EISK16-100T

CTRLink®

Plug and Play Switching Hub for Industrial Automation Systems

Installation Guide

The EISK16-100T *Skorpion-16* switching hub is designed for the Industrial Automation environment. Like all Ethernet switches from Contemporary Controls, it features non-blocking (full wire-speed) operation. It divides an Ethernet network into 16 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 EISK16-100T has 16 Auto-MDIX ports for attaching local devices. In addition to a power LED, each port has one LED showing link/activity/rate and one showing duplex status.

The unit operates from a wide range of low-voltage AC or DC power.

The EISK16-100T is provided with a writable label for easy identification of the remote device attached to each cable.

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INDUSTRIAL CONTROL EQUIPMENT
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CONTEMPORARY CONTROLS®

Specifications

Electrical

INPUT	DC	AC
Voltage:	10–36 V	24 V ±10%
Power:	10 W	10 VA
Frequency:	N/A	47–63 Hz

Class 2 Circuits Only

Environmental

Operating Temperature:	0°C to +60°C
Storage Temperature:	– 40°C to +85°C
Humidity, non-cond.:	10% to 95%
Protection:	IP 30

Mounting TS-35 DIN-rail

Shipping Weight 1 lb (0.45 kg)

Regulatory Compliance

CE Mark; CFR 47 Part 15, Class A
UL508 Industrial Control Equipment

Functional

Compliance:	ANSI/IEEE 802.3
Data Rates:	10 and 100 Mbps
Signaling:	10BASE-T and 100BASE-TX
Connectors:	Shielded RJ-45
Segment length:	100 m (maximum)

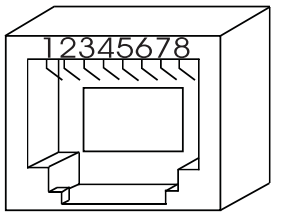
LED Indicators

Power	green
Activity/Link	green or yellow
Duplex	green

RJ-45 Connector Pin Assignments

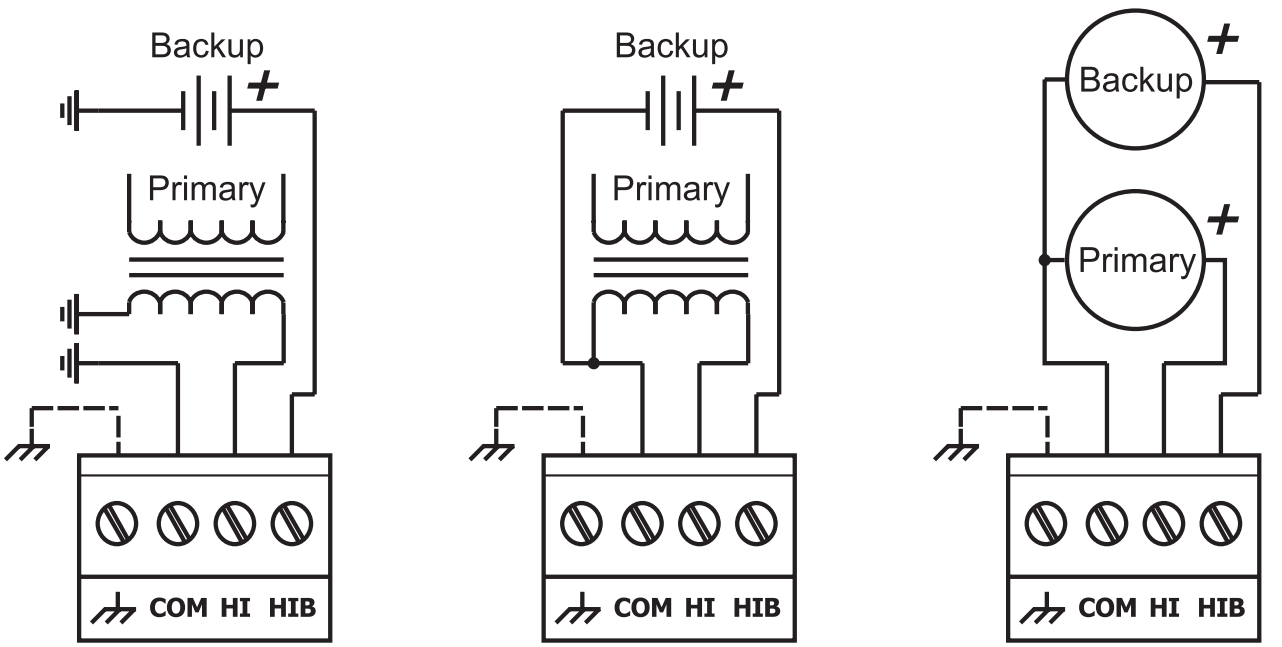
Pin	Function
1	TD+
2	TD–
3	RD+
6	RD–

(All other pins are unused.)



Power Options

Connecting chassis to earth or using a backup source is always optional.



Power Considerations

Voltage in the range of 10–36 VDC or 24 VAC ±10% must deliver current commensurate with 10-watt power consumption. The recommended size for solid power conductors is 16–22 AWG; for stranded conductors, use 16–18 AWG. Ground is directly connected to zero volts and the chassis is isolated from zero volts. Input connections are reverse-polarity protected.

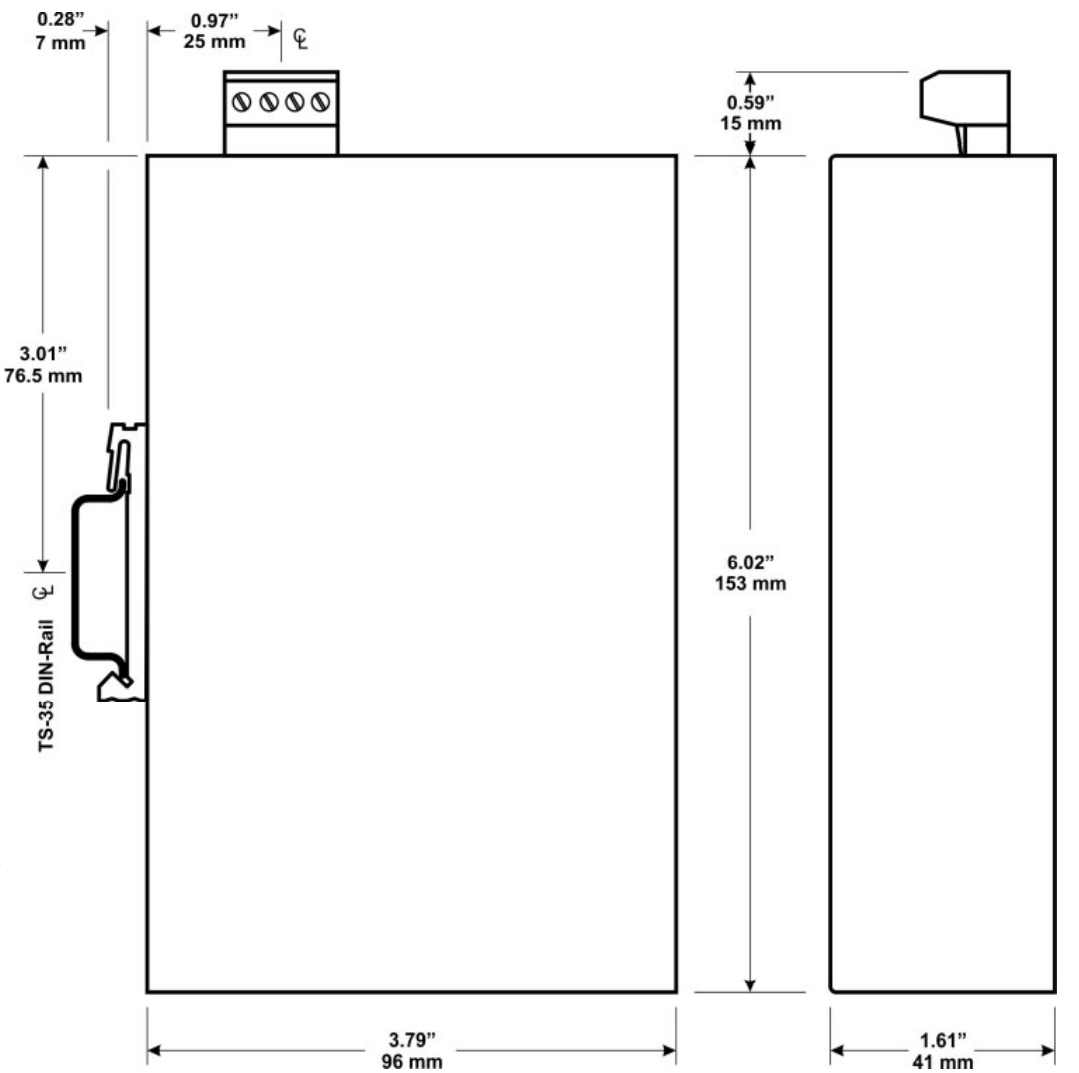
Network Connections

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 “PWR” LED glows solid green when the switch is properly powered. To aid in troubleshooting, each port has two LEDs. The Port 2 LED labeled “L” glows solid if a link exists, flashes to show activity and shows data rate by color: green for 100 Mbps and yellow for 10 Mbps. The LED labeled “D” glows solid green if full-duplex is on or is unlit when that port is operating in half-duplex mode — but in half-duplex operation it will flash if a collision occurs. The other port LEDs are unlabeled but work the same.

Mechanical



NEED MORE HELP INSTALLING THIS PRODUCT?

More information can be found in the Technical Support part of our web site at 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

Before returning a product for repair, contact the manufacturer (US office) or its representative (UK office) below for instructions on return procedure:

Contemporary Control Systems, Inc.
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Downers Grove, Illinois 60515 USA
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Fax: +1-630-963-0109
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WWW: http://www.ccontrols.com

Contemporary Controls Ltd
Sovereign Court Two, UWSP
Sir William Lyons Road
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Tel: +44 (0)24 7641 3786
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DECLARATION OF CONFORMITY

Applied Council Directives: Electromagnetic Compatibility Directive, 2004/108/EEC Council Directive; General Product Safety Directive 92/59/EEC

Standards to which Conformity is Declared: EN 55022:1998/A2:2003 CISPR 22:1997/ A2:2002, Class A; EN 55024:1998/A2:2003 CISPR 24:1997/A2:2002, ITE – Immunity.

Manufacturer's Declaration of November 6, 2008: I declare that the EISK16-100T conforms to the above directives and standards.

George M. Thomas, President

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