

## EL1142 Series

IEC 61850-3/IEEE 1613 Hardened 2-Port 10/100BASE-TX to 2-Port 100BASE-FX Media Converter



## Overview

The EL1142 series provides two independent media conversion paths between 2 x 10/100BASE-T and 2 x 100BASE-SX-LX fiber. Similar to the EL1141 series media converter, the EL1142 includes the hardened construction and high performance needed for mission critical applications, including power substation automation. However, the EL1142 series offers twice the port density in the same housing dimensions, providing greater flexibility and requiring less space for installation.

EtherWAN — "When Connectivity is Crucial."

## Spotlight

### Higher Port Density

- » Two independent media conversion paths in a compact housing

### IEC 61850-3/IEEE 1613 Certification

- » Meets standards for application in power substation automation

### EN 50121-4 Certification

- » Designed and tested for railway environment applications

### Link-Fault-Pass-Through (LFPT)

- » Provides constant monitoring of the links connected to the media converters
- » If a copper links fails, the media converter will pass the fail state on throughout the link, disabling the fiber link and the copper link on the opposite end

# Specifications

## Technology

### Standards

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX/FX
- IEEE 802.3x Full-Duplex and flow control

### Forward and Filtering Rate

- 14,880pps for 10Mbps
- 148,810pps for 100Mbps

### Packet Buffer Memory

- 128K bits

### Processing Type

- Store-and-forward
  - Auto Negotiation
  - Half-Duplex back-pressure and IEEE 802.3x Full-Duplex flow control
  - Auto MDI/MDIX
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## Power

### Input Voltage

- 12-48VDC (Terminal Block)

### Power Consumption

- 4.5W MAX. 0.37A@12VDC, 0.17A@24VDC, 0.09A@48VDC

### Protection

- Overload current protection
  - Reverse polarity protection
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## Mechanical

### Casing

- Aluminum Case
- IP30

### Dimensions

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

### **Weight**

- 1.2kg (2.64lbs.)

### **Installation**

- DIN-Rail (top hat type 35mm) or panel mounting
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## Interface

### **Ethernet Port**

- 10/100BASE-TX: 2 ports
- 100BASE-FX: 2 ports

### **LED Indicators**

- Per Unit: Power1, Power2, Alarm
- Per 10/100BASE-TX port: Link/Activity, 100, Full-Duplex/Collision, LFPT
- Per 100BASE-FX port: Link/Activity, Full-Duplex/Collision

### **Relay Contact**

- Dry contact with current 0.6A/30VDC
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## Environment

### **Operating Temperature**

- -40 to 75°C (-40 to 167°F)

### **Storage Temperature**

- -40 to 85°C (-40 to 185°F)

### **Ambient Relative Humidity**

- 5% to 95% (non-condensing)
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## Regulatory Approvals

### **ISO**

- Manufactured in an ISO 9001 facility

### **Safety**

UL 61010

### **EMC**

FCC Part 15B Class A

VCCI Class A

EN 61000-6-4

EN 61000-6-2 Class A

EN 55032 Class A

## **EMS**

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**

IEC 60068-2-6 Fc (Vibration Resistance)

IEC 60068-2-27 Ea (Shock)

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

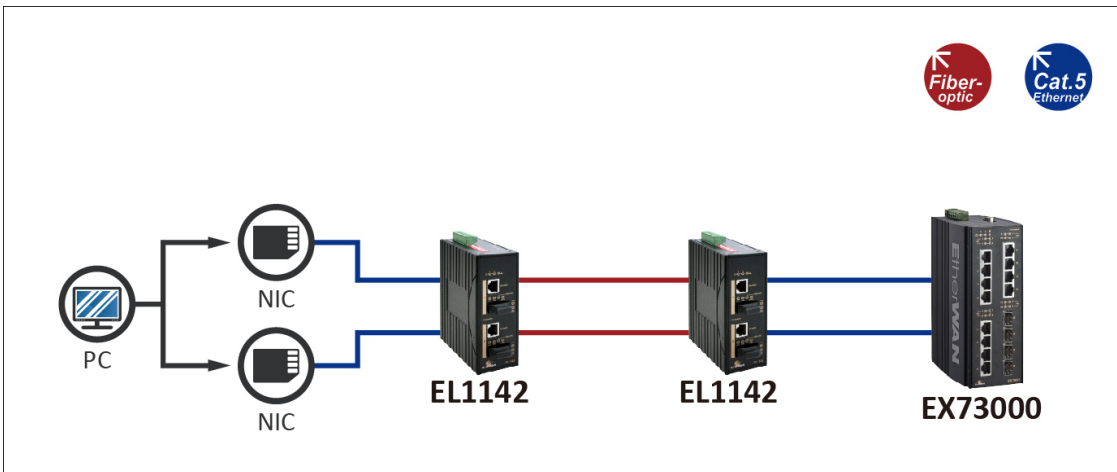
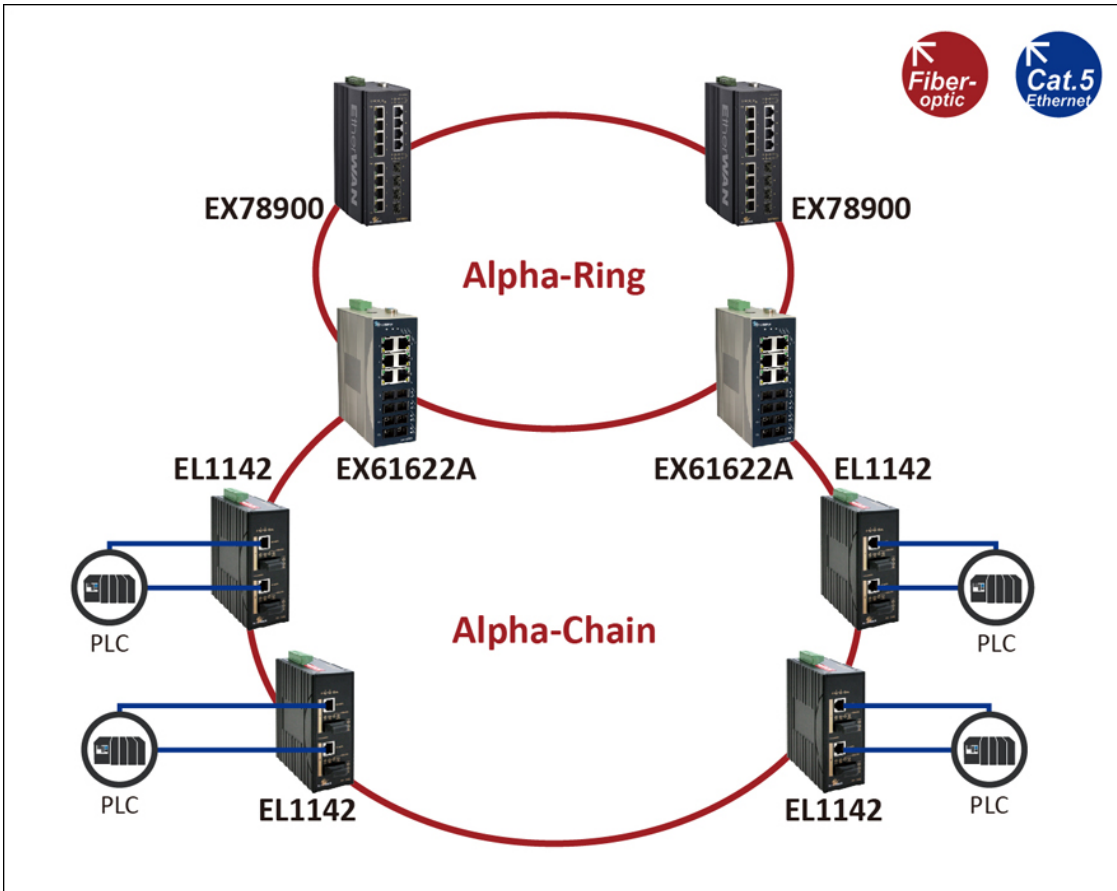
## **Industrial Compliance**

IEC 61850-3/IEEE 1613

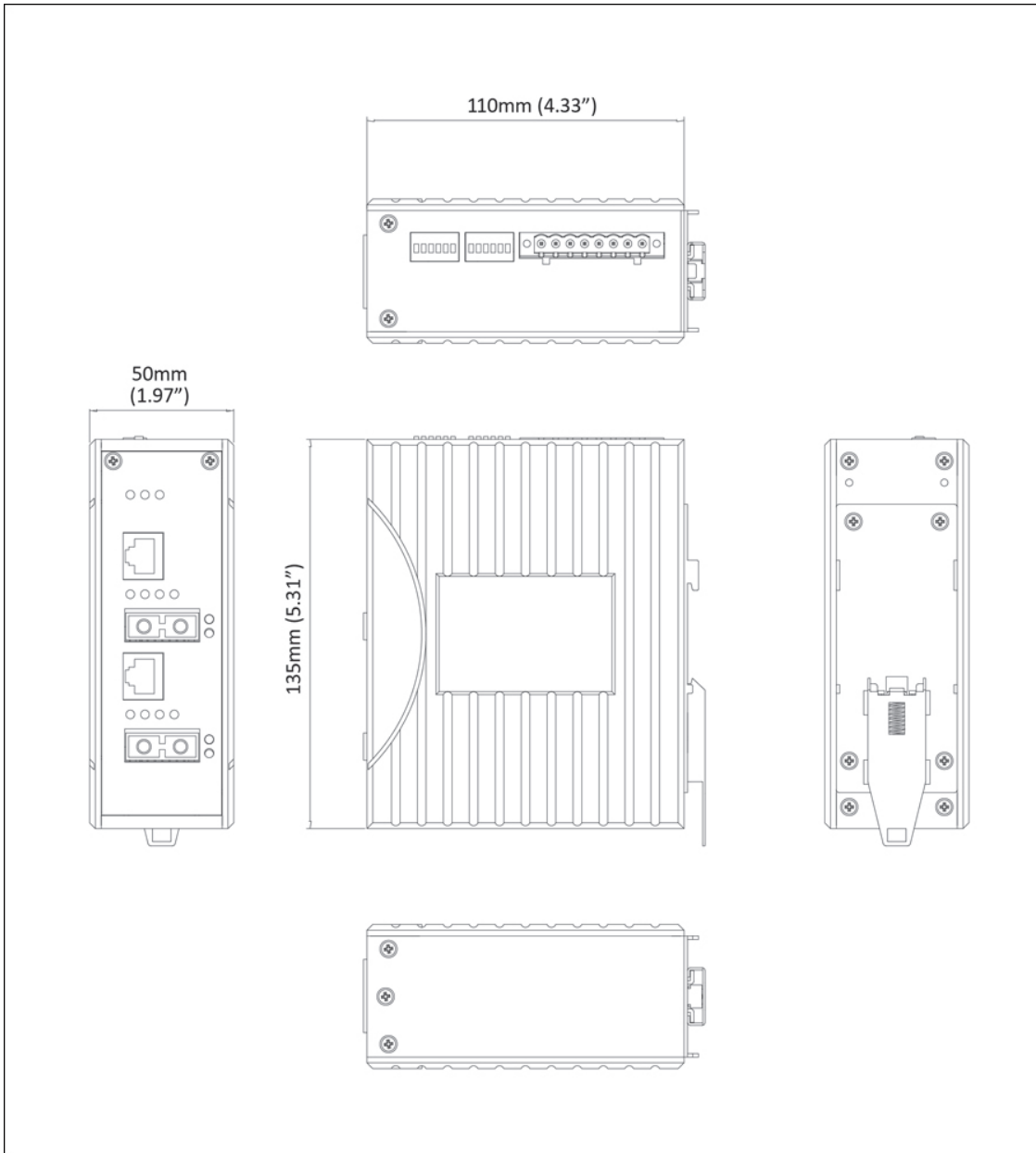
EN 50121-4

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# Application



## Dimensions



## Ordering Info

### Model

<b>EL1142-X0B</b>	2-Port 10/100BASE-TX +2-Port 100BASE-FX IEC 61850-3/IEEE 1613 Hardened Media Converter
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\* DIN-Rail mounting kit included.

### 100BASE-X Fiber Options (X)

<b>1</b>	Multi Mode (SC) - 2Km (1310nm)
<b>2</b>	Multi Mode (ST) - 2Km (1310nm)
<b>A</b>	Single Mode (SC) - 20Km (1310nm)
<b>B</b>	Single Mode (SC) - 40Km (1310nm)
<b>H</b>	Single Mode (ST) - 20Km (1310nm)

### Optional Accessories

<b>KP-AA96-480</b>	KP-AA96-480 Panel mounting kit
<b>HDR-30-24</b>	30W/1.5A DIN-Rail 24VDC Industrial Power Supply
<b>HDR-60-24</b>	60W/2.5A DIN-Rail 24VDC Industrial Power Supply
<b>EDR-75-24</b>	75W/3.2A DIN-Rail 24VDC Industrial Power Supply
<b>EDR-120-24</b>	120W/5A DIN-Rail 24VDC Industrial Power Supply
<b>EX41-145046-X</b>	Power Supply 45W 12VDC with Open Wire (X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA

