EISB CTRLink® Series — High Port Count Switches

Flexibility in Design

- 16- or 24-port 10/100 Mbps switches
- Fibre options include multimode and single-mode versions, ST and SC connectors
- Wide-range temperatures (–40°C to +75°C)

Simple Installation

- Size (6.14" H x 5.45" D x 1.75" W; 156 mm x 139 mm x 45 mm)
- Consistent panel space for 16 or 24 ports
- Easy panel or DIN-rail installation
- Input power range is 10–36 VDC or 8–24 VAC, 47–63 Hz. Power is provided through a quick-disconnect terminal strip.
- Provisions for redundant power connections
- LEDs for link/activity/data rate and power

Plug-and-Play Functionality

- Auto-MDIX on copper ports
- Auto-negotiated data rate, duplex, and flow control on copper ports
- Full- or half-duplex operation on copper ports

Standards Compliant

- 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

EISB CTRLink® Series — High Port Count Switches

Product Overview

The EISB Series is designed with high port density for the space consumed. With a constant form factor requiring only 44.5 mm of DIN-rail space, these switches can support 16 or 24 ports with copper and fibre/copper combinations in a rugged metal enclosure.

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 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.

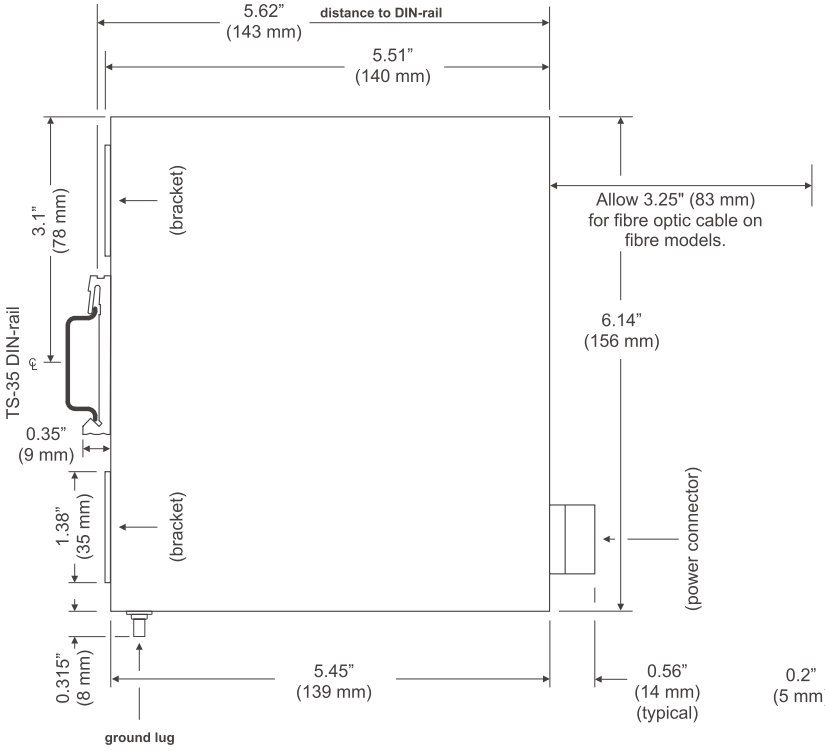
Only standard straight-through cables are needed to connect the copper ports to stations or another hub since the copper ports on these switches are Auto-MDIX compliant. In addition to one power LED, each port has an LED showing link/activity/data rate by colour: green for 100 Mbps and yellow for 10 Mbps. Flashing indicates port activity.

Each unit accepts wide-range, low-voltage AC or DC power and redundant power can be connected.

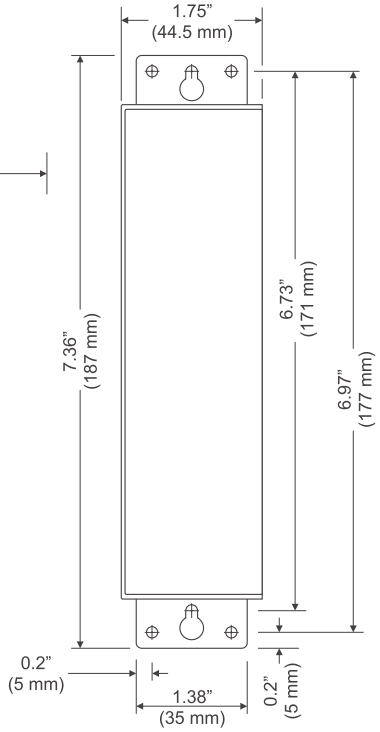
The unit is shipped with a DIN-rail clip installed. If direct mounting to a sub-panel is desired, an optional panel mounting bracket, shipped with the product, can be installed after removing the DIN-rail clip.

EISB CTRLink® Series — High Port Count Switches

Mechanical

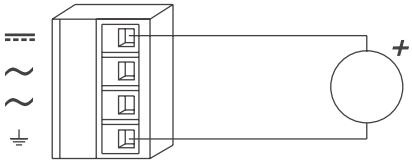


Side View showing DIN-rail Clip (Mounting Brackets Retracted)

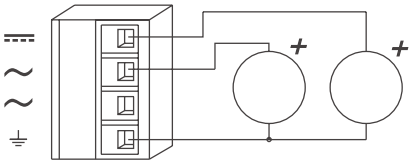


Front View with Mounting Brackets Extended

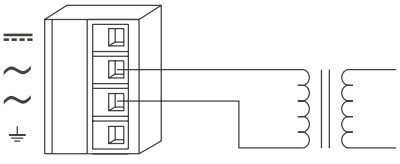
Power Diagrams



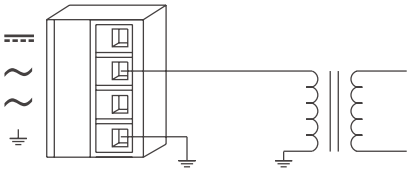
DC Powered



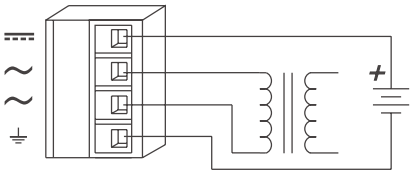
Redundant DC Powered



AC Powered



AC Powered with Grounded Secondary



AC Powered with Battery Backup

EISB CTRLink® Series — High Port Count Switches

Specifications

Electrical

	DC	AC
Input voltage	10–36 Volts	8–24 Volts
Input power	10 W (EISB16-100T)	10 VA (EISB16-100T)
	20 W (EISB16-100T/FT, FC, FCS)	20 VA (EISB16-100T/FT, FC, FCS)
	10 W (EISB24-100T)	10 W (EISB24-100T)
	20 W (EISB24-100T/FT, FC, FCS)	20 VA (EISB24-100T/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%, noncondensing
Protection	IP30

Functional

Standards	IEEE 802.3
Process type	Store-and-Forward

Ports	*Copper*	*Fibre 1300 nm*
Number of ports	16, 24 or 14, 22	0 or 2
Interface	10BASE-T/100BASE-TX 10 or 100 Mbps Auto-negotiated data rate, flow control, full- or half-duplex mode and Auto-MDIX cable connection	100BASE-FX 100 Mbps Full-duplex mode
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	

EISB CTRLink® Series — High Port Count Switches

RJ-45 Pin Assignments

MDI-X[1]	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

[1] 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	4 kV contact & 8 kV air
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-L & 2 kV L-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 A
EN 55022	CISPR 22	Conducted Emissions	Class B
CFR 47, Part 15	ANSI C63.4	Radiated Emissions	Class A

EISB CTRLink® Series — High Port Count Switches

Ordering Information

Copper Only

Model	Description
EISB16-100T	Sixteen-port 10BASE-T/100BASE-TX switch
EISB24-100T	Twenty-four port 10BASE-T/100BASE-TX switch

Fibre and Copper

Model	Description
EISB16-100T/FC	Fourteen-port 10/100 — two-port 100BASE-FX (multimode) switch, SC connectors
EISB16-100T/FT	Fourteen-port 10/100 — two-port 100BASE-FX (multimode) switch, ST connectors
EISB16-100T/FCS	Fourteen-port 10/100 — two-port 100BASE-FX (single-mode) switch, SC connectors
EISB24-100T/FC	Twenty-two port 10/100 — two-port 100BASE-FX (multimode) switch, SC connectors
EISB24-100T/FT	Twenty-two port 10/100 — two-port 100BASE-FX (multimode) switch, ST connectors
EISB24-100T/FCS	Twenty-two port 10/100 — 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)

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

Phone: +1 (630) 963-7070
Fax: +1 (630) 963-0109

info@ccontrols.com
www.ccontrols.com

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

Phone: +86-512-8095866
Fax: +86-512-68093760

info@ccontrols.com.cn
www.ccontrols.asia

United Kingdom
Contemporary Controls Ltd
Sovereign Court Two
University of Warwick
Science Park
Sir William Lyons Road
Coventry, CV4 7EZ
United Kingdom

Phone: +44-24 7641 3786
Fax: +44-24 7641 3923

ccl.info@ccontrols.com
www.ccontrols.eu

Germany
Contemporary Controls GmbH
Fuggerstraße 1 B
04158 Leipzig
Germany

Phone: +49-341-520359-0
Fax: +49-341-520359-16

ccg.info@ccontrols.com
www.ccontrols.eu