Installation, Operation and Maintenance Manual
VCIOM-15257-EN Rev. 1
May 2020

EIM HQ Series Quarter-Turn Electric Actuator

Models HQ-006 / Manual HQ-402-0606

EIM™

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Section 1: General

HQ series electric actuators are design to provide reliable and efficient operation of 90° quarter-turn valves, dampers, etc.

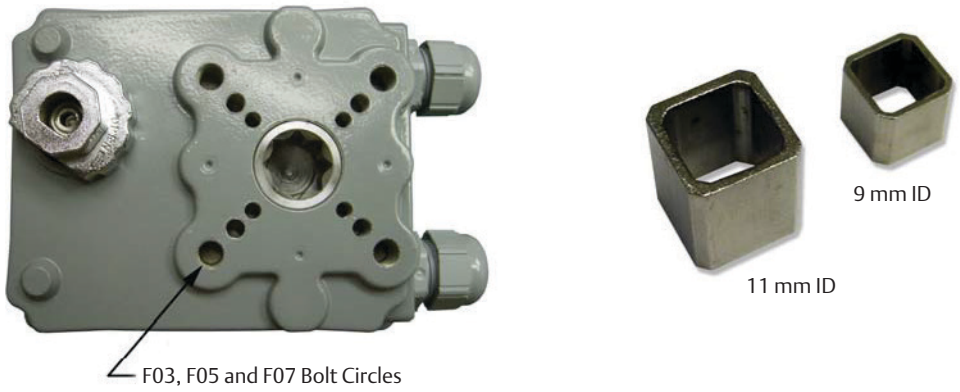
⚠ WARNING

Use caution when working in, with, or around valves and actuators. High pressures, forces, voltages and flammable media can be present. Failure to follow instructions for proper electrical wiring, storage, set-up and maintenance may cause serious injury, damage equipment, or void warranty.

Section 2: Actuator Mounting

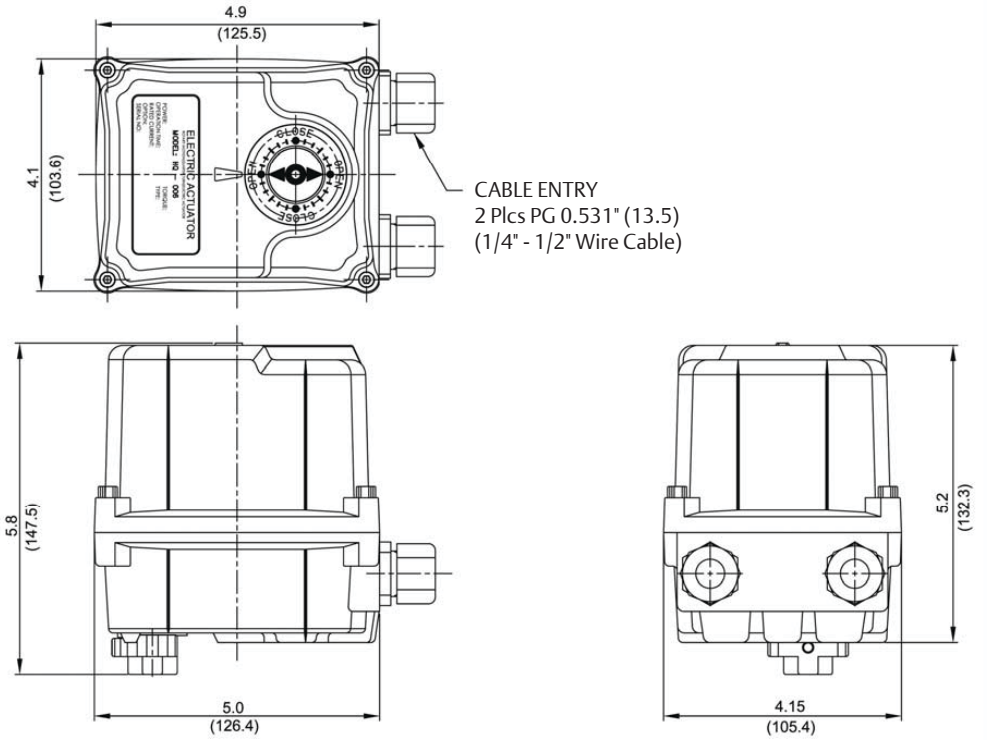
The actuator may be mounted in any position. The HQ-006 actuator is supplied with a female output drive and adaptor bushings. ISO5211 FO3/FO5 and FO7 Bolt patterns are provided for actuator mounting.

Figure 1 Actuator Mounting Flange and Adapter Bushings



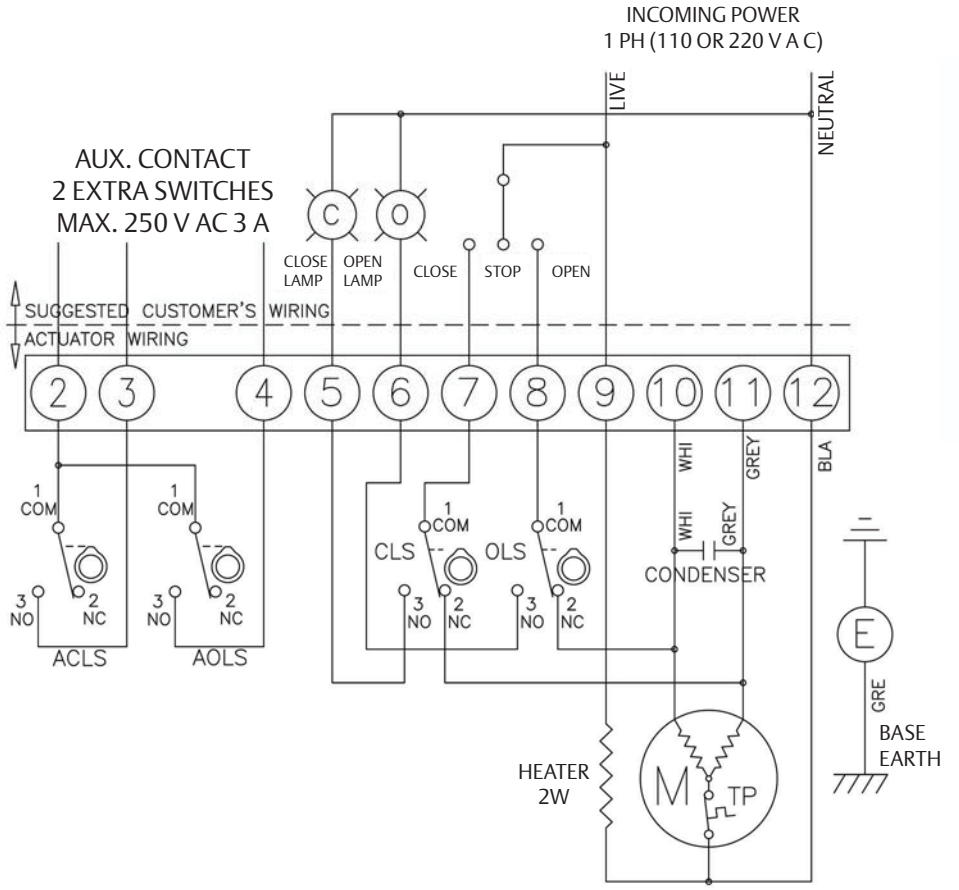
Section 3: External Construction

Figure 2



Section 4: Standard Wiring Diagram

Figure 3



Section 5: Manual Override

The HQ-006 actuator comes standard with a manual override nut. This is located on the bottom of the unit, and can be easily operated with a 5M wrench.

Figure 4

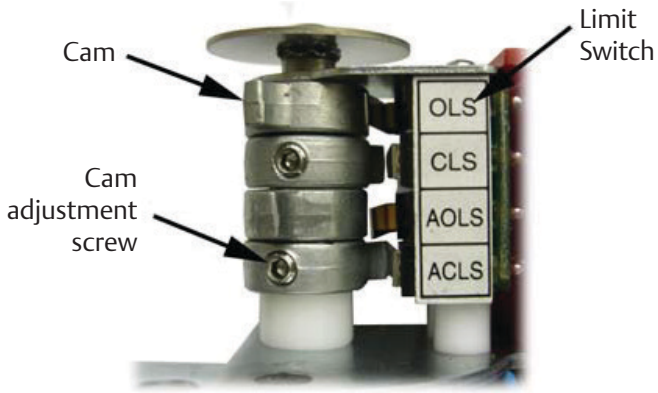
Section 6: Electrical Connection

- Move valve to mid-position by override nut. This will allow sufficient time to stop actuator in case of improper hook-up.
- Identify means of removing power during hook-up.
- Be sure no erroneous remote control signals can be received causing actuator to energize.
- Electrically operate the valve in the open direction. If the valve closes, actuator must be stopped and checked for improper field wiring.
- Set all field conduit entries in accordance with National Electric Code Requirements.

Section 7: Limit Switch Setting Instructions

- Operate the actuator manually to closed position
- Using a hex wrench, loosen the cam adjustment screw in the CLS limit switch cam
- Rotate the CLS cam towards limit switch lever until the switch ‘clicks’
- Tighten set screw with hex wrench
- Operated the actuator manually to open position
- Using a hex wrench, loosen the cam adjustment screw in the OLS limit switch cam
- Rotate the OLS can towards limit switch lever until the switch ‘clicks’
- Tighten set screw with hex wrench
- Repeat for AOLS and ACLS

Figure 5



Section 8: Lubrication

The HQ series actuators are totally enclosed units with a permanently lubricated gear trains (Moly EP Grease). Once installed lubrication should not be required. However, periodic preventative maintenance will extend the operating life of the actuator.

Section 9: MDPI Settings

- Manually rotate actuator to fully closed position
- Remove actuator cover
- Loosen indicator screw
- Adjust indicator to correct orientation
- Tighten indicator screw
- Replace cover
- Check indicator alignment

Section 10: Maintenance and Storage

At least once a year a check should be made of your EIM HQ Series Actuator.

- Disconnect all power to actuator.
- Open electrical enclosure. Inspect and tighten all electrical connections.
- Visually inspect for any electrical or mechanical damage. Replace worn or damaged components.
- Check lubrication consistency and levels. Fill or replace if required.

Actuators must be stored in a clean, cool and dry area. The unit shall be stored with the cover installed and the conduit openings sealed. Storage must be off the floor, covered with a sealed dust protector.

Section 11: Troubleshooting

The following instructions are offered for the most common difficulties encounter during installation and start-up.

Table 1.

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Motor will not run	Open in control circuit	Refer to appropriate wiring diagram and check for continuity
	Insulation resistance breakdown in motor	Perform Megger Test
No power available to actuator	Tripped circuit breaker	Reset circuit breaker
Manual override nut hard to turn	Valve stem improperly lubricated	Lubricate with grease
	Actuator lubrication has broken down	Clean out old grease and replace with recommended lubricant
	Valve packing gland too tight	Loosen packing gland nuts as necessary
	Jammed valve	Refer to valve maintenance
Valve only opens or closes partially with motor	Limit switch improperly set	Check setting and reset if necessary
Manual override nut will not operate valve	Stripped gearing	Replace as necessary
	Broken handwheel shaft	Replace as necessary
	Broken valve stem	Repair or replace as necessary
Motor runs but will not operate valve	Stripped gearing	Replace as necessary

Section 12: Product Features and Specifications

Enclosure Rated	Weatherproof IP67
Enclosure	High grade aluminium alloy, corrosion coated
Power Supply	110/220 V AC, 1 PH, 50/60 Hz
Motor	Reversible Motor
Limit Switches	4 x open/close SPDT, 250VAC 3 A rating
Stall Protection	Built-in thermal protection
Indicator	MDPI (Mechanical Dial Position Indicator)
Manual Override	Manual Override Nut
Space Heater	2 W anti-condensation
Conduit Entries	(2) x PG13.5
Lubrication	Grease moly EP
Ambient Temperatur	-20 °C – +70 °C
External Coating	Dry powder polyester

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