EISK5-100T/H

CTRLink®

Skorpion Diagnostic Switch for Protocol Debugging

Installation Guide

The EISK5-100T/H is designed as an aid in diagnosing Ethernet communication issues and debugging software. This device has all of the features of a normal switch except that — like a repeating hub — it passes messages received by any port to all other ports. This allows the activity of all ports to be monitored by a "sniffer" attached to any port — an ability that would otherwise require the "port mirror" function of a more costly managed switch.

The five ports of the EISK5-100T/H offer features that traditional repeating hubs do not. Each port supports Auto-MDIX — so either straight-through or crossover cabling can be used. The collision domain is terminated at each port — so that a network of EISK5-100T/H units has no cabling length limit — except that each segment cannot exceed the 100 m specification for Ethernet. Store-and-forward operation mitigates against lost messages. Each port automatically negotiates its data rate to 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.

Link integrity is monitored — verifying that a working device is on the far end of a segment. In addition to the unit's power LED, each port has two LEDs — one showing link/activity/rate, and one showing duplex status.

The unit operates from low-voltage AC or DC power and 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:	3 W	6 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
Signalling:	10BASE-T and 100BASE-TX
Connectors:	Shielded RJ-45
Segment length:	100 m (maximum)

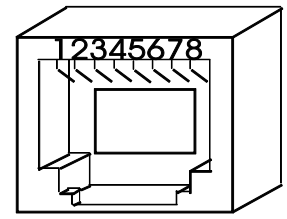
LED Indicators

Power	green
Activity/Link	green or yellow
Duplex	green

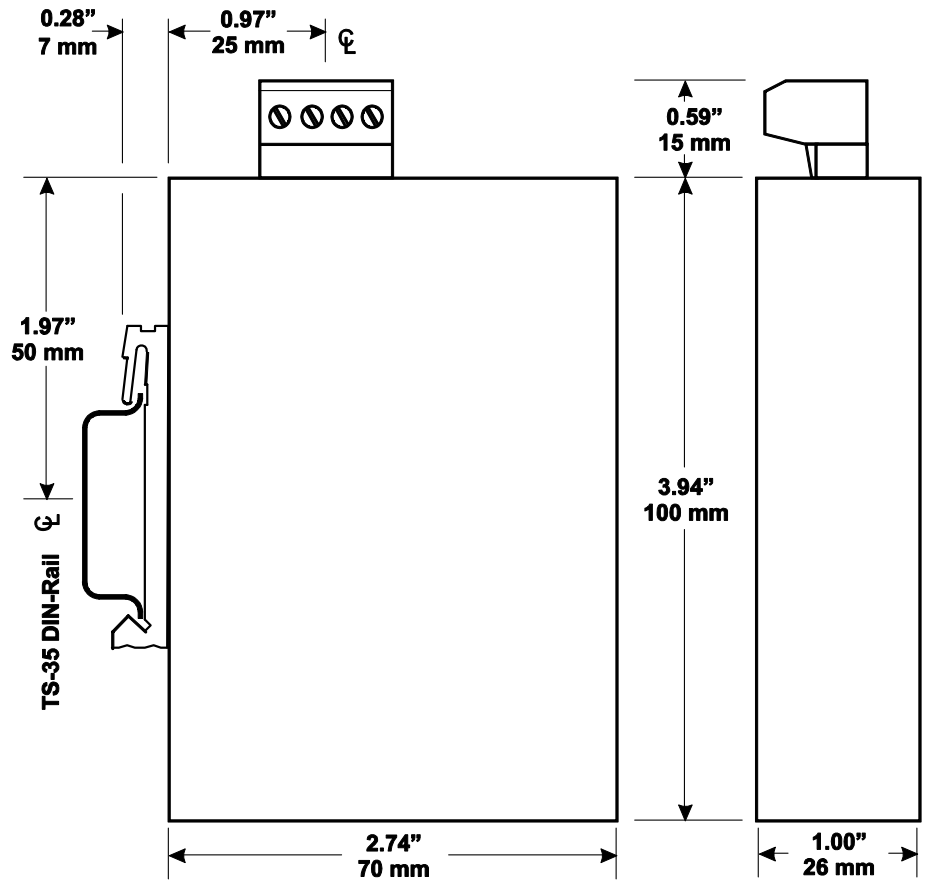
RJ-45 Pin Assignments

Pin	Function
1	TD+
2	TD–
3	RD+
6	RD–

(All other pins are unused.)



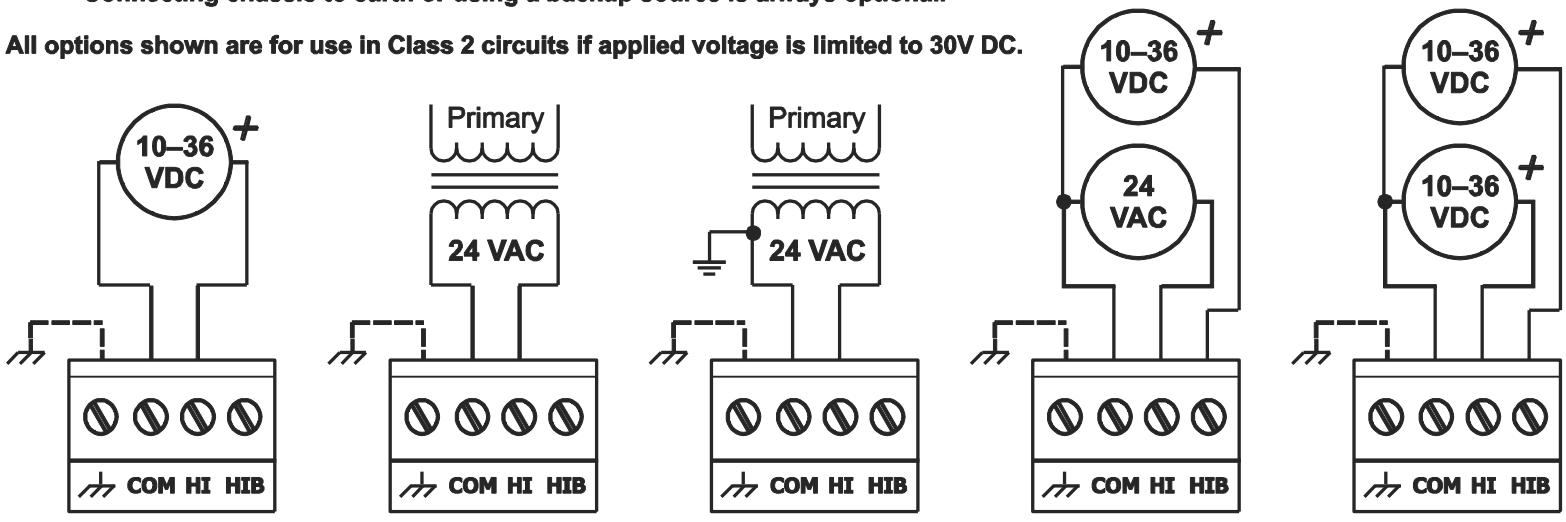
Mechanical



Power Options

Input power: 10–36 VDC or 24 VAC ± 10%, 47–60 Hz.
Connecting chassis to earth or using a backup source is always optional.

All options shown are for use in Class 2 circuits if applied voltage is limited to 30V DC.



DC Powered | **AC Powered** | **AC Powered with Grounded Secondary** | **AC Powered with DC Backup** | **Redundant DC Powered**

Power Considerations

Voltage within the specified range must deliver current that is commensurate with 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

Auto-MDIX technology is employed 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 hub is properly powered. To aid in troubleshooting, each port has two LEDs. The Port 1 LED labelled “L” glows solid if a link exists, flashes to show activity and shows data rate by colour: green for 100 Mbps and yellow for 10 Mbps. The LED labelled “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 LEDs of Ports 2–5 are unlabeled but work the same.

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

Information about the regulatory compliance of this product can be found at the URL below:

www.ccontrols.com/compliance.htm