

EL9020 Series

Hardened 10/100/1000BASE-TX to Gigabit SFP Media Converter



Overview

The EL9020 Series provides media conversion between 10/100/1000BASE-TX and 1000BASE SFP Fiber. Built specifically for mission-critical applications in harsh environments, the EL9020's hardened design features high shock & vibration resistance, electrical noise immunity, wide operating temperature range from -40°C to 75°C, and ruggedized aluminum housing. With triple power inputs, link down alarming, Link-Fault-Pass-Through and a wide range of fiber connectivity options the EL9020 is the ideal media converter for environments where connectivity is crucial.

Spotlight

- **Gigabit Connectivity**
 - Auto 10/100/1000BASE-TX and 1000BASE-SX/LX/BX Ethernet transmission conversion
 - 1000Mbps Full duplex, 10/100Mbps Full/Half duplex
 - SFP socket flexible for Gigabit fiber optic expansion
- **UL508 Certification**
 - Specific design for industrial communication applications with UL508 safety certification
- **Wide Operating Temperature**
 - -40°C to 75°C wide operating temperature range design is suitable for installation in outdoor cabinet

Hardware Specifications

Technology

Standards

- IEEE802.3, 10BASE-T
- IEEE802.3u 100BASE-TX
- IEEE802.3ab 1000BASE-T
- IEEE802.3z 1000BASE-SX/1000BASE-LX
- IEEE802.3x Full duplex and flow control

Forward and Filtering Rate

- 1,488,100pps for 1000Mbps

Processing Type

- Auto Negotiation
- Half duplex back-pressure and IEEE802.3x full-duplex flow control
- Auto-MDI/MDIX

Power

Input Voltage

- 12 to 48VDC (Terminal Block)
- 12VDC (DC Jack)

Power Consumption

- 7.68W Max, 0.16A @ 48VDC

Protection

- Overload current protection
- Reverse polarity protection

Mechanical

Casing

- Aluminum Case
- IP30

Dimensions

- 50mm (W) x 110mm (D) x 135mm (H)
(1.97" (W) x 4.33" (D) x 5.31" (H))

Weight

- 0.8Kg (1.76lbs.)

Installation

- DIN-Rail (Top hat type 35mm), Panel, or Rack mounting

Interface

Ethernet Port

- 10/100/1000BASE-TX: 1 port
- Gigabit SFP: 1 port

LED Indicators

- Per Unit: Power1
Power2
Power3
Fault
LFPT
- Per 10/100/1000TX Port : Link/Act
100M
1000M
Full-duplex/Collision
- Per Gigabit SFP Port : Link/Act

DIP Switch

- No.1: LFPT on/off
- No.2: Alarm for copper port on/off
- No.3: Alarm for fiber port on/off
- No.4: Auto-negotiation for fiber port on/off

Alarm Contact

- Relay contact rating with current 1A @ 30VDC, 0.5A @ 120VAC

Environment

Operating Temperature

- -40°C to 75°C (-40°F to 167°F)
Tested @ -40°C to 85°C (-40°F to 185°F)

Storage Temperature

- -40°C to 85°C (-40°F to 185°F)

Ambient Relative Humidity

- 5% to 95% (non-condensing)

Regulatory Approvals

ISO

- Manufactured in an ISO9001 facility

Safety

UL508

EMI

FCC Part 15B, Class A

EN61000-6-3

EN55022

EN61000-3-2

EN61000-3-3

EMS

EN61000-6-2

- EN61000-4-2 (ESD Standards)
- EN61000-4-3 (Radiated RFI Standards)
- EN61000-4-4 (Burst Standards)
- EN61000-4-5 (Surge Standards)
- EN61000-4-6 (Induced RFI Standards)
- EN61000-4-8 (Magnetic Field Standards)

Environmental Test Compliance

IEC60068-2-6 Fc (Vibration Resistance)

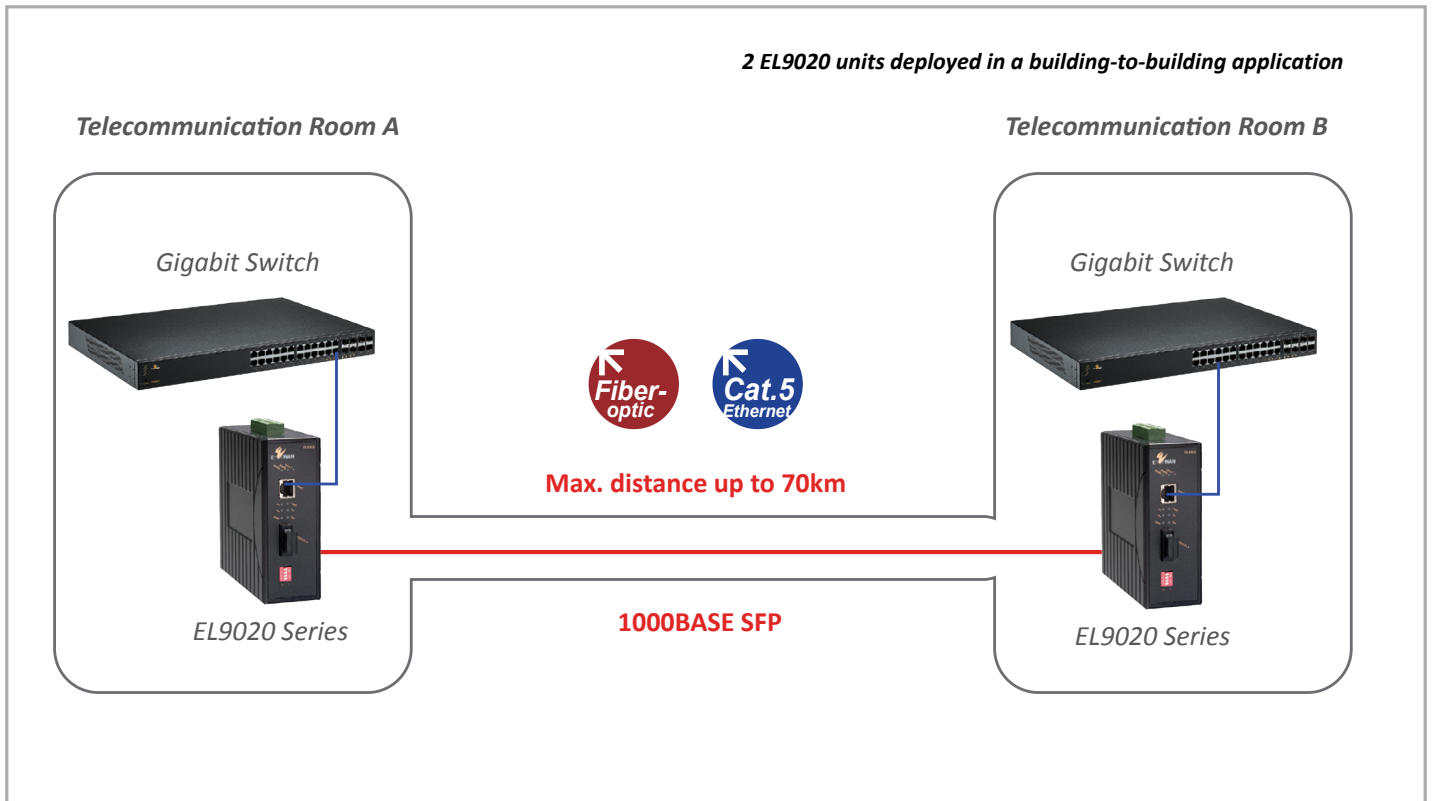
IEC60068-2-27 Ea (Shock)

FED STD 101C Method 5007.1 (Free fall w/ package)

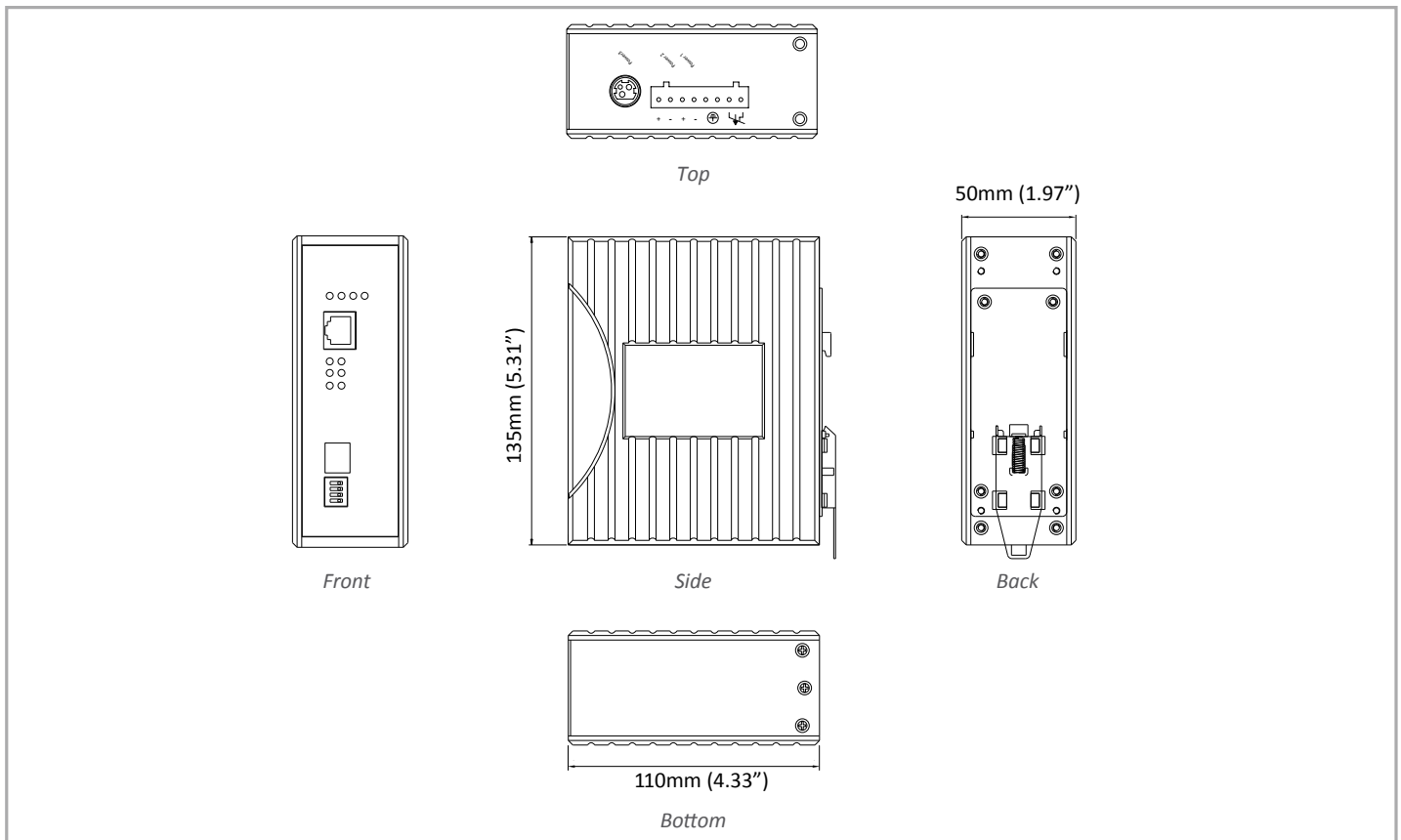
Industrial Compliance

NEMA TS2

Application Diagram



Dimensions



Ordering Information

Model

EL9020-00B	10/100/1000BASE-TX to Gigabit SFP Hardened Media Converter
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* DIN-Rail mounting kit included

Optional Accessories

KP-AA96-480	Panel mounting kit
DR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
DR-60--24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
DR-75-24	75W/3.2A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
DR-120-24	120W/5A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
41-136046-X	36W/3A 12VDC hardened power adapter with open wire in aluminum housing (For Terminal Block); (X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA
41-136044-X	36W/3A 12VDC hardened power adapter with latched DC jack in aluminum housing (For DC Jack); (X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA

Hardened SFP Gigabit Fiber Transceivers

Part Number	Typical Distance	Wavelength (nm)	Cable Type	Connector
EX-1250NSP-SB1L-A	275M/550M	850	MM	Duplex LC
EX-1250TSP-MB4L-A	10KM	1310	SM	Duplex LC
EX-1250TSP-NB6L-A	40KM	1310	SM	Duplex LC
EX-1250TSP-KB8L-A	70KM	1550	SM	Duplex LC
EX-1250TBP-MB1L-A	550M	TX:1310 / RX:1550	MM WDM-A	LC
EX-1250TBP-LB1L-A	550M	TX:1550 / RX:1310	MM WDM-B	LC
EX-1250TBP-MB4L-A	10KM	TX:1310 / RX:1550	SM WDM-A	LC
EX-1250TBP-KB4L-A	10KM	TX:1550 / RX:1310	SM WDM-B	LC
EX-1250TBP-MB5L-A	20KM	TX:1310 / RX:1550	SM WDM-A	LC
EX-1250TBP-KB5L-A	20KM	TX:1550 / RX:1310	SM WDM-B	LC

*More SFP options also available upon request.