B&B ELECTRONICS

PRODUCT INFORMATION

Model: EIR30x series

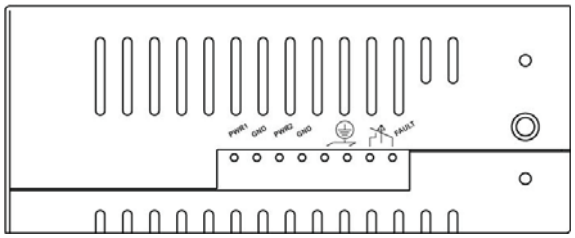
Hardened Compact Ethernet Switches

Description

This quick installation guide describes how to install and use the hardened compact Ethernet Switch. Capable of operating at temperature extremes of -34 to +74°C, this is the switch of choice for harsh environments constrained by space.

Physical Description

Terminal Block and Power Inputs



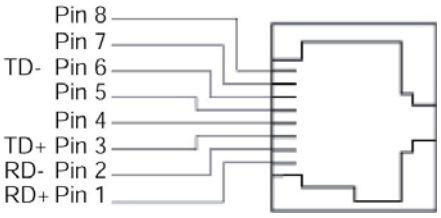
Terminal Block	
PWR1	Power Input 1 (+24VDC)
GND	Power Ground
PWR2	Power Input 2 (+24VDC)
GND	Power Ground
⏚	Earth Ground
FAULT	The relay opens if PWR1 or PWR2 fails (1A)

There are two pairs of voltage inputs that can be used to power up this switch. Redundant voltage supplies are supported. You only need one voltage supply connected to run the switch.

10/100BaseTX and 100BaseFX Connectors

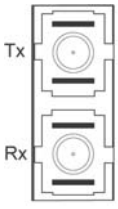
10/100BaseTX Connections

The following diagram lists the pinouts of 10/100BaseTX ports.



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

100BaseFX Connections



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.

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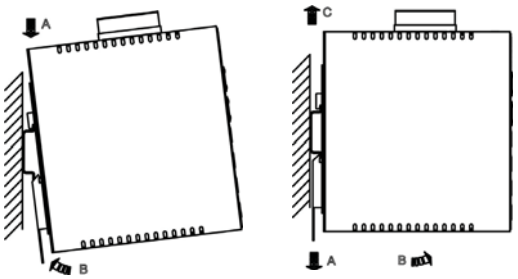
LED	State	Indication
LNK/ACT	Steady	Network connection established, LNK stands for LINK
(Green)	Flashing	Transmitting or receiving data, ACT stands for ACTIVITY
10/100	Steady	100 Mbps data
(Yellow)	Off	10 Mbps data

Functional Description

- Meets NEMA TS1/2 Environmental requirements for temperature, shock, vibration for traffic control equipment.
- Meets IEC61000-6-2 EMC Generic Standard Immunity for industrial environment.
- Support 802.3/802.3u/802.3x. Auto-negotiation: 10/100Mbps, Full/half-duplex; Auto MDI/MDIX.
- 100BaseFX: Multi mode SC or ST type; Single mode SC type.
- Support 2K MAC addresses. Provides 96K bytes memory buffer.
- Alarms for power failure by relay output.
- Redundant 10-30 VDC terminal block power inputs.
- Operating temperature ranges from -34 to 74°C.
- Supports Din-rail 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.
- Dismantling: Pull out the lower edge and then remove the switch from the DIN rail.



DECLARATION OF CONFORMITY

Name:	B&B Electronics Manufacturing Company
Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA
Model Numbers:	EIR305-1ST, EIR305-1SC, EIR306, EIR308, EIR308-2ST, EIR308-2SC, EIR308-2SC-SM
Description:	5, 6, 8 port Ethernet Switches
Type:	Light industrial ITE equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 55022 EN 61000 (-3-2, -3-3) EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)

CE

Michael J. Fahrion, Director of Engineering

Specifications

Hardened Compact Switch	10/100BaseT/TX auto-negotiating ports with RJ-45 connectors, 100BaseFX fiber ports
Applicable Standards	IEEE 802.3 10BaseT, IEEE 802.3u 100BaseTX/FX
Switching Method	Store-and-Forward
Forwarding Rate 10BaseT: 100BaseTX/FX:	 10 / 20Mbps half / full-duplex 100 / 200Mbps half / full-duplex
Performance	148,80pps for 10Mbps, 148,800pps for 100Mbps
Cable 10BaseT: 100BaseTX: 100BaseFX:	 2-pair UTP/STP Cat. 3, 4, 5 up to 100m 2-pair UTP/STP Cat. 5 up to 100m MMF (50 or 62.5µm), SMF (9 or10µm)
LED Indicators	Per unit – Power status (PWR1, PWR2) Per port – LNK/ACT – (Green) 10/100TX or 100FX, 100 – (Yellow) 10/100TX or 100FX
Dimensions / Net Weight	W13.5 cm × D12.5 cm × H5 cm Compact Size / 0.8kg approx.
Power Input	Terminal Block: 24VDC @ 400mA
Power Consumption	9.6W Maximum
Operating / Storage Temperature	-34°C to 74° C / -45°C to 93°C
Humidity	10%-95% non-condensing
Safety	UL/CUL 60950, EN60950, IEC 60950, IEC61000-6-2
Emissions	FCC Class A, CE Class A

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