

25/30 75 Motor Module Kit 120/240 VAC

FCD WCENIM2065-01 AQ (Part 06228)

Installation, Operation and Maintenance

Description

Motor module kits are intended as repair kits for 25/30 75 electric actuators. Attached diagrams show typical installation of these kits, which should be installed exactly as the motor modules they are replacing.

Prior to replacing motor module: Be sure actuator is disconnected from any power source.

Verify that the replacement capacitor and motor have the proper voltage rating.

Motor Module Removal

1. Disconnect all power to the actuator.
 2. Cut cable ties (9). (Replacement ties are provided.)
 3. Remove white motor wire from terminal of the actuator's terminal strip. Remove all input wiring from terminal strip.
 4. Disconnect wires from capacitor. (Note location of wires on diagram.)
 5. Cut capacitor tie (13) or remove capacitor O-ring, whichever is present.
 6. Remove cams (10) from sensing shaft (4). (Note position of cams.)
 7. Remove retaining ring (11) from sensing shaft (4).
 8. Remove five 10-32 socket head cap screws (7) and capacitor bracket (14) (if present) from motor support plate (1).
- NOTE:** If capacitor is mounted on top of motor support plate, it is not necessary to remove capacitor in order to replace motor module.
9. Lift out motor support plate (1).
 10. Remove plastic fan (5).
 11. Loosen set screw (6) on pinion gear (3) and remove pinion gear from sensing shaft (4).
 12. Remove four 10-32 socket head cap screws (7) and lockwashers (8) holding motor (2) to motor support plate (1).

Motor Module Replacement

1. Replace motor to motor support plate, making sure that lead wires are facing capacitor. Center motor to hole in motor support plate and securely tighten cap screws.
2. Replace pinion gear. Locate gear .96" from motor support plate (see Figure 1) and securely tighten gear set screw onto flat of shaft.
3. Replace motor support plate with motor on actuator.
4. Replace motor support screws. Replace capacitor bracket (if present and removed); turn motor shaft extension back and forth. Backlash between the motor pinion and mating gear is allowed, but should be minimal. Move the motor support plate in proper direction to minimize backlash, then tighten motor support plate screws.
5. Replace retaining ring in groove on sensing shaft.
6. Replace cams on sensing shaft. (These will be reset later.)
7. Replace capacitor with new capacitor and secure with new capacitor tie (do **not** reuse O-ring), and connect all motor and capacitor leads. If capacitor has metal retaining ring, insulating fiber washer must be used.
8. Replace plastic fan on top motor shaft. (Do not permit fan to touch motor.)



Worcester Actuation Systems

9. Dress and cable tie all wiring as shown on Figure 1.
10. Apply power to proper actuator terminals to set cams:
 - to terminals 1 and 3 for counterclockwise operation
 - to terminals 1 and 4 for clockwise operation

To set cams actuate valve to “Open” position. If valve does not fully open, or turns past open position, unfasten cam by loosening set screws. Actuate valve to correct position. Adjust cam so that it just throws microswitch in this position.

Tighten set screws and recheck indexing. Repeat this procedure for “Closed” position.

11. Connect remaining input wiring to terminal strip.

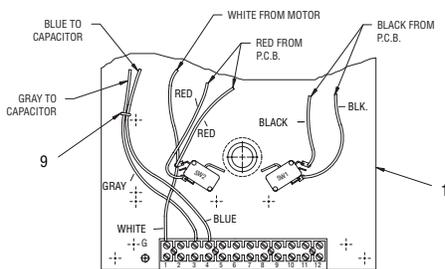
NOTE: All wiring to terminal strip should be inserted only to midpoint of terminal strip.

12. When electrical installation is complete, it is advisable to check the indexing of the actuator before replacing the cover.

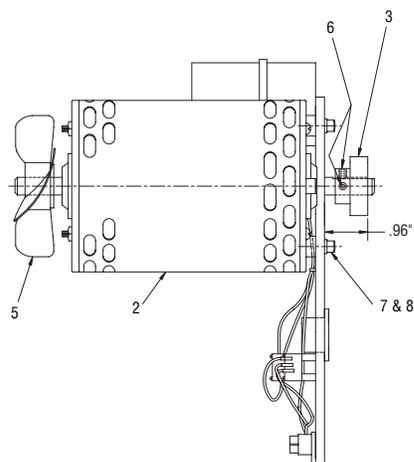
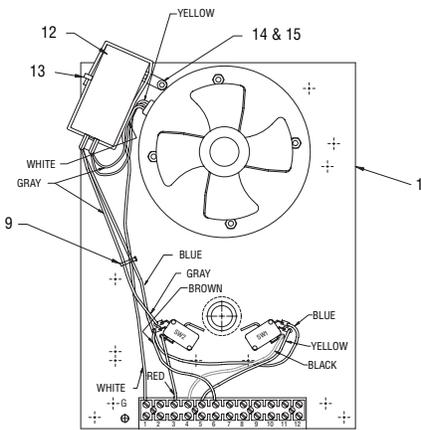
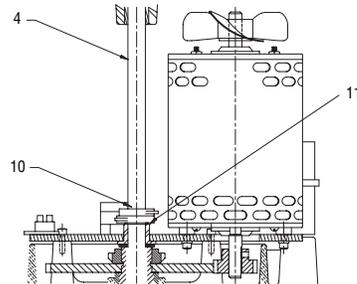
Figure 1—25/30 75 Motor Module Kits for either 120 VAC or 240 VAC Actuators

1. Motor Support Plate
2. Motor
3. Pinion Gear
4. Sensing Shaft
5. Fan
6. Set Screw
7. Socket Head Cap Screw
8. Lockwasher
9. Cable Tie
10. Cams
11. Retaining ring
12. Capacitor (Round or Square Type)
13. Capacitor Tie
14. Capacitor Bracket *
15. Screw-Capacitor Bracket *

* Not used with round type capacitor with threaded lug.



WIRING FOR A75 240 VAC AF17 OR DF17 POSITIONER OR DFC17 CONTROLLER OR DRC17 REMOTE CONTROLLER OR T75 240 VAC INTERFACE OPTIONS



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