

Crestron **CEN-SW-POE-5**
5-Port PoE Switch

Installation Guide



Regulatory Compliance

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.



As of the date of manufacture, the CEN-SW-POE-5 has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.



Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:

(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Industry Canada (IC) Compliance Statement

CAN ICES-3(B)/NMB-3(B)

The specific patents that cover Crestron products are listed at patents.crestron.com.

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5-Port PoE Switch: CEN-SW-POE-5

Introduction

The CEN-SW-POE-5 is a 5-port unmanaged Gigabit Ethernet switch that provides Power over Ethernet (PoE) from four of its ports. Power over Ethernet affords a one-wire solution for connecting Crestron® touch screens, gateways, and other devices, delivering power and data over a single CAT5/CAT6 network cable. All five ports are gigabit capable to ensure maximum bandwidth for multimedia and critical control data.

Using the CEN-SW-POE-5, there is no need to install a separate power supply at each networked device location. The CEN-SW-POE-5 can simply be mounted at a convenient location on a wall or in an equipment rack, providing a single power source for four separate 802.3af compliant PoE powered devices. Non-PoE devices may also be connected to any port on the CEN-SW-POE-5 without risk of damage to either component.

Features and Functions

- 5-port unmanaged Ethernet switch
- All ports support 1000BASE-T Gigabit Ethernet
- Provides PoE (802.3af) on four ports
- Auto-negotiating and auto MDI/MDI-X (Medium Dependent Interface/Medium Dependent Interface Crossover) operation
- Surface or rack-rail mountable

Specifications

Specifications for the CEN-SW-POE-5 are listed in the following table.

CEN-SW-POE-5 Specifications

SPECIFICATION	DETAILS
Ethernet Ports	(5) 10BASE-T/100BASE-TX/ 1000BASE-T Ethernet
Network Standards	IEEE 802.3, 802.3u, 802.3ab, 802.3x, and 802.3af
Transmission Method	Store-and-forward
Power Requirements	48 Vdc @ 1.25 A, 100-240 Vac, 50/60 Hz (power pack included)
Environmental Temperature Humidity Heat Dissipation	32° to 104° F (0° to 40° C) 10% to 90% RH (non-condensing) 10 Btu/hr
Enclosure Chassis Mounting	Metal, black finish, with two integral mounting flanges, vented top and bottom Freestanding, surface mount, or attach to a single rack rail
Dimensions Height Width Depth	5.06 in (129 mm) 4.66 in (119 mm) 1.17 in (30 mm)
Weight	14 oz (381 g)

Physical Description

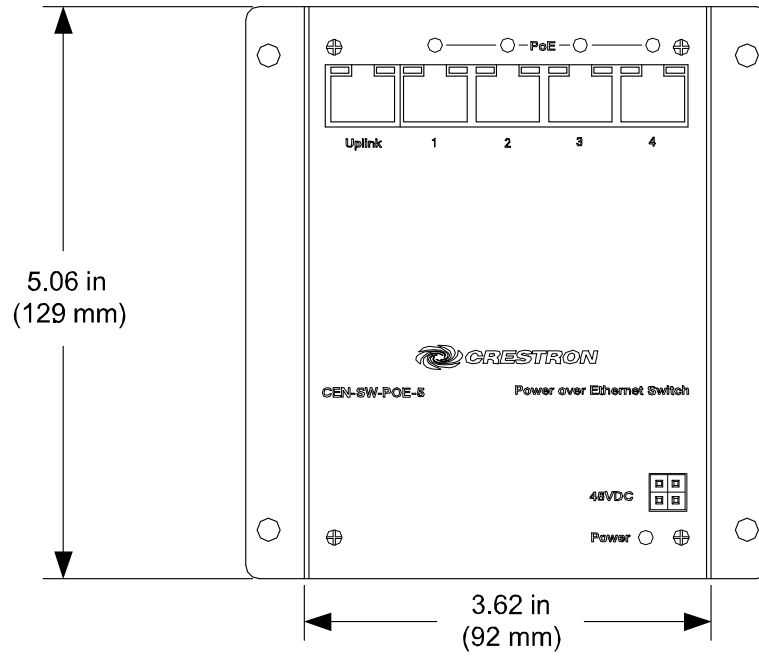
This section provides information on the connections and indicators available on the CEN-SW-POE-5.

CEN-SW-POE-5 Physical View

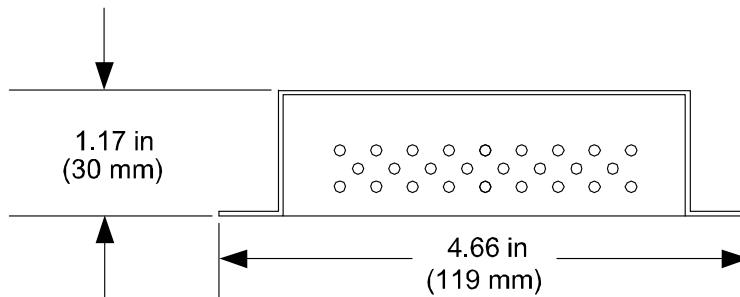


CEN-SW-POE-5 Overall Dimensions

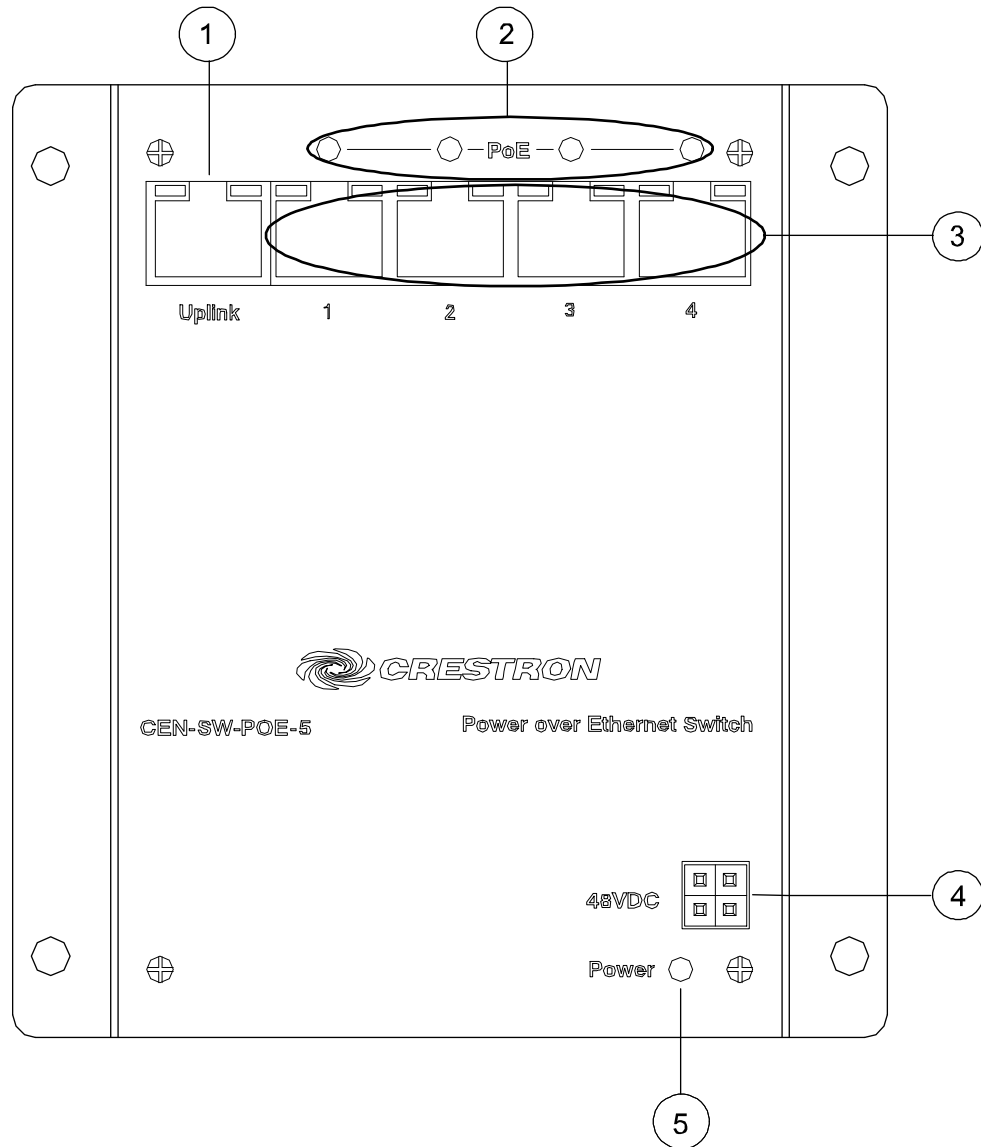
Front View



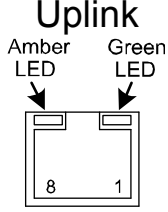
Bottom View



CEN-SW-POE-5 Connectors & Indicators

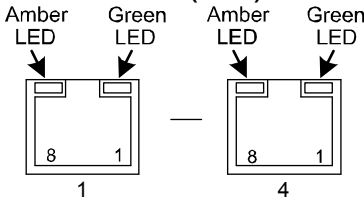


Connectors & Indicators

#	CONNECTORS & INDICATORS	DESCRIPTION																											
1	<p style="text-align: center;">Uplink</p> 	<p>(1) 8-pin RJ-45 connector, female, with 2 LED indicators; 10BASE-T/100BASE-TX/1000BASE-T Ethernet port; Amber LED indicates 1000BASE-T link status; Solid green LED indicates 10BASE-T/100BASE-TX link status; Flashing green LED indicates Ethernet activity; Connects to network hub or switch</p> <p><i>Uplink Connector Pin Assignments</i></p> <table border="1" data-bbox="740 877 1372 1423"> <thead> <tr> <th>PIN</th> <th>10BASE-T/ 100BASE-TX DESCRIPTION</th> <th>1000BASE-T DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Data Pair 1</td> <td>Data Pair 1</td> </tr> <tr> <td>2</td> <td>Data Pair 1</td> <td>Data Pair 1</td> </tr> <tr> <td>3</td> <td>Data Pair 2</td> <td>Data Pair 2</td> </tr> <tr> <td>4</td> <td>No Connection</td> <td>Data Pair 3</td> </tr> <tr> <td>5</td> <td>No Connection</td> <td>Data Pair 3</td> </tr> <tr> <td>6</td> <td>Data Pair 2</td> <td>Data Pair 2</td> </tr> <tr> <td>7</td> <td>No Connection</td> <td>Data Pair 4</td> </tr> <tr> <td>8</td> <td>No Connection</td> <td>Data Pair 4</td> </tr> </tbody> </table>	PIN	10BASE-T/ 100BASE-TX DESCRIPTION	1000BASE-T DESCRIPTION	1	Data Pair 1	Data Pair 1	2	Data Pair 1	Data Pair 1	3	Data Pair 2	Data Pair 2	4	No Connection	Data Pair 3	5	No Connection	Data Pair 3	6	Data Pair 2	Data Pair 2	7	No Connection	Data Pair 4	8	No Connection	Data Pair 4
PIN	10BASE-T/ 100BASE-TX DESCRIPTION	1000BASE-T DESCRIPTION																											
1	Data Pair 1	Data Pair 1																											
2	Data Pair 1	Data Pair 1																											
3	Data Pair 2	Data Pair 2																											
4	No Connection	Data Pair 3																											
5	No Connection	Data Pair 3																											
6	Data Pair 2	Data Pair 2																											
7	No Connection	Data Pair 4																											
8	No Connection	Data Pair 4																											
2	PoE	<p>(4) Green LEDs, indicate that the corresponding PoE port is providing power to an 802.3af-compliant device</p>																											

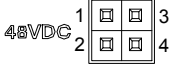
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Connectors & Indicators (Continued)

#	CONNECTORS & INDICATORS	DESCRIPTION																											
3	<p>PoE (1-4)</p> 	<p>(4) 8-pin RJ-45 connectors, female, with 2 LED indicators; 10BASE-T/100BASE-TX/1000BASE-T Ethernet ports and PoE Power Sourcing Equipment (PSE) outputs; Amber LED indicates 1000BASE-T link status; Solid green LED indicates 10BASE-T/100BASE-TX link status; Flashing green LED indicates Ethernet activity</p> <p><i>PoE Connector Pin Assignments</i></p> <table border="1" data-bbox="738 871 1453 1423"> <thead> <tr> <th>PIN</th> <th>10BASE-T/ 100BASE-TX DESCRIPTION</th> <th>1000BASE-T DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Data Pair 1</td> <td>Data Pair 1</td> </tr> <tr> <td>2</td> <td>Data Pair 1</td> <td>Data Pair 1</td> </tr> <tr> <td>3</td> <td>Data Pair 2</td> <td>Data Pair 2</td> </tr> <tr> <td>4</td> <td>+Vdc</td> <td>Data Pair 3/+Vdc</td> </tr> <tr> <td>5</td> <td>+Vdc</td> <td>Data Pair 3/+Vdc</td> </tr> <tr> <td>6</td> <td>Data Pair 2</td> <td>Data Pair 2</td> </tr> <tr> <td>7</td> <td>-Vdc</td> <td>Data Pair 4/-Vdc</td> </tr> <tr> <td>8</td> <td>-Vdc</td> <td>Data Pair 4/-Vdc</td> </tr> </tbody> </table>	PIN	10BASE-T/ 100BASE-TX DESCRIPTION	1000BASE-T DESCRIPTION	1	Data Pair 1	Data Pair 1	2	Data Pair 1	Data Pair 1	3	Data Pair 2	Data Pair 2	4	+Vdc	Data Pair 3/+Vdc	5	+Vdc	Data Pair 3/+Vdc	6	Data Pair 2	Data Pair 2	7	-Vdc	Data Pair 4/-Vdc	8	-Vdc	Data Pair 4/-Vdc
PIN	10BASE-T/ 100BASE-TX DESCRIPTION	1000BASE-T DESCRIPTION																											
1	Data Pair 1	Data Pair 1																											
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5	+Vdc	Data Pair 3/+Vdc																											
6	Data Pair 2	Data Pair 2																											
7	-Vdc	Data Pair 4/-Vdc																											
8	-Vdc	Data Pair 4/-Vdc																											

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Connectors & Indicators (Continued)

#	CONNECTORS & INDICATORS	DESCRIPTION										
4	<p>48VDC</p> 	<p>(1) 4-pin (2 x 2) rectangular connector; 48 Vdc power input (power pack included)</p> <p><i>48VDC Connector Pin Assignments</i></p> <table border="1"> <thead> <tr> <th>PIN</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+48 Vdc</td> </tr> <tr> <td>2</td> <td>+48 Vdc</td> </tr> <tr> <td>3</td> <td>Ground</td> </tr> <tr> <td>4</td> <td>Ground</td> </tr> </tbody> </table>	PIN	DESCRIPTION	1	+48 Vdc	2	+48 Vdc	3	Ground	4	Ground
PIN	DESCRIPTION											
1	+48 Vdc											
2	+48 Vdc											
3	Ground											
4	Ground											
5	Power	(1) Yellow LED, indicates operating power supplied from external power pack										

Setup

Network Wiring

When wiring the Ethernet network, use Category 5/Category 6 (CAT5/CAT6) wiring. CAT5/CAT6 wiring is a twisted pair cable designed for Ethernet networks. These networks operate at speeds of up to 1000 megabits per second (Mbps) using the 1000BASE-T standard.

For information on connecting Ethernet devices in a Crestron system, refer to the latest version of the Crestron e-Control[®] Reference Guide (Doc. 6052), which is available for download from the Crestron Web site (www.crestron.com/manuals).

Supplied Hardware

The hardware supplied with the CEN-SW-POE-5 is listed in the following table.

Supplied Hardware for the CEN-SW-POE-5

DESCRIPTION	PART NUMBER	QUANTITY
48 V, 1.25 A 100-240 Vac Switching Power Supply	2021168	1
North American IEC Power Cable	2021169	1
5 x 20 ISO, Pan Head Phillips Rack Screws with Washers	2021170	2
3/16 x 1-1/4" Pan Head Phillips Drywall Screws	2021171	4

Installation

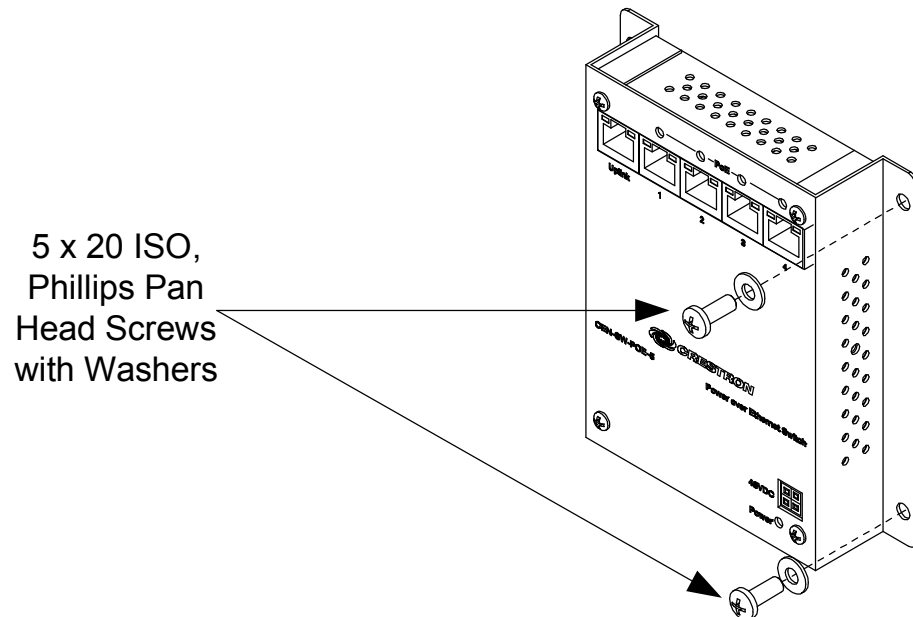
Ventilation The CEN-SW-POE-5 venting holes should not be obstructed under any circumstances. To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications.

Rack Mounting The CEN-SW-POE-5 can be mounted to a front or rear rail of a rack using the supplied rack screws and washers. Either the left or right flange of the switch can be used to mount the unit to the rack.

To mount the CEN-SW-POE-5 to a rack (refer to the illustration below):

1. Position either the left or right mounting flange so that its holes align with the holes in the rack.
2. Secure the unit to the rack using the two supplied 5 x 20 ISO, pan head Phillips rack screws with washers.

Rack Mounting (Mounting of Right Flange Shown)

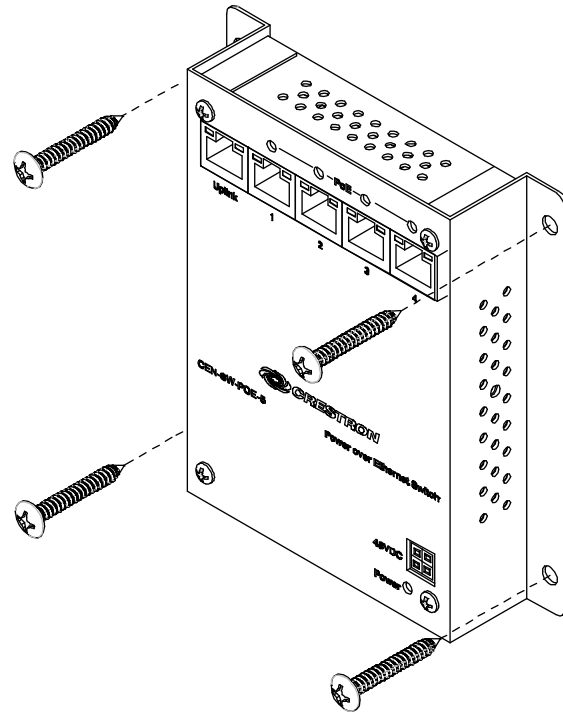


**Wall
Mounting**

The CEN-SW-POE-5 can be mounted to a wall. To mount the device to a wall, use the four supplied 3/16 x 1-1/4" pan head Phillips drywall screws (refer to the illustration below).

Wall Mounting

(4) Screws,
3/16 x 1 1/4"
Phillips Pan Head



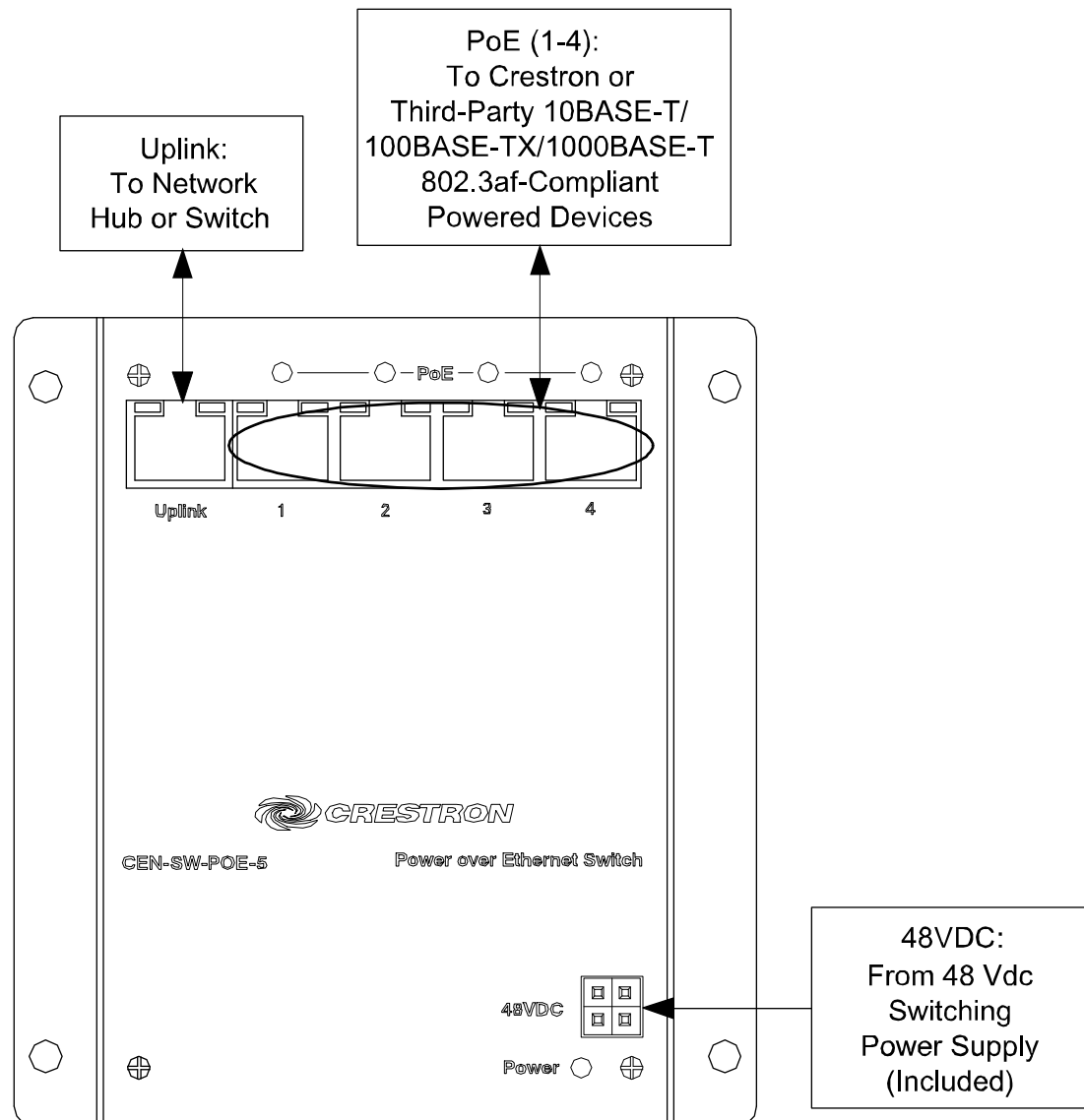
Hardware Hookup

Make the necessary connections as called out in the illustration that follows this paragraph. Apply power after all connections have been made.

When making connections to the CEN-SW-POE-5, note the following:

- Use Crestron power supplies for Crestron equipment.
- The included cable(s) cannot be extended.

Hardware Connections for the CEN-SW-POE-5



Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

CEN-SW-POE-5 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Power LED does not illuminate.	Power cord (ac) is not properly connected to the external power supply or to the power outlet.	Verify power cord connections.
	Power cord (dc) is not firmly plugged into the dc power jack.	Verify power cord connection.
	Problem exists with the power supply.	Replace the power supply.
Green LED on Ethernet port does not illuminate.	Network cable is not connected to the port on the switch or to the 10BASE-T/100BASE-TX/1000BASE-T compatible device.	Verify network cable connection to the switch and to the network device.
	Network cable is not the proper type.	Verify that network cable complies with EIA/TIA 568 and the CAT5 specification.

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CEN-SW-POE-5 Troubleshooting (Continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Green LED on Ethernet port does not illuminate. (Continued)	Network cable is not the proper length.	Verify that network cable is the proper length. Cable length must not exceed 328 feet (100 meters).
	Fault exists with the network cable.	Replace the cable.
	Port is not functioning.	Use another port. If another port is not available, replace the switch.
	10BASE-T/100BASE-TX/1000BASE-T compatible device is not 802.3af compliant and is not powered on.	Verify ac power connection to the network device.
PoE LED does not illuminate.	10BASE-T/100BASE-TX/1000BASE-T compatible device is not 802.3af compliant.	PoE LED illuminates only when the associated port on the switch connects to an 802.3af-compliant device.

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron Web site (www.crestron.com/manuals).

List of Related Reference Documents

DOCUMENT TITLE
Crestron e-Control Reference Guide

Further Inquiries

To locate specific information or to resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or refer to the listing of Crestron worldwide offices on the Crestron Web site (www.crestron.com/offices) for assistance within a particular geographic region.

To post a question about Crestron products, log onto the Online Help section of the Crestron Web site (www.crestron.com/onlinehelp). First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the CEN-SW-POE-5, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron Web site periodically for manual update availability and its relevance. Updates are identified as an “Addendum” in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact an authorized CRESTRON dealer. Only authorized CRESTRON dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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Specifications subject to
change without notice.