

OVERVIEW

High performance without compromise. The Series 76 is a heavy-duty, quarter turn electric actuator ideal for industrial valve automation. Available in various power voltage supplies and designed for on/off and modulating applications for a wide range of markets and industries.

The Bray series 76 is a quarter-turn industrial electric actuator with manual override for use on any quarterturn valve or damper requiring up to 79k lb-in (9,000 Nm) of torque. Operating speeds vary between 17 to 130 seconds depending on torque, voltage, and frequency.

APPLICATIONS

- > On/Off
- > Modulating Control

KEY FEATURES

- > Torque up to 79,000 lb-in (9,000 Nm)
- > 3-Phase, 1-Phase, & DC Power
- > Special High torque induction motor with built in thermal protection to protect against overheating
- > Direct mounts to most quarter turn valves according to EN ISO 5211, resulting in a lower profile
- > Continuous valve position indication even on loss power
- > Padlockable declutch system for manual operation
- > Integral control station options
- > Removable blank bushing for ease of machining
- > Self-locking worm gear design eliminating the need for a motor brake
- > 4 Limit Switches standard on most sizes
 - Additional auxiliary limit switches available
- > Torque switches standard in actuator size 2 and above
- > Anti condensation heater
- > Permanently lubricated
- > Up to 28 point terminal strip

OVERVIEW

PERFORMANCE

Output Torque	See Torque Chart
Voltages	See Motor Chart
Ambient Temperature	-4°F to +140°F (-20°C to +60°C) Optional: -40°F to +140°F (-40°C to +60°C)
On/Off Applications	Per EN 22153 Class A
Modulating Applications	Per EN 22153 Class C

SPECIFICATIONS

Voltage	<ul style="list-style-type: none"> > 3 Phase: 220V, 380V & 460V AC > 1 Phase: 110V, 220V & 240V AC > 24V DC, 24V AC/DC
Torque rating	<ul style="list-style-type: none"> > 3 Phase: Torque up to 79,000 lb-in (9,000 Nm) > 1 Phase: Torque up to 26,500 lb-in (3,000 NM)
Certifications	<p>Weatherproof: FCC, ICES, CE, UKCA, CSA</p> <p>Explosionproof: FCC, ICES, ATEX, IECEx, CSA</p>
Enclosure Ratings	NEMA Type 4, Type 4X & Type 6 Ingress Protection: 66/67 Submersible: IP68 (Optional)
Main Housing	<ul style="list-style-type: none"> > High grade aluminum alloy > Anodized interior and exterior > Polyester powder top coated
Position Indicator	Top mount visual position indicator
Travel	90 degrees +/- 5°
Motor	<p>Squirrel Caged AC Induction Motor</p> <ul style="list-style-type: none"> > Class F Motor Insulation 311°F (155°C) > Embedded thermal protection 275°F (135°C) <p>DC Brushed Motor</p> <ul style="list-style-type: none"> > Class B Motor Insulation 266°F (130°C)
Duty Cycle	S4 Per EN 60034-1
Control Options	<ul style="list-style-type: none"> > Potentiometer: 1K Ohm > Position Transmitter: Output Signal: 4-20mA DC > Modulating: 0-20mA, 4-20mA, 0-5V, 1-5V, 0-10V, 2-10V > Local Control Stations
Conduit Entries	<p>Weatherproof:</p> <p>Sizes 1 thru 5 = 3x 3/4" NPT or 3x M20 Sizes 6 thru 7 = 2x 3/4" NPT + 1x 1" NPT or 2x M20 + 1x M25</p> <p>Explosionproof:</p> <p>2x 3/4" NPT or 2x M25</p>
Drive Bushing	Removable Drive Bushing
Mounting	ISO 5211/MSS SP-101
Lubrication	Grease Moly EP type
Manual Override	Declutch Mechanism, which can be padlocked.

FEATURES & BENEFITS

FEATURES

1 High Visibility Position Indicator: The display indicates valve position through the full range of travel. The O-ring sealed dome is made of high impact, heat, chemical and ultraviolet resistant clear polycarbonate and designed to withstand caustic wash down ensuring excellent corrosion protection.

Weatherproof: Sizes 1 through 4 and size 6 have top mount dome, prominently labeled and color coded yellow for open, red for close. **See Fig. 1.**

Sizes 5 and 7 using an auxiliary gearbox, will have a clear dome with green markings indicate open while red indicates closed. **See Fig. 2.**

Explosionproof: Sizes 1 through 5 uses flat indicator window dial. **See Fig 3.**

2 Enclosure: The housing is fully anodized internally and externally, with a polyester powder topcoat applied to ensure corrosion, wear, and UV resistance in the harshest environments.

3 Captive Cover Bolts: The cover is attached to the base by captive stainless-steel bolts placed outside the sealing area.

4 O-ring Seal: The o-ring between the cover and base provides environmental sealing preventing internal corrosion.

5 Manual Override: Hand-operated declutch lever physically disconnects the motor drive from the handwheel for manual operation. The lockable lever prevents any unauthorized operation.

6 Mechanical Travel Stops: Designed to prevent over-travel in the open or close direction during manual operation. Travel stops bolts include a locknut to prevent loosening, and seals to prevent water ingress.

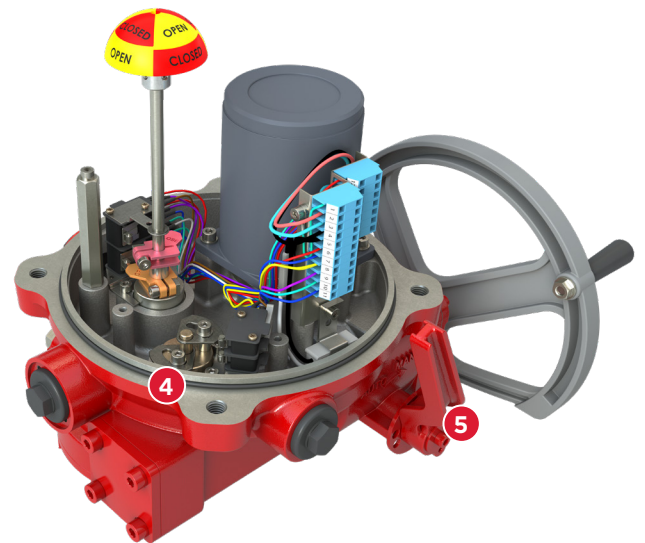
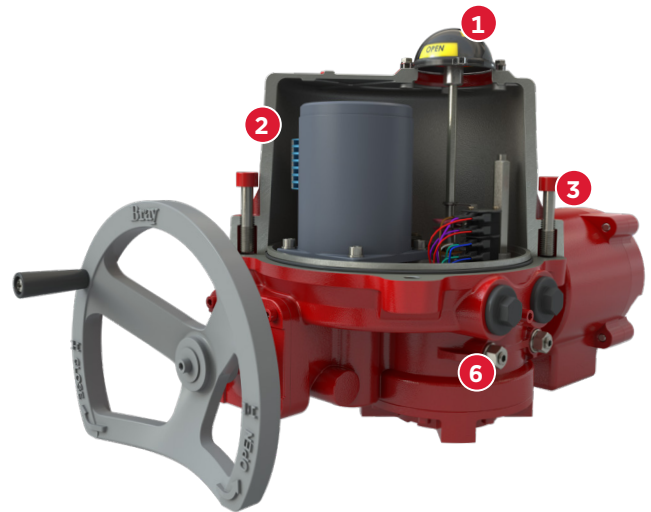


Figure 1: Sizes 1-4, and Size 6.



Figure 2: Sizes 5 & 7.



Figure 3: Sizes 1-5.

FEATURES & BENEFITS

FEATURES

- 7 Motor:** Fan cooled, high torque, squirrel Caged AC Induction Motor with Class F insulation or DC brushed Motor with Class B insulation.
- 8 Limit Switches:** Rotary switch type for easy configuration. 4 limit switches standard.
 - > 2 Available for position feedback.
 - > Additional limit switches available
- 9 Torque Switches:** Open and close torque switches protect the valve for actuator sizes 2 and above. Switches are set at unit rating to eliminate nuisance tripping.
- 10 Heater:** Thermostatically controlled to combat condensation build-up in the unit.
- 11 Local Control Station:** Integral to actuator housing. Local(Lo)-Off-Remote(Re) selector, Open-close selector, Power (white), Open/ Opening (Red), Remote (Blue), Close/Closing (Green) and Fault (Yellow) LED lights. Available as an option for 1 and 3 Phase.
- 12 Output Drive:** Double reduction worm gear design allows output motor torque to be transmitted to the valve. The design incorporates a self-locking feature preventing external forces adversely effecting desired valve position and equipped with anti-rotation mechanism.
 - > Worm: Alloy Steel
 - > Worm Gear: Bronze
- 13 Mounting:** Optional flange sizes for easy installation to any valve type and size per ISO 5211
- 14 Conduit Entries:** Incoming power and control cable connections. Standard protective plastic covers.

