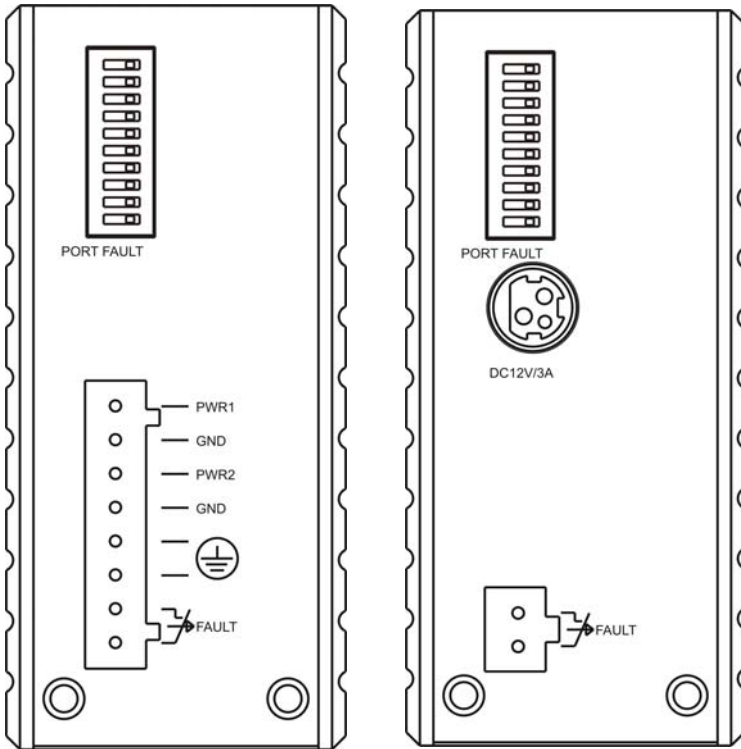


Hardened Ethernet Switch

This quick start guide describes how to install and use the hardened Ethernet Switch. This is the switch of choice for harsh environments constrained by space.

Physical Description

The Terminal Block and Power inputs



Terminal Assignment	
PWR1	Power Input 1 (10 ~ 48VDC)
GND	Power Ground
PWR2	Power Input 2 (10 ~ 48VDC)
GND	Power Ground
	Earth Ground
	1. The relay opens if PWR1 or PWR2 fails 2. The relay opens if the Port Link is broken (When Link Down Detection is Enabled)
ON: Enable Port Fault Alarm OFF: Disable Port Fault Alarm PIN: 6~10 N/A	

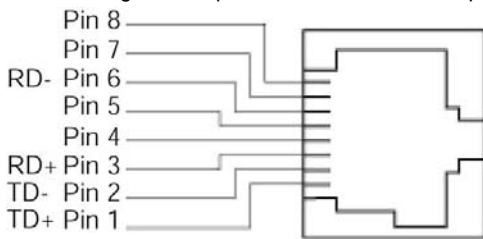
Power Input Assignment	
PWR1	12 VDC Jack
Relay Alarm Assignment	
	*Relay Warning signal disable for following: 1. The rela contactclose if power fails.
ON: Enable Port Fault Alarm OFF: Disable Port Fault Alarm PIN 6~10: N/A	

- DC Terminal Block Power Inputs: There are two pairs of power inputs can be used to power up this device. You need to have two power inputs connected to run the device, but the FAULT LED indicator will light up to remind that the power redundant system functions abnormal in case either PWR1 or PWR2 is dead. This device, however, continues working normally even fault LED indicator lights up.
- DC Jack Power input: 12VDC.

The 10/100Base-TX and 100Base-FX Connectors

The 10/100Base-TX Connections

The following lists the pinouts of 10/100Base-TX ports.

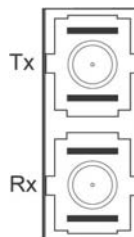


Pin	Regular Ports	Uplink port
1	Output Transmit Data +	Input Receive Data +
2	Output Transmit Data -	Input Receive Data -
3	Input Receive Data +	Output Transmit Data +
4	NC	NC
5	NC	NC
6	Input Receive Data -	Output Transmit Data -
7	NC	NC
8	NC	NC

The 100Base-FX Connections

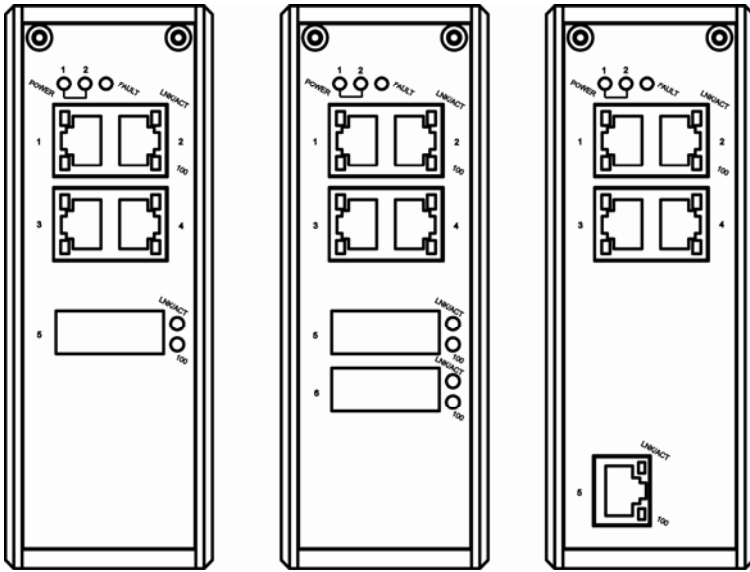
The fiber port pinouts

The Tx (transmit) port of device I is connected to the Rx (receive) port of device II, and the Rx (receive) port of device I to the Tx (transmit) port of device II.



Hardened Ethernet Switch

The Port Status LEDs



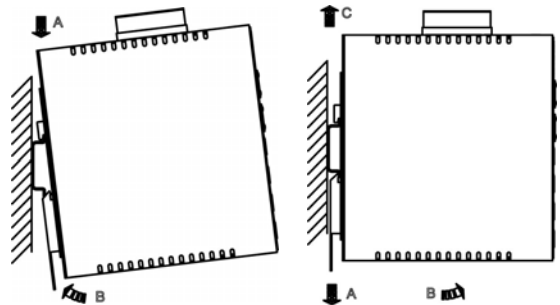
LED	State	Indication
POWER		
PWR1 PWR2 (Green)	Steady	Switch is properly connected to power and turned on.
	Off	Switch is not connected to power and is turned off.
FAULT		
FAULT (Red)	Steady	<ul style="list-style-type: none"> Power redundant system failure occurred. Port failure occurred (when port fault alarm dip switch is enabled).
	Off	<ul style="list-style-type: none"> Power redundant system failure is not occurred. Port failure is not occurred (when port fault alarm dip switch is enabled). Port fault alarm dip switch is disabled.
10/100TX or 100FX		
LNK/ACT (Green)	Steady	A valid network connection established. LNK stands for LINK.
	Flashing	Transmitting or receiving data. ACT stands for ACTIVITY.
100 (Yellow)	Steady	Light solid yellow for a port transferring at 100Mbps.
	Off	The port is transferring at 10Mbps If this LED is dark.

Functional Description

- Meets NEMA TS1/TS2 Environmental requirements such as temperature, shock, and vibration for traffic control equipment.
- Meets EN61000-6-2 & EN61000-6-3 EMC Generic Standard Immunity for industrial environment.
- Support 802.3/802.3u/802.3x. Auto-negotiation: 10/100Mbps, full/half-duplex; Auto MDI/MDIX.
- 100Base-FX: Multi mode SC or ST type; Single mode SC or ST type; WDM Single mode SC type.
- Support 2048 MAC addresses. Provides 768K bits memory buffer.
- Alarms for power and port link failure by relay output 1.5A @ 24VDC.
- Operating voltage and Max. current consumption: 0.76A @ 12VDC, 0.38A @ 24VDC, 0.19A @ 48VDC. Power consumption: 9.12W Max.
- Power Supply: Redundant DC Terminal Block power inputs or 12VDC DC JACK with 100-240VAC external power supply.
- -40°C to 75°C (-40°F to 167°F) operating temperature range. Tested for functional operation @ -40°C to 85°C (-40°F to 185°F).
- Supports DIN-Rail or Panel Mounting installation.

Assembly, Startup, and Dismantling

- Assembly: Place the switch on the DIN rail from above using the slot. Push the front of the switch toward the mounting surface until it audibly snaps into place.
- Startup: Connect the supply voltage to start up the switch via the terminal block (or DC JACK).
- Dismantling: Pull out the lower edge and then remove the switch from the DIN rail.

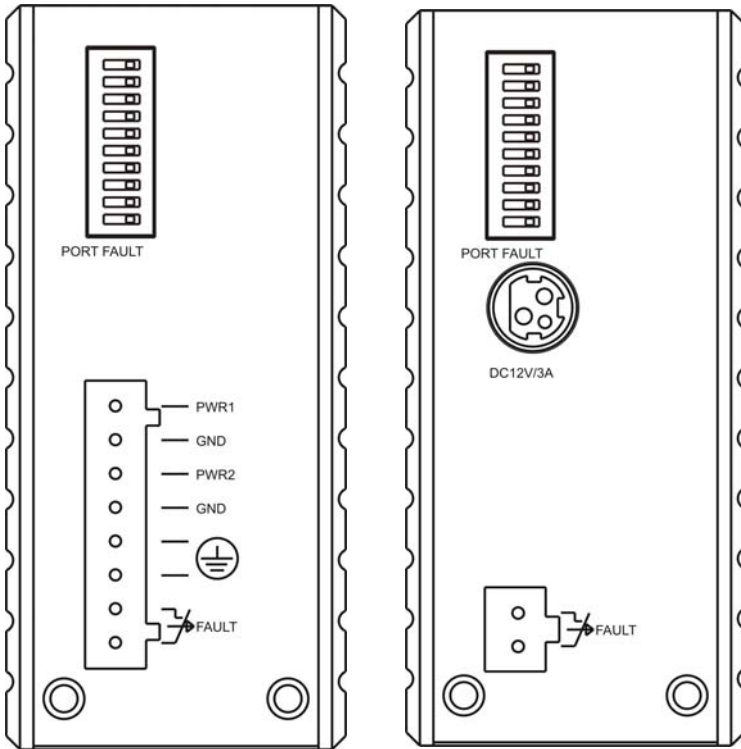


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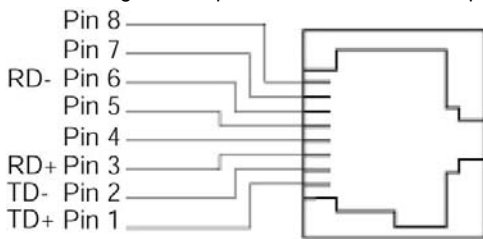
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The 10/100Base-TX and 100Base-FX Connectors

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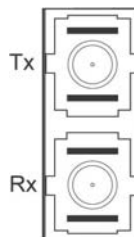


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7	NC	NC
8	NC	NC

The 100Base-FX Connections

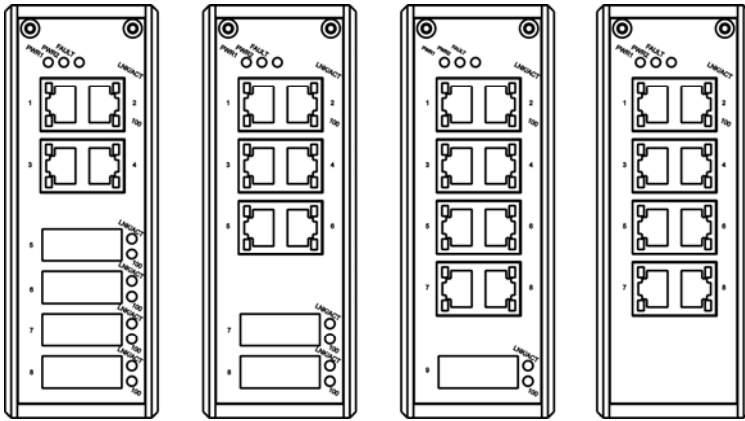
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Hardened Ethernet Switch

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- Power Supply: Redundant DC Terminal Block power inputs or 12VDC DC JACK with 100-240VAC external power supply.
- Field Wiring Terminal: Use Copper Conductors Only, 60/75°C, 12-24 AWG torque value 7 lb-in.
- 40°C to 75°C (-40°F to 167°F) operating temperature range. Tested for functional operation @ -40°C to 85°C (-40°F to 185°F). UL1604 Industrial Control Equipment certified Maximum Surrounding Air Temperature @ 74°C (165°F).
- Supports DIN-Rail or Panel Mounting installation.
- UL1604 Class I, Division 2 Classified for use in hazardous locations (applicable to versions with terminal block power option).
 - This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D OR non-hazardous locations only.
 - WARNING – EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.
 - WARNING – EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2.

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