

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

Hardware 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

Power

Input Voltage

- 12-48VDC (Terminal Block)

Power Consumption

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

Protection

- Over current protection
- Reverse polarity protection

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

Interface

Ethernet Port

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

LED Indicators

- Per Unit: Power 1, Power 2, 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

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)

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)

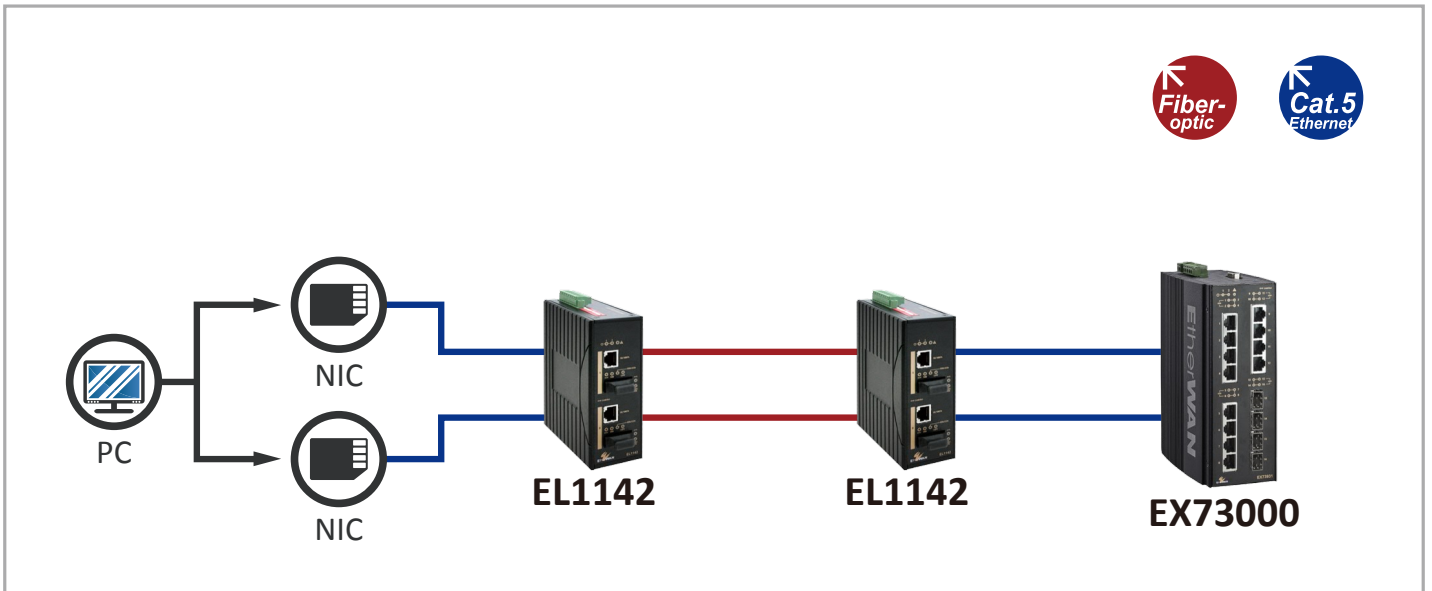
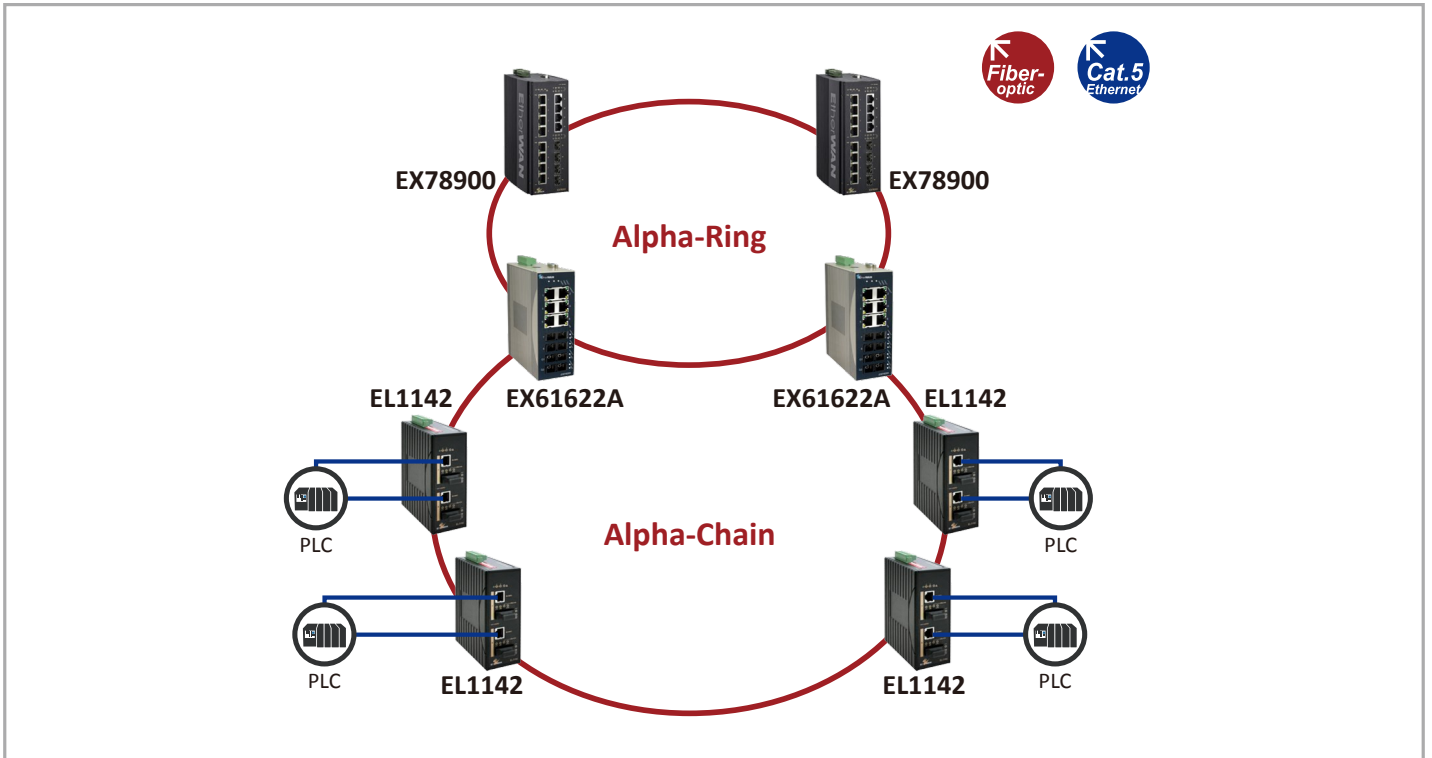
FED STD 101C Method 5007.1 (Free fall w/package)

Industrial Compliance

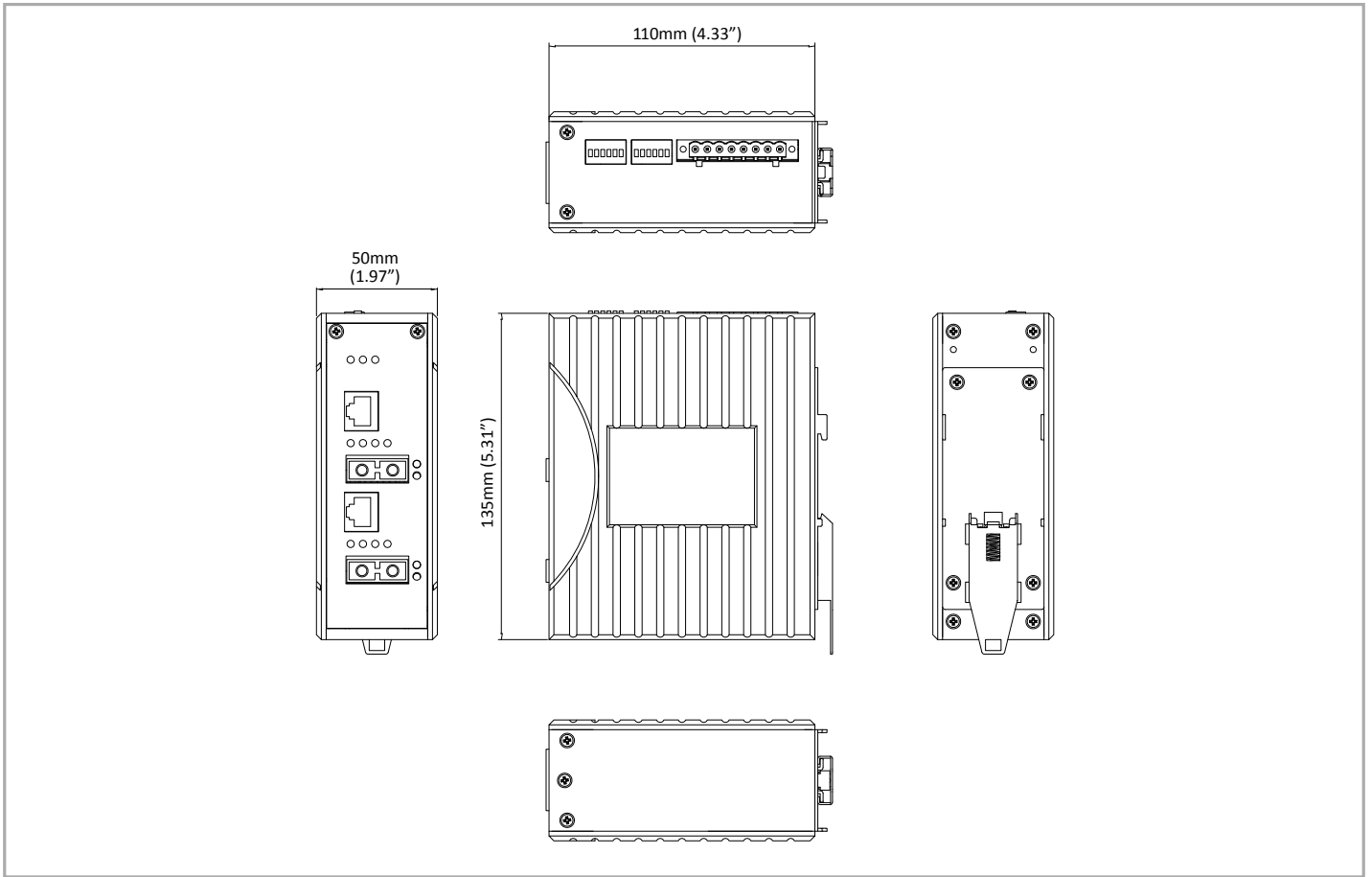
IEC 61850-3/IEEE 1613

EN 50121-4

Application



Dimensions



Ordering Information

Model

EL1142-X0B	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)

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

Optional Accessories

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