

Series 75 10-23 Motor Module

FCD WCENIM2066-01 AQ (Part 09534)

Installation, Operation and Maintenance

Motor module kits are intended as repair kits for 10-23 75 electric actuators. Diagrams show typical installation of these kits, which should be installed exactly as the motor modules they are replacing.

▲ CAUTION: Be sure actuator is disconnected from power source.

To replace a motor module, do the following:

1. Remove the four 8-32 slotted hex head screws (and on 23 size only, the four 6-32 slotted screws on the outside corners of motors) that secure the motor module in place. (A motor module is the complete motor/gearbox assembly.)
2. Disconnect the electrical leads as follows:

AC: Loosen terminal strip screw at terminal 1, to which white motor lead is secured, and remove white wire. Remove all wiring connectors at the capacitor.

DC: Using a wire cutter, cut all lead wires at the closed end splice, as close to this splice as possible.

Loosen terminal strip screw at terminal 1, to which the red wire(s) are attached, and remove red wire(s).

Strip $\frac{1}{4}$ " of insulation from each end of the blue wires that were spliced.
3. Cut cable ties as required and remove motor module from the actuator.
4. On AC voltage actuators remove and replace capacitor. Position capacitor with connectors at 45° to base so that leads do not touch cover.

5. Install the new motor module, securing in place with the four 8-32 mounting screws. Locate the motor module in the identical manner as it was removed.

NOTE: For 23 size only, four additional screws on the outside corners of motors are also used to secure motor module. Prior to mounting, remove any temporary fasteners holding these screws in place.

6. Reconnect motor leads, as shown, keeping all wires away from any rotating parts (shaft and motor module pinion). Wiring to terminal strip should be inserted only to midpoint of terminal strip.

DC: Using the new closed end splice, insert the blue leads and black motor lead(s) into the splice and crimp it closed. Tuck the splice underneath the limit switch.

7. The actuator's cam settings are not affected by changing a motor module. Operate actuator to verify proper operation.
8. Replace cable ties, as shown. Trim off excess tie and revolve so as to not interfere with cover.
9. **SPECIAL NOTE**

AC Actuators: Observe the following when installing AC motor modules:

When the motor module is located with "output-fast" closest to center shaft, connect actuator wires, as shown (10, 15 and 20 size actuators). For 23 size only, wires are connected as shown, except that motor module is located with "output-slow" closest to center shaft.



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When the motor module is located with “output-slow” closest to center shaft, connect actuator wires as shown except interchange grey and yellow motor leads at the motor capacitor (12 and 22 size actuators). If capacitor has metal retaining ring, insulating fiber washer must be used.

For 20 75 actuators, 100% duty cycle, the motor module is mounted to the actuator with the “output-slow” closest to the center shaft. As before, interchange the grey and yellow leads from the motor at the capacitor. If capacitor has metal retaining ring, insulating fiber washer must be used.

SPECIAL NOTE

DC Actuators: Observe the following when installing DC motor modules:

When the motor module is located with “output-fast” closest to the center shaft, connect actuator wires as shown (10 and 20 size actuators). For 23 size only, wires are connected as shown,

except that motor module is located with “output-slow” closest to center shaft.

When the motor module is located with “output-slow” closest to the center shaft, connect actuator wires as shown, except interchange the wiring location of the motor’s red and black leads. The black wire(s) are connected to terminal 1, while the red wire(s) are crimped with the blue wires (12 and 22 size actuators).

Alternatively, the supply voltage polarity may be reversed to accomplish the same thing. That is, if the motor module is located with “output-slow” closest to the center shaft, simply reverse supply voltage polarity for proper operation. **Never do both!**

If in special circumstances DC motor is mounted on top of gearbox from AC motor module, the bearing from gearbox has to be removed to eliminate bindings. (DC motor has two bearings in the housing already.)

Figure 1: 10 75 120/240A
15 75 120A

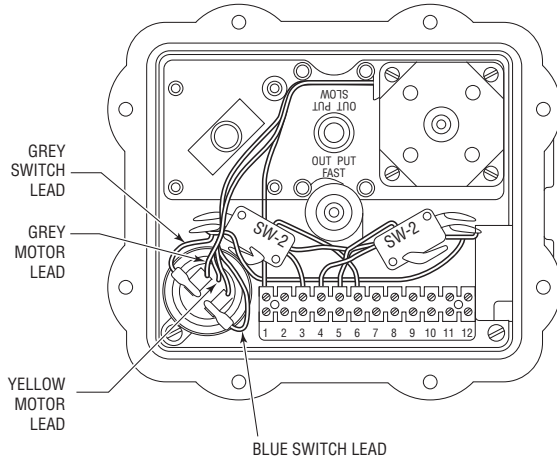


Figure 2: 20 75 120/240A

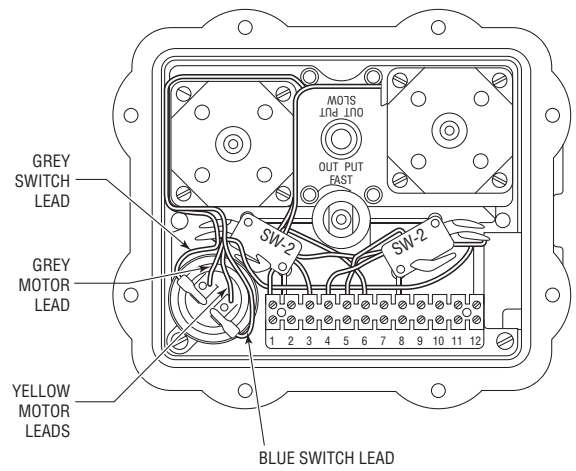


Figure 3: 10 75 12/24D

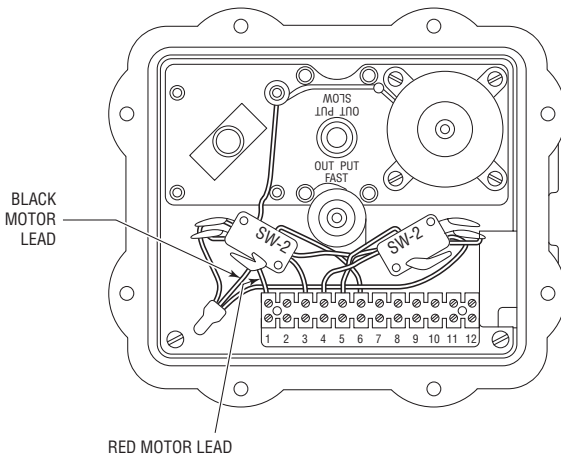
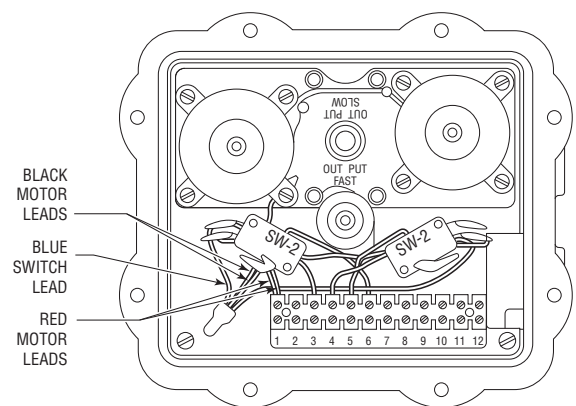


Figure 4: 20 75 12/24D





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