

EISX9-100T

CTRLink®

Industrial Ethernet 10/100 Mbps Miniature Switching Hub

Installation Guide

The EISX9-100T segments the Ethernet LAN into nine collision domains. It acts as a “bridge” between data links—creating a larger network diameter than possible with repeating hubs. Each port *automatically negotiates* its data rate to 10 Mbps or 100 Mbps and controls data flow with the PAUSE function in full-duplex or the backpressure method in half-duplex.

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.

The switch learns port assignments by reading Ethernet frames and logs source addresses on a table which can hold over 4000 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 is implemented and broadcast, multicast, or unicast transmissions are received by all ports.

The switch has nine *normal* ports for attaching local devices. A special *uplink* port (9X) allows cascading two hubs with no need of a crossover cable. In addition to one power LED, each port has an LED which shows link/activity/data rate.

The unit mounts on TS35 DIN-rail, can operate from a wide range of low-voltage AC or DC power and offers redundant power connections.

Designed for Industrial Ethernet applications, the switch complies with EMC immunity and emissions compatibility standards for industrial environments.



CONTEMPORARY  **CONTROLS®**

INDUSTRIAL
CONTROL
EQUIPMENT

Specifications

Electrical

| INPUT | DC | AC |
|------------|---------|----------|
| Voltage: | 10-36 V | 8-24 V |
| Power: | 4 W | 4 VA |
| Frequency: | N/A | 47-63 Hz |

Temperature

| | |
|------------|----------------|
| Operating: | -40°C to +75°C |
| Storage: | -40°C to +85°C |

Mounting

DIN-rail: TS35

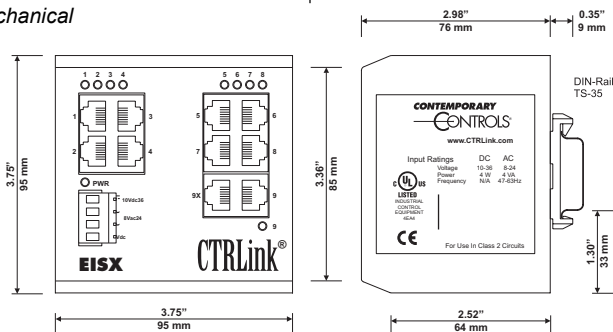
Shipping Weight 1 lb (0.45 kg)

Regulatory Compliance

CE Mark
FCC Part 15, Class A
EN55022
EN55024

For use in Class 2 circuits.

Mechanical



Functional

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

LED Indicators

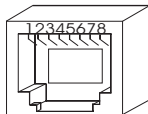
| | |
|----------------|--------------------------------------|
| Power | green |
| Data Rate/Link | green = 100 Mbps yellow = 10 Mbps |

Activity flashing

RJ-45 Connector Pin Assignments

Pin Function

| | |
|---|-----|
| 1 | TD+ |
| 2 | TD- |
| 3 | RD+ |
| 6 | RD- |



(All other pins are unused.)

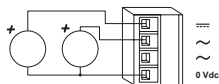
Power Options

The EISX9-100T can be powered in various ways as illustrated below :

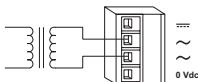
DC POWERED



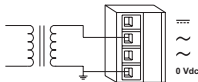
REDUNDANT DC POWERED



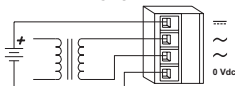
AC POWERED



AC POWERED WITH GROUNDING SECONDARY



AC POWERED WITH BATTERY BACKUP



Power Considerations

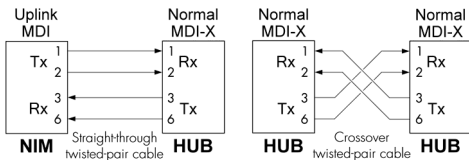
Voltage in the range of 10–36 VDC or 8–24 VAC must deliver current commensurate with 4-watt power consumption. Conductors should be sized accordingly. Zero volts and the chassis are isolated from each other. Input connections are reverse-polarity protected. Primary power backup is possible via redundant diode-isolated inputs for a substitute DC supply or backup battery, but separate provisions are required for charging any backup battery.

LED Indicators

To aid troubleshooting, each port LED glows solid if a link exists, flashes to show activity and shows data rate by color: green for 100 Mbps and yellow for 10 Mbps. One power LED is provided.

Network Connections

Only standard straight-through cables are needed to connect to NIMs or another hub. Eight “normal” ports make the crossover function internally for attaching local devices. Port 9 can provide another local drop via its “normal” jack or allow hub-to-hub cabling via straight-through cable if using its “uplink” jack (marked “9X”) — but the two Port 9 options can NOT be used simultaneously.



Uplink Ports vs. Normal Ports

NEED MORE HELP INSTALLING THIS PRODUCT?

More information can be found in the Technical Support part of our web site at www.ccontrols.com. If contacting our office, ask for Technical Support.

WARRANTY

Contemporary Controls (CC) warrants this product to the original purchaser for one year 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

Before returning a product for repair, contact the manufacturer (USA office) or its representative (UK office) below for instructions on return procedure:

Contemporary Control Systems, Inc.
2431 Curtiss Street
Downers Grove, Illinois 60515 USA
Tel: +1-630-963-7070
Fax: +1-630-963-0109
E-mail: info@ccontrols.com
WWW: <http://www.ccontrols.com>

Contemporary Controls Ltd
Barclays Venture Centre
University of Warwick Science Park
Sir William Lyons Road
Coventry CV4 7EZ UK
Tel: +44 (0)24 7641 3786
Fax: +44 (0)24 7641 3923
E-mail: info@ccontrols.co.uk

DECLARATION OF CONFORMITY

Applied Council Directives: EMC Directive 89/336/EEC as amended by 92/31/EEC & 93/68/EEC; General Product Safety Directive 92/59/EEC

Standards to which Conformity is Declared: EN 55022:1995 (CISPR22:1993), Class B; EN 55024:1998 I.T.E. Immunity Characteristics

Manufacturer's Declaration of April 1, 2003: I declare that the EISX9-100T conforms to the above directives and standards.

George M. Thomas, President

TD020800-01A