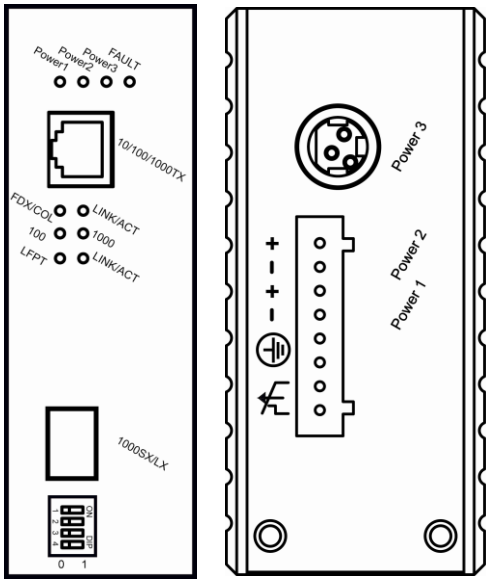
EL9020 Series Hardened Media Converter

This quick start guide describes how to install and use the Gigabit SFP hardened media converter. This is the media converter of choice for harsh environments constrained by space.

Physical Description

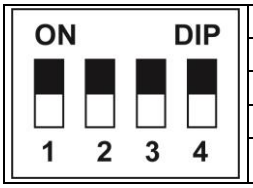
The Terminal Block and Power inputs



Power Input Assignment			
Power3		12VDC	DC Jack
Power2	+	12-48VDC	Terminal Block
	−	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 on. 2. The relay contact closes if Power3 is failed but Power1 and Power2 are both on.	

- DC Terminal Block Power Inputs: There are two pairs of power inputs can be used to power up this device.
- DC JACK Power input: 12VDC.

DIP Switch



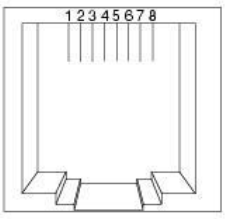
DIP switch No.	0 (OFF)	1 (ON)
1	Disable LFPT	Enable LFPT
2	Disable link down alarm for copper port	Enable link down alarm for copper port
3	Disable link down alarm for SFP socket port	Enable link down alarm for SFP socket port
4	Enable force mode for SFP socket port	Enable auto-negotiation for SFP socket port

The 1000Base-T and 1000Base-SX/LX Connectors

The 1000Base-T Connections

The following lists the pinouts of 1000Base-T port.

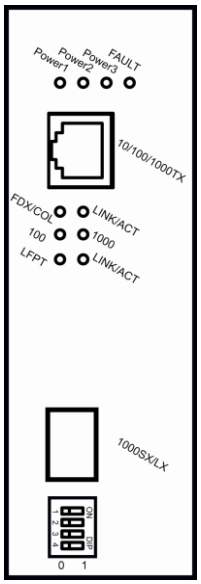
Pin	Label
1	TP0+
2	TP0-
3	TP1+
4	TP2+
5	TP2-
6	TP1-
7	TP3+
8	TP3-



The 1000Base-SX/LX Connections

The SFP socket for Gigabit fiber optic expansion.

The Port Status LEDs



LEDs	State	Indication
FAULT	Steady	Power redundant system or ports function abnormally
	Off	Power redundant system and ports function normally
Power1 Power2 Power3	Steady Off	Power on Power off
LFPT	Steady	LFPT function enabled
	Off	LFPT function disabled
1000Base-SX/LX		
LINK/ACT	Steady	A valid network connection established for SFP port
	Flashing	Transmitting or receiving data ACT stands for Activity
	Off	No valid network connection established for SFP port

10/100/1000Base-TX		
LINK/ACT	Steady	A valid network connection established for copper port
	Flashing	Transmitting or receiving data ACT stands for Activity
	Off	No valid network connection established for copper port
FDX/COL	Steady	Connected in full duplex mode
	Flashing	Collision occurred COL stands for Collision
	Off	Connected in half duplex mode
1000	Steady	Connected at 1000Mbps
	Off	Not connected at 1000Mbps
100	Steady	Connected at 100Mbps
	Off	Connected at 10Mbps

Functional Description

- Meets NEMA TS1/TS2 Environmental requirements: temperature, shock, and vibration for traffic control equipment.
- Meets EN61000-6-2 & EN61000-6-3 EMC Generic Standard Immunity for industrial environment.
- DIP switch configuration for link-fault-pass-through, fiber auto/force mode, and port link down alarm.
- 4096 MAC addresses, 2.75M bits buffer memory.
- Supports 802.3/802.3u/802.3ab/802.3z/802.3x. Auto-negotiation and Auto MDI/MDIX.
- SFP socket for Gigabit fiber optic expansion.
- Full wire-speed forwarding rate.
- Alarms for power and port link failure by relay output. Relay contact rating with current 1A @ 30VDC, 0.5A @ 120VAC.
- Operating voltage and Max. current consumption: 1A @ 12VDC, 0.5A @ 24VDC, 0.25A @ 48VDC. Power consumption: 12W Max.
- Power Supply: Redundant DC Terminal Block power inputs or 12VDC DC JACK with 100-240VAC external power supply.
- Field Wiring Terminal Markings: Use Copper Conductors Only, 60/75℃, wire range 12-24 AWG, torque value 7 lb-in.
- -40℃ to 75℃ (-40℉ to 167℉) operating temperature range. Tested for functional operation @ -40℃ to 85℃ (-40℉ to 185℉). UL508 Industrial Control Equipment certified Maximum Surrounding Air Temperature @ 75℃ (167℉).
- For use in Pollution Degree 2 Environment.
- Supports DIN-Rail, Panel, or Rack Mounting installation.

Assembly, Startup, and Dismantling

- Unpacking: Open the carton and unpack the items. Your package should include an EL9020 media converter and this Quick Install Guide. If items are missing or damaged, notify your EtherWAN representative.
  Download the full manual at: https://www.etherwan.com
- Assembly: Place the media converter on the DIN rail from above using the slot. Push the front of the media converter toward the mounting surface until it audibly snaps into place.
- Startup: Connect the supply voltage to start up the media converter via the terminal block (or DC JACK).
- Dismantling: Pull out the lower edge and then remove the media converter from the DIN rail.