

EL9020

Hardened 10/100/1000BASE-TX to Gigabit SFP Media Converter Gigabit



Overview



The EL9020 functions at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and is tested for functional operation @ -40°C to 85°C (-40°F to 185°F). Whether on the factory floor or the street corner, the EL9020 will provide flawless communications when you need it most. The EL9020 series offers 1000BASE SFP socket to support multi-mode/single-mode fibre optics. 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 EL9020, it may be DIN rail or panel mounted, and comes with power options to match the applications that require a tough, environmentally hardened, Gigabit Ethernet media converter

Features

- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- DIP switch configuration for "Link-Fault-Pass-Through", fibre Auto/force mode, link down alarm
- 1000Mbps-Full-duplex, Auto-Negotiation, Auto-MDI/MDIX
- SFP socket for Gigabit fibre optic expansion
- 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

EL9020-00Z 10/100/1000BASE-TX to Gigabit SFP Hardened Media Converter

Power Input Interface:

(Z) = B: Terminal Block & DC Jack

SFP Hardened Type Gigabit Fibre Transceiver: (Optional)

| Part Number | Typical Distance | Wavelength (nm) | Cable Type | Connector |
|-------------------|------------------|-------------------|------------|-----------|
| EX-1250NSP-SB1L-A | 275M/550M | 850 | MM | Duplex LC |
| EX-1250TSP-MB4L-A | 10KM | 1310 | SM | Duplex LC |
| EX-1250TSP-NB6L-A | 40KM | 1310 | SM | Duplex LC |
| EX-1250TSP-KB8L-A | 70KM | 1550 | SM | Duplex LC |
| EX-1250TBP-MB1L-A | 550M | TX:1310 / RX:1550 | MM WDM-A | LC |
| EX-1250TBP-LB1L-A | 550M | TX:1550 / RX:1310 | MM WDM-B | LC |
| EX-1250TBP-MB4L-A | 10KM | TX:1310 / RX:1550 | SM WDM-A | LC |
| EX-1250TBP-KB4L-A | 10KM | TX:1550 / RX:1310 | SM WDM-B | LC |
| EX-1250TBP-MB5L-A | 20KM | TX:1310 / RX:1550 | SM WDM-A | LC |
| EX-1250TBP-KB5L-A | 20KM | TX:1550 / RX:1310 | SM WDM-B | LC |

*More Gigabit SFP options also available upon request.

Power Supply: (Optional)

*Option A - 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

**Option B - The external power adapter and power cord are not included. Please order the following part numbers, as required:

41-136044-X X=1, 2,3,4,5

Installation Type: DIN Rail (mounting kit is included)

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



| Power Input Assignment | | |
|------------------------|--|----------------|
| Power3 | 12VDC | Terminal Block |
| Power2 | + 12-48VDC | |
| | - Power Ground | |
| Power1 | + 12-48VDC | |
| | - Power Ground | |
| ⊕ | Earth Ground | |
| Relay Alarm Assignment | | |
| ⚡ FAULT | *Relay warning signal disable for following: 1. The relay contact closes if Power1 and Power2 are both failed but Power3 is on. 2. The relay contact closes if Power3 is failed but Power1 and Power2 are both on. | |



Specifications

Technology

Standards:

- IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3ab 1000BASE-T, IEEE802.3z 1000BASE-SX/1000BASE-LX, IEEE802.3x

Forward and Filtering Rate:

- 1,488,100pps for 1000Mbps

Power

Input:

- Input Voltage: 12 to 48VDC (Terminal Block); 12VDC (DC Jack)

Power Consumption:

- 10.56W, 0.88A@12VDC, 0.44A@24VDC, 0.22A@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:

- 10/100/1000BASE-TX: 1 port
- Gigabit SFP: 1 port

LED Indicators:

- Per Unit: Power Status (Power1, Power2, Power3, Fault), LFPT
- Per Port: 10/100/1000TX: Link/Activity, Speed, Full-duplex/Collision
- Gigabit SFP: Link/Activity

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
- VCCI, Class A
- EN61000-6-3
- EN55022
- EN61000-3-2
- EN61000-3-3

EMS:

- EN61000-6-2
- EN61000-4-2 (ESD Standards)
Contact: + / - 4KV; Criteria B
Air: + / - 8KV; Criteria B
- EN61000-4-3 (Radiated RFI Standards)
10V/m, 80 to 2.7GMHz; 80% AM Criteria A
- EN61000-4-4 (Burst Standards)
Signal Ports: + / - 4KV; Criteria B
D.C. Power Ports: + / - 4KV; Criteria B
- EN61000-4-5 (Surge Standards)
Signal Ports: + / - 1KV; Line-to-Line; Criteria B
D.C. Power Ports: + / - 0.5KV; Line-to-earth; Criteria B
- 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)
30A/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.)

Diagrams

