

# Electronic Overload Expansion Module Product Installation

Figure 1.

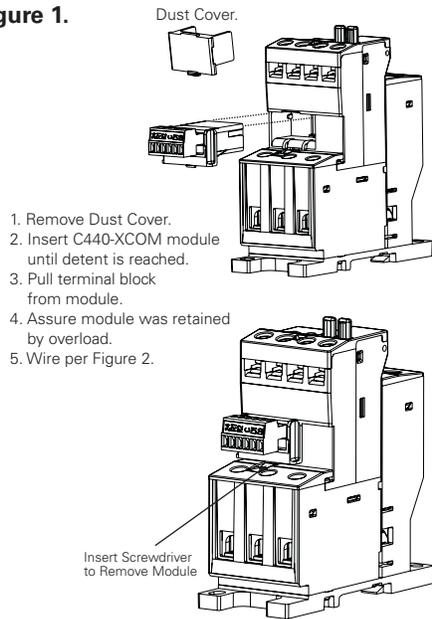
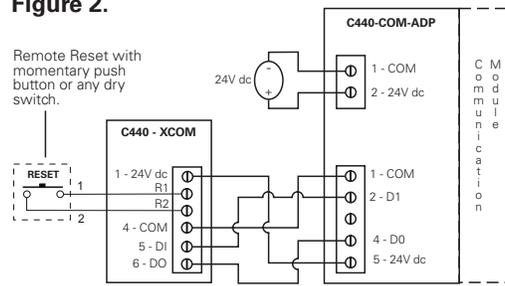


Figure 2.



FOR USE WITH C440-COM-ADP  
Consult IL04210006E  
Remote reset wire length is governed by satisfying Type-1 24V dc input requirements per IEC 61131-2.

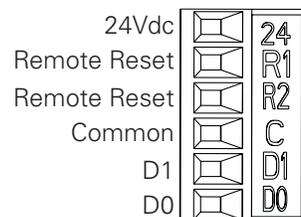
Table 1. Modbus Settings

| Parameter                    | Value   |
|------------------------------|---|
| Mode                         | Slave Mode Only   |
| Modbus Address/Slave Address | Network Settable, Default = 1 (0 = for broadcast)   |
| Baud Rate                    | 19.2kb  |
| Byte Characteristics         | 8-bit, Even Parity, 1-Stop Bit  |
| Commands Supported           | 0x03 – Read Holding Registers<br>0x04 – Read Input Registers<br>0x06 – Write Single Register<br>0x10 – Write Multiple Holding Registers<br>0x2B/0x0E - Read Device Identification |
| Protocol Supported           | Modbus RTU  |
| Electrical Signaling         | RS-485 (ANSI/TIA/EIA-485), Two Wire   |
| Checksum                     | CRC16bit 0x8005 (or CRC-CCITT 0x1021)   |
| Max. Number of Devices       | 32 (1 unit load per RS-485) Note: Line polarization will reduce max. # of devices by 4  |
| Max. Cable Length            | Dependent on Baud Rate, cable characteristics, number of loads. Reference Modbus-IDA over Serial Line Specification and Implementation Guide and EIA-485 for details              |

Table 2. Wiring Configuration

| Pin # |       | Description   |
|-------|-------|---|
| 1     | 24Vdc | 24V dc power supply connection  |
| 2     | R1    | Remote Reset Dry Contact Source. This is a 24VDC signal to be applied to a dry contact (ie pushbutton). |
| 3     | R2    | Remote Reset Dry Contact Input  |
| 4     | GND   | Common or Ground power supply connection  |
| 5     | D1    | RS485   |
| 6     | D0    | RS485   |

Figure 3. Modbus Wiring Configuration



Powering Business Worldwide

**Table 3. Environmental Ratings of the Module**

|                            |                         |  |
|----------------------------|-------------------------|--|
| Transportation and Storage | Temperature             | -40°C to 85°C (-40°F to 185°F)                   |
|                            | Humidity                | 5-95% non-condensing                             |
|                            | Shock IEC 60068-2-27    | 15G  |
| Operating                  | Temperature             | -25°C to 65°C (-13°F to 149°F)                   |
|                            | Humidity                | 5-95% non-condensing                             |
|                            | Altitude                | Above 2000 meters (6600 feet)<br>Consult FACTORY |
|                            | Vibration IEC-60068-2-6 | 3G   |
|                            | Polution Degree         | 3  |

**Table 4. Approvals/Certifications**

|                       |   |  |
|-----------------------|---|--|
| Agency Certifications | UL508<br>CUL (CSA C22.2 No. 14)<br>CE (Low Voltage Directive) | <br><b>RoHS</b> |
|-----------------------|---|--|

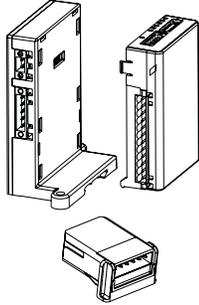
**Table 5. Module Electrical Requirements**

|               |                |
|---------------|----------------|
| Voltage Range | 18 - 30 V dc   |
| Current Draw  | Approx. 100 mA |

**Notes:**

For use with Eaton UL Listed Power Supply Catalog Numbers, PSS55A, PSS55B, PSS55C, or PS160E.

Any UL Listed isolated power supply with a maximum of 30Vdc out may be used, provided that a UL Listed or Recognized Fuse rated at no more than 3A maximum be installed.

| Communication Kits                       | Catalog No.   |   |
|--|---------------|---|
| Device Net Com module kit - 120V ac I/O  | C440-DN-120   |  |
| Device Net Com module kit - 24V dc I/O   | C440-DN-24    |   |
| Profibus Com module kit - 120V ac I/O    | C440-DP-120   |   |
| Profibus Com module kit - 24V dc I/O     | C440-DP-24    |   |
| Modbus Com module kit - 120V ac I/O      | C440-MOD-120  |   |
| Modbus Com module kit - 24V dc I/O       | C440-MOD-24   |   |
| Ethernet IP Com module kit - 120V ac I/O | Not Available |   |

**Eaton Corporation**  
Electrical Sector  
1000 Cherrington Parkway  
Moon Township, PA 15108  
United States  
877-ETN-CARE (877-386-2273)  
Eaton.com

© 2008 Eaton Corporation  
All Rights Reserved  
Publication No. IL04210003E  
July 2010 Rev.002