

EL1141 Series

IEC61850-3/IEEE1613 Hardened 10/100BASE-TX to 100BASE-FX Media Converter



Value

- Specific design for power automation and railway applications with IEC61850-3, IEEE1613 and EN50121-4 standard compliances
- Specific design for industrial communication applications with UL508 safety certification, focus on various Industrial communication applications

Features

- Complies with IEC61850-3 EMC and Environment requirement, and IEEE1613 standard for substation and power automation
- Complies with EN50121-4 EMC requirement for Railway applications
- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- DIP switch configuration for "Link-Fault-Pass-Through," link down alarm, speed, duplex mode
- 128K bits buffer memory
- 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Full wire-speed forwarding rate
- Alarms for power and port link failure by relay output
- Redundant power inputs with Terminal Block and DC Jack
- -40°C to 75°C (-40°F to 167°F) operating temperature range
- Hardened aluminum case
- Supports DIN-Rail, Panel or Rack Mounting installation

Ordering Information

EL1141-X0B	10/100BASE-TX to 100BASE-FX Hardened Media Converter
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100FX 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)
 6 : Multi Mode (SC) WDM -TX:1310nm/RX:1550nm - 2Km
 7 : Multi Mode (SC) WDM -TX:1550nm/RX:1310nm - 2Km
 8 : Multi Mode (SC) WDM -TX:1310nm/RX:1550nm - 5Km
 9 : Multi Mode (SC) WDM -TX:1550nm/RX:1310nm - 5Km
 P : Single Mode (SC) WDM -TX:1310nm/RX:1550nm - 20Km
 Q : Single Mode (SC) WDM -TX:1550nm/RX:1310nm - 20Km
 R : Single Mode (SC) WDM -TX:1310nm/RX:1550nm - 40Km
 S : Single Mode (SC) WDM -TX:1550nm/RX:1310nm - 40Km
 *More 100FX Fiber options also available upon request

Power Supply : (Optional)

*Option - The Terminal Block type external power supply are not included. Please order the following part numbers:

DR-30-24, DR-60-24, DR-75-24, DR-120-24 or 41-136046-X (X)=1: US, 2: EU, 3: UK, 4: AU, 5: JP

Installation Type : DIN-Rail (mounting kit is included)

Optional Panel mount kit, part number: KP-AA96-480



Specifications

Technology	
Standards	- IEEE802.3 10BASE-T, - IEEE802.3u 100BASE-TX/100BASE-FX, IEEE802.3x
Forward and Filtering Rate	14,880pps for 10Mbps 148,810pps for 100Mbps
Packet Buffer Memory	128K bits
Processing Type	- Store-and-Forward - Half-duplex back-pressure and IEEE802.3x full-duplex flow control

Power	
Input	Input Voltage: 12 to 48VDC (Terminal Block) / 12VDC(DC Jack)
Power Consumption	2.4W MAX. 0.2A @ 12VDC, 0.05A @ 48VDC
Overload Current Protection	Present
Reverse Polarity Protection	Present

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, Rack Mounting

Interface	
Ethernet Port	10/100BASE-TX: 1 port 100BASE-FX: 1 port
LED Indicators	- Per Unit: Power Status (Power 1, Power 2, Fault), Link-Fault-Pass-Through - Per Port: 10/100TX: Link/Activity, Full-duplex/Collision, Speed 100FX: Link/Activity, Full-duplex/Collision
Relay 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
Safety	UL508
EMI	- FCC Part 15, Class A - EN61000-6-4 - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	- IEC61850-3 & IEEE1613: Substation & Power automation Applications - EN50121-4: Railway Applications - EN61000-6-2 - EN61000-4-2 (ESD Standards) - Contact: + / - 8KV - Air: + / - 15KV - EN61000-4-3 (Radiated RFI Standards) 35V/m, 80 to 1000MHz; 80% AM - EN61000-4-4 (Burst Standards) - Signal Ports: + / - 4KV - D.C. Power Ports: + / - 4KV - EN61000-4-5 (Surge Standards) - Signal Ports: + / - 2KV; Line-to-Line - D.C. Power Ports: + / - 2KV; Line-to-earth - EN61000-4-6 (Induced RFI Standards) - Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM - D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM - EN61000-4-8 (Magnetic Field Standards) 1000A/m @ 50, 60Hz
Environmental Test Compliance	- IEC60068-2-6 Fc (Vibration Resistance) 5g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport) - IEC60068-2-27 Ea (Shock) 25g @ 11ms (Half-Sine Shock Pulse; Operation) 50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport) - FED STD 101C Method 5007.1 (Free fall w/ package) -Tested with Cross Weight and Drop High standard table

Diagrams

Unit: mm

