# EISK8-GT

CTRLink®

**Plug and Play Gigabit Switching Hub for Automation Systems**

### Installation Guide

The EISK8-GT gigabit switching hub is designed for the automation environment. Like all Ethernet switches from Contemporary Controls, it features non-blocking (full wire-speed) operation. It divides an Ethernet network into eight collision domains — "bridging" data links to create larger network diameters than possible with repeating hubs. Each port automatically negotiates its data rate to 10, 100 or 1000 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 EISK8-GT has eight Auto-MDIX ports for attaching local devices. In addition to a power LED, each port has one LED showing link/activity/rate. The unit operates from a wide range of low-voltage AC or DC power.

The EISK8-GT is provided with a writeable label for easy identification of the remote device attached to each cable.

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EQUIPMENT
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**CONTEMPORARY CONTROLS®**

## Specifications

*Electrical*

INPUT
| | DC | AC |
|---|---|---|
| Voltage: | 10–36 V | 24 V ±10% |
| Power: | 3 W | 7 VA |
| Frequency: | N/A | 47–63 Hz |

Class 2 Circuits Only

*Environmental*

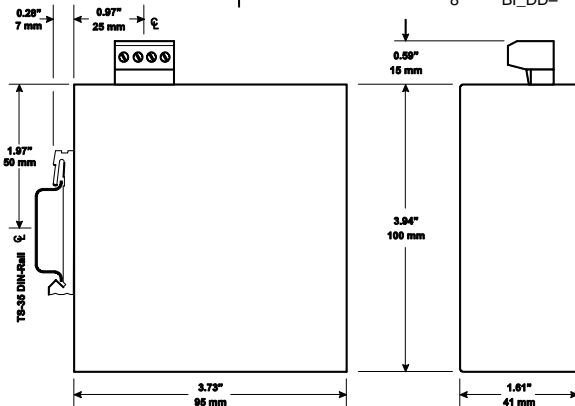| Operating Temperature: | 0°C to +60°C |
|---|---|
| Storage Temperature: | –40°C to +85°C |
| Humidity, non-cond.: | 10% to 95% |
| Protection: | IP 30 |

*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

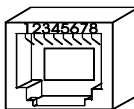*Functional*

| Compliance: | ANSI/IEEE 802.3 |
|---|---|
| Data Rates: | 10, 100 and 1000 Mbps |
| Signalling: | 10BASE-T, 100BASE-TX and 1000BASE-T |
| Connectors: | Shielded RJ-45 |
| Segment length: | 100 m (maximum) |

*LED Indicators*

| Power | green |
|---|---|
| Activity/Link | green or yellow |

*RJ-45 Connector Pin Assignments*



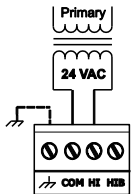| Pin | Function |
|---|---|
| 1 | BI_DA+ |
| 2 | BI_DA– |
| 3 | BI_DB+ |
| 4 | BI_DC+ |
| 5 | BI_DC– |
| 6 | BI_DB– |
| 7 | BI_DD+ |
| 8 | BI_DD– |

*Mechanical*

## Power Options

**Input power: 10–36 VDC or 24 VAC ± 10%, 47–60 Hz.**
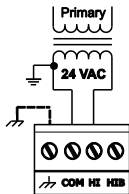**Connecting chassis to earth or using a backup source is always optional.**
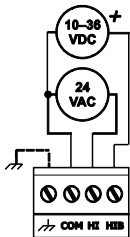
**All options shown are for use in Class 2 circuits.**
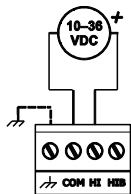
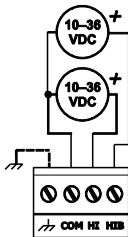| 10–36 VDC + | Primary 24 VAC | Primary 24 VAC | 10–36 VDC + / 24 VAC | 10–36 VDC + / 10–36 VDC + |
|---|---|---|---|---|
| ⊘⊘⊘⊘ | ⊘⊘⊘⊘ | ⊘⊘⊘⊘ | ⊘⊘⊘⊘ | ⊘⊘⊘⊘ |
| COM HI HIB | COM HI HIB | COM HI HIB | COM HI HIB | COM HI HIB |
| **DC Powered** | **AC Powered** | **AC Powered with Grounded Secondary** | **Redundant Power** | **Redundant Power** |

## Power Considerations

Voltage in the specified range must deliver current 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

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 1 LED labelled "H" glows if a link exists at 1000 Mbps (green) or at 100 Mbps (yellow). The LED labelled "L" is normally unlit but glows yellow if a 10 Mbps link exists. Either the "H" or "L" LEDs flash to show activity. The LEDs of Ports 2–8 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:

<div align="center">www.ccontrols.com/rma.htm</div>

**Declaration of Conformity**

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

<div align="center">www.ccontrols.com/compliance.htm</div>