



GE Lighting Contactors

CR360ML2 Mechanically Held

Caution: Before installing in a nuclear application, determine that the product is intended for such use.

Warning: Disconnect power before installing or servicing.

Description

The GE CR360ML2 magnetically operated, coil clearing mechanically held lighting contactor is available in two-, three-, four-, six-, eight-, ten-, or twelve-pole forms. Optional auxiliary contacts and control modules are available for field installation.

Installation

1. Remove all packing material.
2. Mount contactor or enclosure on a sturdy vertical support. Enclosures mount with ¼-inch screws and the contactor with three #10 screws.
3. Additional over-current protection may be required. Refer to the National Electrical Code or local electrical code as required.
4. Wire control and power circuits per wiring diagram furnished for control module selected using 60° or 75°C wire. All connections should be tightened to 18 inch-pounds.

Auxiliary Contacts

Up to two auxiliary contacts may be added to the left side of the contactor. See Figure 1.

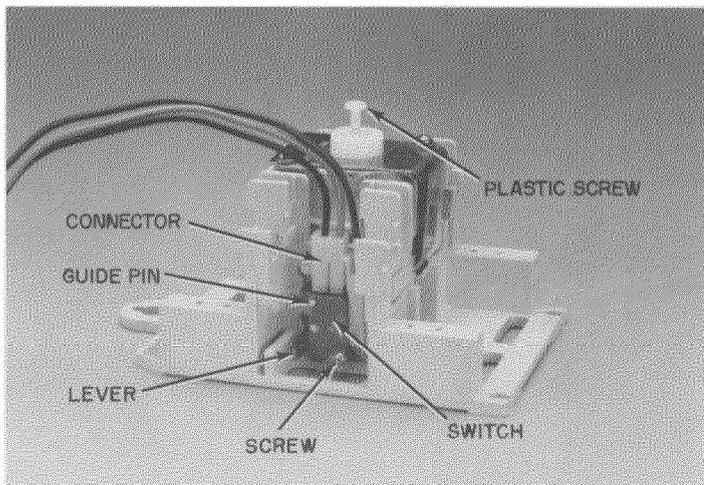


Figure 1.

1. Insert the #8-32 plastic screw from the kit into the center of the coil and turn clockwise until the threads engage the cam core assembly.
2. Pull the operating screw outward to latch the cam core assembly in the "open" position.
3. Insert the lever from the kit into the left side of the contactor as shown in Figure 1. The end of the cylindrical section should fit flush into the contactor. Push the cam/core assembly in until it latches in the "closed" position. Remove the operating screw.

4. Assemble the connector(s) with leads to the switches from the kit.
5. Insert the mounting screw through the switch(es) and install the assembly over the guide pin on the left side of the contactor. Tighten the screw to 4 inch-pounds.

Contact Blocks

Contact blocks may be replaced or added to the top or bottom of the contactor. A bottom contact block is used only for contactors with more than 6 poles. When two contact blocks are used, always mount the 6-pole block in the top position.

1. When adding a contact block to the bottom of the contactor, the leafspring must first be removed. See Figure 2. Remove the two screws holding the nameplate and remove the leafspring. Re-assemble the nameplate and screws. Tighten screws to 10 inch-pounds.

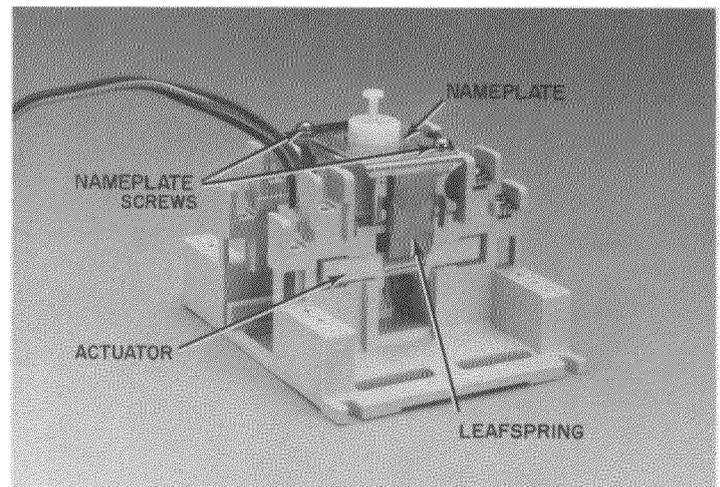


Figure 2.

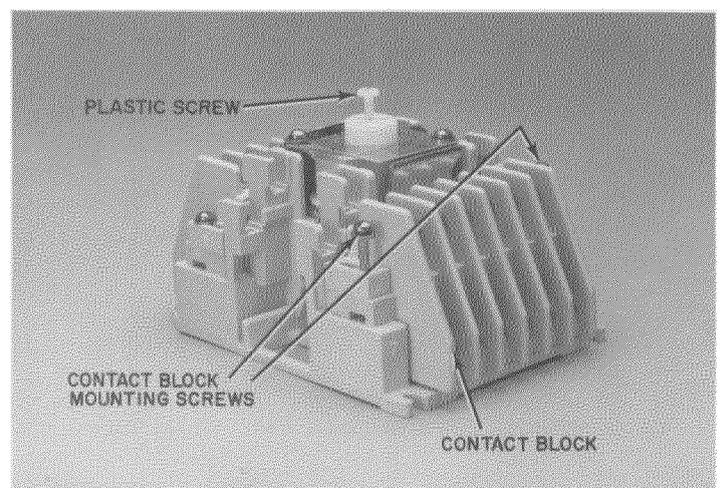


Figure 3.

Contact Blocks (Continued)

2. The actuator(s) must be in position with the roller end next to the cam core assembly.
3. Place contact block in position on the base as shown in Figure 3 and tighten the two mounting screws to 10 inch-pounds.
4. Insert the #8-32 plastic screw from the kit into the center of the coil and turn clockwise until the threads engage the cam core assembly. Pull the operating screw outward to latch the cam core assembly in the "open" position and push in to latch the cam core assembly in the "closed" position. Operation should be smooth with no binding. If not, recheck alignment of the contact block and coil assembly. Remove the operating screw.

Control Modules

Control modules are mounted to the bottom or side of the contactor depending on the number of contactor poles.

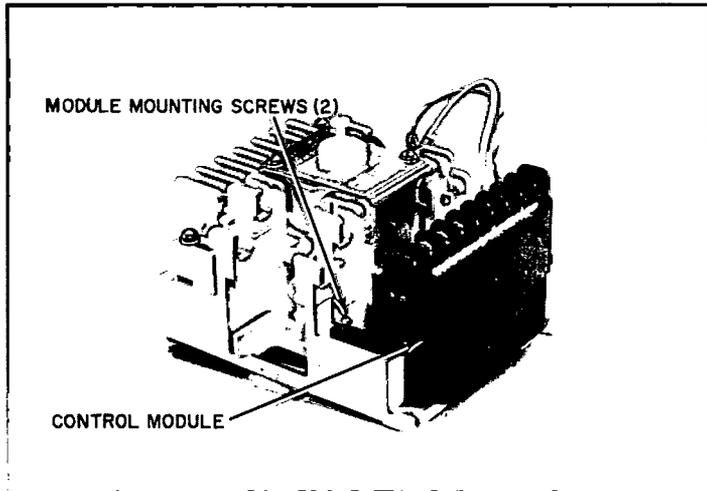


Figure 4.

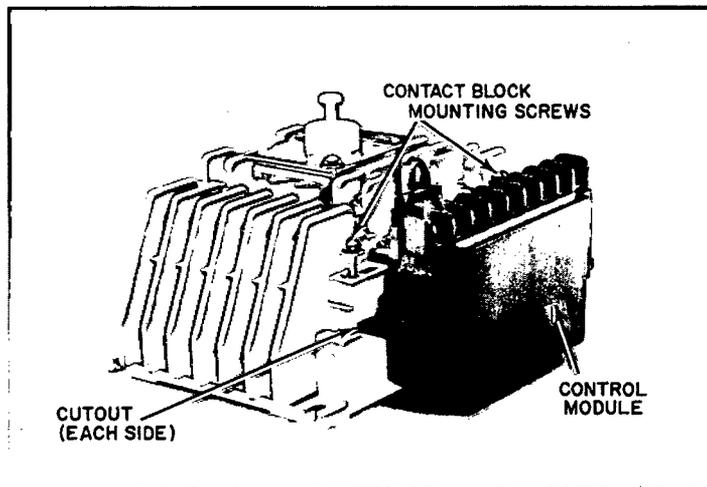


Figure 5.

1. For contactors with up to 6-poles the module is mounted to the lower part of the contactor with the two #6 x 3/8-inch long screws. See Figure 4.
2. Break off the two standoffs on the back of the control module.
3. Mount the module using the two #6 x 3/8-inch long screws and tighten to 5 inch-pounds.
4. Connect the yellow wire from terminal "O" on the control module to the "O" terminal on the contactor. Connect the orange/black wire from the "C" terminal on the control module to the "C" terminal on the contactor. Connect the remaining wiring per the wiring diagram for the control module selected. Control module terminals will accept

#22-12 AWG copper wire. Tighten terminal screws to 12 inch-pounds.

5. For contactors with more than 6-poles the module is mounted to the side of the contactor. See Figure 5.
6. Loosen the two existing screws on the right side of the upper and lower contact block assemblies and back out the screws to clear the cutouts in the contact blocks. Slightly loosen the two contact block mounting screws on the left side of the contactor.
7. Insert the mounting tabs of the module into the cutouts and re-tighten the screws to 10 inch-pounds.
8. Connect control module per wiring diagram for module selected. Control module terminals will accept #22-12 AWG copper wire. Tighten terminal screws to 12 inch-pounds.

Coils

1. Remove the coil lead with the quick connect terminal from the switch on the right side of the contactor.
2. Loosen the terminal screw to remove the other coil lead.
3. See Figure 2. Remove the two nameplate screws from the magnetic frame and pull the coil assembly and nameplate straight out.
4. Slide the coil out the right side of the magnetic frame as shown in Figure 6.

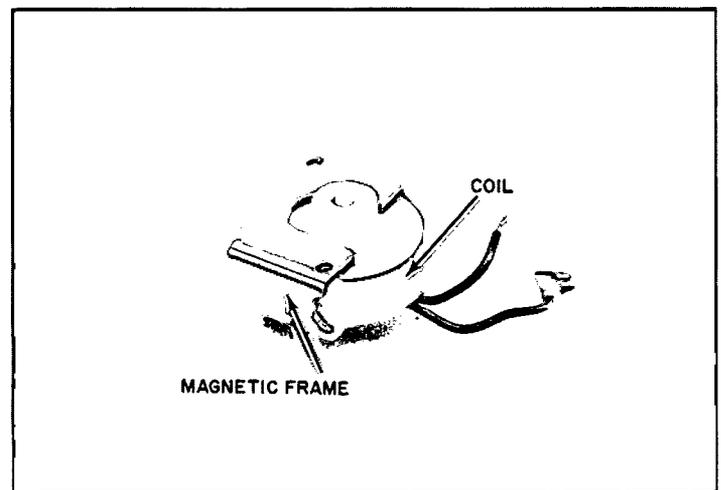


Figure 6.

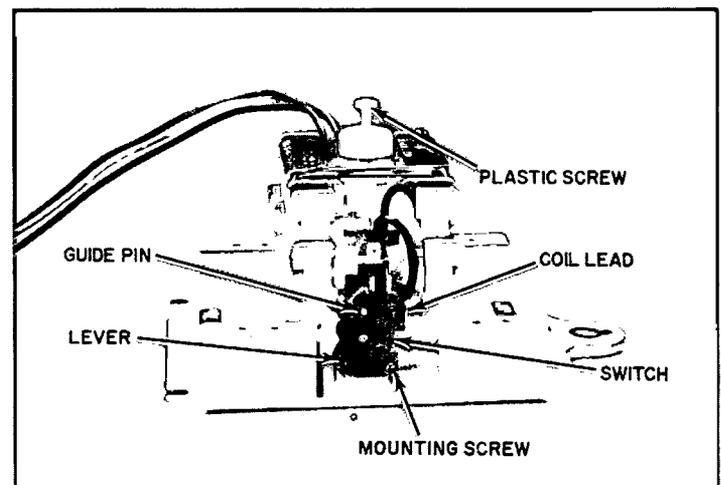


Figure 7.

5. Slide the new coil into the magnetic frame. The frame should be positioned with the joint next to the base.
6. Insert the two screws into the magnetic frame and place the coil assembly on the contactor base. Be sure the frame is flat against the base.
7. Assemble nameplate and tighten screws to 10 inch-pounds.

8. Reconnect the coil lead with the quick connect terminal by carefully aligning the lug and pressing it onto the push-on terminal. Connect the other coil lead to the closest front screw terminal.
9. Insert the #8-32 plastic screw from the kit into the center of the coil and turn clockwise until the threads engage the cam core assembly.
10. Pull the operating screw outward to latch the cam core assembly in the "open" position and push in to latch the cam core assembly in the "closed" position. Operation should be smooth with no binding. If not, recheck alignment of the coil assembly. Remove the operating screw.

Coil Control Contact

1. See Figure 7. Remove the coil lead with the quick connect terminal from the switch on the right side of the contactor.
2. Carefully remove the "O" and "C" bus quick connect terminals from the switch.
3. Remove the switch mounting screw and remove the switch from the contactor.
4. Slide the replacement switch over the guide pin and replace the switch mounting screw. Torque the mounting screw to 4 inch-pounds.
5. Replace the bus quick connects and coil lead quick connect terminals.
6. Insert the #8-32 plastic screw from the kit into the center of the coil and turn clockwise until the threads engage the cam core assembly.
7. Pull the operating screw outward to latch the cam core assembly in the "open" position and push in to latch the cam core assembly in the "closed" position while checking the coil control contact operation. The switch actuator should be depressed when the cam core assembly is in the "open" position and released when the cam core assembly is in the "closed" position. Operation should be smooth with no binding. Remove the operating screw.

Accessory Kits

Catalog Number	Description
CR360MXA21	SPDT auxiliary contact
CR360MXA22	DPDT auxiliary contact
CR360MXD22	2-pole contact block
CR360MXD23	3-pole contact block
CR360MXD24	4-pole contact block
CR360MXD26	6-pole contact block
CR360MXX211	120 vac on/off control module
CR360MXX212	277 vac on/off control module
CR360MXX213	24 vac on/off control module
CR360MXX214	24 vdc on/off control module
CR360MXX221	120 vac 2-wire control module
CR360MXX222	277 vac 2-wire control module
CR360MXX223	24 vac 2-wire control module
CR360MXX224	24 vdc 2-wire control module
CR360MXX231	120 vac 3-wire control module
CR360MXX232	277 vac 3-wire control module
CR360MXX233	24 vac 3-wire control module
CR360MXX234	24 vdc 3-wire control module

Renewal Parts

Catalog Number	Description
CR360MXC2A	110-120V 60/50 Hz coil
CR360MXC2K	265-277V 60/50 Hz coil
55-215045P001	Coil control contact

CAUTION: Never apply simultaneous ON, OFF signals to terminals "O" and "C". Simultaneous ON, OFF signals will result in coil and contactor burnout. You must prevent simultaneous ON, OFF signals in all applications, but extra care is required when this contactor is used with energy management systems or multiple control stations. The use of control modules may prevent such a condition.



GE Electrical Distribution & Control