

# EL9100 Series

Hardened 10/100/1000BASE-TX to 1000BASE-SX/LX/BX  
Media Converter



## Overview

The EL9100 Series provides media conversion between 10/100/1000BASE-T(X) and 1000BASE-SX-LX Fiber. Built specifically for mission-critical applications in harsh environments, the EL9100'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 EL9100 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
- Full wire-speed forwarding rate

### • 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

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### 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

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### 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

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### 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

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### Ethernet Port

- 10/100/1000BASE-TX: 1 port
- 1000BASE-SX/LX/BX: 1 port

### LED Indicators

- Per Unit: Power1  
Power2  
Power3  
Fault  
LFPT
- Per 10/100/1000BASE-TX Port: Link/ACT  
100M  
1000M  
Full-duplex/Collision
- Per 1000SX/LX/BX 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

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### 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

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### ISO

- Manufactured in an ISO 9001 facility

### EMI

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#### FCC Part 15B Class A

#### VCCI Class A

#### EN 55022

#### EN 61000-3-2

#### EN 61000-3-3

#### EN 61000-6-4

### Safety

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#### UL 508

### EMS

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#### EN 61000-6-2

- EN 61000-4-2 (ESD Standards)
- EN 61000-4-3 (Radiated RFI Standards)
- EN 61000-4-4 (Burst Standards)
- EN 61000-4-5 (Surge Standards)
- EN 61000-4-6 (Induced RFI Standards)
- EN 61000-4-8 (Magnetic Field Standards)

### Environmental Test Compliance

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#### IEC 60068-2-6 Fc (Vibration Resistance)

#### IEC 60068-2-27 Ea (Shock)

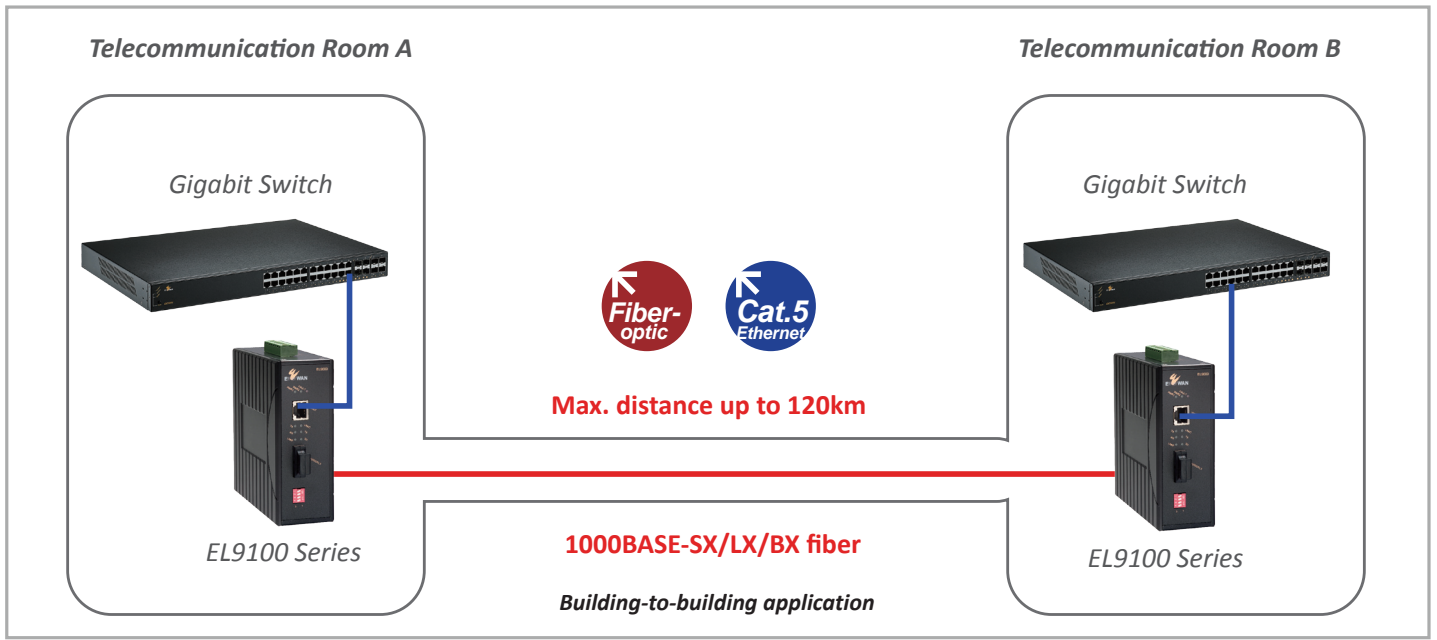
#### FED STD 101C Method 5007.1 (Free fall w/ package)

### Industrial Compliance

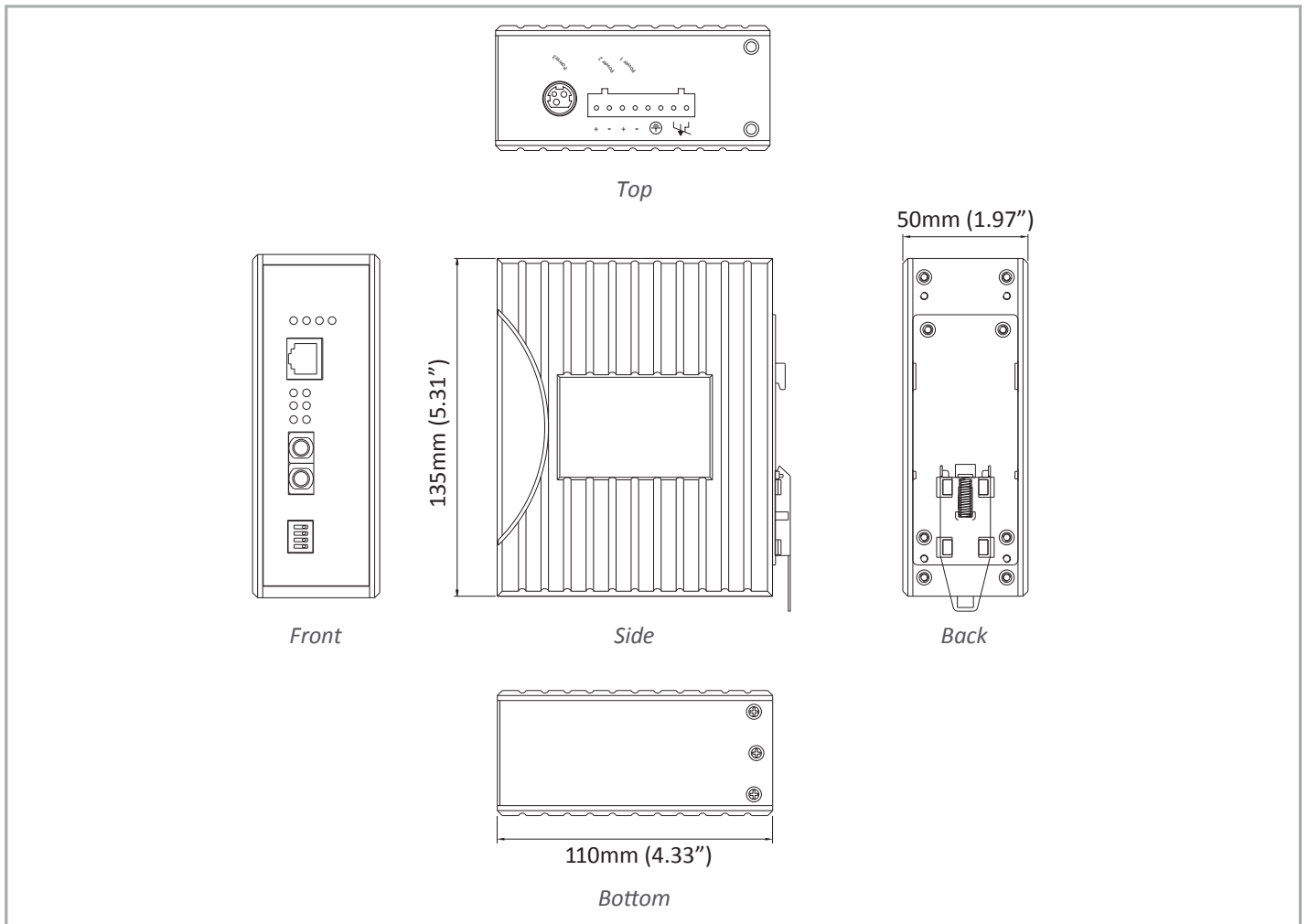
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#### NEMA TS2

# Application Diagram



# Dimensions



# Ordering Information

## Model

<b>EL9100-X1B</b>	10/100/1000BASE-TX to 1000BASE-SX/LX/BX Hardened Media Converter
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## Gigabit Port Options (X)

<b>3</b>	1000BASE-SX(SC) - 550m
<b>4</b>	1000BASE-SX (SC) - 2Km
<b>5</b>	1000BASE-SX (ST) - 550m
<b>A</b>	1000BASE-LX (SC) - 10Km
<b>B</b>	1000BASE-LX (SC) - 20Km
<b>E</b>	1000BASE-LX (SC) - 40Km (1310nm)
<b>H</b>	1000BASE-LX (ST) - 10Km (1310nm)
<b>I</b>	1000BASE-LX (ST) - 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

\* DIN-Rail mounting kit included

## Optional Accessories

<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