

### EISX Compact Switching Hubs



- Extended temperature range ( $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ )
- Compact size
- Plug-and-Play (PnP)
- 10BASE-T/100BASE-TX/100BASE-FX compliant
- Shielded RJ-45 connectors or SC/ST-style fibre optic connectors

- Auto-negotiated data rate, duplex, and flow control on twisted-pair ports
- Auto-MDIX on twisted-pair ports
- Powered from an unregulated DC power source (10–36 V) or from an AC power source (8–24 V, 47–63 Hz). Power is provided through a quick-disconnect terminal strip.
- Multimode or single-mode fibre
- Full- or half-duplex operation on twisted-pair ports
- Provision for redundant power connections
- LEDs for link/activity/data rate and power
- Easy panel or DIN-rail installation
- Industrial environment EMC compatible
- UL 508 Listed, Industrial Control Equipment
- C-UL Listed, CSA 22.2 No. 14-M91, Industrial Control Equipment
- CE Mark
- RoHS compliant

### PRODUCT OVERVIEW

**EISX switches, supporting both twisted-pair and fibre optics, answer the call for those industrial and commercial applications requiring a small footprint and extended temperature range from  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ .** This series is ideal for situations where outdoor temperatures are expected and compact size is a necessity.

Each unit segments the Ethernet LAN into multiple collision domains, acting as a “bridge” between data links to create a larger network diameter than possible with repeating hubs. Each twisted-pair port automatically negotiates data rate, duplex, and flow control.

**The switch learns port assignments by reading Ethernet frames and logging source addresses into a table which can hold over 4,000 addresses.** With this information it improves throughput by restricting traffic

to only those ports party to a data exchange — while other data is simultaneously exchanged on other ports. Store-and-forward operation of frames is implemented using 256 kB of built-in memory.

**Only standard straight-through cables are needed to connect copper ports to NIMs or another hub.**

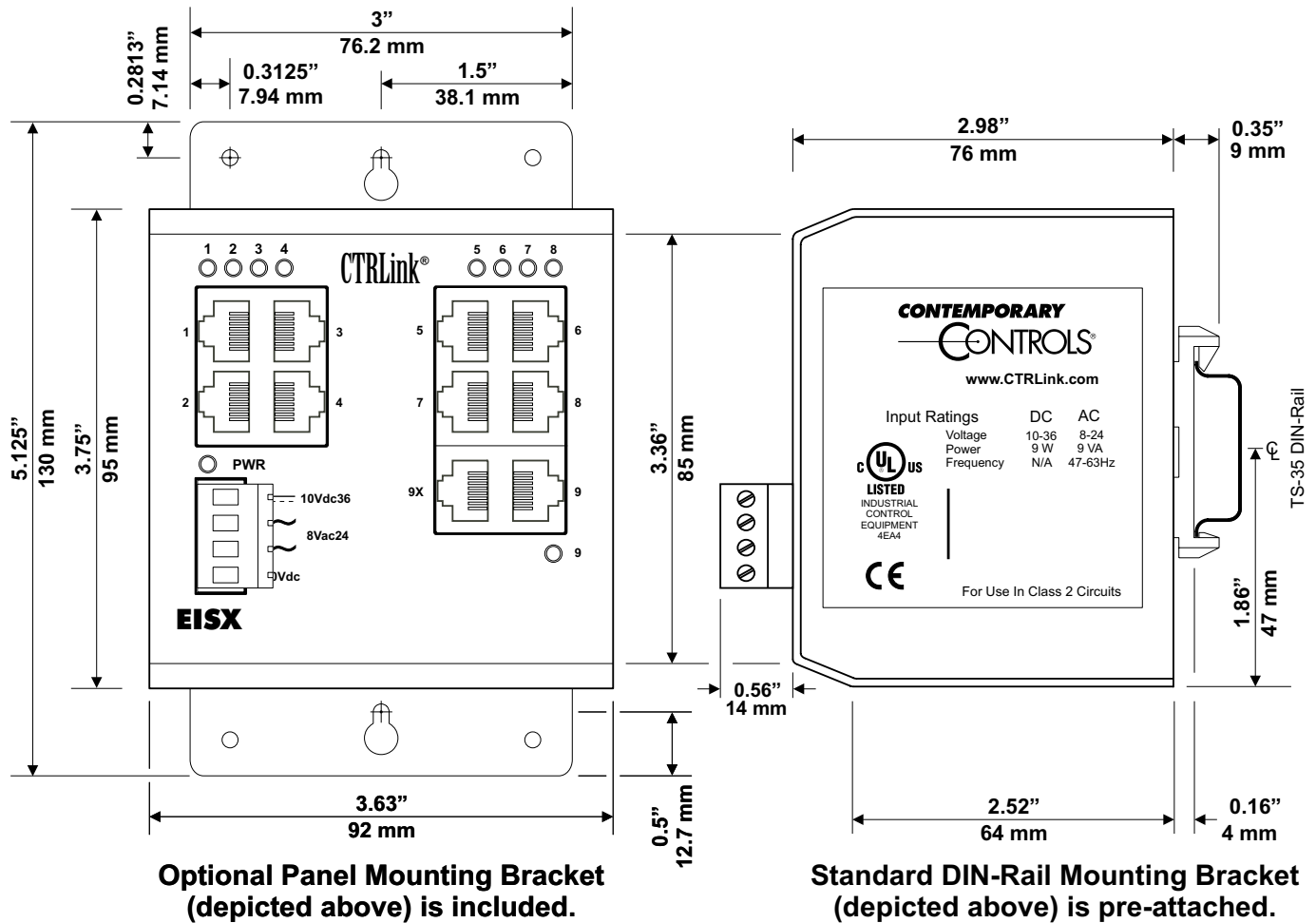
Eight (MDIX) copper ports are available on the EISX9-100T for attaching local devices with the ninth copper port being used as an uplink port. In addition to one power LED, each port has an LED showing link/activity/data rate by colour: green for 100 Mbps and yellow for 10 Mbps. Flashing indicates port activity.

Each unit accepts wide-range, low-voltage AC or DC power and has terminals for redundant power.

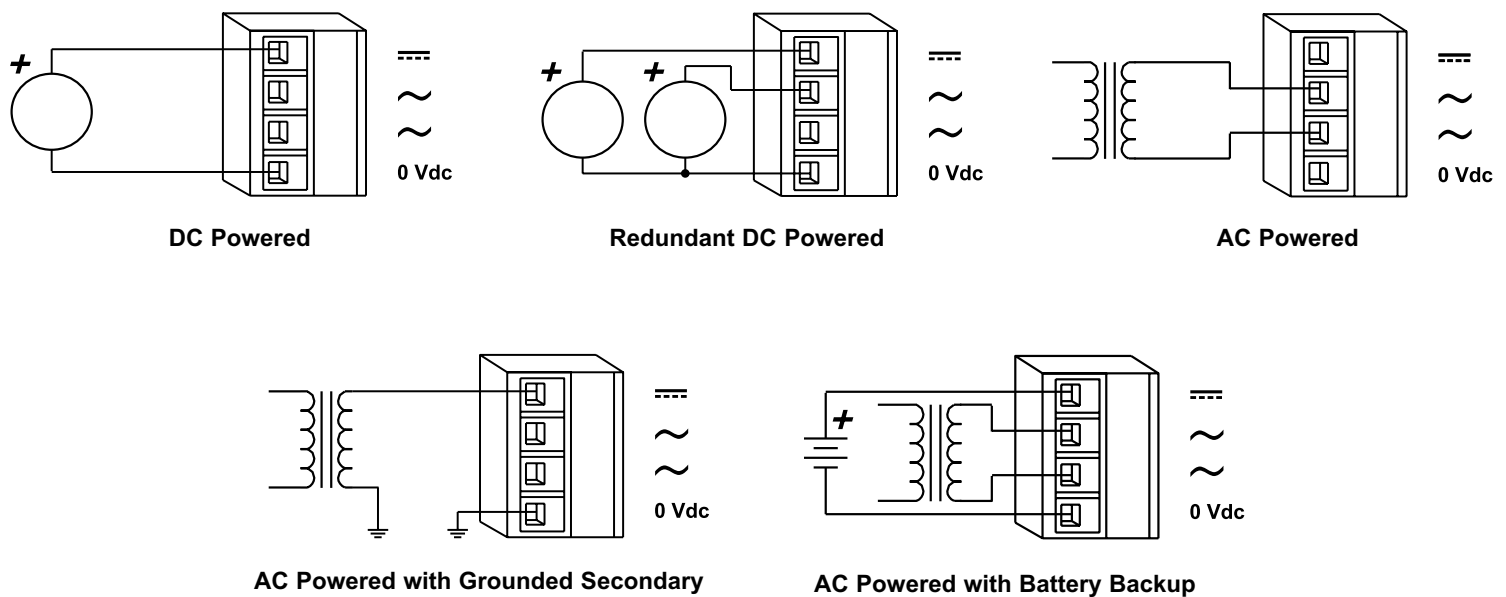
**The unit is shipped with a DIN-rail clip installed.** If direct mounting to a sub-panel is desired, an optional panel mounting bracket, shipped with the product, can be installed after removing the DIN-rail clip.

## ELSX Series

## Mechanical



## Power Diagrams



## Specifications

Electrical	DC	AC
Input voltage	10–36 Volts	8–24 Volts
Input power	6 W (EISX9-100T)	6 VA (EISX9-100T)
	10 W (EISX9-100T/FT, FC, FCS)	10 VA (EISX9-100T/FT, FC, FCS)
	10 W (EISX8-100T/FT, FC, FCS)	10 VA (EISX8-100T/FT, FC, FCS)
Input frequency	N/A	47–63 Hz

## Environmental

Operating temperature	–40°C to +75°C
Storage temperature	–40°C to +85°C
Relative humidity	10–95% non-condensing
Protection	IP30

## Functionality

Standards	IEEE 802.3
Process type	Store-and-Forward

Ports	Copper twisted-pair	Fibre 1300 nm
Number of ports	9, 8 or 6	0, 1 or 2
Interface	10BASE-T/100BASE-TX 10/100 Mbps Auto-negotiated data rate, flow control, full- or half-duplex mode and Auto-MDIX cable connection	100BASE-FX 100 Mbps Full-duplex
Connectors	Shielded RJ-45	SC (on multimode or single-mode models) ST (only on multimode models)
Maximum segment length	100 m	2 km (multimode), optical budget: 13 dB 15 km (single-mode), optical budget: 19 dB
LED signal indicators	Link LED: Yellow — 10 Mbps Green — 100 Mbps Green Flashing — Activity	Green — 100 Mbps link Flashing — Activity
LED power indicator	Green	
Flow control	Half-duplex (backpressure)	Full-duplex (PAUSE)
Aging	300 seconds	

## RJ-45 Pin Assignments

MDI-X<sup>1</sup> 10BASE-T/100BASE-TX

RJ-45	Usage
1	TD+
2	TD–
3	RD+
4	Not Used
5	Not Used
6	RD–
7	Not Used
8	Not Used

<sup>1</sup> Ports normally assume the internal crossover function, but will automatically adapt to connected devices.

**Electromagnetic Compatibility**

Standard	Test Method	Description	Test Levels
EN 55024	EN 61000-4-2	Electrostatic Discharge	6 kV Contact
EN 55024	EN 61000-4-3	Radiated immunity	10 V/m, 80 MHz to 1 GHz
EN 55024	EN 61000-4-4	Fast Transient Burst	1 kV Clamp & 2 kV Direct
EN 55024	EN 61000-4-5	Voltage Surge	1 kV L to L & 2 kV L to Earth
EN 55024	EN 61000-4-6	Conducted Immunity	10 Volts (rms)
EN 55024	EN 61000-4-11	Voltage Dips & Interruptions	1 Line Cycle, 1 to 5 s @ 100% dip
EN 55022	CISPR 22	Radiated Emissions	Class B
EN 55022	CISPR 22	Conducted Emissions	Class B
CFR 47, Part 15	ANSI C63.4	Radiated Emissions	Class A

**Ordering Information****Copper Only**

Model	Description
EISX9-100T	Nine-port 10BASE-T/100BASE-TX compact switch

**Fibre and Copper**

EISX9-100T/FC	Eight-port 100BASE-TX/one-port 100BASE-FX (multimode) switch, SC connectors
EISX9-100T/FT	Eight-port 100BASE-TX/one-port 100BASE-FX (multimode) switch, ST connectors
EISX9-100T/FCS	Eight-port 100BASE-TX/one-port 100BASE-FX (single-mode) switch, SC connectors
EISX8-100T/FC	Six-port 100BASE-TX/two-port 100BASE-FX (multimode) switch, SC connectors
EISX8-100T/FT	Six-port 100BASE-TX/two-port 100BASE-FX (multimode) switch, ST connectors
EISX8-100T/FCS	Six-port 100BASE-TX/two-port 100BASE-FX (single-mode) switch, SC connectors

**Accessories**

Model	Description
AI-XFMR	Wall-mount plug-in transformer, 120 VAC input/24 VAC output (nominal values)
AI-XFMR-E	Wall-mount plug-in transformer, 230 VAC input/24 VAC output (nominal values)

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**CONTEMPORARY** CONTROLS®  
www.ccontrols.com

Contemporary Control Systems, Inc.  
2431 Curtiss Street  
Downers Grove, Illinois 60515 USA

Telephone (630) 963-7070  
Fax (630) 963-0109