



# XL Series Ethernet COM Module (HE-XEC)

## 1 INTRODUCTION

The XL Series Ethernet COM Module (XEC) is used to provide Ethernet communications support between a PC and an XL Series OCS. The following applications are supported:

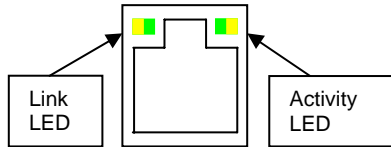
1. Cscape™ - Allows remote programming, monitoring and debugging
2. CsCAN OPC Server – Allows remote data monitoring and transfers
3. XLE Remote Terminal – Allows remotely viewing and operating the XLE user interface
4. EnvisionRV – Remote viewing/monitoring of OCS
5. EnvisionFX – File Transfer to/from OCS
6. Modbus TCP/IP – Allows communication with other Modbus TCP/IP supporting devices.

**Note:** When using 'Open' and 'Close' ladder functions to start and end Modbus TCP/IP communications ladder program must wait for the power flow at the output of these functions (usually it takes 10-15 seconds for the reconfiguration of the Ethernet COM module to complete).

**Note:** If using Cscape 8.6 or previous releases, communication re-director software must be installed. Please see the Ethernet COM Module manual (MAN0817) for additional details. No updates are required for the XLE controller to install a Ethernet module.

The Ethernet module has two LEDs for status indication:

Link LED (Left Side)		Activity LED (Right Side)	
Color	Meaning	Color	Meaning
Off	No Link	Off	No Activity
Amber	10 Mbps	Amber	Half-Duplex
Green	100 Mbps	Green	Full-Duplex



## 2 SPECIFICATIONS

Table 1 – XEC Specifications	
<b>Ethernet</b>	10BASE-T & 100BASE-TX full / half duplex auto switching
<b>Power</b>	64mA Max at 24VDC (in additional to the requirements for the XLE controller)

## 3 INSTALLATION PROCEDURE

### 3.1 Installation Procedure (for XLE OCS)

1. Disconnect all power from the XLE unit including I/O power.
2. Remove the four screws on the back of the XLE unit and remove the back cover. The back cover can be discarded or saved, but it will be replaced with the extended back cover that ships with the communication add-on. Screws are re-used (Figure 1).

REMOVE FOUR SCREWS AS SHOWN AND REMOVE BACK COVER.  
**DISCARD BACK COVER ONLY! DO NOT DISCARD SCREWS!**

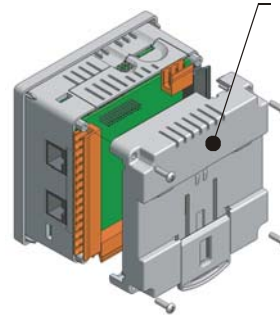


Figure 1-Removing Back Cover of the XLE

001XLE058  
INSTALL COM BOARD BY ALIGNING CONNECTOR AND SEATING BOARD FULLY ON STANDOFFS.

INSTALL NEW BACK COVER RE-USING THE FOUR SCREWS.

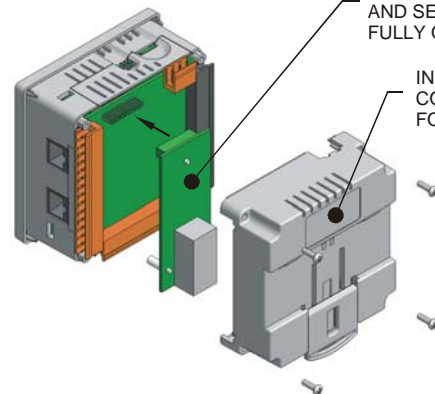


Figure 2- Installing the COM Board in the XLE

3. Make sure all the jumper settings on the I/O board are set correctly for the application.
4. Plug the communication board onto the 24-pin connector. Make sure all the pins are properly aligned (Figure 2).
5. Place the extended back cover onto the unit. It can be helpful to tip it at an angle so the connector on the COM board passes through the opening on the back cover.
6. Place the screw back into the hole and turn the screw slowly counter clockwise until it clicks into the threads. This prevents the screw from being cross-threaded. Now, turn the screw clock-wise until the cover is firmly secured. Repeat this process for all four (4) screws.

## 4 SAFETY

When found on the product, the following symbols specify:



**Warning:** Consult user documentation.



**Warning:** Electrical Shock Hazard.

**WARNING:** To avoid the risk of electric shock or burns, always connect the safety (or earth) ground before making any other connections.

**WARNING:** To reduce the risk of fire, electrical shock, or physical injury it is strongly recommended to fuse the voltage measurement inputs. Be sure to locate fuses as close to the source as possible.

**WARNING:** Replace fuse with the same type and rating to provide protection against risk of fire and shock hazards.

**WARNING:** In the event of repeated failure, do **not** replace the fuse again as a repeated failure indicates a defective condition that will **not** clear by replacing the fuse.

**WARNING:** Only qualified electrical personnel familiar with the construction and operation of this equipment and the hazards involved should install, adjust, operate, or service this equipment. Read and understand this manual and other applicable manuals in their entirety before proceeding. Failure to observe this precaution could result in severe bodily injury or loss of life.

- All applicable codes and standards need to be followed in the installation of this product.
- For I/O wiring (discrete), use the following wire type or equivalent: Belden 9918, 18 AWG or larger.

Adhere to the following safety precautions whenever any type of connection is made to the module.

- Connect the green safety (earth) ground first before making any other connections.
- When connecting to electric circuits or pulse-initiating equipment, open their related breakers. Do **not** make connections to live power lines.
- Make connections to the module first; then connect to the circuit to be monitored.
- Route power wires in a safe manner in accordance with good practice and local codes.
- Wear proper personal protective equipment including safety glasses and insulated gloves when making connections to power circuits.
- Ensure hands, shoes, and floor are dry before making any connection to a power line.
- Make sure the unit is turned OFF before making connection to terminals. Make sure all circuits are de-energized before making connections.
- Before each use, inspect all cables for breaks or cracks in the insulation. Replace immediately if defective.

## 5 TECHNICAL SUPPORT

For assistance and manual updates, contact Technical Support at the following locations:

**North America:**

Tel: 317 916-4274

Fax: 317 639-4279

Web: <http://www.heapg.com>

Email: [techsppt@heapg.com](mailto:techsppt@heapg.com)

**Europe:**

Tel: +353-21-4321266

Fax: +353-21-4321826

Web: <http://www.horner-apg.com>

Email: [tech.support@horner-apg.com](mailto:tech.support@horner-apg.com)

No part of this publication may be reproduced without the prior agreement and written permission of Horner APG, Inc. Information in this document is subject to change without notice.