



8-Port Skorpion Gigabit Diagnostic Switch

Plug and Play Diagnostic Switch for Protocol Debugging

One benefit of switched Ethernet technology is that the switch restricts directed messages to only those ports party to the communication. This improves overall network throughput by not burdening end stations with useless traffic. However, this feature makes protocol debugging difficult because a protocol analyser tool attached to an unused port on the switch cannot observe any directed messages of interest. In the past, the solution was to change out the switching hub with a repeating hub but with the Skorpion Gigabit Diagnostic Switch this is unnecessary.

The EISK8-GT/H retains all the virtues of switched Ethernet technology such as 10/100/1000 Mbps data rates on individual segments, auto-negotiation, Auto-

MDIX — but with one exception: *no address learning*. All messages — directed, multicast, broadcast — are flooded to all ports on the switch allowing a protocol analyser tool such as Wireshark® the ability to observe all traffic on the network. Also, GigE jumbo frames up to 9216 bytes are supported for the highest possible system performance. The EISK8-GT/H can be permanently installed on an installation or replaced with a regular Skorpion switch after commissioning.

This device can also be useful when developing embedded Ethernet devices because you can connect the Skorpion Gigabit Diagnostic Switch between two embedded Ethernet devices and view their messages using Wireshark.

- Plug-and-Play operation
- 10/100/1000 Mbps data rates
- Shielded RJ-45 connectors
- Auto-negotiation of speed and duplex
- Auto-MDIX supports cable inversion
- No address learning, all messages flood to all ports



- DIN-rail mounting
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL listed, CE mark
- 24 VAC/VDC powered

CTRLink®

Wireshark is a registered trademark of the Wireshark Foundation which can be accessed at www.wireshark.org.

Overview

The EISK8-GT/H can be used for control panel installations where one needs the ability to diagnose problems in the field. It can also be used in a development environment when debugging code. A metal DIN-rail clip attached to the aluminium enclosure can survive the toughest installation. A writable side label allows the installer an opportunity to document field cabling locations right on the unit.

The EISK8-GT/H is powered from a source of either 24 VAC ±10% or 10–36 VDC. With redundant power connections, a backup power

scheme can be supported. A removable power connector facilitates the servicing of the unit.

LEDs built into the RJ-45 connector indicate data rate and activity on each of the five ports. For each port, the data rate will be indicated along with port activity — thereby greatly assisting in troubleshooting connection issues.

The EISK8-GT/H is UL 508 Listed and c-UL Listed for Industrial Control Equipment. It complies with CFR 47 Part 15 Class A, and carries the CE Mark. It is RoHS compliant.

Metal Enclosure
rugged packaging
for tough environments

Quick Disconnect 4-pin Power Connector
provides connections to a DC or AC source and a
connection for a backup DC source.

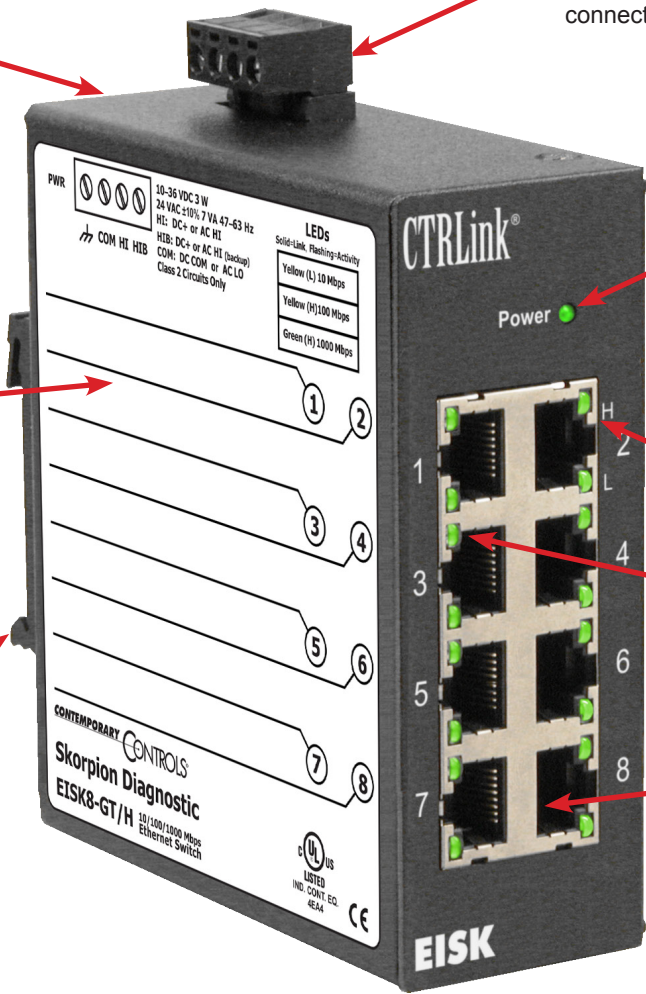
Writable Label
for identifying each
link partner

35 mm Din-rail Clip
for convenient installation
in control panels





Power LED
indicates the unit is being powered

Link LEDs
All ports have activity and link LEDs.
Each “H” LED glows green when
the data rate is 1000 Mbps or
yellow when the rate is 10 or 100
Mbps and flashes with data.
Each “L” LED glows yellow if the link
is made to a 10 Mbps legacy device
and flashes with data.

Copper Ports
shielded RJ-45 connectors

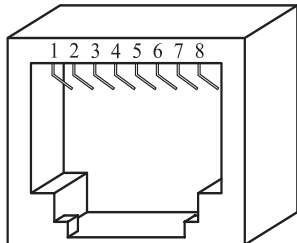


Specifications

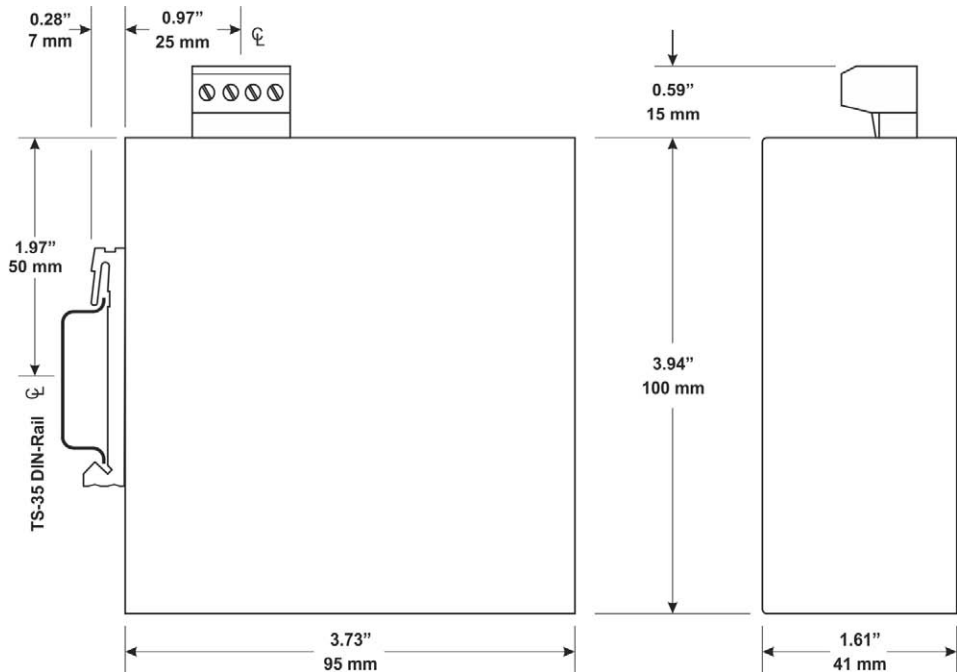
Power Requirements	10–36 VDC 3 W or 24 VAC ±10% 7 VA 47–63 Hz	
Operating Temperature	0°C to 60°C	
Storage Temperature	–40°C to 85°C	
Relative Humidity	10–95%, non-condensing	
Protection	IP30	
Mounting	TS-35 DIN-rail	
Shipping Weight	1 lb (0.45 kg)	
Ethernet Communications	IEEE 802.3 10/100/1000 Mbps data rate using RJ-45 connectors, 100 m (max) Supports jumbo frames up to 9216 bytes	
LEDs	Power “H” LEDs “L” LEDs “H” or “L” LEDs	Green = power OK Green = 1000 Mbps communication established Yellow = 100 Mbps communication established Yellow = 10 Mbps communication established Flashing = data transmissions occurring
Regulatory Compliance	CE Mark; CFR 47, Part 15 Class A; RoHS; UL 508 Industrial Control Equipment	   

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–

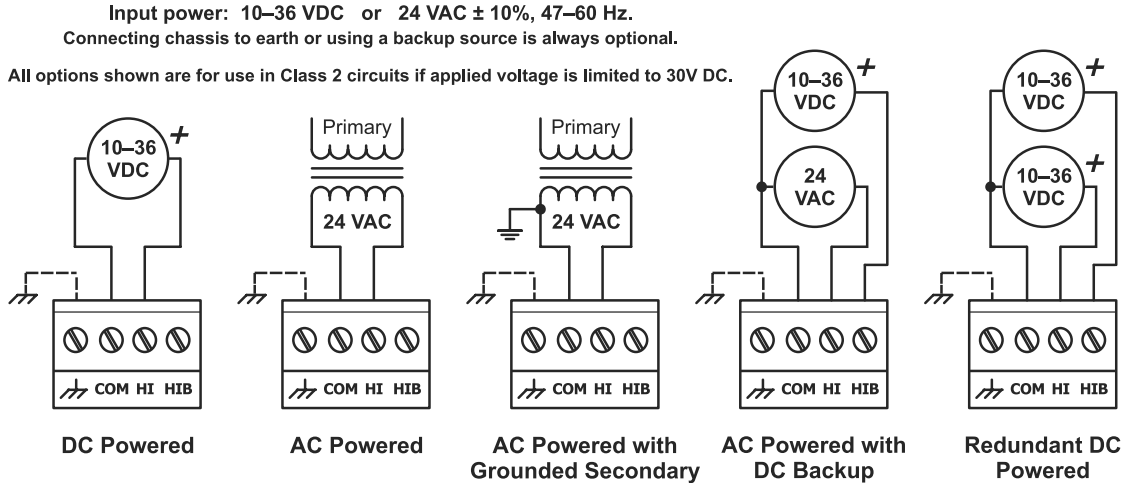


Mechanical Drawing

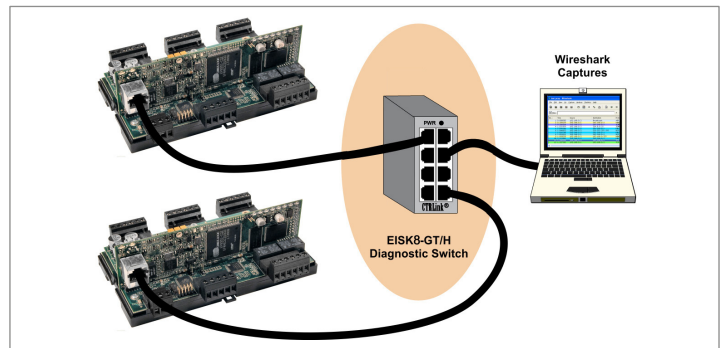
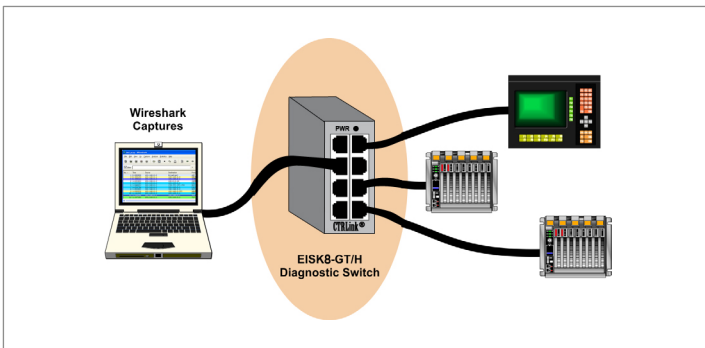


Power Considerations

Applied voltage must be 10–36 VDC or 24 VAC \pm 10% and deliver a current commensurate with power consumption. The recommended size for solid power conductors is 16–20 AWG; and for stranded conductors use 16–18 AWG. Zero volts (COM) is isolated from chassis (earth). Input connections are reverse-polarity protected.



Typical Installations



Ordering Information

Model	Description
EISK8-GT/H	Skorpion 8-Port GigE Diagnostic Switch

United States
Contemporary Control Systems, Inc.
 2431 Curtiss Street
 Downers Grove, IL 60515
 USA

Tel: +1 630 963 7070
 Fax: +1 630 963 0109

info@ccontrols.com

China
Contemporary Controls (Suzhou) Co. Ltd
 11 Huoju Road
 Science & Technology Industrial Park
 New District, Suzhou
 PR China 215009

Tel: +86 512 68095866
 Fax: +86 512 68093760

info@ccontrols.com.cn

United Kingdom
Contemporary Controls Ltd
 14 Bow Court
 Fletchworth Gate
 Coventry CV5 6SP
 United Kingdom

Tel: +44 (0)24 7641 3786
 Fax: +44 (0)24 7641 3923

info@ccontrols.co.uk

Germany
Contemporary Controls GmbH
 Fuggerstraße 1 B
 04158 Leipzig
 Germany

Tel: +49 341 520359 0
 Fax: +49 341 520359 16

info@ccontrols.de

www.ccontrols.com