 - 53VDC	48 - 55VDC	48 - 55VDC	48 - 55VDC	48 - 56VDC
Current Range	0 - 1.6A	0 - 2.5A	2.5A	5A	10A	0 - 0.83A
Rated Power	76.8W	120W	120W	240W	480W	39.8W
Input						
12 - 36VDC	-	-	-	-	-	-
85 - 264VAC / 120 - 370VDC	√	-	-	-	-	√
88 - 264VAC / 120 - 370VDC	-	-	√	√	√	-
88 - 132VAC / 176 - 264VDC	-	√	-	-	-	-
Protection						
Over Voltage Protection	58 - 65V	58 - 65V	56 - 65V	56 - 65V	56 - 65V	57.6 - 64.8V
Overload Protection	105 - 150%	105 - 150%	110 - 150%	110 - 150%	110 - 150%	105-150%
Constant Current Limiting	√	√	√	√	√	√
Mechanical						
Casing	aluminum	aluminum	aluminum	aluminum	aluminum	plastic
Installation*	D	D	D	D	D	D
Dimensions (WxDxH)	55.5x125.2x100	65.5x125.2x100	40x125.2x113.5	63x125.2x113.5	85x125.2x128.5	40x100x90
Operating Temperature						
-10˚C to 60˚C	√	√	-	-	-	-
-20˚C to 70˚C	-	-	-	-	-	√
-25˚C to 70˚C	-	-	√	√	√	-
-40˚C to 75˚C	-	-	-	-	-	-
Regulatory Approvals						
CE / FCC	√	√	√	√	√	√
UL60950-1	-	√	-	-	-	√
UL508	√	√	√	√	√	√
E Mark	-	-	-	-	-	-

* D: DIN-Rail Mounting, P: Panel Mounting, R: Rack Mounting, W: Wall Mounting

Industrial Power Supplies >>							
Model Name	DD-85-48	DD-85-55	DR-30-24	DR-30-12 NEW	DR-60-24	DR-75-24	DR-120-24
Output							
DC Voltage	48VDC	55VDC	24VDC	12VDC	24VDC	24VDC	24VDC
Current Range	0 - 1.78A	0 - 1.55A	0 - 1.5A	0 - 2A	0 - 2.5A	3.2A	0 - 5A
Rated Power	85W	85W	36W	24W	60W	76.8W	120W
Input							
12 - 36VDC	√	√	-	-	-	-	-
85 - 264VAC / 120 - 370VDC	-	-	√	√	√	√	-
88 - 132VAC / 176 - 264VDC	-	-	-	-	-	-	√
90 - 264VAC	-	-	-	-	-	-	-
Protection							
Over Voltage Protection	58V	60V	27.6 - 32.4V	13.8 - 16.2V	27.6 - 32.4V	29 - 34V	29 - 33V
Overload Protection	110 - 160%	110 - 180%	105 - 160%	105 - 160%	105 - 160%	105 - 150%	105 - 150%
Constant Current Limiting	-	-	√	√	√	-	√
Mechanical							
Casing	aluminum	aluminum	plastic	plastic	plastic	aluminum	aluminum
Installation*	D, P	D, P	D	D	D	D	D
Dimensions (WxHxD)	50x148x165	50x148x165	78x56x93	78x56x93	78x56x93	55.5x100x125.2	65.5x100x125.2
Operating Temperature							
-10˚C to 60˚C	√	√	-	-	-	√	√
-20˚C to 60˚C	-	-	√	√	√	-	-
-20˚C to 75˚C	-	-	-	-	-	-	-
-40˚C to 75˚C	-	-	-	-	-	-	-
Regulatory Approvals							
CE / FCC	√	√	√	√	√	√	√
UL60950-1	√	√	√	√	√	-	-
UL508	-	-	-	-	-	√	√
E Mark	√	-	-	-	-	-	-

* D: DIN-Rail Mounting, P: Panel Mounting, R: Rack Mounting, W: Wall Mounting

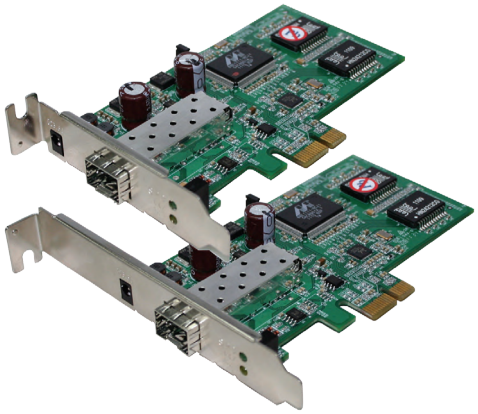
Power Adapters >>		
Model Name	GS120A-48	41-136042
Output		
DC Voltage	48VDC	12VDC
Current Range	0 - 2.5A	0 - 3A
Rated Power	120W	36W
Input		
90 - 264VDC	√	√
Mechanical		
Casing	plasitc	plastic
Installation*	-	-
Operating Temperature		
0˚C to 55˚C	√	-
-40˚C to 75˚C	-	√
Output Connector		
DC Jack with Latch	√	-
Open Wire for Terminal Block	-	√
DC Plug	-	-

Power Adapters >>			
Model Name	41-136043	41-136044	41-136046
Output			
DC Voltage	12VDC	12VDC	12VDC
Current Range	0 - 3A	0 - 3A	0 - 3A
Rated Power	36W	36W	36W
Input			
90 - 264VDC	√	√	√
Mechanical			
Casing	aluminum	aluminum	aluminum
Installation*	W	W	W
Operating Temperature			
0˚C to 55˚C	-	-	-
-40˚C to 75˚C	√	√	√
Output Connector			
DC Jack with Latch	-	√	-
Open Wire for Terminal Block	-	-	√
DC Plug	√	-	-

* D: DIN-Rail Mounting, P: Panel Mounting, R: Rack Mounting, W: Wall Mounting

GE3100 Series

PCI Express Gigabit Ethernet Adapter



Features

- Compliant to IEEE802.3z 1000BASE-SX/LX/SFP
- Supports PCI Express 1.1
- Supports low profile
- 0°C to 45°C operating temperature range
- Supports power down/link down power saving
- Plug-and-Play Support
- Jumbo Frame up to 9K Bytes
- RFC 1157 SNMP v1 compliant
- Preboot Execution Environment (PXE) 2.1
- Supports PCI Message Signaled Interrupt (MSI)
- IEEE 802.1P Layer 2 Priority Encoding
- IEEE 802.1Q VLAN tagging
- Supports ASF(Alert Standard Format) 2.0

Hardware Specifications

Technology

Standards
- IEEE802.3, 10BASE-T
- IEEE802.3u, 100BASE-TX
- IEEE802.3ab, 1000BASE-T
- IEEE802.3z, 1000BASE-SX/LX/SFP
- IEEE802.3Q, VLAN tagging
- IEEE802.3p, Priority Encoding
- IEEE802.3x, Full duplex flow control

Jumbo Frame
- 9K bytes

Driver
- Windows Vista, Windows 2003, Windows XP, Windows 2000, Windows 7/8
- Linux 2.4/2.6/3.x
- MacOS 10.4, 10.5, 10.6, and 10.7 (Intel-based)

Power

Power Consumption
- 3.2W Max.

Mechanical

Dimensions
- Low Profile:
  80mm (W) x 117.6mm (D)
  (3.2”(W) x 4.7”(D))
- 117.5 mm (W) x 117.6 mm (D)
  (4.7”(W) x 4.7”(D))

Weight
- 52g (1.8 oz.)

Interface

Ethernet Port
- Gigabit: 1 port

LED Indicators
- LED Connector: Per Unit: Link/Activity, SPD

Environment

Operating Temperature
- 0°C to 45°C (32°F to 113°F)

Storage Temperature
- -20°C to 70°C (-4°F to 158°F)

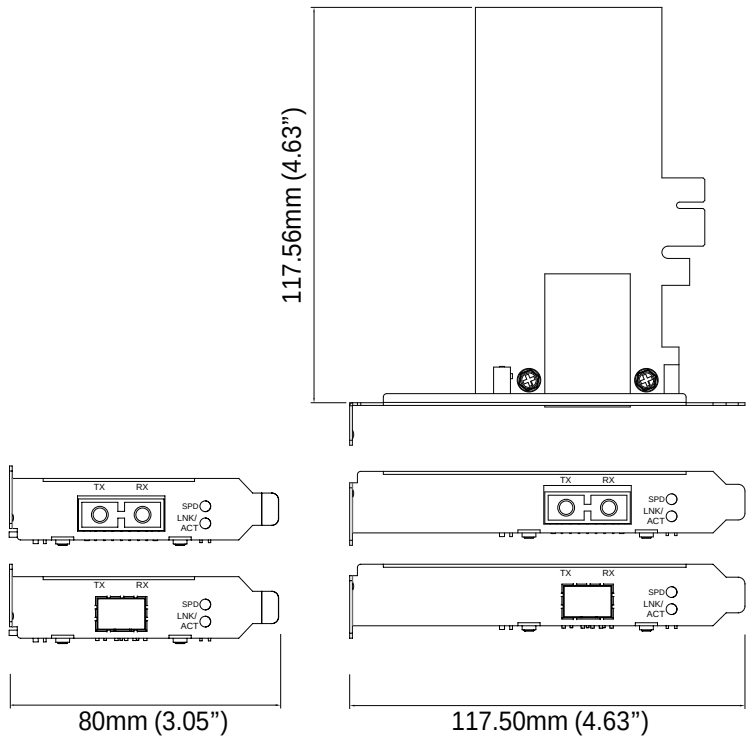
Ambient Relative Humidity
- 5% to 95% (non-condensing)

Regulatory Approvals

ISO
- Manufactured in an ISO9001 facility

Emission Compliance
- FCC Part 15, Class B
- CE, VCCI Class B

Dimensions



Low Profile Version

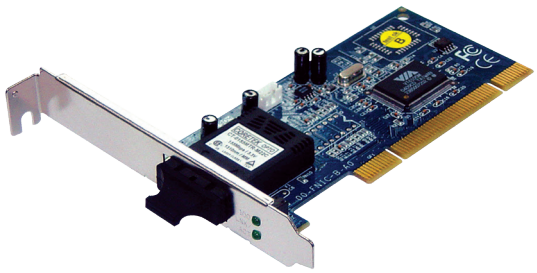
Ordering Information

Model	
GE3100PSC	1000BASE-SX (SC) Multi-Mode Fiber Gigabit Ethernet Adapter (Low Profile)
GE3100PSFP	1000BASE SFP Gigabit Ethernet Adapter(Low Profile)
GE3100SC	1000BASE-SX (SC) Multi-Mode Fiber Gigabit Ethernet Adapter
GE3100SFP	1000BASE SFP Gigabit Ethernet Adapter
GE3100TX	10/100/1000BASE-T Gigabit Ethernet Adaptor
GE3100PTX	10/100/1000BASE-T Gigabit Ethernet Adaptor (Low profile)

** More Gigabit options also available upon request.*

EN301 Series

32bit PCI-Bus 100BASE-FX Ethernet Adapter



Features

- **PCI 2.2 Specification compliant**
- **Separate 2K Bytes FIFO for receive and transmit controllers**
- **Advanced Configuration Power Interface (ACPI):**
  - Supports PC99, PC2001 and Net PC requirements
  - Supports PCI Bus Power Management Interface Specification Version 1.0/1.1
  - Supports ACPI Specification 1.0
  - Support Network Device Class Power Management Specification Version 1.0a
  - Wake-up supports magic packet
- **MAC Enhancement Function**
  - UDP, TCP/IP checksum for IPv4 frames
  - Statistics of 12 sets of hardware Management Information BASE counters
- **Utilities**
  - Windows auto installation
  - MS-DOS diagnostics
  - Desktop Management Interface (DMI) 2.0 (Vista is not support)
- **0°C to 45°C (32°F to 113°F) operating temperature range**

Hardware Specifications

Technology

Standards
- IEEE802.3u 100BASE-FX
- IEEE802.3x
- IEEE802.1Q

Protocols
- IEEE802.3x full-duplex flow control; Multiple pause frame XON/XOFF

Driver
- Microsoft Windows 95 (including OSR2), Windows 98 (including SE), Windows ME, Windows 2000, Windows XP, Windows Vista (32bit/64bit), Windows NT 4.0, Windows 7 (32bit/64bit)
- LAN Manager, LANtastic, PC-NFS
- Novell Netware 3.11, 3.12, 4.x, 5.x, 6.0, Client 32
- Linux Kernel 2.2.x/2.4.x/2.6.x
- FreeBSD 3.2, 4.0, 4.11, 4.2, 5.x
- SCO UnixWare 7.x/Open Unix 8, SCO UNIX 5.0

Power

Power Consumption
- 1W Max.

Mechanical

Dimensions
- EN301: 133mm (L) x 117.5mm (W) ; 5.23" (L) x 4.62" (W)
- EN301L: 133mm (L) x 80mm (W) ; 5.23" (L) x 3.14" (W)

Weight
- 80g (0.18lb.)

Interface

Ethernet Port
- 100BASE-FX: 1 port

LED Indicators
- Per Unit: Link/Activity, Speed

Environment

Operating Temperature
- 0°C to 45°C (32°F to 113°F)

Storage Temperature
- -10°C to 70°C (14°F to 158°F)

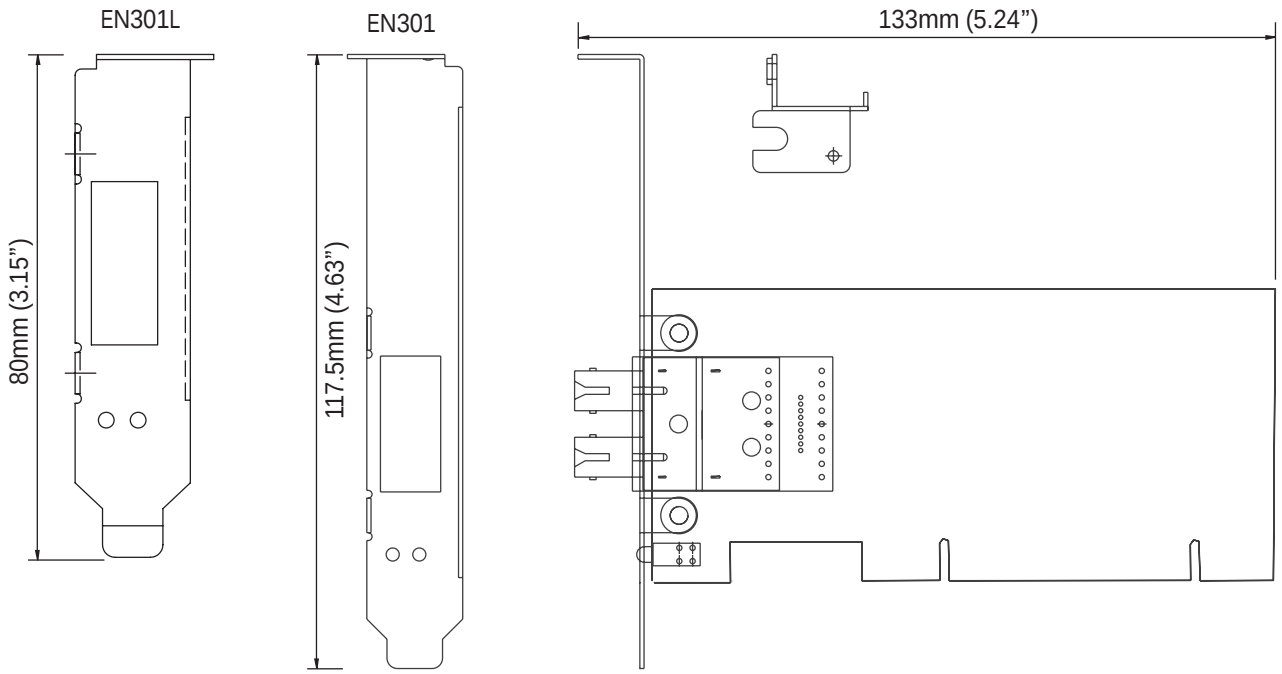
Ambient Relative Humidity
- 5% to 95% (non-condensing)

Regulatory Approvals

ISO
- Manufactured in an ISO9001 facility

Emission Compliance
- FCC Part 15, Class B
- CE Mark Class B

Dimensions

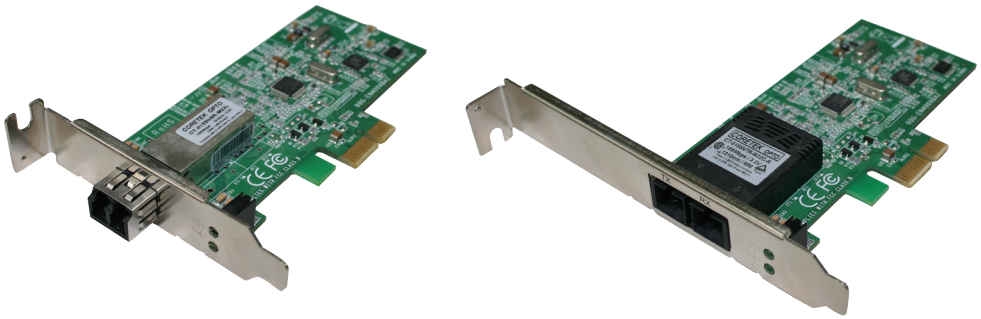


Ordering Information

Model	
EN301C	100BASE-FXMultiMode(SC) Ethernet Adapter
EN301T	100BASE-FXMultiMode(ST) Ethernet Adapter
EN301C-20	100BASE-FXSingleMode(SC)-20Km Ethernet Adapter
EN301C-40	100BASE-FXSingleMode(SC)-40Km Ethernet Adapter
EN301T-20	100BASE-FXSingleMode(ST)-20Km EthernetAdapter
EN301CA-20	100BASE-FXSingleMode(SC) WDM-TX:1310nm/RX:1550nm-20Km Ethernet Adapter
EN301CB-20	100BASE-FXSingleMode(SC) WDM-TX:1550nm/RX:1310nm-20Km Ethernet Adapter
EN301CA-40	100BASE-FXSingleMode(SC) WDM-TX:1310nm/RX:1550nm-40Km Ethernet Adapter
EN301CB-40	100BASE-FXSingleMode(SC) WDM-TX:1550nm/RX:1310nm-40Km Ethernet Adapter
EN301LC	100BASE-FXMultiMode(SC) Ethernet Adapter with low-profile bracket
EN301LT	100BASE-FXMultiMode(ST) Ethernet Adapter with low-profile bracket
EN301LC-20	100BASE-FXSingleMode(SC)-20Km Ethernet Adapter with low-profile bracket
EN301LC-40	100BASE-FXSingleMode(SC)-40Km Ethernet Adapter with low-profile bracket
EN301LT-20	100BASE-FXSingleMode(ST)-20Km Ethernet Adapter with low-profile bracket
EN301LCA-20	100BASE-FXSingleMode(SC)WDM-TX:1310nm/RX:1550nm-20Km Ethernet Adapter with low-profile bracket
EN301LCB-20	100BASE-FXSingleMode(SC)WDM-TX:1550nm/RX:1310nm-20Km Ethernet Adapter with low-profile bracket
EN301LCA-40	100BASE-FXSingleMode(SC)WDM-TX:1310nm/RX:1550nm-40Km Ethernet Adapter with low-profile bracket
EN301LCB-40	100BASE-FXSingleMode(SC)WDM-TX:1550nm/RX:1310nm-40Km Ethernet Adapter with low-profile bracket

EN400 Series

PCI-Express 100BASE-FX/SFP Ethernet Adapter



Spotlight

- **SFP slot and low-profile version availability**
- **Supports PCI Express 1.1**
- **Wake-on-LAN and remote wake-up support**
- **Supports 1-Lane 2.5Gbps PCI Express Bus**
- **0 to 50°C operating temperature range**

Features

- Compliant IEEE802.3 10BASE-T, 802.3u 100BASE-TX/FX/SFP
- Supports PCI Express 1.1
- Various Type of Cable Support - Twisted Pair Cable or Fiber Optic Cable
- Plug-and-Play Support
- Wake-on-LAN and remote wake-up support
- Full Duplex flow control (IEEE 802.3x)
- IEEE 802.1P Layer 2 Priority Encoding
- IEEE 802.1Q VLAN tagging
- Supports power down/link down power saving (for EN400TX)
- Supports 1-Lane 2.5Gbps PCI Express Bus
- 0 to 50°C operating temperature range

Hardware Specifications

Technology

Standards
- IEEE802.3
- IEEE802.3u

Protocols
- IEEE802.3x Full-duplex flow control

Driver
- Microsoft Windows 98, Windows ME, Windows XP, Windows 2000, Windows 2003, Windows 2008, Windows Vista, and Windows 7
- SCO Unix 5.0.6 and 5.0.7
- SCO OpenServer 6 and UnixWare 7.1.x.
- FreeBSD 7.x and 8.0
- Linux kernel 2.6.x and 2.4.x (Support x86 and x64)
- Novell server driver (Support OS 6.x, 5.x), client for DOS (ODI driver)
- MacOS 10.4 and 10.5 on Intel-based Mac computer, 10.6 on Intel-based Mac computer.

Power

Power Consumption
- 2W Max.

Mechanical

Dimensions

Low Profile:
- 80mm (W) x 119.2mm (D)
- 3.2”(W) x 4.76”(D))

Regular
- 117.5 mm (W) x 119.2 mm (D)
- (4.7”(W) x 4.76”(D))

Weight
- 80g (0.18lb.)

Interface

Ethernet Port
- 100BASE-FX: 1 port

LED Indicators
- Per Unit: Link/Activity, SPD

Environment

Operating Temperature
- 0°C to 50°C (32°F to 122°F)

Storage Temperature
- -10°C to 70°C (14°F to 158°F)

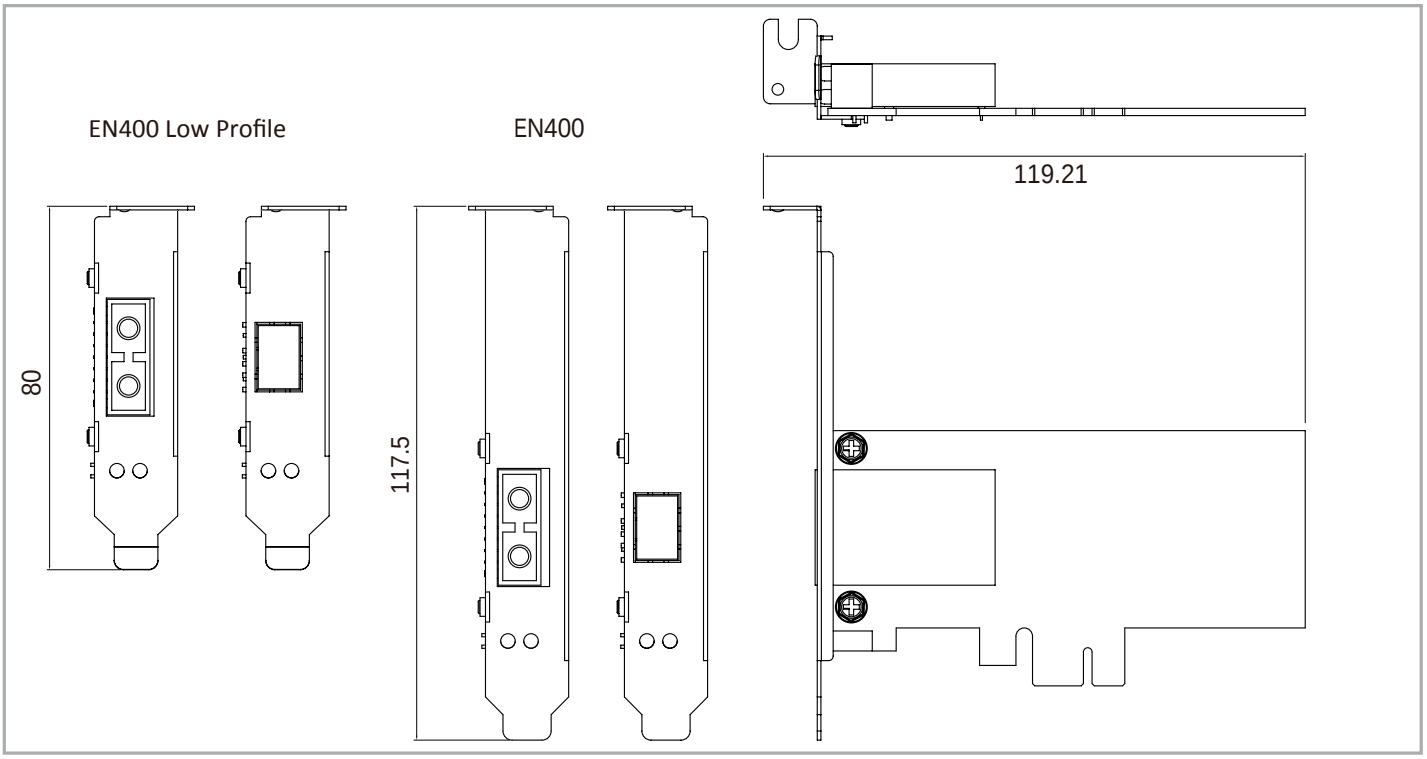
Ambient Relative Humidity
- 5% to 95% (non-condensing)

Regulatory Approvals

ISO
- Manufactured in an ISO9001 facility

Emission Compliance
- CE Mark Class B
- FCC Part 15 Class B

Dimensions



Ordering Information

Model	
EN400C	100BASE-FX Multi Mode (SC) Ethernet Adapter
EN400T	100BASE-FX Multi Mode (ST) Ethernet Adapter
EN400C-20	100BASE-FX Single Mode (SC) -20Km Ethernet Adapter
EN400C-40	100BASE-FX Single Mode (SC) -40Km Ethernet Adapter
EN400T-20	100BASE-FX Single Mode (ST) -20Km Ethernet Adapter
EN400CA-20	100BASE-FX Single Mode (SC) WDM-TX :1310nm/RX :1550nm -20Km Ethernet Adapter
EN400CB-20	100BASE-FX Single Mode (SC) WDM-TX :1550nm/RX :1310nm -20Km Ethernet Adapter
EN400CA-40	100BASE-FX Single Mode (SC) WDM-TX :1310nm/RX :1550nm -40Km Ethernet Adapter
EN400CB-40	100BASE-FX Single Mode (SC) WDM-TX :1550nm/RX :1310nm -40Km Ethernet Adapter
EN400LC	100BASE-FX Multi Mode (LC) -2Km Ethernet Adapter
EN400SFP	100BASE SFP Ethernet Adapter
EN400PC	100BASE-FX Multi Mode (SC) Ethernet Adapter (Low profile)
EN400PT	100BASE-FX Multi Mode (ST) Ethernet Adapter (Low profile)
EN400PC-20	100BASE-FX Single Mode (SC) -20Km Ethernet Adapter (Low profile)
EN400PC-40	100BASE-FX Single Mode (SC) -40Km Ethernet Adapter (Low profile)
EN400PT-20	100BASE-FX Single Mode (ST) -20Km Ethernet Adapter (Low profile)
EN400PCA-20	100BASE-FX Single Mode (SC) WDM-TX :1310nm/RX :1550nm -20Km Ethernet Adapter (Low profile)
EN400PCB-20	100BASE-FX Single Mode (SC) WDM-TX :1550nm/RX :1310nm -20Km Ethernet Adapter (Low profile)
EN400PCA-40	100BASE-FX Single Mode (SC) WDM-TX :1310nm/RX :1550nm -40Km Ethernet Adapter (Low profile)
EN400PCB-40	100BASE-FX Single Mode (SC) WDM-TX :1550nm/RX :1310nm -40Km Ethernet Adapter (Low profile)
EN400PLC	100BASE-FX Multi Mode (LC) -2Km Ethernet Adapter (Low profile)
EN400PSFP	100BASE SFP Ethernet Adapter (Low profile)

DD-85-48

85W/1.78A 48VDC Industrial Power Supply

Features

- **Wide input voltage range from 12VDC to 36 VDC**
- **-10°C to 60°C operating temperature range**
- **Over-voltage / over-current / reverse input protection**

Hardware Specifications

Power

Output
- DC Voltage: 48VDC
- Current Range: 0 to 1.78A
- Rated Power: 85W

Input
- Voltage Range: 12-36VDC
- Inrush Current: 13A max./12VDC or 50A/36VDC

Protection
- Over Voltage Protection: 56V
- Over-current protection: 110% to 180% of rated value

Mechanical

Casing
- Aluminum case

Dimensions
- 50mm (W) x 148mm (D) x 165mm(H)
  (1.96" (W) x 5.82" (D) x 6.49" (H))

Weight
- 1.2kg (2.64 lb)

Installation
- DIN-Rail and Panel mounting (both mounting kits are included)

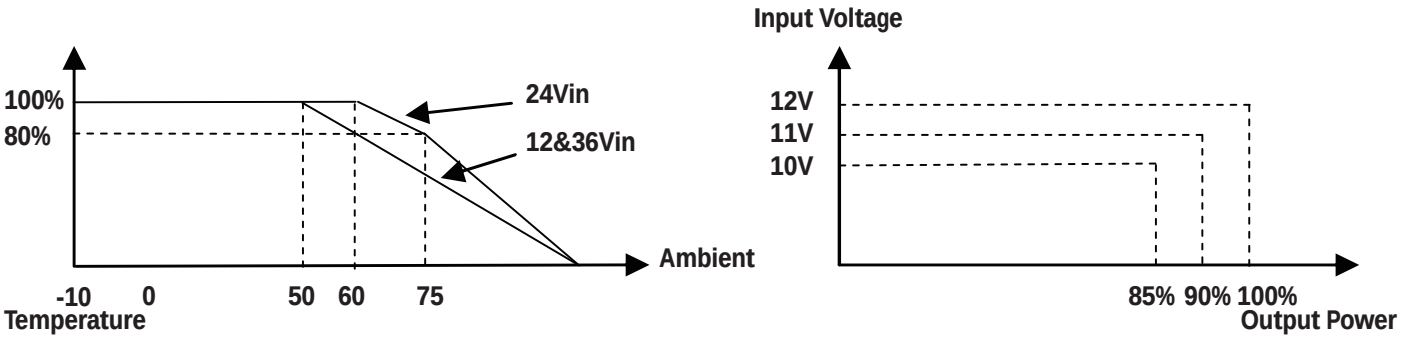
Environment

Operating Temperature
- -10°C to 60°C (Refer to output load derating curve)

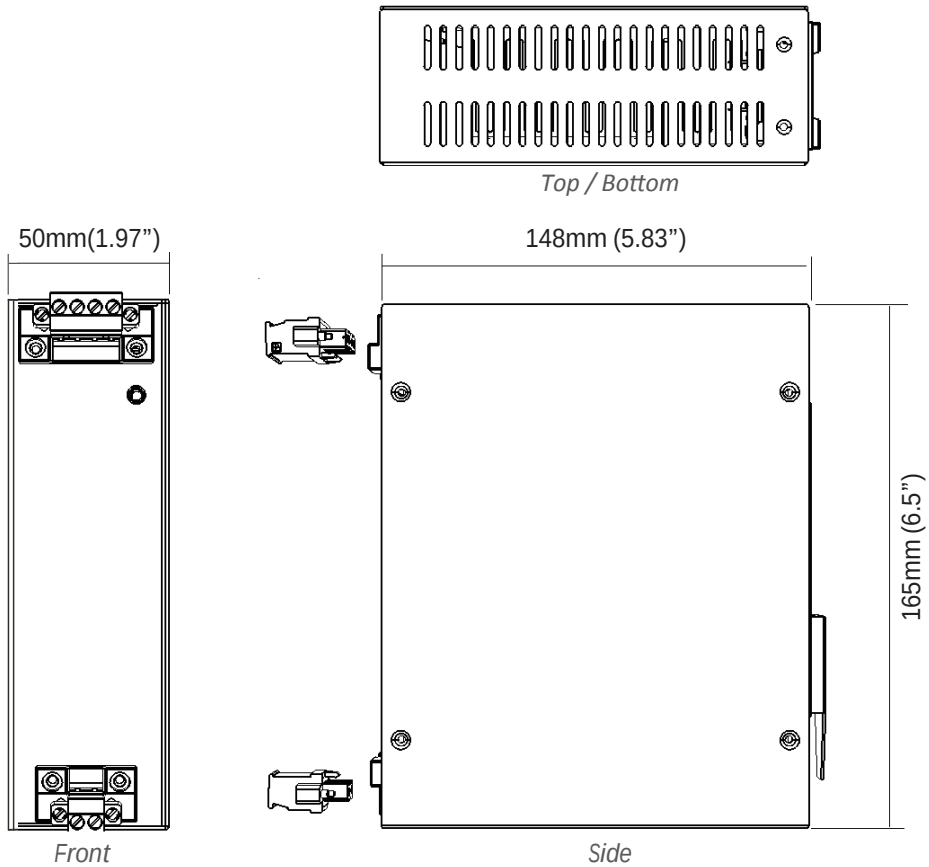
Storage Temperature
- -20°C to 85°C (-4°F to 158°F)

Working Humidity
- 0% to 95% RH

Derating Curves



Dimensions



Ordering Information

Model

DD-85-48	85W/1.78A 48VDC Industrial Power Supply

DD-85-55

85W/1.55A 55VDC Industrial Power Supply

Features

- **Wide input voltage range from 12VDC to 36 VDC**
- **-10°C to 60°C operating temperature range**
- **Over-voltage / over-current / reverse input protection**

Hardware Specifications

Power

Output
- DC Voltage: 55VDC
- Current Range: 0 to 1.55A
- Rated Power: 85W

Input
- Voltage Range: 12-36VDC
- Inrush Current: 13A/12VDC or 50A/36VDC

Protection
- Over Voltage Protection: 60V
- Over-current protection: 110% to 180% of rated value

Mechanical

Dimensions
- 50mm (W) x 148mm (D) x 165mm(H)
  (1.96" (W) x 5.82" (D) x 6.49" (H))

Weight
- 1.2kg (2.64 lb)

Installation
- DIN-Rail and Penel mounting (both mounting kits are included)

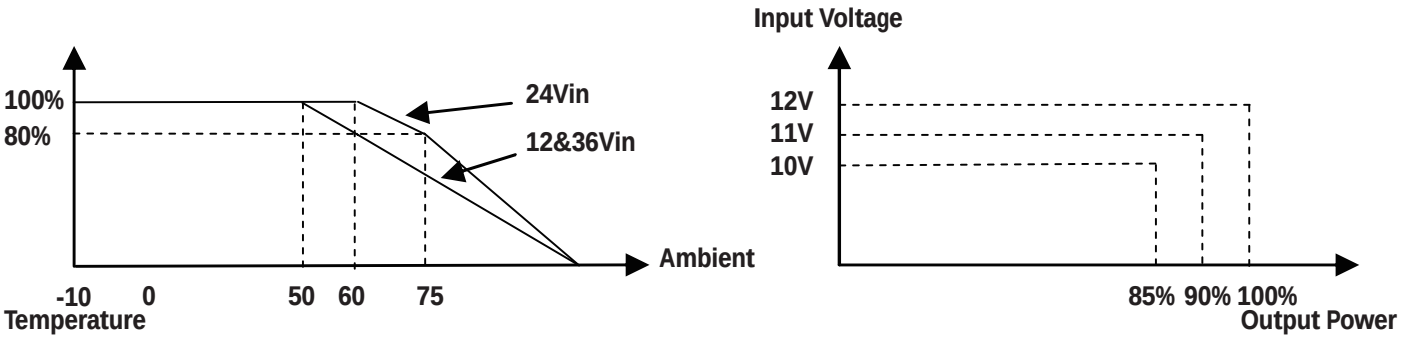
Environment

Operating Temperature
- -10°C to 60°C (Refer to output load derating curve)

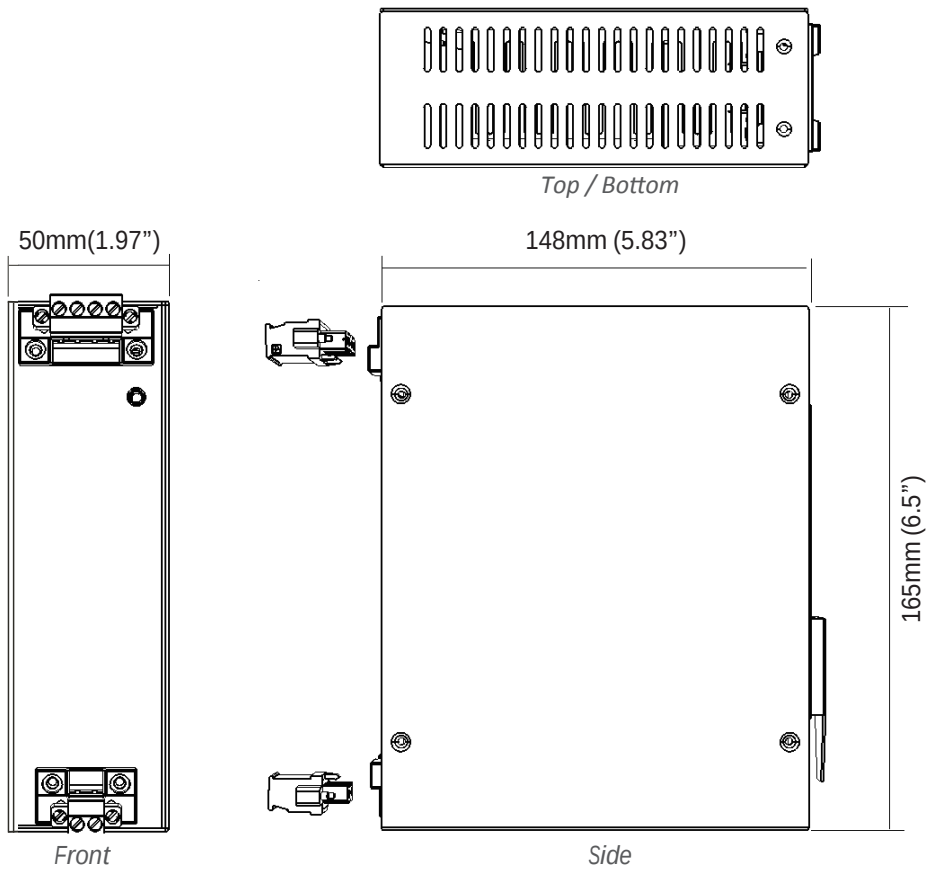
Storage Temperature
- -20°C to 85°C (-4°F to 158°F)

Working Humidity
- 0% to 95% RH

Derating Curves



Dimensions



Ordering Information

Model

DD-85-55	85W/1.55A 55VDC Industrial Power Supply

DR-30-24

30W/1.5A 24VDC DIN-Rail Industrial Power Supply

Features

- **-20°C to 60°C operating temperature range**
- **Can be installed on DIN-rail TS-35 / 7.5 or 15**
- **Protections: Short circuit / Over load / Over voltage**
- **UL60950-1, TUV EN60950-1 approved**
- **Universal AC input / Full range**

Hardware Specifications

Power

Power Input
- Voltage Range: 85 to 264VAC, or 120 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 83%
- AC Current (Typ.): 0.88A / 115VAC; 0.48A / 230VAC
- Inrush Current (Typ.): Cold Start 15A / 115VAC; 30A / 230VAC

Power Output
- DC Voltage: 24V
- Rated Current: 1.5A
- Current Range: 0 to 1.5A
- Rated Power: 36W
- Ripple & Noise (max.): 150mVp-p
- Voltage Adj. Range: 21.6 to 26.4V
- Voltage Tolerance: + / - 1.0%
- Line Regulation: + / - 1.0%
- Load Regulation: + / - 1.0%
- Setup, Rise Time: 100ms, 30ms / 230VAC; 100ms, 30ms / 115VAC at full load
- 100ms, 30ms / 115VAC at full load
- Hold up Time: 100ms / 230VAC; 100ms, 21ms / 115VAC at full load

Mechanical

Casing
- Plastic case

Dimensions
- 78mm (W) x 56mm (D) x 93 mm(H) (3.12" (W) x 2.24" (D) x 3.72" (H))

Weight
- 0.27kg (0.59 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 27.6 to 32.4V
- Protection type : Shut down o/p voltage, re-power on to recover

Over Load Protection
- 105 to 160% rated output power
- Protection type : Constant current limiting, recovers automatically after fault condition is removed

Environment

Operating Temperature
- -20°C to 60°C (Refer to output load derating curve)

Storage Temperature
- -40°C to 85°C (-4°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL60950-1, TUV EN60950-1, design refer to EN50178

EMC
- EN55011
- EN55022 (CISPR22) Class B
- EN61000-3-2, -3
- Withstand Voltage
  - I/P-O/P: 3KVAC
- Isolation Resistance
  - I/P-O/P: 100M Ohms / 500VDC

EMS

EN61000-4-2,3,4,5,6,8,11

ENV50204

EN55024

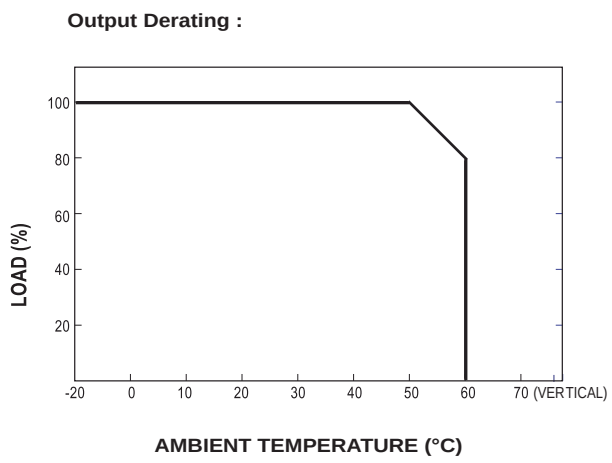
EN61000-6-2

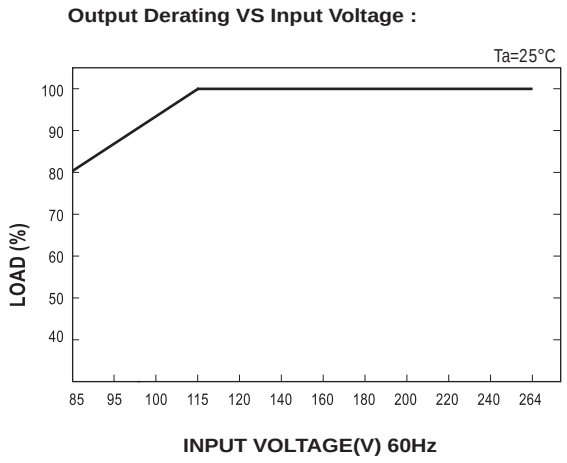
EN61204-3 Heavy industry level, criteria A

Environmental Test Compliance

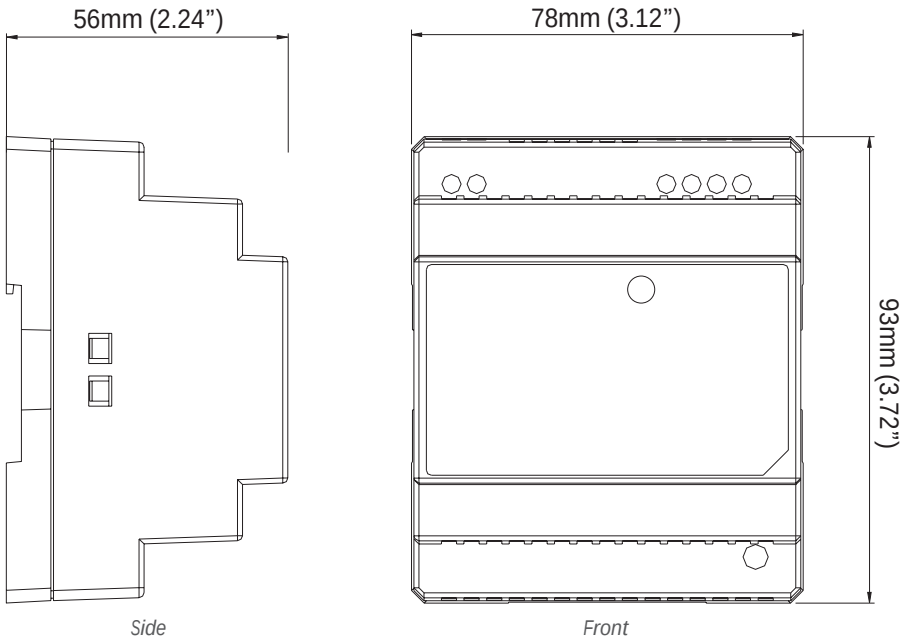
- Vibration
  - 10 to 500Hz, 2G 10min. / 1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves





Dimensions



Ordering Information

Model	
DR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply

DR-30-12

24W/1.5A DIN-Rail 24VDC Industrial Power Supply

Features

- **-20°C to 60°C operating temperature range**
- **Can be installed on DIN-rail TS-35 / 7.5 or 15**
- **Protections: Short circuit / Over load / Over voltage**
- **Isolation class II**
- **UL60950-1, TUV EN60950-1 approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 85 to 264VAC; 120 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 81%
- AC Current (Typ.): 0.88A / 115VAC; 0.48A / 230VAC
- Inrush Current (Typ.): Cold Start 15A / 115VAC; 30A / 230VAC

Power Output
- DC Voltage: 12V
- Rated Current: 2A
- Current Range: 0 to 2A
- Rated Power: 24W
- Ripple & Noise (max.): 120mVp-p
- Voltage Adj. Range: 10.8 to 13.2V
- Voltage Tolerance: + / - 1.0%
- Line Regulation: + / - 1.0%
- Load Regulation: + / - 1.0%
- Setup, Rise Time: 100ms, 30ms / 230VAC; 100ms, 30ms / 115VAC at full load
- Hold up Time: 100ms / 230VAC; 21ms / 115VAC at full load

Mechanical

Casing
- Plastic case

Dimensions
- 78mm (W) x 56mm (D) x 93 mm(H) (3.12" (W) x 2.24" (D) x 3.72" (H))

Weight
- 0.27kg (0.59 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 13.8 to 16.2V
- Protection type: Shut down o/p voltage, re-power on to recover

Over Load Protection
- 105 to 160% rated output power
- Protection type : Constant current limiting, recovers automatically after fault condition is removed

Environment

Operating Temperature
- -20°C to 60°C (Refer to output load derating curve)

Storage Temperature
- -40°C to 85°C (-4°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety

UL EN60950-1

TUV EN60950-1, design refer to EN50178

EMC

EN55011

EN55022 (CISPR22) Class B

EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
- Isolation Resistance:
  - I/P-O/P: 100M Ohms / 500VDC

EMS

EN61000-4-2,3,4,5,6,8,11

ENV50204

EN55024

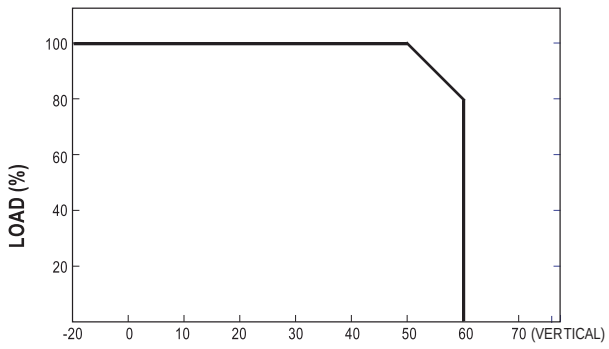
EN61000-6-2

EN61204-3 Heavy industry level, criteria A

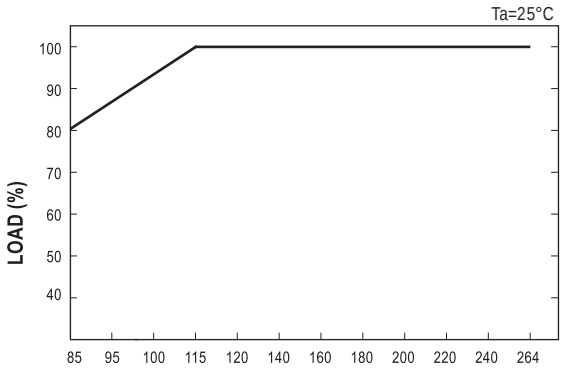
Environmental Test Compliance
- Vibration
  - 10 to 500Hz, 2G 10min. / 1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

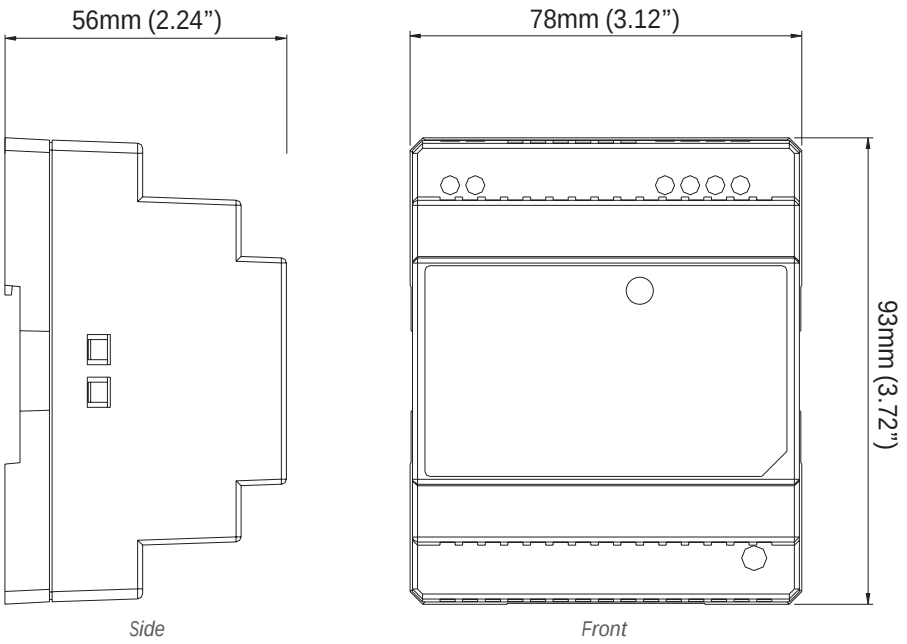
Output Derating :



Output Derating VS Input Voltage :



Dimensions



Ordering Information

Model	
DR-30-12	24W/2A DIN-Rail 12VDC Industrial Power Supply

DR-60-24

60W/2.5A DIN-Rail 24VDC Industrial Power Supply

Features

- **-20°C to 60°C operating temprature range**
- **Can be installed on DIN-rail TS-35 / 7.5 or 15**
- **Protections: Short circuit / Over load / Over voltage / Over temperature**
- **Isolation class II**
- **UL60950-1, TUV EN60950-1 approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 88 to 264VAC; 124 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 84% AC Current (Typ.): 1.2 / 115VAC; 0.8A / 230VAC
- Inrush Current (Typ.): Cold Start 18A / 115VAC; 36A / 230VAC

Power Output
- DC Voltage: 24V
- Rated Current: 2.5A
- Current Range: 0 to 2.5A
- Rated Power: 60W
- Ripple & Noise (max.): 150mVp-p
- Voltage Adj. Range: 21.6 to 26.4V
- Voltage Tolerance: + / - 1.0%
- Line Regulation: + / - 1.0% Load Regulation: + / - 1.0%
- Setup, Rise Time: 100ms, 30ms / 230VAC; 200ms, 30ms / 115VAC at full load
- Hold up Time: 100ms / 230V

Mechanical

Casing
- Plastic Case

Dimensions
- 78mm (W) x 56mm (D) x 93mm (H) (3.17" (W) x 2.2" (D) x 3.66" (H))

Weight
- 0.3Kg

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 27.6 - 32.4V
- Protection type : Shut down o/p voltage , re-power on to recover

Over Load Protection
- 105 -160% rated output power
- Protection type : Constant current limiting, recovers automatically after fault condition is removed

Environment

Operating Temperature
- -20°C to 60°C (-4°F to 140°F)

Storage Temperature
- -40°C to 85°C (-40°F to 185°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

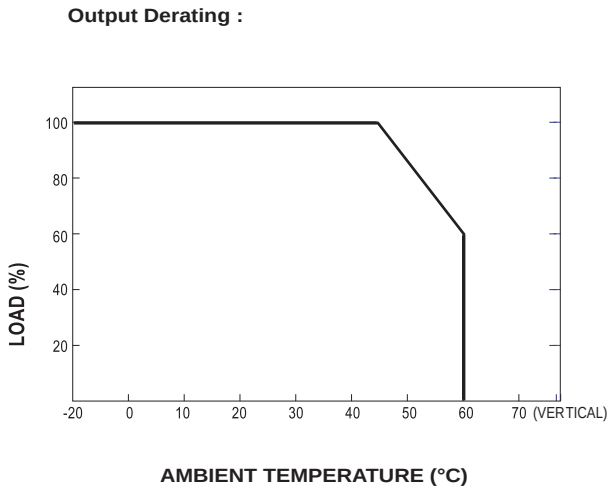
Safety
- UL60950-1, TUV EN60950-1 approved, design refer to EN50178

EMC
- EN55011
- EN55022 (CISPR22) Class B
- EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
- Isolation Resistance:
  - I/P-O/P: 100M Ohms / 500VDC

EMS Immunity
- EN61000-4-2,3,4,5,6,8,11
- ENV50204
- EN55024
- N61000-6-2
- EN61204-3, EN50082-2, Heavy industry level, criteria A

Environmental Test Compliance
- Vibration 10 to 500Hz, 2G 10min. / 1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves



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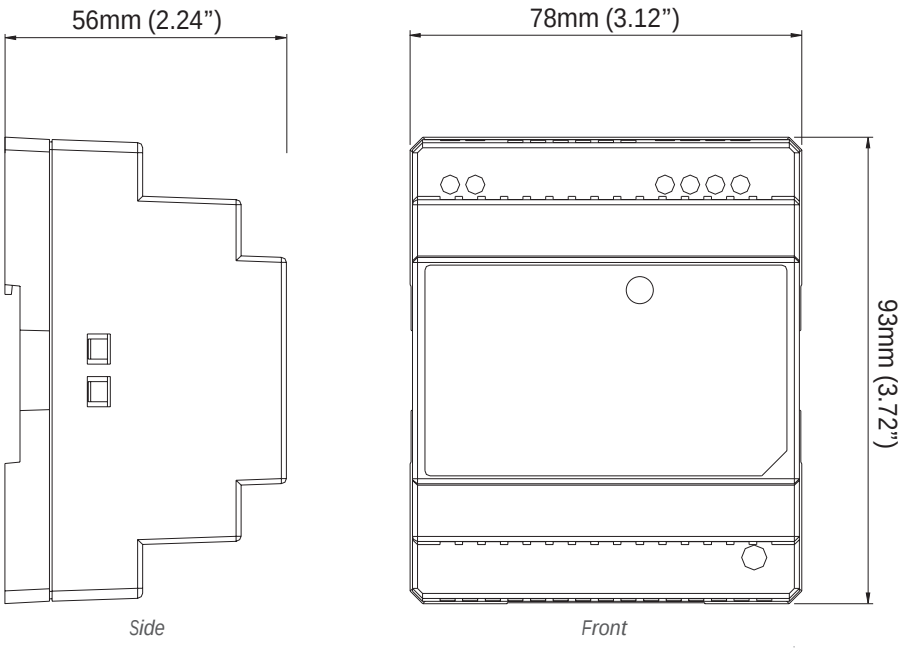


Ordering Information

Model	
DR-60-24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply

DR-75-24

75W/3.2A DIN-Rail 24VDC Industrial Power Supply

Features

- **-10°C to 60°C operating temperature range**
- **Can be installed on DIN-rail TS-35/7.5 or 15**
- **Short circuit/over load/over voltage/over temperature protections**
- **UL508 (industrial control equipment) approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 85 to 264VAC; 120 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 80%
- AC Current (Typ.): 1.6A / 115VAC; 0.96A / 230VAC
- Inrush Current (Typ.): Cold Start 20A / 115VAC; 40A / 230VAC Leakage Current: <1mA / 240VAC

Power Output
- DC Voltage: 24V
- Rated Current: 3.2A Current
- Range: 0 to 3.2A
- Rated Power: 76.8W
- Ripple & Noise (max.): 150mVp-p
- Voltage Adj. Range: 24 to 28V
- Voltage Tolerance: ± 1.0%
- Line Regulation: ± 0.5%
- Load Regulation: ± 1.0%
- Setup, Rise Time: 1000ms, 60ms / 230VAC; 1800ms, 60ms / 115VAC at full load
- Hold up Time: 60ms / 230VAC; 12ms / 115VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
- 55.5mm (W) x 100mm (D) x 125.2 mm(H) (2.22" (W) x 4" (D) x 5.00" (H))

Weight
- 0.6kg (1.32 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 29 to 34V
- Protection type : Hiccup mode, recovers automatically after fault condition is removed

Over Load Protection
- 105 to 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed

Environment

Operating Temperature
- -10°C to 60°C (Refer to output load derating curve)

Storage Temperature
- -20°C to 85°C (-4°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL508, TUV EN60950-1 Approved

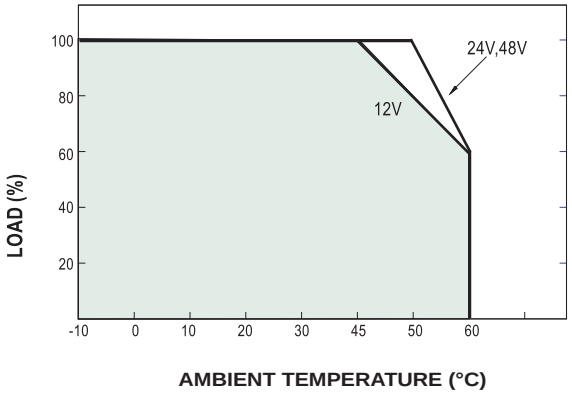
EMC
- EN55011 EN55022 (CISPR22) Class B EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
- O/P-DC OK: 0.5KVAC Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: 100M Ohms / 500VDC

EMS
- EN61000-4-2,3,4,5,6,8,11
- ENV50204
- EN55024 E
- N61000-6-2 (EN50082-2), Heavy industry level, criteria A

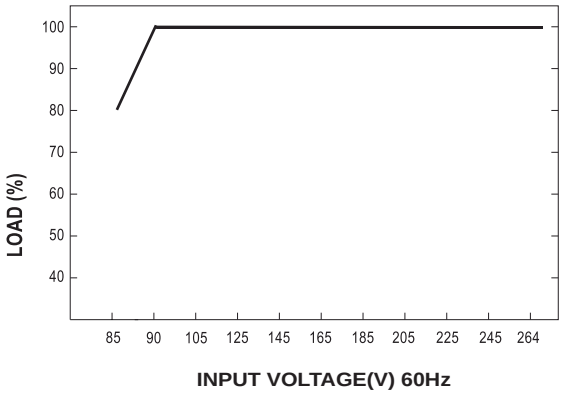
Environmental Test Compliance
- Vibration
  - 10 to 500Hz, 2G 10min./1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

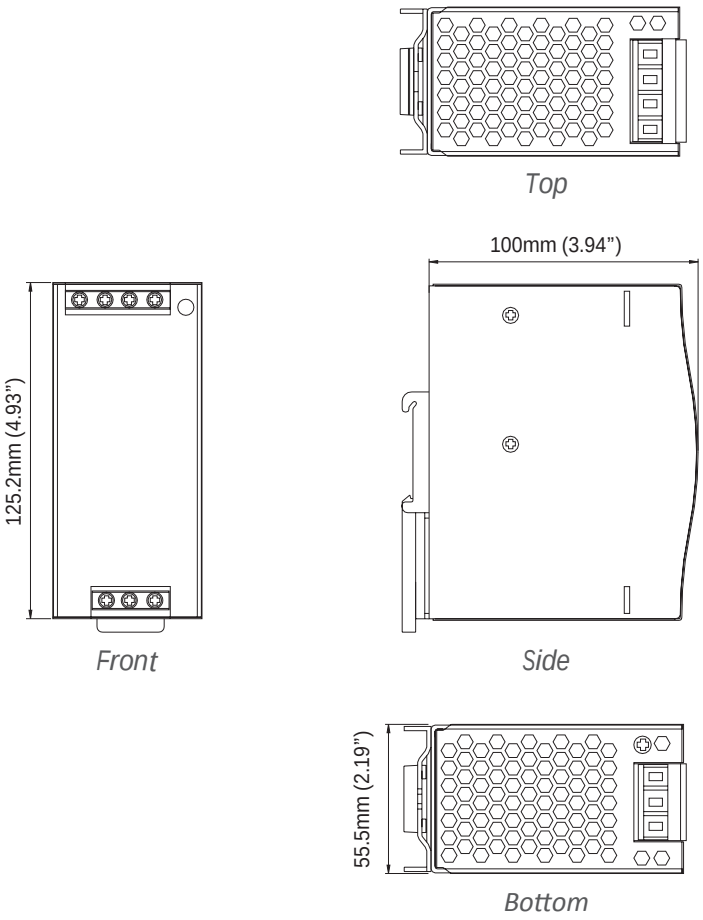
Output Derating :



Output Derating VS Input Voltage :



Dimensions



Ordering Information

Model	
DR-75-24	75W/3.2A DIN-Rail 24VDC Industrial Power Supply

DR-75-48

75W/1.6A DIN-Rail 48VDC Industrial Power Supply

Features

- **-10°C to 60°C operating temprature range**
- **Can be installed on DIN-rail TS-35/7.5 or 15**
- **Short circuit/over load/over voltage/over temperature protections**
- **UL508 (industrial control equipment) approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 85 to 264VAC; 120 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 81%
- AC Current (Typ.): 1.6A / 115VAC; 0.96A / 230VAC
- Inrush Current (Typ.): Cold Start 20A / 115VAC; 40A / 230VAC
- Leakage Current: <1mA / 240VAC

Power Output
- DC Voltage: 48V
- Rated Current: 1.6A
- Current Range: 0 to 1.6A
- Rated Power: 76.8W
- Ripple & Noise (max.): 240mVp-p
- Voltage Adj. Range: 48 to 53V
- Voltage Tolerance: ± 1.0%
- Line Regulation: ± 0.5%
- Load Regulation: ± 1.0%
- Setup, Rise Time: 1000ms, 60ms/230VAC; 1800ms, 60ms/115VAC at full load
- Hold up Time: 60ms / 230VAC; 12ms / 115VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
- 55.5mm (W) x 100mm (D) x 125.2 mm(H)
  (2.22" (W) x 4" (D) x 5.00" (H))

Weight
- 0.6kg (1.32 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 58 to 65V
- Protection type : Hiccup mode, recovers automatically after fault condition is removed

Over Load Protection
- 105 to 150% rated output power Protection type: Constant current limiting, recovers automatically after fault condition is removed

Environment

Operating Temperature
- -10°C to 60°C (Refer to output load derating curve)

Storage Temperature
- -20°C to 85°C (-4°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL508, TUV EN60950-1 Approved

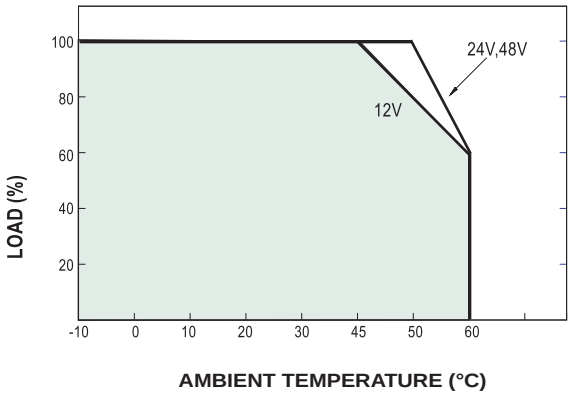
EMC
- EN55011
- EN55022 (CISPR22) Class B
- EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
- O/P-DC OK: 0.5KVAC Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: >100M Ohms / 500VDC

EMS
- EN61000-4-2,3,4,5,6,8,11
- ENV50204
- EN55024 E
- N61000-6-2 (EN50082-2), Heavy industry level, criteria A

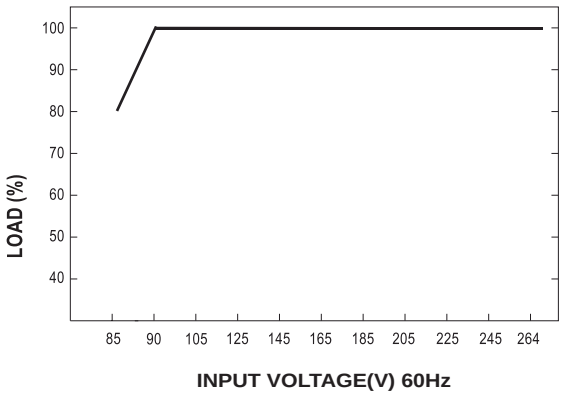
Environmental Test Compliance
- Vibration
  - 10 to 500Hz, 2G 10min./1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

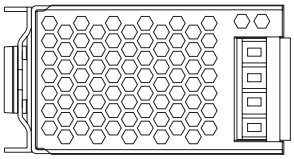
Output Derating :



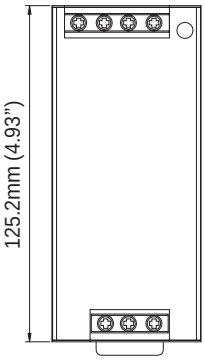
Output Derating VS Input Voltage :



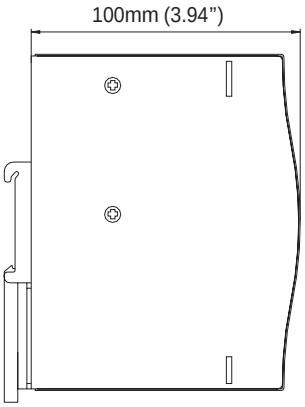
Dimensions



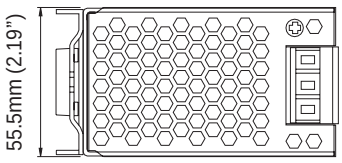
Top



Front



Side



Bottom

Ordering Information

Model	
DR-75-48	75W/1.6A DIN-Rail 48VDC Industrial Power Supply

DR-120-24

120W/5A DIN-Rail 24VDC Industrial Power Supply

Features

- **-10°C to 60°C operating temperature range**
- **Can be installed on DIN-rail TS-35 / 7.5 or 15**
- **Short circuit/over load/over voltage/over temperature protections**
- **UL508 (industrial control equipment) approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 88 to 132VAC/ 176 to 264VAC by switch; 240 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 84%
- AC Current (Typ.): 2.6A / 115VAC; 1.6A / 230VAC
- Inrush Current (Typ.): Cold Start 20A / 115VAC; 40A / 230VAC
- Leakage Current: <3.5mA / 240VAC

Power Output
- DC Voltage: 24V
- Rated Current: 5A
- Current Range: 0 to 5A
- Rated Power: 120W Ripple & Noise (max.): 80mVp-p
- Voltage Adj. Range: 24 to 38V
- Voltage Tolerance: + / - 1.0%
- Line Regulation: + / - 0.5%
- Load Regulation: + / - 1.0% Setup, Rise Time: 500ms, 70ms / 230VAC; 500ms, 70ms / 115VAC at full load
- Hold up Time: 36ms / 230VAC; 32ms / 115VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
- 65.5mm (W) x 100mm (D) x 125.2 mm(H) (2.62" (W) x 4" (D) x 5.00" (H))

Weight
- 0.79kg (1.74 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 29 to 33V
- Protection type : Shut down o/p voltage, re-power on to recover

Over Load Protection
- 105 to 150% rated output power
- Protection type : Constant current limiting, recovers automatically after fault condition is removed

Over Temperature Protection
- 90°C + / - 5°C (TSW1) Protection type: Shutdown o/p voltage, recovers automatically after temperature goes down

Environment

Operating Temperature
- -10°C to 60°C (Refer to output load derating curve)

Storage Temperature
- -20°C to 85°C (-4°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL508, TUV EN60950-1 Approved

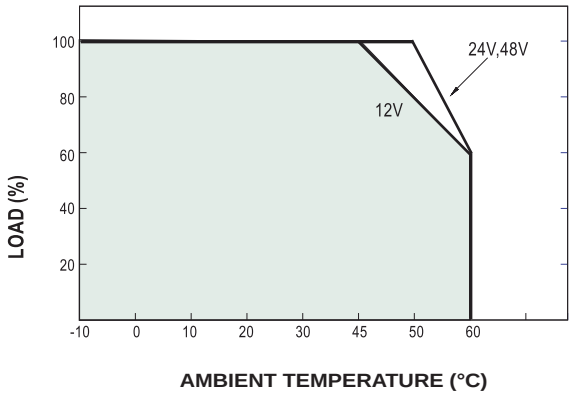
EMC
- EN55011
- EN55022 (CISPR22) Class B
- EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
- Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: 100M Ohms / 500VDC

EMS
- EN61000-4-2,3,4,5,6,8,11
- ENV50204
- EN55024
- EN61000-6-2 (EN50082-2), Heavy industry level, criteria A

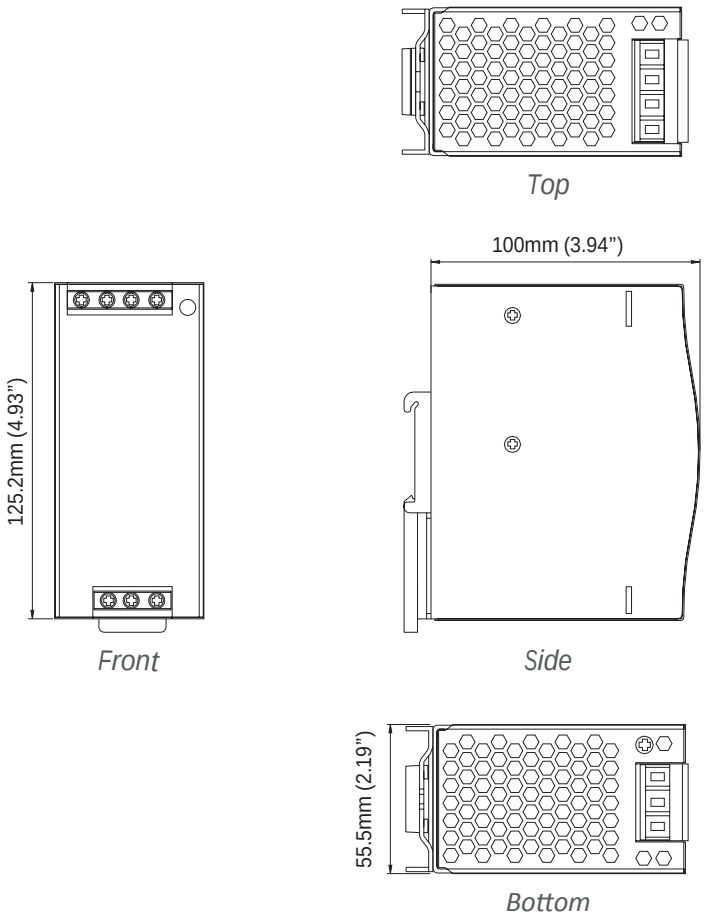
Environmental Test Compliance
- Vibration
  - 10 to 500Hz, 2G 10min./1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

Output Derating :



Dimensions



Ordering Information

Model	
DR-120-24	120W/5A DIN-Rail 24VDC Industrial Power Supply

DR-120-48

120W/2.5A DIN-Rail 48VDC Industrial Power Supply

Features

- **-10°C to 60°C operating temperature range**
- **Can be installed on DIN-rail TS-35/7.5 or 15**
- **Short circuit/over load/over voltage/over temperature**
- **UL508 (industrial control equipment) approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 88 to 132VAC / 176 to 264VAC by switch ; 248 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 85%
- AC Current (Typ.): 2.6A / 115VAC; 1.6A / 230VAC
- Inrush Current (Typ.): Cold Start 20A / 115VAC; 40A / 230VAC
- Leakage Current: <3.5mA / 240VAC

Power Output
- DC Voltage: 48V
- Rated Current: 2.5A
- Current Range: 0 to 2.5A Rated Power: 120W
- Ripple & Noise (max.): 100mVp-p Voltage Adj.
- Range: 48 to 53V
- Voltage Tolerance: ± 1.0%
- Line Regulation: ± 0.5%
- Load Regulation: ± 1.0%
- Setup, Rise Time: 500ms, 70ms / 230VAC; 500ms, 70ms / 115VAC at full load
- Hold up Time: 36ms / 230VAC; 32ms / 115VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
65.5mm (W) x 100mm (D) x 125.2 mm(H)
(2.62" (W) x 4.00" (D) x 5.00" (H))

Weight
- 0.79kg (1.74 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 58 to 65V
- Protection type : Shut down o/p voltage, re-power on to recover

Over Load Protection
- 105 to 150% rated output power
- Protection type : Constant current limiting, recovers automatically after fault condition is removed

Over Temperature Protection
- 90°C + / - 5°C (TSW1) Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

Environment

Operating Temperature
- -10°C to 60°C (Refer to output load derating curve)

Storage Temperature
- -20°C to 85°C (-4°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL508, UL60950-1, TUV EN60950-1 approved

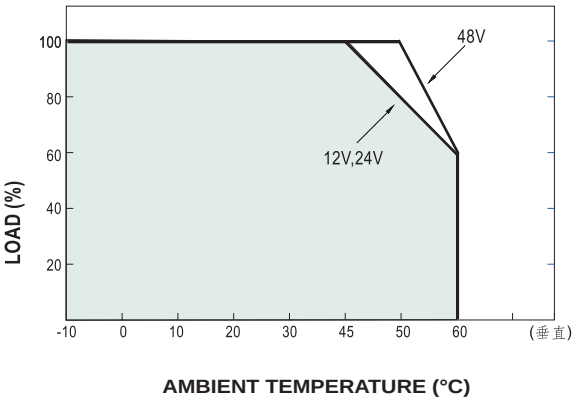
EMC
- EN55011
- EN55022 (CISPR22) Class B
- EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
- Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: 100M Ohms / 500VDC

EMS
- EN61000-4-2,3,4,5,6,8,11
- ENV50204
- EN55024
- EN61000-6-2 (EN50082-2), Heavy industry level, criteria A

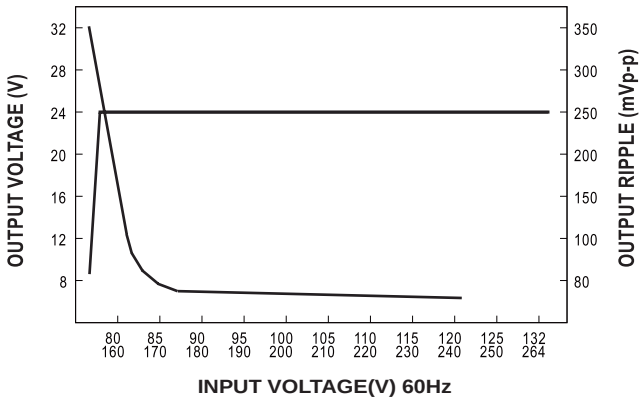
Environmental Test Compliance
- Vibration
  - 10 to 500Hz, 2G 10min./1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

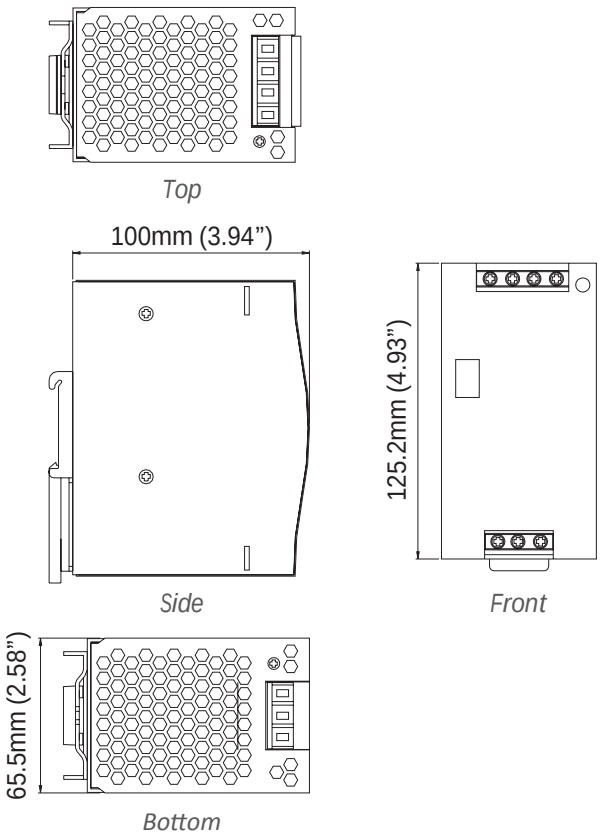
Output Derating :



Static Characteristics (24V) :



Dimensions



Ordering Information

Model	
DR-120-48	120W/2.5A DIN-Rail 48VDC Industrial Power Supply

SDR-120-48

120W/2.5A DIN-Rail 48VDC Industrial Power Supply

Features

- **-25°C to 70°C operating temperature range**
- **High efficiency 90.5% and low power dissipation**
- **Short circuit/over load/over voltage/over temperature protections**
- **Can be installed o DIN-rail TS-35/7.5 or 15**
- **UL508 (industrial control equipment) approved**

Hardware Specifications

Power

Power Input
- Voltage Range: full load 88 to 264VAC, 124 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 90.5%
- AC Current (Typ.): 1.4A/115VAC, 0.7A/230VAC
- Inrush Current (Typ.): 35A/115VAC, 70A/230VAC
- Leakage Current: <1mA / 240VAC

Power Output
- DC Voltage: 48V
- Rated Current: 2.5A
- Current Range: 0 to 2.5A
- Rated Power: 120W
- Peak Current: 3.75A
- Ripple & Noise (max.): 120mVp-p
- Voltage Adj. Range: 48 to 55V
- Voltage Tolerance: ± 1.0%
- Line Regulation: ± 0.5%
- Load Regulation: ± 1.0%
- Setup, Rise Time: 1500ms, 60ms/230VAC, 3000ms, 60ms/115VAC at full load
- Hold up Time: 20ms/230VAC, 20ms/115VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
- 40mm (W) x 113.5mm (D) x 125.2mm (H)
  (1.6" (W) x 4.46" (D) x 4.93" (H))

Weight
- 0.67kg

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 56 to 65V
- Protection type : Shut down o/p voltage, re-power on to recover

Over Load Protection
- Normally works within 110 to 150% rated output power for more than 3 seconds and then shut down o/p voltage
- >150% rated power, constant current limiting with auto-recovery within 3 seconds and shut down o/p voltage after 3 seconds

Over Temperature Protection
- 95°C ± 5°C (TSW: detected on heatsink of power switch)
- Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

Environment

Operating Temperature
- -25°C to 70°C (-13°F to 158°F)
- Refers to output load derating curve

Storage Temperature
- -40°C to 85°C (-40°F to 185°F), 10 to 95% RH

Working Humidity
- 20% to 95% RH non-condensing

Storage Humidity
- 10% to 95% RH

Regulatory Approvals

Safety
- UL508, TUV EN60950-1 approved

EMI
- Compliance to EN55022 (CISPR22) Class B

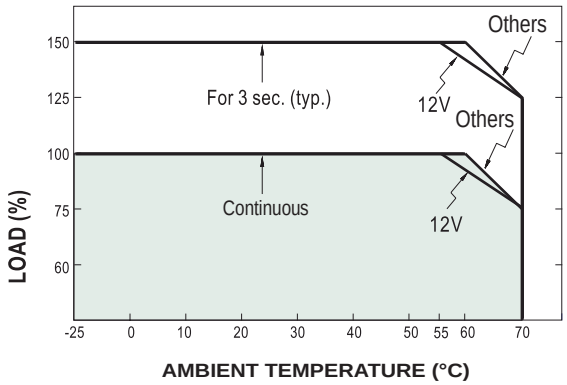
EMC
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
  - O/P-DC OK: 0.5KVAC
- Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: >100M Ohms / 500VDC / 25°C / 70% RH
- Harmonic Current: Compliance to EN61000-3-2,-3

EMS
- Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A, SEMI F47, GL approved

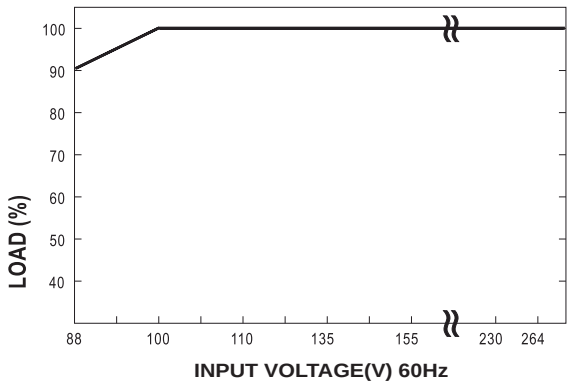
Environmental Test Compliance
- Vibration
  - Component:10 to 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; mounting: Compliance to IEC60068-2-6

Derating Curves

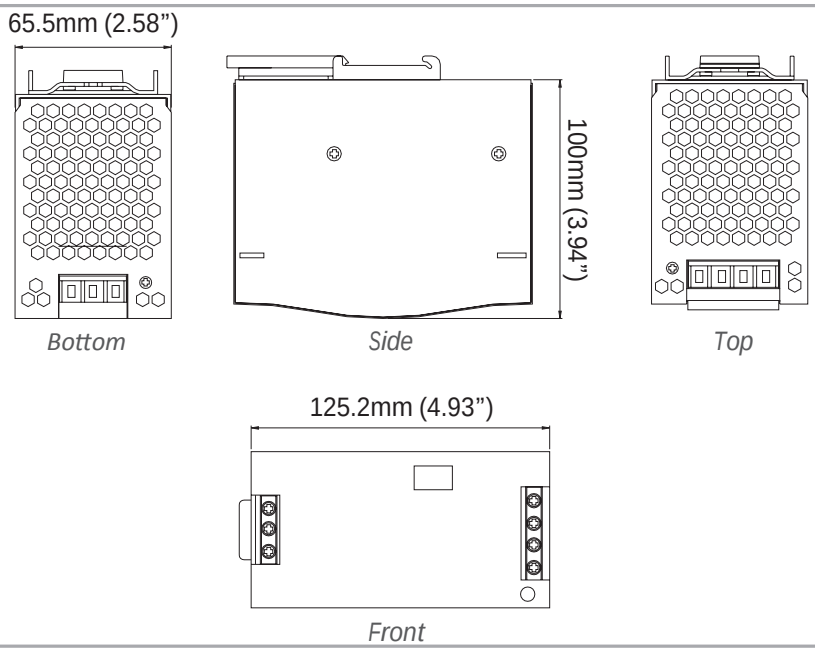
Output Derating :



Output Derating VS Input Voltage :



Dimensions



Ordering Information

Model

SDR-120-48	120W/2.5A DIN-Rail 48VDC Industrial Power Supply

SDR-240-48

240W/5A DIN-Rail 48VDC Industrial Power Supply

Features

- **-25°C to 70°C operating temperature range**
- **High efficiency 94% and low power dissipation**
- **Short circuit/over load/over voltage/over temperature protections**
- **Can be installed on DIN-Rail TS-35/7.5 or 15**
- **UL508 (industrial control equipment) approved**

Hardware Specifications

Power

Power Input
- Voltage Range: 88 to 264VAC; 124 to 370VDC
- Frequency Range: 47 to 63Hz
- Power Factor(Typ.): 0.93 / 230VAC; 0.99 / 115VAC at full load
- Efficiency: 94%
- AC Current (Typ.): 2.6A / 115VAC; 1.3A / 230VAC
- Inrush Current (Typ.): 33A / 115VAC; 65A / 230VAC
- Leakage Current: <1mA / 240VACC

Power Output
- DC Voltage: 48V
- Rated Current: 5A
- Current Range: 0 to 5A
- Rated Power: 240W
- Peak Current: 7.5A
- Peak Power: 360W (3 sec.)
- Ripple & Noise (max.): 120mVp-p
- Voltage Adj. Range: 48 to 55V
- Voltage Tolerance: + / - 1.0%
- Line Regulation: + / - 0.5%
- Load Regulation: + / - 1.0%
- Setup, Rise Time: 1500ms, 60ms / 230VAC;3000ms, 60ms / 115VAC at full load
- Hold up Time: 20ms / 230VAC; 20ms / 115VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
- 63mm (W) x 113.5mm (D) x 125.2 mm(H)
  (2.52" (W) x 4.54" (D) x 5.00" (H))

Weight
- 1.03kg (2.27 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 56 to 65V
- Protection type : Shut down o/p voltage with auto-recovery

Over Load Protection
- Normally works within 110 to 150% rated output power for more than 3 seconds and then shut down o/p voltage
- >150% rated power, constant current limiting with auto-recovery within 2 seconds and may cause to shut down if over 2 seconds

Over Temperature Protection
- 95°C + / - 5°C (TSW: detect on heatsink of power switch)
- Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

Environment

Operating Temperature
- -25°C to 70°C (Refer to output load derating curve)

Storage Temperature
- -40°C to 85°C (-40°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL508, TUV EN60950-1 approved

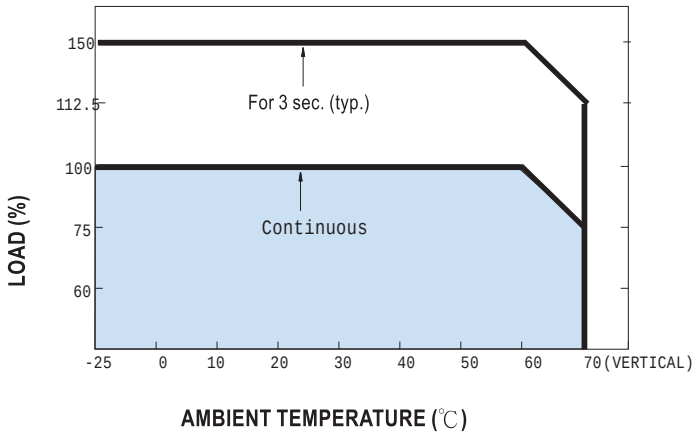
EMC
- EN55022 (CISPR22) Class B
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
  - O/P-DC OK: 0.5KVAC
- Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: >100M Ohms / 500VDC

EMS
- EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61204-3, EN61000-6-2 (EN50082-2), Heavy industry level, criteria A approved

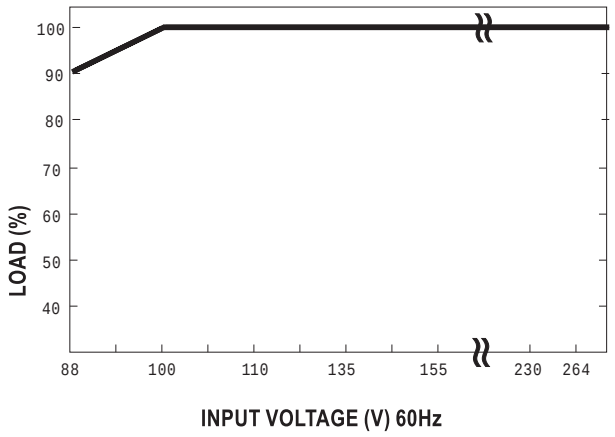
Environmental Test Compliance
- Vibration
  - 10 to 500Hz, 2G 10min./1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

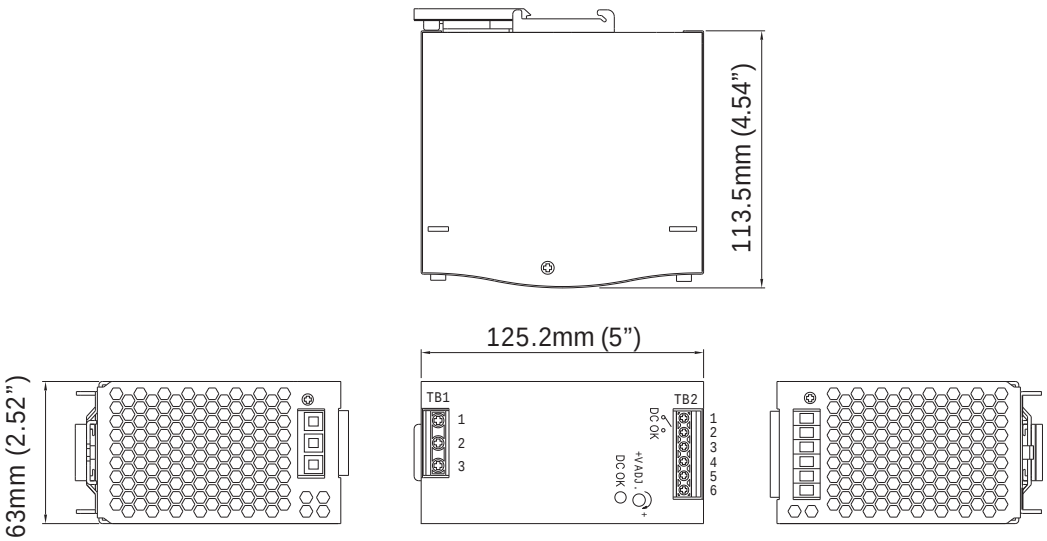
■ Derating Curve



■ Output derating VS input voltage



Dimensions



Ordering Information

Model	
SDR-240-48	240W/5A DIN-Rail 48VDC Industrial Power Supply

SDR-480-48

480W/10A DIN-Rail 48VDC Industrial Power Supply

Features

- **High efficiency 94% and low power dissipation**
- **UL508 (industrial control equipment) approved**
- **EN61000-6-2 (EN50082-2) industrial immunity level**
- **-25°C to 70°C operating temperature range**

Hardware Specifications

Power

Power Input
- Voltage Range: 90 to 240VAC or 127 to 370VDC
- Frequency Range: 47 to 63Hz
- Power Factor (Typ.): 0.94 / 230VAC;
- 0.99 / 115VAC at full load
- Efficiency: 94%
- AC Current (Typ.): 5A/115VAC; 2.5A/230VAC
- Inrush Current (Typ.): 40A/115VAC; 80A/230VAC
- Leakage Current: <0.8mA / 240VAC

Power Output
- DC Voltage: 48V Rated Current: 10A
- Current Range: 0 to 10A
- Rated Power: 480W
- Peak Current 15A Peak Power: 720W (3sec.)
- Ripple & Noise (max.): 120mVp-p
- Voltage Tolerance: ± 1.0%
- Line Regulation: ± 0.5%
- Load Regulation: ± 1.0%
- Setup, Rise Time: 1500ms, 150ms/230VAC 3000ms, 150ms/115VAC at full load
- Hold up Time: 14ms/230VAC at full load

Mechanical

Casing
- Aluminum case

Dimensions
- 85.5mm (W) x 128.5mm (D) x 125.2 mm(H) (3.42" (W) x 5.14" (D) x 5.01" (H))

Weight
- 1.6kg (3.52 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 56 - 65V

Over Load Protection
- Normally works within 110 to 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery

Over Temperature Protection
- 105°C ± 5°C (TSW : detect on heatsink of power switch)
- Shut down o/p voltage, recovers automatically after temperature goes down

Environmental

Operating Temperature
- -25°C to 70°C (Refer to output load derating curve)

Storage Temperature
- -40°C to 85°C (-40°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- UL508
- TUV EN60950-1

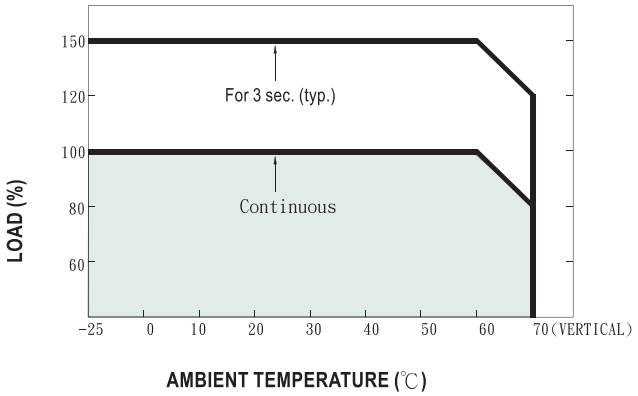
EMC
- EN55022
- EN61000-3-2
- EN61000-3-3
- Withstand Voltage
  - I/P-O/P:3KVAC
  - I/P-FG:1.5KVAC
  - O/P-FG:0.5KVAC
  - O/P-DC OK:0.5KVAC
- Isolation Resistance
  - I/P-O/P
  - I/P-FG
  - O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH

EMS
- EN61000-4-2,3,4,5,6,8,11 ENV50204 EN55024 EN61000-6-2 (EN50082-2) EN61204-3 Heavy industry level, criteria A , SEMI F47 approved

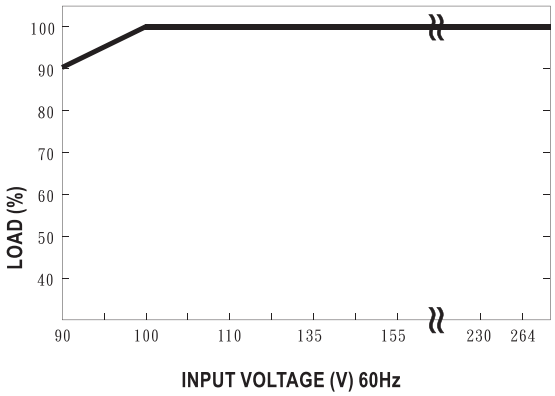
Environmental Test Compliance
- IEC60068-2-6
  - Component:10 to 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; mounting: Compliance to IEC60068-2-6

Derating Curves

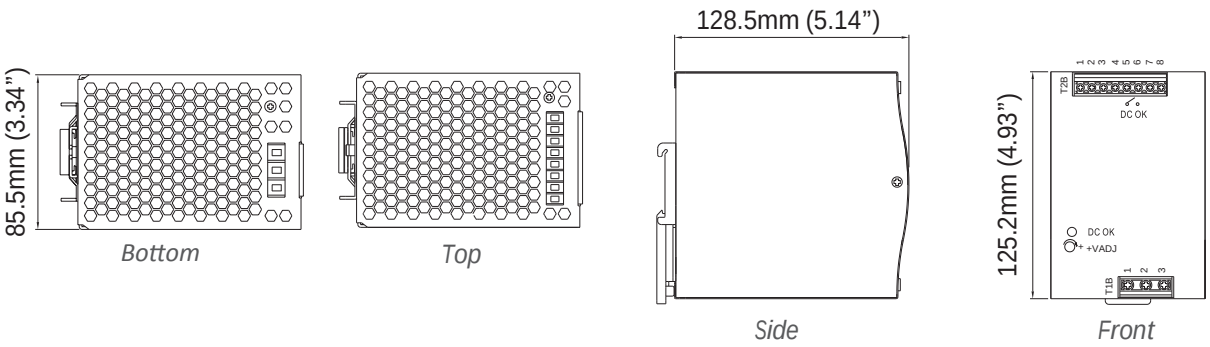
Derating Curve :



Output Derating VS Input Voltage :



Dimensions



Ordering Information

Model

SDR-480-48	480W/10A DIN-Rail 48VDC Industrial Power Supply

MDR-40-48

40W/0.83A 48VDC Industrial Power Supply

Features

- **-20°C to 70°C operating temperature range**
- **Can be installed on DIN-Rail TS-35/7.5 o 15**
- **Short circuit/over load/over voltage protections**
- **No load power consumption < 0.75W**
- **NEC class 2/LPS compliant**

Hardware Specifications

Power

Power Input
- Voltage Range: 85 to 264VAC; 120 to 370VDC
- Frequency Range: 47 to 63Hz
- Efficiency: 88%
- AC Current (Typ.): 1.1A / 115VAC; 0.7A / 230VAC
- Inrush Current (Typ.): Cold Start
  30A / 115VAC;
  60A / 230VAC

Power Output
- DC Voltage: 48V
- Rated Current: 0.83A
- Current Range: 0 to 0.83A
- Rated Power: 39.8W
- Ripple & Noise (max.): 200mVp-p
- Voltage Adj. Range: 48 to 56V
- Voltage Tolerance: + / - 1.0%
- Line Regulation: + / - 1.0%
- Load Regulation: + / - 1.0%
- Setup, Rise Time: 500ms, 30ms / 230VAC;
  500ms, 30ms / 115VAC at full load
- Hold up Time: 50ms / 230VAC; 20ms / 115VAC at full load

Mechanical

Casing
- Plastic case

Dimensions
- 40mm (W) x 100mm (D) x 90 mm(H)
  (1.6" (W) x 4.0" (D) x 3.6" (H))

Weight
- 0.3kg (0.66 lb)

Installation
- DIN-Rail

Protection

Over Voltage Protection
- 57.6 to 64.8V
- Protection type : Shut down o/p voltage, re-power on to recover

Over Load Protection
- 105 to 150% rated output power
- Protection type : Constant current limiting, recovers automatically after temperature goes down

Environment

Operating Temperature
- -20°C to 70°C (Refer to output load derating curve)
  (Tested @ -40°C to 75°C)

Storage Temperature
- -40°C to 85°C (-40°F to 158°F)

Working Humidity
- 20% to 90%RH non-condensing

Storage Humidity
- 10% to 95%RH

Regulatory Approvals

Safety
- TUV EN60950-1
- UL60950-1
- NEC class 2 / LPS compliant
- UL508

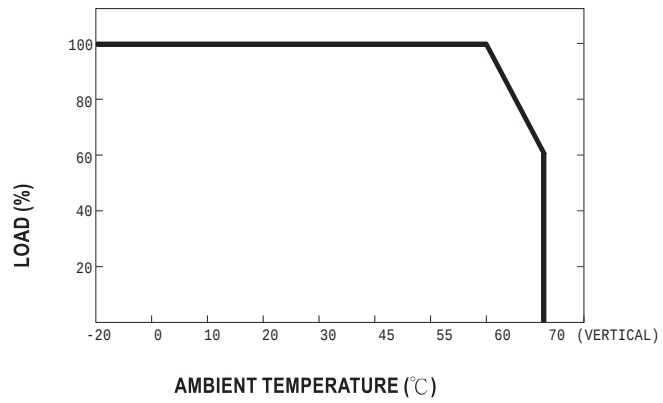
EMC
- EN55011
- EN55022 (CISPR22) Class B
- EN61204-3 Class B
- EN61000-3-2, -3
- Withstand Voltage:
  - I/P-O/P: 3KVAC
  - I/P-FG: 1.5KVAC
  - O/P-FG: 0.5KVAC
- Isolation Resistance:
  - I/P-O/P
  - I/P-FG
  - O/P-FG: >100M Ohms / 500VDC / 25°C / 70%RH

EMS
- EN61000-4-2,3,4,5,6,8,11
- ENV50204
- EN55024
- EN61000-6-2
- EN61204-3
- Heavy industry level, criteria A

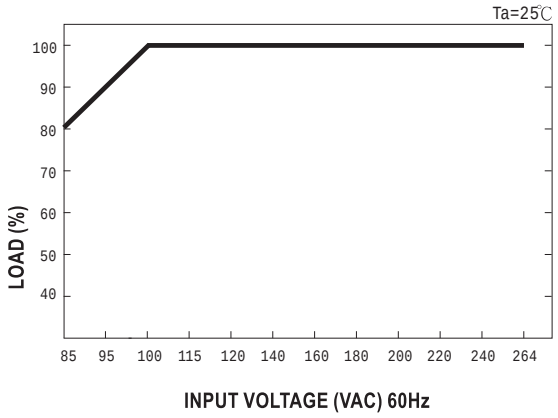
Environmental Test Compliance
- IEC60068-2-6
  - Component: 10 to 500Hz, 2G 10min. / 1 cycle, period for 60 min. each along X, Y, Z axes

Derating Curves

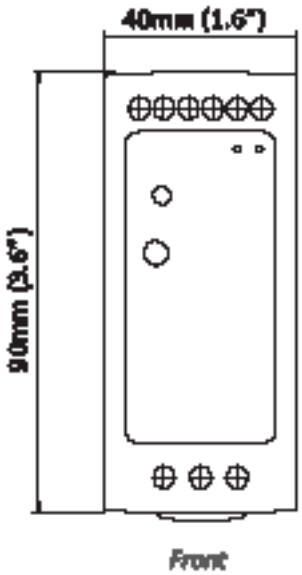
■ Derating Curve

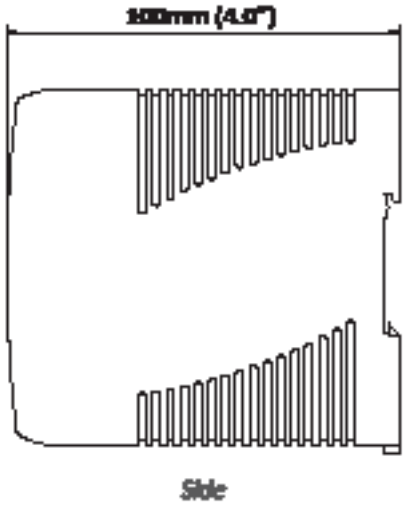


■ Output Derating VS Input Voltage



Dimensions





Ordering Information

Model	
MDR-40-48	40W/0.83A DIN-Rail 48VDC Industrial Power Supply

GS-120A-48

120W/2.5A 48VDC Power Adapter with Latched DC Jack in Plastic Housing

Features

- **The GS-120A-48 power adapter can be used with EtherWAN's EX34000, EX38000, EX38000A, EX45000, EX46000, EX48000, EX48000A, EX78000, EL1032, and EL1033 Series.**

Hardware Specifications

Power

Input Rating
- 85 - 264VAC (47 - 63Hz) / 120 - 370VDC

Output Rating
- 120W, 48VDC, 0 - 2.5A

Mechanical

Casing
- Plastic case

Operating Temperature
- -30°C to 70°C (32°F to 158°F)

Output Connector
- DC Jack with latch

Ordering Information

Model

GS120A-48X	120W/2.5A 48VDC Power Adapter

Input Plug Options (X)

1	US
2	EU
3	UK
4	AU
5	JP

41-136042

36W/3A 12VDC Hardened Power Adapter with Open Wire in Plastic Housing

Features

- **The 41-136042 power adapter can be used with the following EtherWAN models:**
  - EX33000, EX35000, EX41000, EX43000, EX47000, EX61000, EX61000A, EX62000, EX63000, EX65000, EX71000, EX72000, EX73000, EX94000, EX95000, EX96000, EL900, EL9000, EL9020, EL9100, EL1141, ED3341, ED3344, ED3141, and ED3171 Series.
- **Complies with NEMA TS1 & TS2 environmental requirements for traffic control equipment**

Hardware Specifications

Power

Input Rating
- 90 - 264VAC (47 - 63Hz)

Output Rating
- 36W, 12VDC, 0-3A

Mechanical

Casing
- Plastic case

Operating Temperature
- -40°C to 75°C (-40°F to 167°F)

Output Connector
- open wire for terminal block

Ordering Information

Model

41-136042-X	36W/3A 12VDC Hardened Power Adapter

Input Plug Options (X)

1	US
2	EU
3	UK
4	AU
5	JP
6	SA

41-136043

36W/3A 12VDC Hardened Power Adapter with DC Plug in Aluminum Housing

Features

- **The 41-136043 power adapter can be used with the following EtherWAN Model:**
  - ED3101 and ED3331
- **Complies with NEMA TS1 & TS2 environmental requirements for traffic control equipment**

Hardware Specifications

Power

Input Rating
- 90 - 264VAC (47 - 63Hz)

Output Rating
- 36W, 12VDC, 0 - 3A

Mechanical

Casing
- Aluminum case

Operating Temperature
- -40°C to 75°C (-40°F to 167°F)

Output Connector
- DC plug

Ordering Information

Model

41-136043-X	36W/3A 12VDC Hardened Power Adapter

Input Plug Options (X)

1	US
2	EU
3	UK
4	AU
5	JP
6	SA

41-136044

36W/3A 12VDC Hardened Power Adapter with Latched DC Jack in Aluminum Housing

Features

- **The 41-136044 power adapter can be used with the following EtherWAN models:**
  - EX33000, EX35000, EX41000, EX43000, EX47000, EX61000, EX61000A, EX62000, EX63000, EX65000, EX71000, EX72000, EX73000, EX94000, EX95000, EX96000, EL900 EL9000, EL9020, EL9100, EL1141, ED3341, ED3344, ED3141, and ED3171 Series.
- **Complies with NEMA TS1 & TS2 environmental requirements for traffic control equipment**

Hardware Specifications

Power

Input Rating
- 90 - 264VAC (47 - 63Hz)

Output Rating
- 36W, 12VDC, 0 - 3A

Mechanical

Casing
- Aluminum case

Operating Temperature
- -40°C to 75°C (-40°F to 167°F)

Output Connector
- DC jack with latch

Ordering Information

Model

41-136044-X	36W/3A 12VDC Hardened Power Adapter

Input Plug Options (X)

1	US
2	EU
3	UK
4	AU
5	JP
6	SA

41-136046

36W/3A 12VDC Hardened Power Adapter with Open Wire in Aluminum Housing

Features

- **The 41-136046 power adapter can be used with the following EtherWAN models:**
  - EX33000, EX35000, EX41000, EX43000, EX47000, EX61000, EX61000A, EX62000, EX63000, EX65000, EX71000, EX72000, EX73000, EX95000, EX96000, EL1141, EL900, EL9000, EL9020, EL9100, ED3341, ED3344, ED3141, and ED3171 Series.
- **Complies with NEMA TS1 & TS2 environmental requirements for traffic control equipment**

Hardware Specifications

Power

Input Rating
- 90 - 264VAC (47 - 63Hz)

Output Rating
- 36W, 12VDC, 0 - 3A

Mechanical

Casing
- Aluminum case

Operating Temperature
- -40°C to 75°C (-40°F to 167°F)

Output Connector
- Open wire for terminal block

Ordering Information

Model

41-136046-X	36W/3A 12VDC Hardened Power Adapter

Input Plug Options (X)

1	US
2	EU
3	UK
4	AU
5	JP
6	SA

PD1041

Hardened Surge Protection Device – RJ45

Overivew

EtherWAN's PD1041 Hardened Surge Protection Device is designed to protect your EtherWAN Switch investment; however any Ethernet network device can be protected from dangerous electrical surges. Designed for harsh environments, the PD1041 can be placed where you need it to protect your valuable network equipment.

Spotlight

- **Protection Solution Against Voltage Surge**
  - Provides pair-to-pair protection through RJ45 connector
- **Flexible Installation**
  - Supports DIN-rail or desktop installation
- **Wide Temperature Range**
  - Provides -40°C to 75°C operating temperature range for extreme environments
- **Compatible with 10/100BASE-T, Gigabit and PoE products**
  - Pass-through Data and PoE Power

Hardware Specifications

Electrical

Maximum continuous operating voltage U_C
- ≤ 3.3V DC

Maximum continuous voltage U_C (wire-wire)
- ≤ 3.3 V DC (± 60 V DC/PoE+)

Maximum continuous voltage U_C (wire-ground)
- ≤ 180 V DC

Nominal current I_N
- ≤ 1.5 A (25 °C)

Operating effective current IC at U_C
- ≤ 1 µA

Residual current I_{PE}
- ≤ 8 µA

Nominal discharge surge current I_n (8/20) µs (Core-Core)
- 100 A

Nominal discharge surge current I_n (8/20) µs (Core-Earth)
- 2 kA (per signal pair)

Total surge current (8/20) µs
- 10 kA

Nominal pulse current I_{an} (10/700) µs (Core-Core)
- ≤ 40 A

Nominal pulse current I_{an} (10/700) µs (Core-Earth)
- ≤ 160 A

Output voltage limitation at 1 kV/µs (Core-Core) spike
- ≤ 85 V (PoE)

Output voltage limitation at 1 kV/µs (Core-Earth) spike
- ≤ 700 V

Output voltage limitation at 1 kV/µs (Core-Core) static
- ≤ 9 V

Output voltage limitation at 1 kV/µs (Core-Earth) static
- ≤ 700 V

Output voltage limitation at 100V/s (Core-Core)
- ≤ 9 V

Output voltage limitation at 100V/s (Core-Earth)
- ≤ 300 V

Output voltage limitation at 100V/µs (Core-Core)
- ≤ 9 V

Output voltage limitation at 100V/µs (Core-Earth)
- ≤ 600 V

Residual voltage at I_N, (conductor-conductor)
- ≤ 15 V
- ≤ 100 V (PoE)

Voltage protection level Up (Core-Core)
- ≤ 9 V (B2 - 1 kV/25 A
- ≤ 100 V (B2 - 1 kV/25 A - PoE)
- ≤ 15 V (500 V/100 A)

Voltage protection level Up (Core-Earth)
- ≤ 600 V
- ≤ 700 V (C2 - 4 kV/2 kA)

Response time tA (Core-Core)
- ≤ 1 ns

Response time tA (Core-Earth)
- ≤ 100 ns

Input attenuation aE, sym.
- 1 dB (≤ 250 MHz)

Near-end crosstalk attenuation
- ≤ 35 dB (At 250 MHz / 100 Ω)

Cut-off frequency fg (3 dB), sym. in 100 Ohm system
- > 500 MHz

Capacity (Core-Core)
- typ. 5 pF (f= 1 MHz / VR= 0 V)

Capacity (Core-Earth)
- typ. 2 pF (f= 1 MHz / VR= 0 V)

Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)
- B2 (1 kV/25 A)

Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)
- B2 (4 kV / 100 A)
- C2 (4 kV / 2 kA)
- D1 (1 kA)

Mechanical

Casing
- Aluminum case
- IP30

Dimensions
- 62.5mm (W) x 100mm (H) x 30mm (D) (2.5”(W) x 3.8”(H) x 1.18”(D))

Weight
- 184g ± 5%

Installation
- DIN-Rail

Connection
- RJ45 connector

Environment

Operating Temperature
- -40°C to 75°C (-40°F to 167°F)

Storage Temperature
- -40°C to 85°C (-40°F to 185°F)

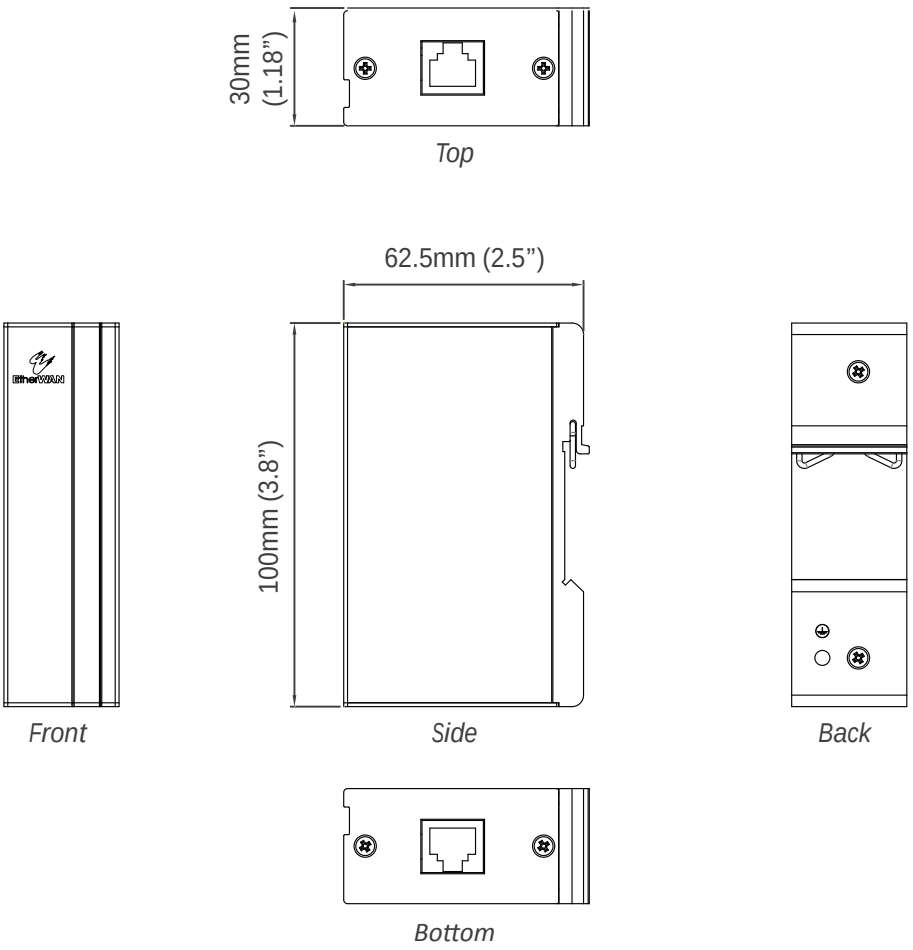
Ambient Relative Humidity
- 5% to 95%, non-condensation

Regulatory Approvals

ISO
- Manufactured in an ISO9001 facility

UL
- UL497B

Dimensions

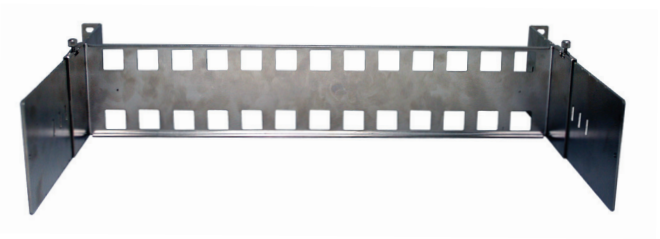


Ordering Information

Model	
PD1041	Hardened Surge Protection Device – RJ45

**Note: CAT6 cable is recommended*

TransRack



Features

- **DIN-Rail devices inside a standard 19" rack or cabinet**
- **Unique depth adjustment feature to fit equipment in any size**
- **One standard 35mm (1.38") DIN-Rail track included**
- **Patent-pending design**

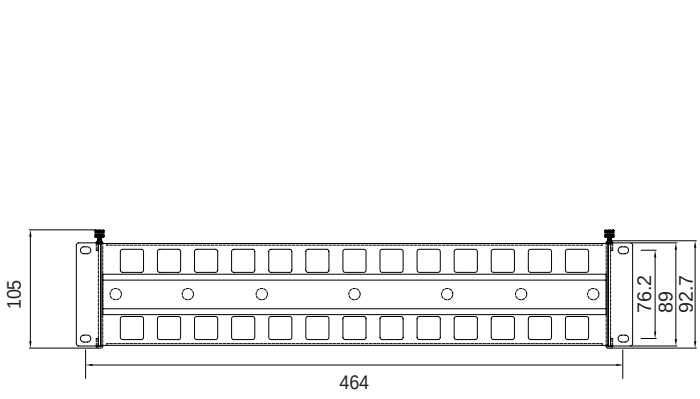
Specifications

Mechanical

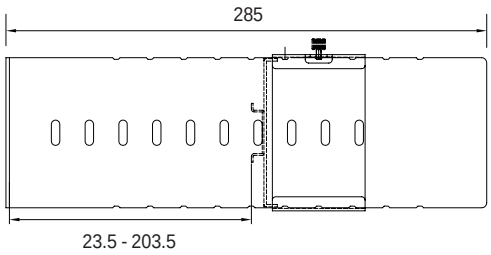
Material
- Heavy-duty cold-rolled steel

Dimensions
- 464mm (19") x 105mm(4.13") x 285mm (11.22") (W x H x D)

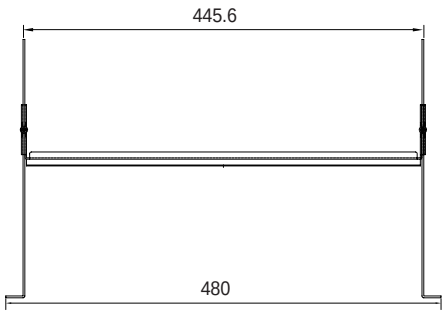
Dimensions



Front



Side



Top

Ordering Information

Model

Transrack	KR-DINRAILB

Mounting Kits

Ordering Information

DIN-Rail Mounting Kits

Part Name	Description
KD-31003 	DIN-Rail mounting kit For ED3101, ED3331 series (Can be mounted using hardware version V3 and above with holes on the bottom cases)
KD-AA5100 	DIN-Rail mounting kit For EL1032T and EX42900 series
KD-AA78000 	DIN-Rail mounting kit For EX78000 and DD-85-48 series
KD-AA96000 	DIN-Rail mounting kit For EX43000, EL1141, ED3145, ED3146, ED3171, ED3175, EX33000, EX34000, EX35000, ED3538, ED3638, EX42200, EX45000, EX46100, EX47000, EX63000, EX61000A, EX71000, EX73000, EX83000, EL900, EL9100, EX94000, EX95000 and EL9000 series
KD-AAEL950 	DIN-Rail mounting kit For EL910 and EL950 series
KD-BK1360 	DIN-Rail mounting kit For 41-136043, 41-136044 and 41-136046 series

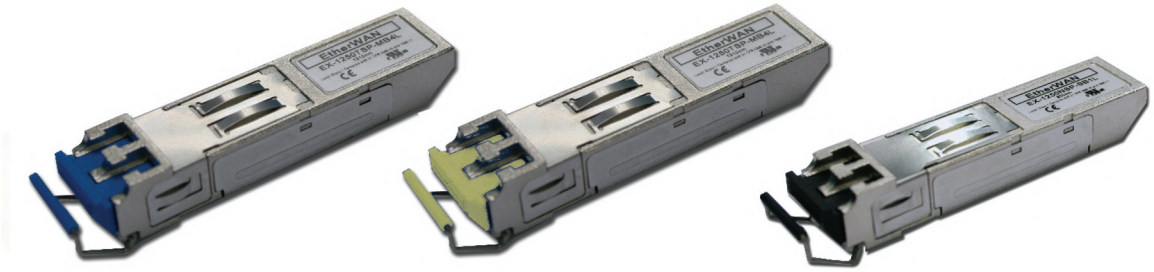
Panel Mounting Kits

Part Name	Description
KP-BK6212 	Panel mounting kit (Black) For EX74000, EX72000, EX62000, and DD-85-48 Series
KP-AA96-480 	Panel mounting kit For EX33000, EX34000, EX35000, EX43000, EX45000, EX46100, EX47000, EX61000A, EX63000, EX71000, EX73000, EX78000, EX94000, EX95000, EL900, EL9000, EL9020, EL9100, EL1141, ED3341, ED3344, ED3141, and ED3171 series

Rack mounting Kits

Part Name	Description
KR-BKEL900 	19" Rack mounting kit (Black) For EL900, EL9000, EL9020, EL9100, EL1141, ED3341, ED3344, ED3141, and ED3171 series
KR-BK-43-400 	19" Rack mounting kit (Black) For EX43000 Series
KR-BK71000 	19" Rack mounting kit (Black) For EX71000, EX61000A and ED3175 Series
KR-BK72-400 	19" Rack mounting kit (Black) For EX72000 and EX62000 Series
KR-BK74-400 	19" Rack mounting kit (Black) For EX74000 Series
KR-AE612-400 	19" Rack mounting kit (Black) For EX1616W, EX1624W, EX27000 (Single Power), EX29000 (Single Power), EX49000A, EX75000, EX76000, EX77000 (Single Power), EX87000 (Single Power), EX89000 (Single Power), and EMC1200R Series
KR-EW612-400 	19" Rack mounting kit (White) For EX1608SF Series
KR-BK1600R-410 	19" Rack mounting kit (Black) For EMC1600 Series
KR-BK17 	19" Rack mounting kit (Black) For EX17008, EX17008A, EX17908 and EX17908A Series

SFP Fiber Transceiver Series



Spotlight

- All SFPs have been tested with the best operating performance on EtherWAN switches
- The characteristics are performed in accordance with Telcordia Specification GR-468-CORE
- Single +3.3V Power Supply
- RoHS Compliant and Lead-free
- AC/AC Differential Electrical Interface
- Eye Safety Designed to meet Laser Class 1 compliant with EN60825-1
- Compliant with Multi-Source Agreement (MSA) Small Form Factor Pluggable (SFP)
- EMC requirement meets FCC in the United States and CENELEC EN55022 (CISPR 22) in Europe

Ordering Information

100BASE SFP Series*

Non-Hardened (Operating Temperature : 0°C to 70°C / 32°F to 158°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EXFE-R1S4-05H1	100 m	-	TX	-	-	-	-
EX-0155NSP-MB2L	2 Km	62.5 / 125 µm, MM	Duplex LC	1310 nm	13 dbm	-19 to -14 dBm	-32 dbm
EX-LM38-TC-N-B3	2 Km	62.5 / 125 µm / 50 / 125 µm, MM	Single LC	TX:1310 nm / RX:1550 nm	18 dBm	-10 to 0 dbm	-28 dbm
EX-LM48-TC-N-B5	2 Km	62.5 / 125 µm / 50 / 125 µm, MM	Single LC	TX:1550 nm / RX:1310 nm	18 dBm	-10 to 0 dbm	-28 dbm
EX-0155TSP-MB5L	15 Km	9 / 125 µm, SM	Duplex LC	1310 nm	17 dbm	-15 to -8 dBm	-32 dbm
EX-0155TBP-MB5L	20 Km	9 / 125 µm, SM	Single LC	TX:1310 nm / RX:1550 nm	18 dBm	-14 to -8 dBm	-32 dbm
EX-0155TBP-LB5L	20 Km	9 / 125 µm, SM	Single LC	TX:1550 nm / RX:1310 nm	18 dBm	-14 to -8 dBm	-32 dbm
EX-0155TSP-MB6L	40 Km	9 / 125 µm, SM	Duplex LC	1310 nm	29 dBm	-5 to 0 dBm	-34 dbm
EX-0155TBP-MB6L	40 Km	9 / 125 µm, SM	Single LC	TX:1310 nm / RX:1550 nm	26 dBm	-8 to -3 dbm	-34 dbm
EX-0155TBP-KB6L	40 Km	9 / 125 µm, SM	Single LC	TX:1550 nm / RX:1310 nm	26 dBm	-8 to -3 dbm	-34 dbm

100BASE SFP Series*

Hardened (Operating Temperature : -40°C to 85°C / -40°F to 185°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-0155NSP-MB2L-A	2 Km	62.5 / 125 µm, MM	Duplex LC	1310nm	13 dBm	-19 to -14 dbm	-32 dbm
EX-LM38-TI-N-B3	2 Km	62.5 / 25 µm / 50 / 125 µm, MM	Single LC	TX: 1310 nm / RX:1550 nm	18 dbm	-10 to 0 dbm	-28 dbm
EX-LM48-TI-N-B5	2 Km	62.5 / 125 µm / 50 / 125 µm, MM	Single LC	TX: 1550 nm / RX:1310 nm	18 dbm	-10 to 0 dbm	-28 dbm
EX-0155TSP-MB5L-A	15 Km	9 / 125 µm, SM	Duplex LC	1310nm	19 dbm	-15 to -8 dbm	-34 dbm
EX-0155TBP-MB5L-A	20 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX:1550 nm	18 dBm	-14 to -8 dbm	-32 dbm
EX-0155TBP-LB5L-A	20 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX:1310 nm	18 dBm	-14 to -8 dbm	-32 dbm
EX-0155TSP-MB6L-A	40 Km	9 / 125 µm, SM	Duplex LC	1310nm	30 dbm	-5 to 0 dbm	-35 dbm
EX-0155TBP-MB6L-A	40 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX:1550 nm	26 dbm	-8 to -3 dbm	-34 dbm
EX-0155TBP-KB6L-A	40 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX:1310 nm	26 dbm	-8 to -3 dbm	-34 dbm

** More SFP options upon the request*

*** Link Budget data is based on pair of the same SFP modules*

Gigabit SFP Series*

Non-Hardened (Operating Temperature : 0°C to 70°C / 32°F to 158°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-1250NSP-SB1L S	275 m / 550 m	62.5 / 125 µm / 50 / 125 µm, MM	Duplex LC	850 nm	7.5 dBm	-9.5 to -4 dBm	-17 dBm
EX-1250TBP-MB1L S	550 m	62.5 / 125 µm / 50/125 µm, MM	Single LC	TX: 1310 nm / RX: 1550 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-1250TBP-LB1L S	550 m	62.5 / 125 µm / 50 / 125 µm, MM	Single LC	TX: 1550 nm / RX: 1310 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-1250TSP-MB2L S	2 Km	62.5 / 125 µm, MM	Duplex LC	1310 nm	13.5 dBm	-9.5 to -3 dBm	-23 dBm
EX-1250TSP-MB4L S	10 Km	9 / 125 µm, SM	Duplex LC	1310 nm	11.5 dBm	-9.5 to -3 dBm	-21 dBm
EX-1250TBP-MB4L S	10 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TBP-KB4L S	10 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TSP-MB5L S	20 Km	9 / 125 µm, SM	Duplex LC	1310 nm	15 dBm	-9 to -3 dBm	-24 dBm
EX-1250TBP-MB5L S	20 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-1250TBP-KB5L S	20 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-LS38-C3L-TC-N-EB (DDM)	40 Km	9 / 125 µm, SM	Duplex LC	1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS38-C3L-TC-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS48-C3L-TC-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS38-C3U-TC-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	24 dBm	0 to +5 dBm	-24 dBm
EX-LS48-C3U-TC-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	23 dBm	-2 to +4 dBm	-25 dBm
EX-LS48-C3U-TC-N-EB (DDM)	70 Km	9 / 125 µm, SM	Duplex LC	1550 nm	23 dBm	0 to +5 dBm	-23 dBm
EX-LS48-C3U-TC-N51-CE (1510 nm) (DDM)	80 Km	9 / 125 µm, SM	Single LC	TX: 1510 nm / RX: 1570 nm	24 dBm	-2 to +3 dBm	-26 dBm
EX-LS48-C3U-TC-N57-CE (1570 nm) (DDM)	80 Km	9 / 125 µm, SM	Single LC	TX: 1570 nm / RX: 1510 nm	24 dBm	-2 to +3 dBm	-26 dBm

Gigabit SFP Series*

Hardened (Operating Temperature : -40°C to 85°C / -40°F to 185°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EXGT-R154-05H3	100 m	TX	TX	-	-	-	-
EX-1250NSP-SB1L-A S	275 m/ 550 m	62.5 / 125 µm/ 50/125 µm, MM	Duplex LC	850 nm	7.5 dBm	-9.5 to -4 dBm	-17 dBm
EX-1250TBP-MB1L-A S	550 m	62.5 / 125 µm/ 50/125 µm, MM	Single LC	TX: 1310 nm / RX: 1550 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-1250TBP-LB1L-A S	550 m	62.5 / 125 µm/ 50/125 µm, MM	Single LC	TX: 1550 nm / RX: 1310 nm	7 dBm	-10 to -4 dBm	-17 dBm
EX-LM38-C3S-TI-N-CE (DDM)	550 m	62.5 / 125 µm, MM	Single LC	TX: 1310 nm / RX: 1550 nm	8 dBm	-10 to +2 dBm	-18 dBm
EX-LM48-C3S-TI-N-CE (DDM)	550 m	62.5 / 125 µm, MM	Single LC	TX: 1550 nm / RX: 1310 nm	10 dBm	-8 to 0 dBm	-18 dBm
EX-1250TSP-MB2L-A S	2 Km	62.5 / 125 µm, MM	Duplex LC	1310 nm	13.5 dBm	-9.5 to -3 dBm	-23 dBm
EX-1250TSP-MB4L-A S	10 Km	9 / 125 µm, SM	Duplex LC	1310 nm	11.5 dBm	-9.5 to -3 dBm	-21 dBm
EX-1250TBP-MB4L-A S	10 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TBP-KB4L-A S	10 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	12 dBm	-9 to -3 dBm	-21 dBm
EX-1250TSP-MB5L-A S	20 Km	9 / 125 µm, SM	Duplex LC	1310 nm	15 dBm	-9 to -3 dBm	-24 dBm
EX-1250TBP-MB5L-A S	20 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-1250TBP-KB5L-A S	20 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	15 dBm	-8 to -3 dBm	-23 dBm
EX-LS38-C3L-TI-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS48-C3L-TI-N-CE (DDM)	40 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS38-C3U-TI-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1310 nm / RX: 1550 nm	24 dBm	0 to +5 dBm	-24 dBm
EX-LS48-C3U-TI-N-CE (DDM)	60 Km	9 / 125 µm, SM	Single LC	TX: 1550 nm / RX: 1310 nm	23 dBm	-2 to +4 dBm	-25 dBm
EX-LS38-C3L-TI-N-EB (DDM)	40 Km	9 / 125 µm, SM	Duplex LC	1310 nm	20 dBm	-3 to +2 dBm	-23 dBm
EX-LS48-C3U-TI-N-EB (DDM)	70 Km	9 / 125 µm, SM	Duplex LC	1550 nm	23 dBm	0 to +5 dBm	-23 dBm

** More SFP options upon the request*

*** Link Budget data is based on pair of the same SFP modules*

10GBASE SFP Series*

Non-Hardened (Operating Temperature : 0°C to 70°C / 32°F to 158°F)

Model Name	Distance	Cable Type	Connector Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-LM28-H3S-TC-N	30 m / 80 m	662.5 / 125 µm / 50 / 125 µm, MM	Duplex LC	850nm	2.8 dBm	-7.1 to -1 dBm	-9.9 dBm
EX-LS38-H3S-TC-N	10 Km	SMF	Duplex LC	1310nm	8.4 dBm	-6 to 0.5 dBm	-14.4 dBm

** More SFP options upon the request*

*** Link Budget data is based on pair of the same SFP modules*