data SHEET

EISK5-100T/F Skorpion Switch
100 Mbps speed — Copper/Fibre

The EISK5-100T/F Skorpion Switch is a five-port unmanaged Ethernet switch that provides 100 Mbps performance on all ports in order to accommodate a range of control devices and workstations commonly found in an automation project. Four of the ports are copper ports with RJ-45 connectors while one port is either a single-mode or multimode fibre port. For 10 Mbps legacy copper devices, the switch will automatically reduce its port-speed accordingly. This low-cost compact unit utilizes a rugged metal enclosure and is intended for installation in control panels using DIN-rail mounting.

This is a plug-and-play Ethernet switch requiring no configuration. All copper ports automatically configure their data rate and duplex using the Auto-negotiation protocol. Depending on the capability of the link partner, communication is set at 10 or 100 Mbps and at either half- or full-duplex. Each copper port will accommodate either a straight-through or crossover cable by using the Auto-MDIX protocol. The fibre port is preset for 100 Mbps full-duplex operation in order to achieve the highest performance.

The unit is powered from a choice of low-voltages (AC or DC). Redundant power connections are provided for back-up power schemes. LED indicators assist in troubleshooting network issues.

- Plug-and-Play operation
- 10BASE-T/100BASE-TX/100BASE-FX
- Single-mode or multimode fibre
- Shielded RJ-45 connectors
- Auto-negotiation of speed and duplex
- Auto-MDIX supports cable inversion

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

CTRLink®

CONTEMPORARY CONTROLS

DS-EISK5F00-BA1

Overview

The Skorpion Switch is intended for control panel installations where DIN-rail space is at a premium by requiring a width of only one inch (26mm) of rail space. 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.
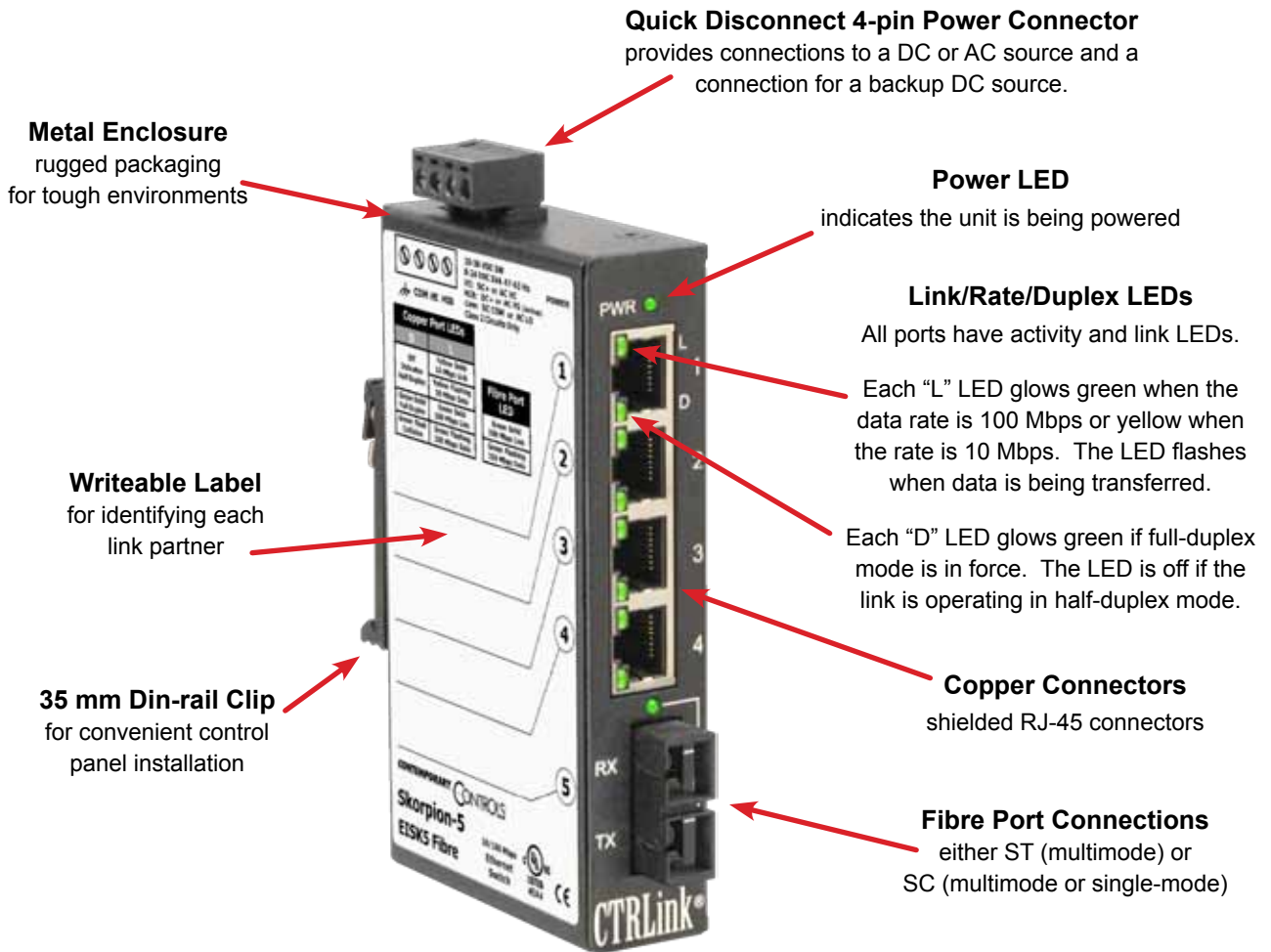
There are three fibre models: multimode with ST connectors, multimode with SC connectors and single-mode with SC connectors. With single-mode, distances up to 15 km are possible.

The switch can be powered from a 10–36 VDC or a 24 VAC (±10%) source. Its half-wave rectified low-voltage power supply allows the sharing of power with other 24 VAC/VDC control devices from a common power supply. 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 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 switch 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.

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

Metal Enclosure
rugged packaging for tough environments

Power LED
indicates the unit is being powered

Link/Rate/Duplex LEDs
All ports have activity and link LEDs.

Each "L" LED glows green when the data rate is 100 Mbps or yellow when the rate is 10 Mbps. The LED flashes when data is being transferred.

Each "D" LED glows green if full-duplex mode is in force. The LED is off if the link is operating in half-duplex mode.

Writeable Label
for identifying each link partner

35 mm Din-rail Clip
for convenient control panel installation

Copper Connectors
shielded RJ-45 connectors

Fibre Port Connections
either ST (multimode) or SC (multimode or single-mode)

Specifications

Power Requirements	10–36 VDC 3 W or 24 VAC ±10% 6 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 Mbps data rate using RJ-45 connectors, 100 m (max)
	IEEE 802.3 100BASE-FX using either ST or SC connectors

Multimode: 2 km maximum cable length
Single-mode: 15 km maximum cable length

LEDs	Power	Green = power OK
	"L" LEDs	Green = 100 Mbps communication established
		Yellow = 10 Mbps communication established
		Flashing = data transmissions occurring
	"D" LEDs	Green = Full-duplex communication established
		Off = Half-duplex communication established

Regulatory Compliance   CE Mark; CFR 47, Part 15 Class A; RoHS;
UL 508 Industrial Control Equipment
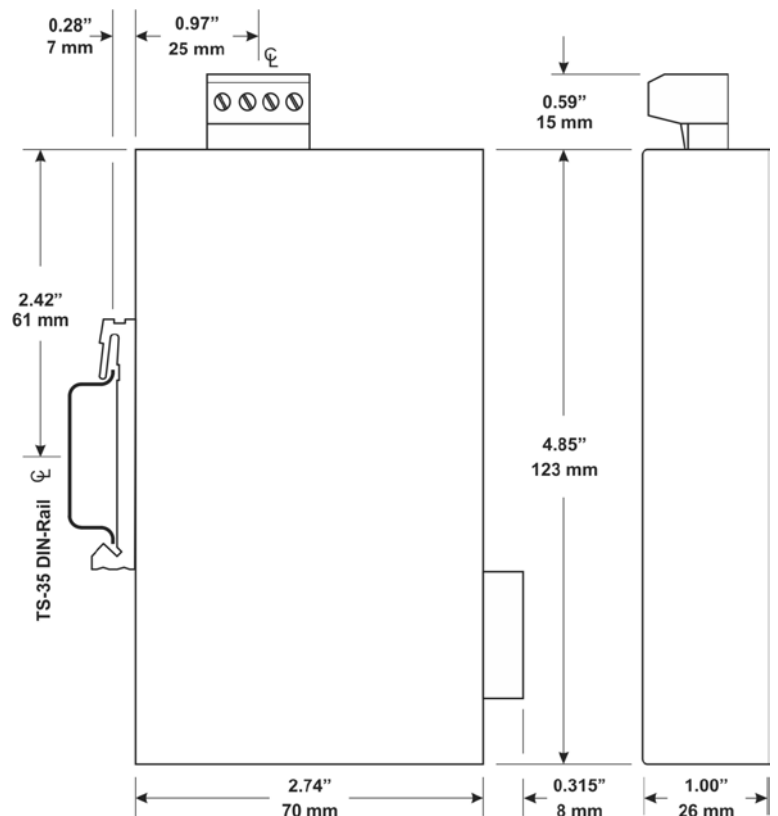
RoHS ✓

RJ-45 Connector Pin Assignments

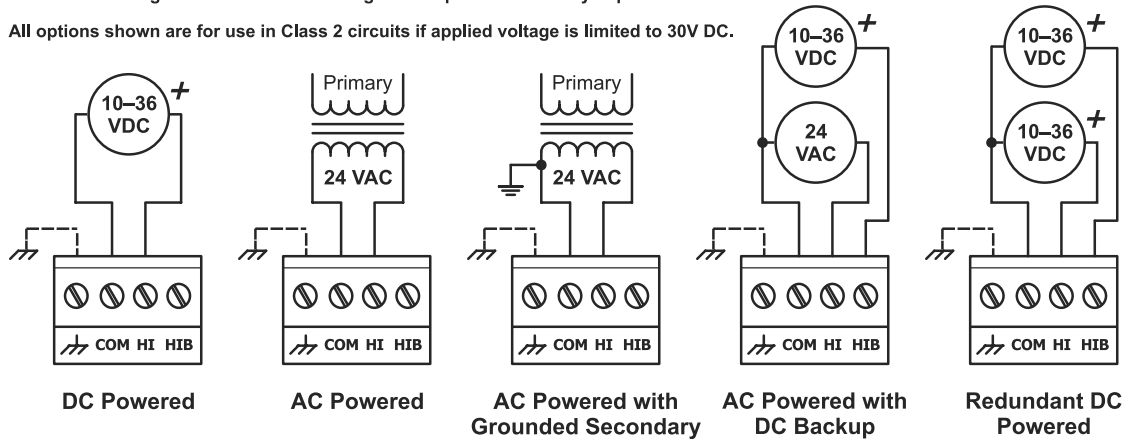| Pin	Function
1	TD+
2	TD–
3	RD+
4	Not Used
5	Not Used
6	RD–
7	Not Used
8	Not Used
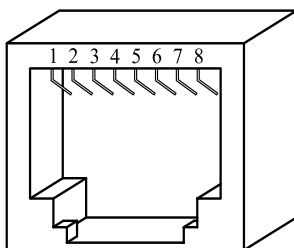
Mechanical Drawing

Power Considerations

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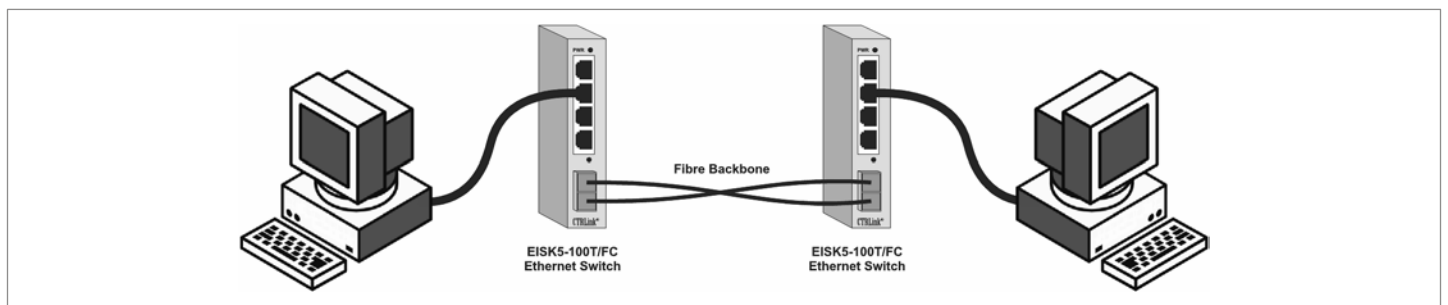
Input power: 10–36 VDC   or   24 VAC ± 10%, 47–60 Hz.
Connecting chassis to earth or using a backup source is always optional.

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 |

Typical Switch Installations

EISK5-100T/FC Ethernet Switch   Fibre Backbone   EISK5-100T/FC Ethernet Switch

Ordering Information

Model	Description
EISK5-100T/FC	Skorpion 4-Port 10/100Mbps 1-Port MM SC-fiber Switch
EISK5-100T/FCS	Skorpion 4-Port 10/100Mbps 1-Port SM SC-fiber Switch
EISK5-100T/FT	Skorpion 4-Port 10/100Mbps 1-Port MM ST-fiber Switch