EL9000 Series

Hardened 1000BASE-T to 1000BASE-SX/LX/BX Media Converter



Overview

The EL9000 Series provides media conversion between 1000BASE-T(X) and 1000BASE-SX-LX Fiber. Built specifically for mission-critical applications in harsh environments, the EL9000'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 EL9000 is the ideal media converter for environments where connectivity is crucial.

Spotlight

- **Gigabit Connectivity**
  - 1000BASE-TX and 1000BASE-SX/LX/BX Ethernet transmission conversion
  - 1000Mbps Full duplex and full wire-speed forwarding rate

- **ISA12.12.01 Certification**
  - Highly qualified for explosive environmental applications and certified by UL with ISA12.12.01 Class I, Division 2 classified for use in hazardous locations

- **Wide Operating Temperature**
  - -40°C to 75°C wide operating temperature range design is suitable for installation in outdoor cabinet

Hardware Specifications

Technology

Standards
- IEEE802.3ab 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
- 9.12W Max, 0.76A @ 12VDC, 0.38A@ 24VDC, 0.19A @ 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
- 1000BASE-T: 1 port
- 1000BASE-SX/LX: 1 port

LED Indicators
- Per Unit: Power, Power2, Fault
- Per Port: LNK, TX, RX

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

EMI

FCC Part 15B, Class A

EN61000-6-3

EN55022

EN61000-3-2

EN61000-3-3

Safety

ISA 12.12.01 (UL1604) for Hazardous Locations
- Class 1, Division 2 group A,B,C&D

UL60950-1

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)

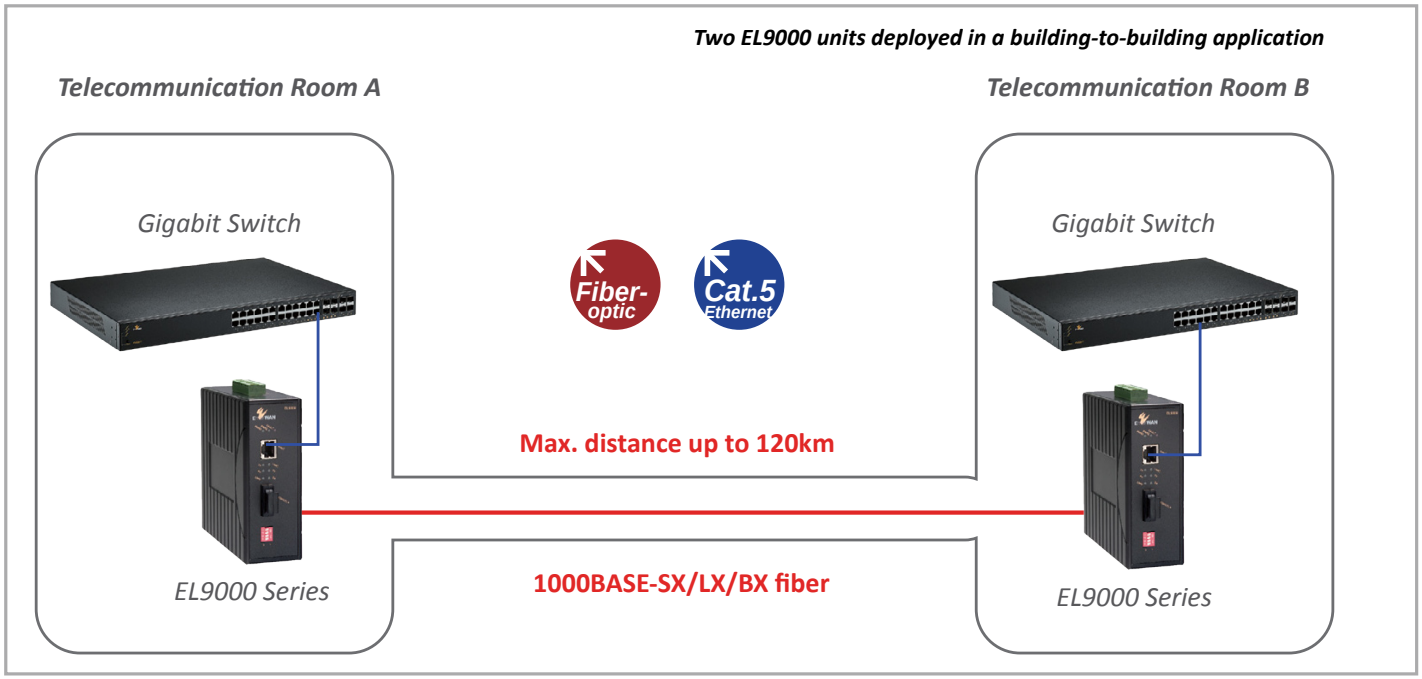
IEC60068-2-27 Ea (Shock)

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

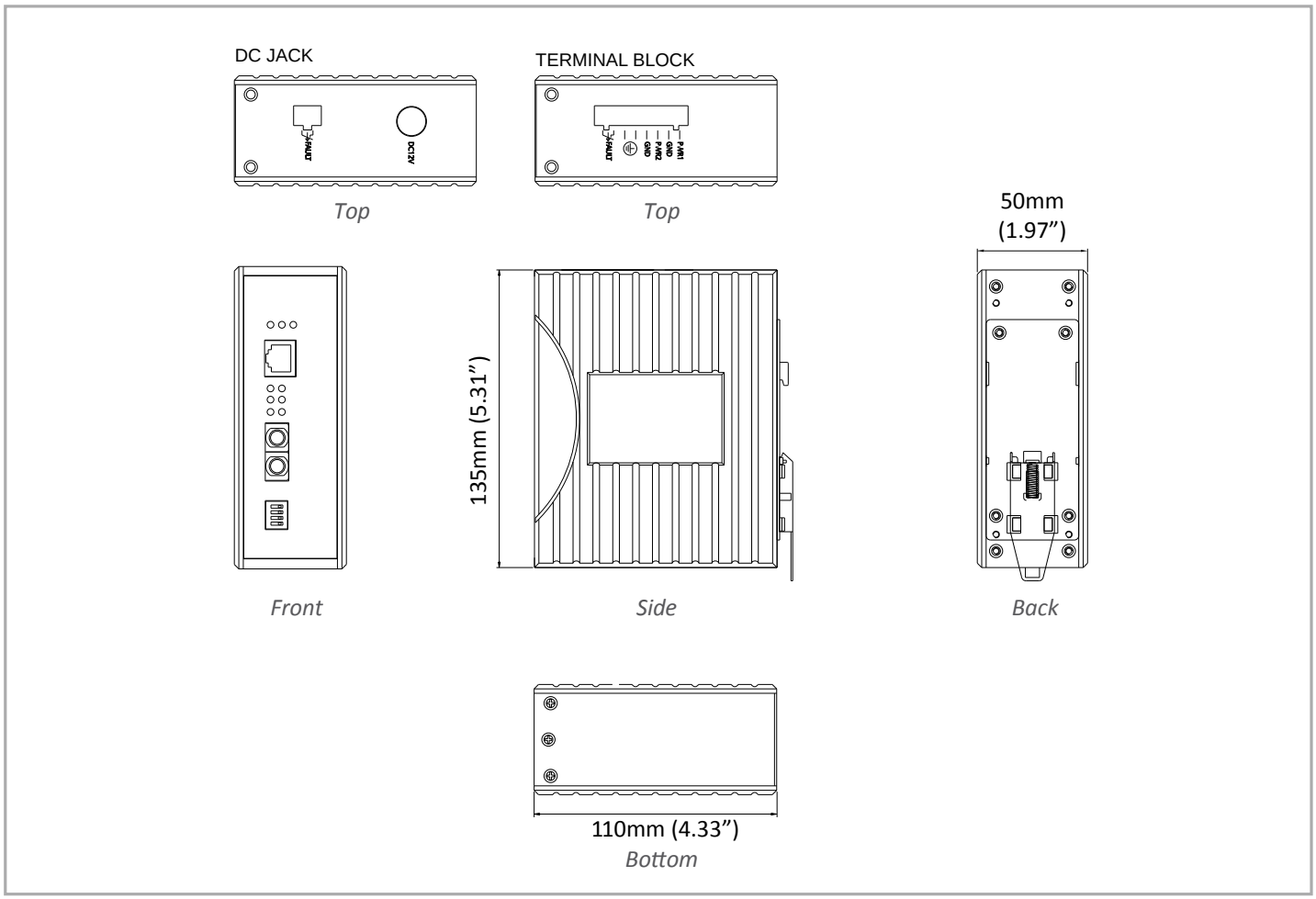
Industrial Compliance

NEMA TS2

Application Diagram



Dimensions



Ordering Information

Model

EL9000-A-Y-1-P	1000BASE-T to 1000BASE-SX/LX Hardened Media Converter

Gigabit Fiber Options (Y)

B	1000BASE-SX (SC) - 550m (850nm)
C	1000BASE-SX (SC) - 2Km (1310nm)
N	1000BASE-LX (SC) - 10Km (1310nm)
O	1000BASE-LX (SC) - 20Km (1310nm)
R	1000BASE-BX (SC) WDM -TX:1310nm/RX:1550nm - 20Km
S	1000BASE-BX (SC) WDM -TX:1550nm/RX:1310nm - 20Km

** More Gigabit options are also available upon request*

Power Connector Options (P)

A	Terminal Block
B	DC Jack

Optional Accessories

KP-AA96-480	Panel mount 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