

EISW16-100T

Plug and Play Switching Hub for Automation Systems

Installation Guide

The EISW16-100T 16-port switching hub is designed for networked automation applications. Like all Ethernet switches from Contemporary Controls, it features non-blocking (full wire-speed) operation. It divides an Ethernet network into sixteen collision domains—"bridging" data links to create larger network diameters than possible with repeating hubs. Each port automatically negotiates its data rate to either 10 Mbps or 100 Mbps—controlling data flow with the PAUSE function in full-duplex links or with the backpressure method in half-duplex links.

The switch provides preamble regeneration with symmetry and amplitude compensation, retiming signals to eliminate jitter. Digital pre-emphasis compensates for inherent signal strength roll-off. Link integrity is monitored, verifying that a working adapter or hub is on the distant end of a segment.

Port assignments are learned by reading Ethernet frames and logging the source addresses to a table. Throughput is improved by restricting traffic to those ports party to a data exchange while other data is simultaneously exchanged on other ports. Store-and-forward operation is implemented, and broadcast, multicast, or unicast transmissions are received by all ports.

The EISW16-100T has sixteen Auto-MDIX ports for attaching local devices. Each port has a LNK/ACT LED that glows green with an established link and flashes with activity. Each port also has speed LED that glows amber for 100Mbps.

The unit features dual power inputs with wide-ranging voltages (12-48V DC or 24V AC). For power redundancy, two DC supplies can be used. A normally open (NO) fault relay contact held closed, opens upon a P1 or P2 power failure. This contact is rated up to 24V DC at 1A. A wide operating temperature range of -40°C to +75°C make the EISW16 suitable for outdoor applications.

Specifications

Electrical

INPUT	DC	AC
Voltage:	12-48 V	24 V
Power:	5.3 W	6 VA
Frequency:	N/A	47-63 Hz
Class 2 Circuits Only		

Environmental

Operating Temperature:	-40°C to +75°C
Storage Temperature:	-40°C to +85°C
Humidity, non-cond.:	5% to 95%
Protection:	IP 30

Mounting	TS-35 DIN-rail/ wall-mounted
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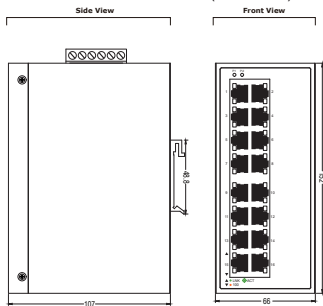
Product Weight	750g
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Regulatory Compliance

CE Mark; CFR 47 Part 15, Class A;
UL; UKCA

Mechanical

Dimensions: 66 x 107 x 152 mm (W x D x H)



Functional

Compliance:	IEEE 802.3/3u/3x/1p/3az
Data Rates:	10 and 100 Mbps
Signalling:	10BASE-T and 100BASE-TX
Connectors:	Shielded RJ-45
Segment length:	100 m (maximum)

LED Indicators

P1	green (PWR1)
P2	green (PWR2)

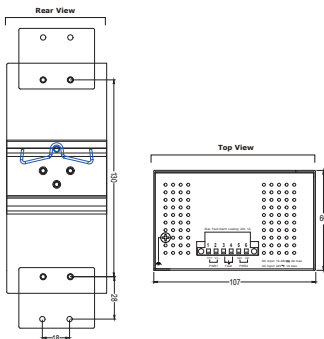
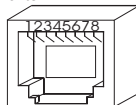
Per Ethernet Port:

Link/Activity	green/flashing
Speed	amber (100 Mbps)

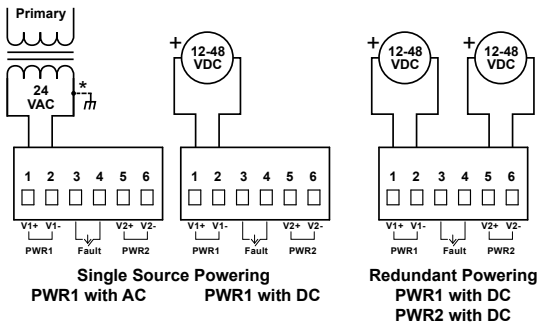
RJ-45 Connector Pin Assignments

Pin	Function
1	TD+
2	TD-
3	RD+
6	RD-

(All other pins are unused.)



Power Sourcing Options



* Possible grounded secondary.

Power supplies must be isolated from each other.

Power Considerations

The EISW can be powered from either a single source of AC or DC. Dual source powering is possible with two DC supplies isolated from one another. Recommended size for solid power conductors is 16–22 AWG; for stranded conductors, use 16–18 AWG. Input connections are reverse polarity protected. The earthing screw terminal on the switch must be grounded if there is no other option for grounding the case.

Network Connections

The switch employs Auto-MDIX technology so that either straight-through or crossover cables can be used to connect to network interface adapters or to another hub.

LED Indicators

The “P1” LED glows green to indicate Power Input 1 (PWR1) has power, and the “P2” LED glows green to indicate Power Input 2 (PWR2) has power. Each Ethernet port has a LNK/ACT LED that glows solid green to indicate an established link, and flashes green to indicate that network traffic is occurring over that port. Port speed at 100 Mbps is indicated by an amber LED.

Need more help installing this product?

For more information, visit www.ccontrols.com. If contacting our office, ask for Technical Support.

Warranty

Contemporary Controls (CC) warrants this product to the original purchaser for five years from the shipping date. If it fails to operate in compliance with its specification during this period, CC will, at its option, repair or replace the product at no charge. The customer is responsible for shipping the product; CC assumes no responsibility for the product until received. This limited warranty covers products only as delivered. If user modification damages the product, repair or replacement are not covered. Damage from abuse, accident, disaster, misuse, or incorrect installation are not covered. This warranty in no way warrants suitability of the product for any specific application. More warranty information can be found at www.ccontrols.com.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Returning Products for Repair

Return the product to the location where it was purchased by following the instructions at the URL below:

www.ccontrols.com/rma.htm

Declaration of Conformity

Additional compliance documentation can be found on our website.

