

# 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)

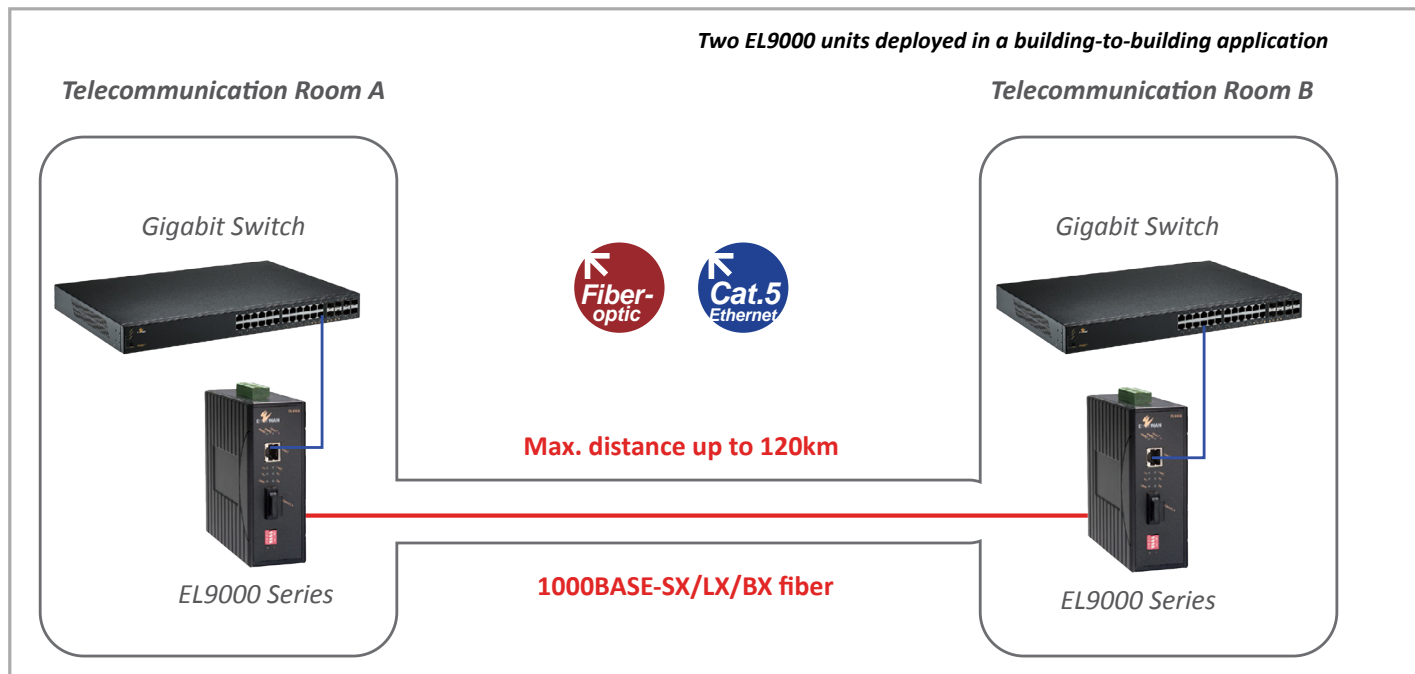
#### FED STD 101C Method 5007.1 (Free fall w/ package)

### Industrial Compliance

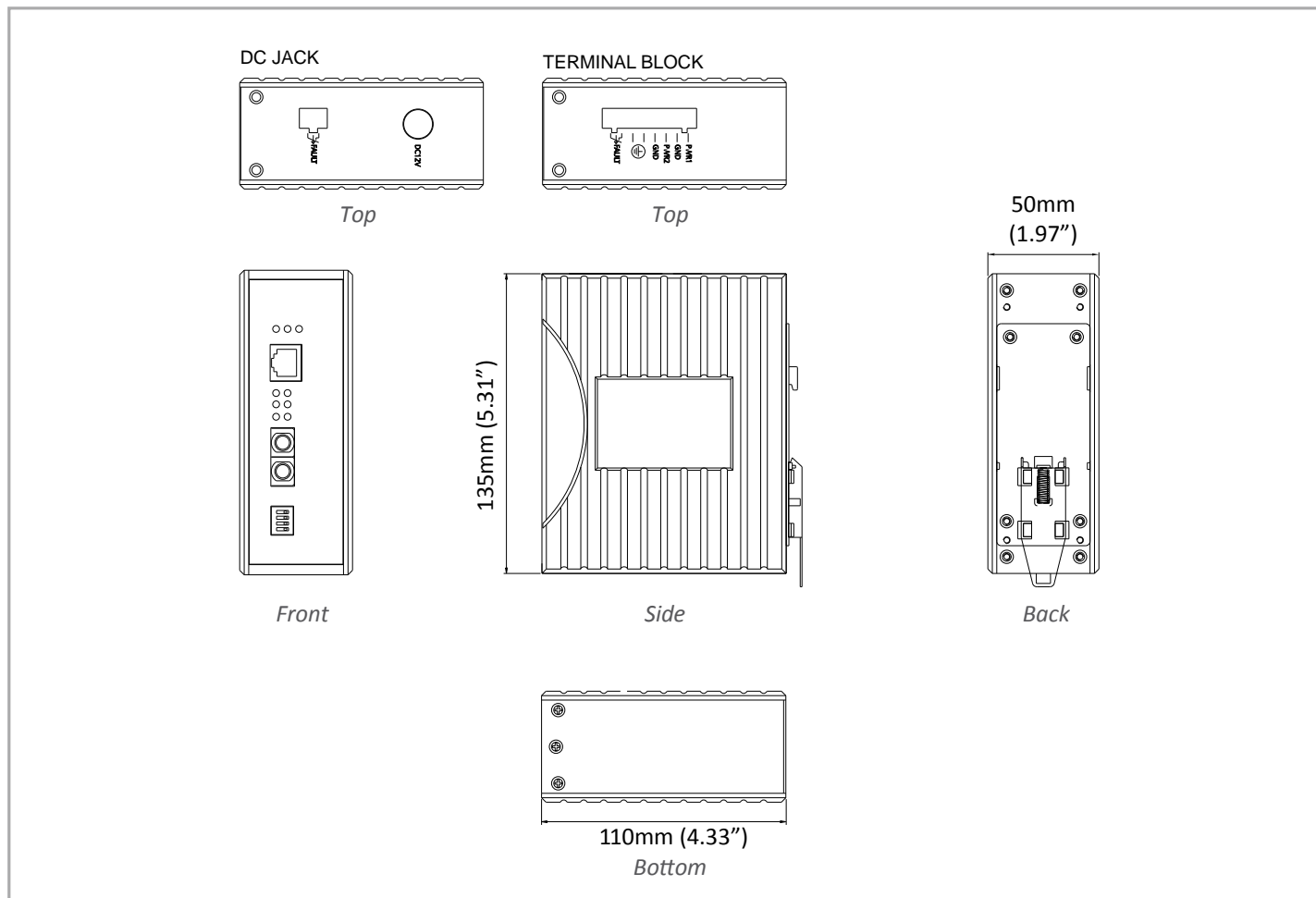
---

NEMA TS2

# Application Diagram



# Dimensions



# Ordering Information

## Model

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

## Gigabit Fiber Options (Y)

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

\* More Gigabit options are also available upon request

## Power Connector Options (P)

<b>A</b>	Terminal Block
<b>B</b>	DC Jack

## Optional Accessories

<b>KP-AA96-480</b>	Panel mount kit
<b>DR-30-24</b>	30W/1.5A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
<b>DR-60-24</b>	60W/2.5A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
<b>DR-75-24</b>	75W/3.2A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
<b>DR-120-24</b>	120W/5A DIN-Rail 24VDC Industrial Power Supply (For Terminal Block)
<b>41-136046-X</b>	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
<b>41-136044-X</b>	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