

Valvcon™ V-series motor board replacement

Installation, maintenance and
operating instructions

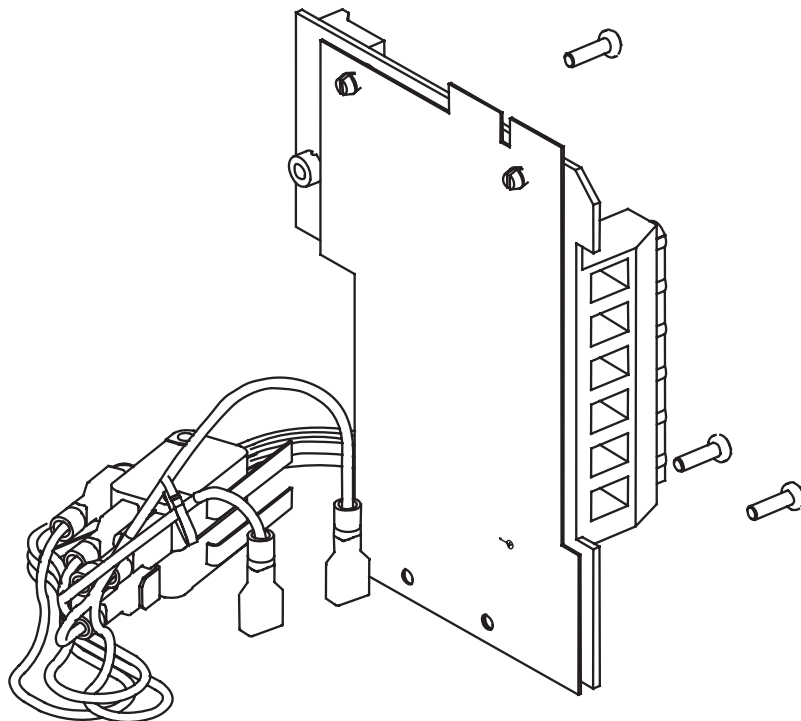


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READ THESE INSTRUCTIONS FIRST!

These instructions provide information about safe handling and operation of the valve.

If you require additional assistance, please contact the manufacturer or manufacturer's representative.

SAVE THESE INSTRUCTIONS!

Addresses and phone numbers are printed on the back cover.

1. GENERAL

This instruction manual contains important information regarding the replacement of the Valvcon™ V-Series Motor Board. Please read these instructions carefully and save them for future reference.

1.1 DESCRIPTION

The replacement board is universal to standard 115 VAC, 230 VAC, large enclosure, small enclosure V- & I-Series actuators.

1.2 SAFETY PRECAUTIONS

WARNING:

DO NOT EXCEED THE ACTUATOR PERFORMANCE LIMITATIONS!

EXCEEDING THE TORQUE LIMITATIONS MARKED ON THE ACTUATOR IDENTIFICATION NAMEPLATE LABEL MAY CAUSE DAMAGE TO THE ACTUATOR AND/OR FINAL DRIVE ELEMENT.

WARNING:

DO NOT EXCEED THE ACTUATOR ELECTRICAL LIMITATIONS! EXCEEDING THE ELECTRICAL LIMITATIONS MARKED ON THE ACTUATOR IDENTIFICATION NAMEPLATE LABEL MAY CAUSE DAMAGE TO THE ACTUATOR AND/OR PERSONAL INJURY.

WARNING:

BEWARE OF MOVEMENT OF THE FINAL DRIVE ELEMENT AND ANY LINKAGE BETWEEN IT AND THE ACTUATOR!

KEEP HANDS, OTHER PARTS OF THE BODY, TOOLS AND OTHER OBJECTS OUT OF THE WAY OF MOVING PARTS. FAILURE TO DO THIS MAY RESULT IN DAMAGE OR PERSONAL INJURY!

WARNING:

ACTUATORS SHOULD BE PROPERLY GROUNDED AND WIRED IN ACCORDANCE WITH LOCAL ELECTRICAL CODE; SEE IDENTIFICATION NAMEPLATE LABEL FOR MAXIMUM CURRENT DRAW.

This option will fit V/LV and I/LI actuators with the letter "N" preceding the voltage designator in the part number on the product nameplate.

2. INSTALLATION

2.1 TOOLS REQUIRED

- Hex Wrench – 5mm (Small Enclosure)
- Hex Wrench – 6mm (Large Enclosure)
- Philips Screw Driver #1

2.2 PARTS VERIFICATION

Verify that the kit contains all parts listed in Table 1 below:

Table 1	
Parts List for Replacement Motor Board Kit	
Part Description	Qty
Screw, #4-40 x 3/8"	3
Wire Tie, Nylon	4
Motor Board	1
Instruction Sheet	1

WARNING:

WHENEVER WORKING INSIDE THE ACTUATOR BE SURE TO FOLLOW ALL GUIDELINES, AND HEED ALL WARNINGS IN THIS OPTION KIT INSTALLATION MANUAL. BE SURE TO READ AND FOLLOW THE INSTRUCTIONS SUPPLIED WITH THE ACTUATOR CAREFULLY, AND HEED ANY ADDITIONAL WARNINGS

WARNING:

DANGEROUS VOLTAGES ARE PRESENT INSIDE THE ACTUATOR COVER UNLESS THE POWER SUPPLY TO THE ACTUATOR HAS BEEN SHUT OFF OR DISCONNECTED. USE EXTREME CAUTION WHENEVER WORKING ON THE ACTUATOR WITH THE COVER REMOVED.

WARNING:

WHENEVER WORKING INSIDE THE ACTUATOR, CARE MUST BE TAKEN TO AVOID DAMAGE TO THE MACHINED FLANGE SURFACES ON THE COVER AND BASE CASTINGS. FAILURE TO DO SO CAN VOID THE ACTUATOR'S ENVIRONMENTAL CERTIFICATION

WARNING:

USE CARE WHENEVER WORKING WITH THE ACTUATOR COVER REMOVED, DAMAGE, SCRATCHES, OR DENTS ON THE MACHINED FLANGE SURFACES OF THE ENCLOSURE MAY VOID COMPLIANCE WITH NEMA, CSA, UL, AND/OR IEC SPECIFICATIONS.

2.3 INSTALLATION INSTRUCTIONS

1. Remove cover.
2. Disconnect motor and any applicable options, (i.e. Heater/Thermostat or Brake Assembly) from Motor Board.
3. Remove existing Motor Board, including limit switches and capacitor wires; retaining limit switch mounting screws, (#4-40 X 1.5", round head, Phillips).
4. Position the Motor Board as shown in Figure 1, and secure it to the lower bracket with two of the supplied mounting screws, (#4-40 X 3/8", round head, Phillips).
5. Secure the board to the upper bracket using the remaining supplied mounting screw, (#4-40 X 3/8", round head, Phillips).
6. Secure the new limit switches, (terminated to the Motor Board) to the motor support plate with the screws retained in Step 3. The switch labeled CW is the bottom and the switch labeled CCW is the second, counting from the bottom up.
7. Attach the new capacitor wires to the top of the capacitor, (either wire may be connected to either terminal).
8. Reconnect motor and any applicable options as follows: motor connector into terminal J2, (also labeled motor), Heater/Thermostat to J3 & Brake to J1.
9. Secure motor wires to cable tie hold-downs with two of the supplied cable ties.
10. Use the remaining cable ties to safeguard other wires from moving parts, allowing for strain relief.

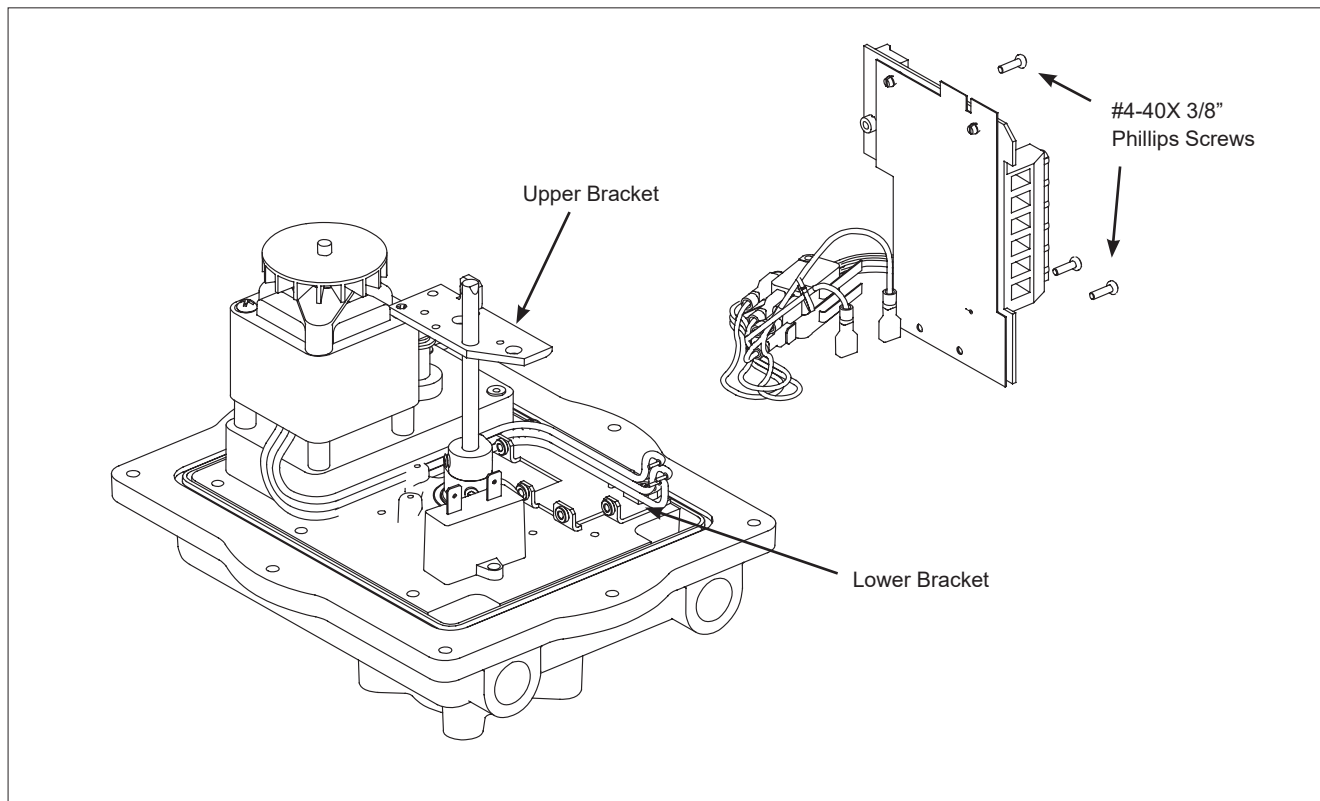


Figure 1. Exploded View

2.4 PROPER ACTUATOR COVER REPLACEMENT

NOTE: For actuators including hazardous location certification. Prior to installing cover, inspect machined flange surfaces for any damage, scratches, or dents. Damage, scratches, or dents that will not fit completely in a circle having a diameter of 1/64" will void hazardous location certifications. If such imperfections are present the damaged enclosure parts(s) must be replaced. See product series IMO for captive cover screw specifications. Consult the factory for replacement parts.

1. Remove the override shaft from the actuator cover bushing; if the actuator is equipped with a handwheel, remove the handwheel before removing the top piece of the "two-piece" shaft from the cover bushing.
2. Install the override shaft on the square motor shaft; if the actuator is equipped with a handwheel, install the bottom piece of the "two-piece" shaft on the motor shaft and then install the top piece of the shaft onto the bottom piece of the shaft.
3. Align cover so that the override shaft will pass through the override bushing and carefully push it down so that the cover flange contacts the base flange.
4. Once the cover is properly seated, tighten the screws to secure the cover; a cross pattern is recommended for uniform distribution of load.
5. If the position indicator is not seated to the output/cam shaft, turn until it drops into place in order to ensure accurate visual position indication.

Valmet Flow Control Oy

Vanha Porvoontie 229, 01380 Vantaa, Finland.

flowcontrol@valmet.com

Tel. +358 10 417 5000.

www.valmet.com/flowcontrol

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