



Overview



The EtherWan EL1141 Fast Ethernet media converters are designed for electric utility automation application, such as substation, wind power systems, hydro power plants, distributed energy resources and water control system...etc. environments. The EL1141 is complied with the standard of IEC61850-3, IEEE1613 and EN50121-4, and functions at temperatures ranging from -40°C to 75°C (-40°F to 167°F), Whether on the factory floor or the street corner, the EL1141 will provide flawless communications when you most need it most. The EL1141 is available with a selection of fibre cabling and connector options. The RJ-45 port on this unit provides Auto-MDIX and auto-negotiation. The link-fault-pass-through feature allows the network management agent on adjacent equipment to react to a broken link. Flexibility is the main feature of the EL1141, it may be DIN rail or panel mounted, and comes with power options to match the applications that require a tough, environmentally hardened, Fast Ethernet media converter.

Features

- Complies with IEC61850 EMC and Environment requirement, and IEEE1613 standard for substation and power automation
- Complies with EN50121-4 environmental 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
- 768K 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 aluminium case
- Supports DIN-Rail, Panel or Rack Mounting installation

Ordering Information

EL1141-X0Z 10/100BASE-TX to 100BASE-FX Hardened Media Converter

100FX Fibre Options:

- (X) =
- | | |
|--|--|
| 1: Multi Mode (SC) | 8: Multi Mode (SC) WDM -TX: 1310nm/RX: 1550nm -5Km |
| 2: Multi Mode (SC) | 9: Multi Mode (SC) WDM -TX: 1550nm/RX: 1310nm -5Km |
| A: Single Mode (SC) -20Km | P: Single Mode (SC) WDM -TX: 1310nm/RX: 1550nm -20Km |
| B: Single Mode (SC) -40Km | Q: Single Mode (SC) WDM -TX: 1550nm/RX: 1310nm -20Km |
| H: Single Mode (ST) -20Km | R: Single Mode (SC) WDM -TX: 1310nm/RX: 1550nm -40Km |
| 6: Multi Mode (SC) WDM -TX: 1310nm/RX: 1550nm -2Km | S: Single Mode (SC) WDM -TX: 1550nm/RX: 1310nm -40Km |
| 7: Multi Mode (SC) WDM -TX: 1550nm/RX: 1310nm -2Km | |
- *More 100FX Fibre Options also available upon request

Power Input Interface:

(Z) =B: Terminal Block and DC Jack

Power Supply: (Optional)

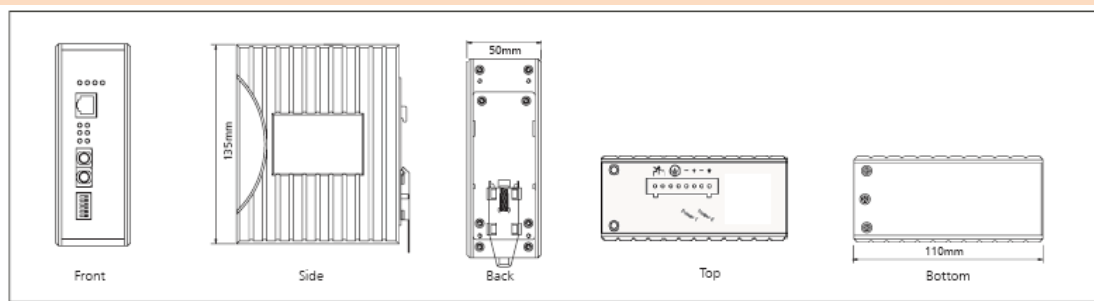
*Option - The Terminal Block type external power supply are not included. Please order the following part numbers, as required:
DR-30-24, DR-60-24, DR-75-24, DR-120-24 or 41-136046-X X=1, 2,3,4,5

Installation Type: DIN Rail (mounting kit is included)

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



Diagrams



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:

- 768K 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:

- Aluminium 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:

- EN61000-6-2
- EN61000-4-2 (ESD Standards)
Contact: +/- 8KV; Criteria B
Air: +/- 15KV; Criteria B
- EN61000-4-3 (Radiated RFI Standards)
35V/m, 80 to 1000MHz; 80% AM Criteria A
- EN61000-4-4 (Burst Standards)
Signal Ports: +/- 4KV; Criteria A
D.C. Power Ports: +/- 4KV; Criteria A
- EN61000-4-5 (Surge Standards)
Signal Ports: +/- 2KV; Line-to-Line; Criteria A
D.C. Power Ports: +/- 2KV; Line-to-earth; Criteria A
- EN61000-4-6 (Induced RFI Standards)
Signal Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
D.C. Power Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
- EN61000-4-8 (Magnetic Field Standards)
1000A/m @ 50, 60Hz; Criteria A

Environmental Test Compliance:

- IEC60068-2-6 Fc (Vibration Resistance)
5g @ 10~150 KHz, 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)
- IEC60068-2-32 Ed (Free Fall)
1M (3.281ft.)

Power Input Assignment					
Power 1	+	12~48VDC	Terminal Block		
	-	Power Ground			
Power 2	+	12~48VDC			
	-	Power Ground			
		Earth Ground			
		Relay			
Power 3		12VDC	DC Jack		
DIP Switch Assignment					
DIP-ON 	LFPT	TX		FX	LINK DOWN
	Enable	F. Mode	10M	H. Duplex	H. Duplex
Disable	Auto Mode	100M	F. Duplex	F. Duplex	OFF

