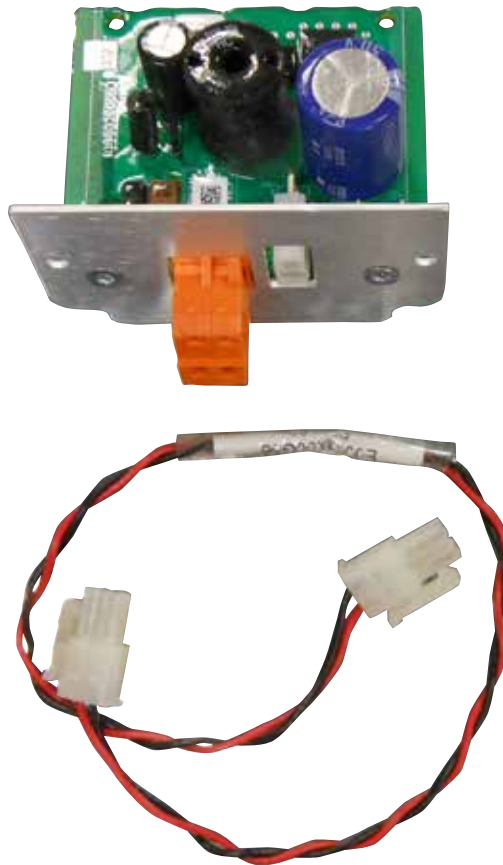


## DC power module (13.5 Vdc) installation instructions



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## Safety for life



Eaton's Cooper Power™ series products meet or exceed all applicable industry standards relating to product safety. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Eaton employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally approved safety procedures and safety instructions when working around high voltage lines and equipment, and support our "Safety For Life" mission.

### Safety information

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians who are familiar with this equipment should install, operate, and service it.

A competent technician has these qualifications:

- Is thoroughly familiar with these instructions.
- Is trained in industry-accepted high and low-voltage safe operating practices and procedures.
- Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment.
- Is trained in the care and use of protective equipment such as arc flash clothing, safety glasses, face shield, hard hat, rubber gloves, clampstick, hotstick, etc.

Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

### Hazard Statement Definitions

This manual may contain four types of hazard statements:

#### DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

#### WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

#### CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in equipment damage only.

### Safety instructions

Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

#### DANGER

**Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment.**

G103.3

#### WARNING

**Before installing, operating, maintaining, or testing this equipment, carefully read and understand the contents of this manual. Improper operation, handling or maintenance can result in death, severe personal injury, and equipment damage.**

G101.0

#### WARNING

**This equipment is not intended to protect human life. Follow all locally approved procedures and safety practices when installing or operating this equipment. Failure to comply can result in death, severe personal injury and equipment damage.**

G102.1

#### WARNING

**Power distribution and transmission equipment must be properly selected for the intended application. It must be installed and serviced by competent personnel who have been trained and understand proper safety procedures. These instructions are written for such personnel and are not a substitute for adequate training and experience in safety procedures. Failure to properly select, install or maintain power distribution and transmission equipment can result in death, severe personal injury, and equipment damage.**

G122.3

## **Product information**

### **Introduction**

*Service Information MN225010EN* contains instructions to install an Eaton's Cooper Power™ series DC power module into an Eaton's Cooper Power series CL-7 voltage regulator control.

### **Read this manual first**

Read and understand the contents of this manual and follow all locally approved procedures and safety practices before installing or operating this equipment.

### **Additional information**

These instructions cannot cover all details or variations in the equipment, procedures, or processes described nor provide directions for meeting every possible contingency during installation, operation, or maintenance. For additional information, contact your Eaton representative.

### **Acceptance and initial inspection**

Each module kit is in good condition when accepted by the carrier for shipment. Upon receipt, inspect the shipping container for signs of damage. Unpack the module kit and inspect it thoroughly for damage incurred during shipment. If damaged is discovered, file a claim with the carrier immediately.

### **Handling and storage**

Be careful during handling and storage of the module kit to minimize the possibility of damage. If the module kit is to be stored for any length of time prior to installation, provide a clean, dry storage area.

### **Standards**

ISO 9001 Certified Quality Management System

### **Description**

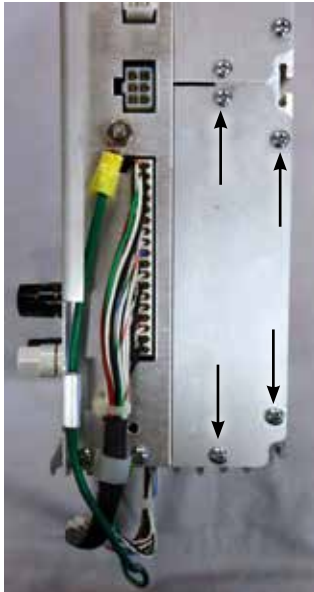
The 13.5 Vdc power module kit provides the hardware needed to install a module into a CL-7 voltage regulator control. The module has a max output of 1.48 A for one (1) second and max power of 14 W continuous and 20 W peak to power communications equipment.

**Table 1. Kit Part Contents**

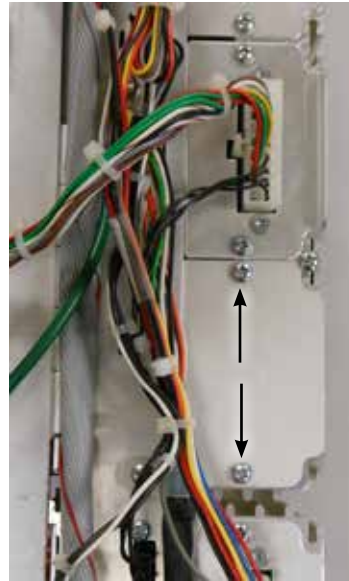
Item	Description	Qty
1	13.5 Vdc Power Module	1
2	Power Cable	1
3	Card Support Bar, Aluminum	1
4	Accessories Slot Blank Cover Plate	1
5	Screw, #6-32 X 0.25	1
6	Cable Tie	2

## Installation procedures

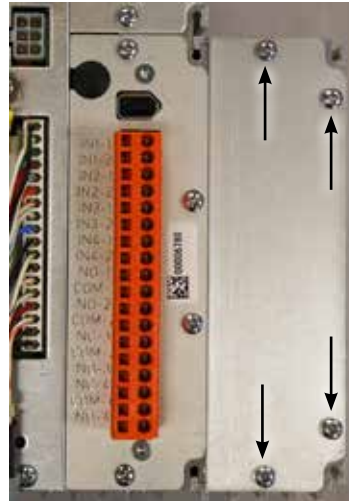
1. Remove the CL-7 control from the control box. To do this, the Control Function switch should be set to OFF, the Control Power switch should be set to OFF, the V1 switches (and V6 switches if present) in the back panel should be opened and the C switches should be closed. Unplug the wiring harness and disconnect the green ground wire. Remove the control from the hinge pins.
2. There are a few possible locations for the DC power module depending upon the control configuration and installed accessories. In each case, remove the accessory slot cover from the side of the control box by removing the screws (2 or 4); retain the screws. See figures 1, 2 and 3 for some of the possible module locations. In the case of Figure 3, it may be necessary to add the auxiliary accessories extrusion to the back of the control to accommodate the DC power module.



**Figure 1. Full accessory slot on main control.**



**Figure 2. Accessory slot in lower portion of main control on a multi-phase control. Note that the upper portion of the slot is occupied by the multi-phase metering card.**



**Figure 3. Auxiliary accessory extrusion attached to back of main control. The extrusion may be installed in any one of three locations on the back of a control.**

- Slide the aluminum card-support bar into the groves in the back of the accessories slot and secure with the supplied 0.25" screw. See Figures 4 and 5. This step is not required if an accessory is already installed into part of the slot as shown in Figure 2.



**Figure 4. Installing aluminum card-support bar into accessories slot.**



**Figure 5. Aluminum card-support bar secured with 0.25" screw.**

- Slide the DC power module circuit board into the groves in the accessory slot. Figure 6 shows installation of the module into an accessories slot in a single-phase control.



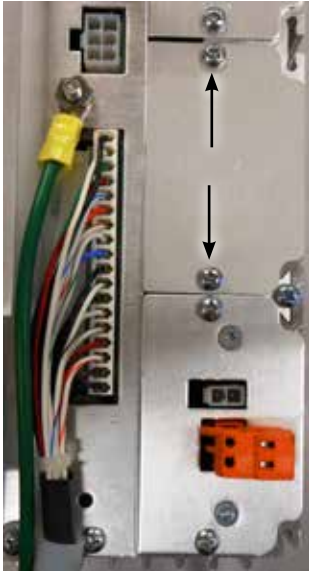
**Figure 6. Inserting the DC power module into the accessories slot in a single-phase control.**

- Fully seat the DC power module into the slot and secure with two of the screws retained in step 2. See Figure 7. Note that the module can be installed into any available slot as convenient.



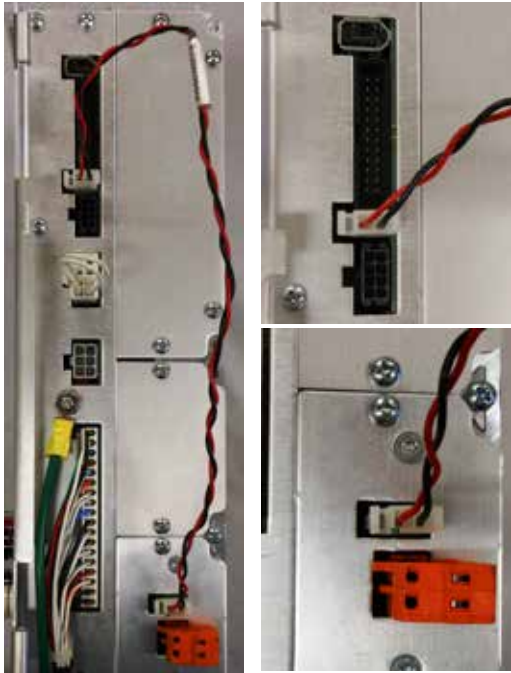
**Figure 7. Securing the DC power module with screws into the accessories slot of the main control panel.**

6. If required, install the accessories slot blank cover plate and secure with two of the screws retained in step 2. See Figure 8.



**Figure 8. Installing the accessories slot blank cover plate.**

7. Install the power cord between the CL-7 control and the DC power module as shown in Figure 9.



**Figure 9. Installing the power cord.**

8. Wrap the power cord with cable ties to eliminate excess length and snip off the ends of the ties. See Figure 10.



**Figure 10. Eliminate the excess power cord length.**

9. Figure 11 shows the DC power supply installed in the side of a CL-7 control. Power connections can be made to the orange plug; the top plug is the negative terminal and the bottom plug is the positive terminal.



**Figure 11. DC power module fully installed.**

10. Install the CL-7 control back into the control box by reversing the process in step 1.



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**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

**Eaton's Cooper Power Systems  
Division**  
2300 Badger Drive  
Waukesha, WI 53188  
United States  
Cooperpower.com

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