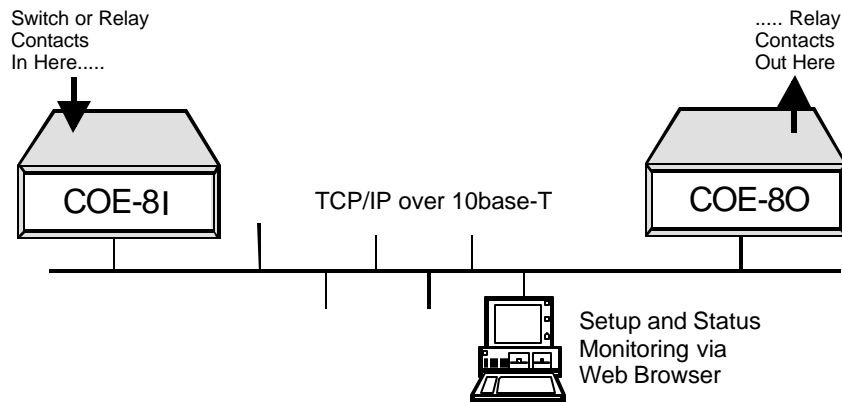


Overview

COE-8 is a system for transporting switch closure information over a TCP/IP network. The COE-8 consists of two devices, a Transmitter Unit (COE-8I) and a Receiver Unit (COE-8O). The COE-8I provides 8 inputs for switch contacts, relay closures or DC Voltage. Upon a change of state for any channel, it will transmit a message to one or more (up to 32) COE-8O units. The COE-8O has eight relays that will mirror the status of the eight inputs of the COE-8I. Each unit can be monitored and configured from a Web Browser.



Each channel of the COE-8I is independently configurable, allowing selection of what IP addresses to deliver to and on what channel. Highly flexible telemetry systems can be developed with these simple devices. The COE-8 system also supports SNMP for independent monitoring and control. Up to 4 SNMP managers can be configured to support the COE-8.

The COE-8 uses 128 bit SSL for web browser security. Communications between COE-8 devices is secured using AES. Each unit has a user settable Control Word that seeds the encryption. Security features can be enabled or disabled by the administrator.

REF: CTL\COE8_IO_S_060801G.DOC

Technical Support Hotline: (201) 967-8788

Hardware Installation

Inputs (COE-8I)

Connect the inputs to the COE-8I using the screw terminals on the printed circuit card, as illustrated. Inputs can be either dry relay or switch contacts, or a +VDC voltage (3 to 30 V), referenced to a common ground.

Status	Dry Relay	DC Voltage
Open	Open	>3VDC
Closed	Closed	<=0VDC

Input Specification Dry Contact (common ground)
or Wet ±30VDC Max

Relays (COE-8O)

Connect the inputs to the COE-8O using the screw terminals on the printed circuit card, as illustrated. Relays are Form A.

Relay Specifications

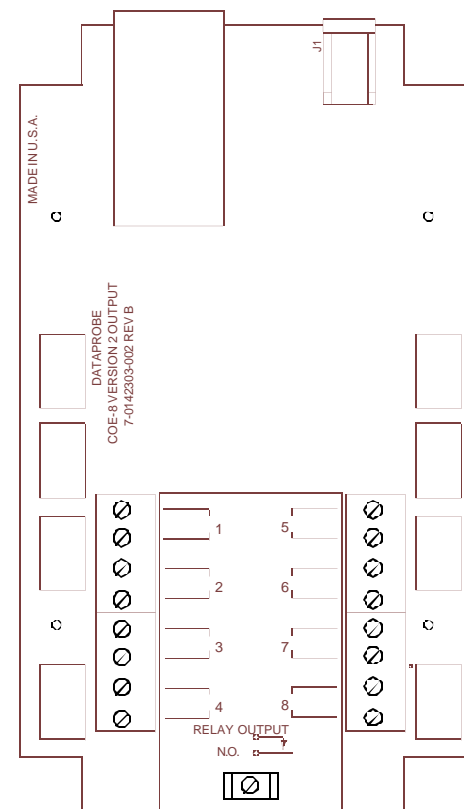
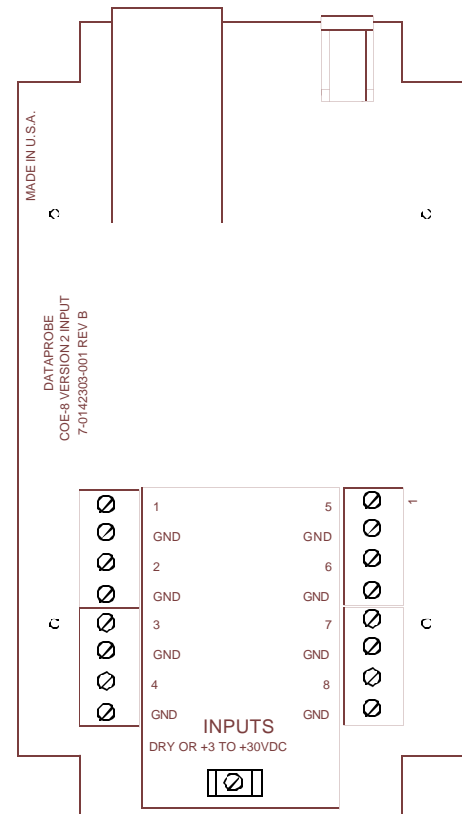
Rating (resistive)	0.5 A 120 VAC or 1 A 24 VDC
Maximum Carrying Current	2 A
Maximum Switching Power	60 AV, 24 W
Maximum Switching Voltage	120 VAC/60 VDC
Maximum Switching Current	1A
Life Expectancy:	5 Million Operations Mechanical 100K Operations at rated load

Network

Connect the network to the connector provided. A yellow LED indicates a successful connection to the network, a green LED data activity.

Power

Apply power only when the cover is secured onto the COE-8. Use only the wall mounted power supply provided. For applications outside the US use Dataprobe Power Supply 1930044.



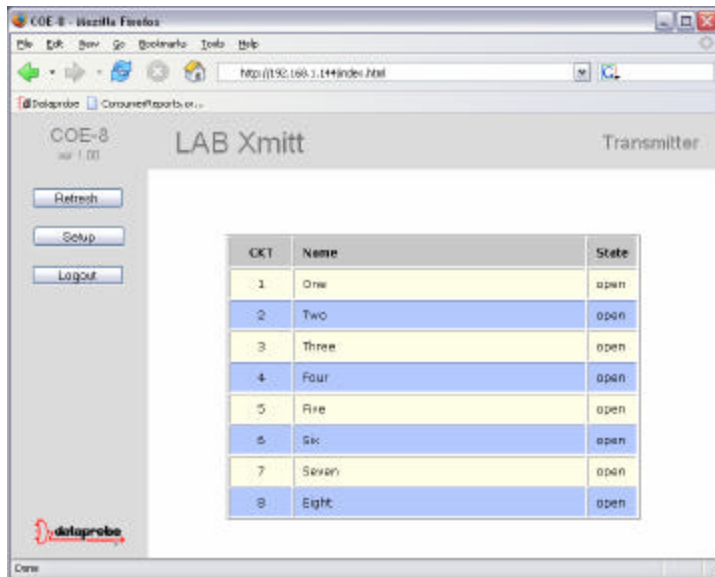
WEB Page Access

The web pages provide status information on the inputs and outputs of the COE-8, as well as provide configuration for the unit. Open a browser to the default or current IP address of the unit. Enter the default username and password:

Factory Defaults:

IP Address 192.168.1.254
Username admin
Password admin

The unit will display the current status of each of the channels and provide buttons for Refresh, Setup and Logout.



Configuration

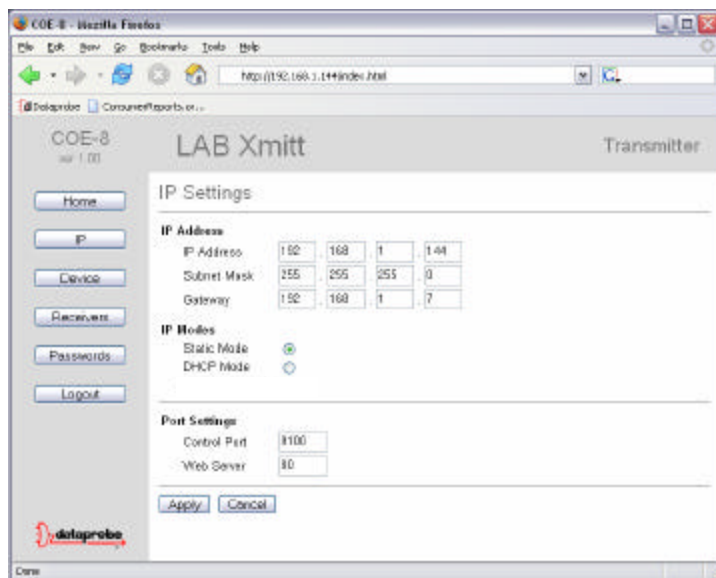
Setting I/P Address

The COE-8 units provide three methods for setting the IP Address

- 1) Static IP via the Web Page Setup
- 2) DHCP

WEB Page

Login to the COE-8 and access the Setup pages by clicking on the **Setup** button from the home page. Click on the IP button to bring up the IP Settings page:



Select Static Mode from the radio buttons and fill in the IP Address, Subnet Mask and Gateway as provided by your network administrator. Click Apply to save the changes. You will then be prompted to reboot the COE-8. Click on the Reboot button. The COE-8 will reboot and the new IP address will be ready to be accessed.

DHCP

Selecting DHCP from the IP Setup page allows a DHCP server to provide IP address information to the COE-8. Click Apply and then Reboot when prompted. The COE-8 will reboot and will have to be accessed with the IP address assigned by the DHCP server. If no IP address is assigned by a DHCP server, the original IP address will be retained.

Setup

The Setup button from the Home page provides access to all the configuration of the COE-8. The Setup area is divided into several pages:

Device Page:

Basic setup of the COE-8, IP address and TCP/IP settings

Name Assign a name up to 20 characters to help identify the COE-8

IP Address Set the IP Address manually in the Static Mode (see below)

IP Modes Set the method to configure the IP address. See section above for details.

- Static: Manually entered IP address information
- DHCP: IP address obtained upon power up from DHCP server.

Port Settings The IP Setup page also allows for changing of the port assignment for both the control communication and web page access. If SSL security is used, the web port setting is ignored. Dataprobe recommends changing the Web port for units that will be connected to the Internet. This will minimize the number of hacker attacks that the COE-8 will be subject to.

The Control Port for both the COE-8I and all COE-8Os that receive status from it must be set the same.

If a port other than the default Port 80 is used for web browser access, the port must specifically be used in the URL when accessing the COE-8. For example, if the Web Port is changed to 9090 then the URL for the unit would be `http://192.168.1.254:9090`

Receivers (COE-8I Only)

Transmission Frequency 0 to 9999 seconds

This sets the frequency that the COE-8I transmits its status to the receivers. When set to 0, transmission will only occur upon change of status.

Receiver IP Address Set up to 32 IP addresses of the COE-8O units that will have input status information set to them. If you wish to send the same input channel status to two different channels on any one COE-8O, then that IP address must be entered twice in the table.

Inputs (COE-8I Only)

The COE-8I can send individual input status to multiple COE-8O receivers, or other IP address. This page provides for selecting which output of the COE-8Os will be operated by each input of the COE-8I. Select the Input from the drop down box, then configure the Name for that input, along with the channel of each COE-8O unit to receive the status. Click Apply after each channel is configured.

Use Output 0 if no output of a given COE-8O is to be used for that channel. Configure each of the 8 inputs as necessary.

Security

The COE-8 provides two types of user settable security.

SSL Enable Provides encryption for web browser access, and for inter-unit communications. Browser encryption is SSL. When SSL is enabled, access the COE-8 with https:// instead of http:// \

The COE-8 uses a self signed certificate. Upon first connection, the web browser will ask the user to establish a trust. This trust can be established on each and every connection or it can be set up for the life of the certificate.

Encryption for the inter-unit protocol is via AES. When security is enabled with this checkbox, a Control Word must be specified. This Control Word must be identical in each unit that communicates with another COE device.

Alarm Enable Provides a reliability check for inter-unit communications. When Alarm is Enabled, Channel 8 of the COE-8O is used as an alarm relay, and is not available to receive status information. Channel 8 Relay is Closed when the status is OK and Open when there is a communications alarm. When Alarm is Enabled, set the Max Fail counter to the number of attempts required before setting the Alarm.

When Alarm is Enabled, the Home Page will display Channel 8 in gray, and the name will be designated as ALARM. The status box will show either OK or Triggered to indicate the status of the alarm. This status is a hot link to the Alarm Status information. The Alarm Status displays any current alarms, and provides a refresh button to obtain the latest information. The COE-8O unit also has a Clear Alarms button. This button deletes all the current alarms.

SNMP

The COE-8 can be monitored and configured via SNMP managers. Download the MIB at <http://dataprobe.com/files/mibs/coe8.mib>

Enter the IP addresses of up to 4 SNMP managers. Enable or Disable SNMP with the checkbox provided. Traps can be sent every time there is a change of state on any COE-8 channel. Check the box provided to enable this. If both the COE-8I and COE-8O are configured to send traps, two messages will be received by each SNMP manager for each event.

Passwords

Two username and password sets allow for two types of users:

User Type	Default Username / Password	Access
Administrator	admin / admin	Full view and setup
General User	user / user	View status only

Click Apply to save the new usernames and passwords.

TECHNICAL SUPPORT, RETURNS and WARRANTY

Dataprobe Technical Support is available 8:30AM to 5:30PM ET to assist you in the installation and operation of this product. To obtain Technical Support call our Tech Support Hotline at 201-967- 8788, or Email us at tech@dataprobe.com. Please have the following information available when you call:

- Model of Product
- Serial Number
- Date of Purchase
- Name of Seller (if other than Dataprobe)

If you purchased this product through an **Authorized Dataprobe Reseller**, you should contact them first, as they may have information about the application that can more quickly answer your questions.

WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of One Year from the date of initial purchase. If the product should prove defective within that period, Seller will repair or replace the product, at its sole discretion.

Service under this Warranty is obtained by shipping the product (with all charges prepaid) to the address below. Seller will pay return shipping charges. Call Dataprobe Technical Service at (201) 967-8788 to receive a Return Materials Authorization (RMA) Number prior to sending any equipment back for repair. Include all cables, power supplies and proof of purchase with shipment.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR ANY PURPOSE ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from jurisdictions to jurisdiction.

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes no representation or warranty as to the suitability of fitness for any specific application.

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