

## Features

- Wafer butterfly valve with ISO5211 direct mount actuator
- Unique wave line seat reduces torque and extends seal life
- Ductile iron body with epoxy coating and 316SS disc
- Multi-voltage capable with auto-voltage sensing
- Long life brushless motor
- External LED power on and diagnostic light
- IP67 polyamide weatherproof enclosure with UV protection
- Electronic torque limiter - protects against valve jams
- Anti-condensation heater
- Manual override with dome style visual valve position indicator
- Electrical connections via external DIN plugs
- Auxiliary limit switches to confirm open/closed valve position

## Applications

Butterfly valves with EPDM seals are typically used for on-off control of water and other media compatible with the materials of construction. Actuator designed for 75% duty cycle. Valve has multi-standard alignment holes, suitable for flange types: ANSI/ASME Class 125/150, EN1092, PN10, PN16, BS10 Table D, E and JIS B2239 10K, 16K.

## Operation

Electric actuated valve uses power-to-open and power-to-close, stays in the last known position with power failure. On receipt of a continuous voltage signal, the motor runs and via a flat gear system rotates the disc 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the valve position.

## Construction

|   |  |
|---|--|
| <b>Valve Body</b>                         | Epoxy coated ductile iron                            |
| <b>Disc</b>                               | 316 stainless steel CF8M                             |
| <b>Disc Seat/Liner</b>                    | EPDM or NBR (Buna-N)                                 |
| <b>Stem/Stem Seals</b>                    | 420 stainless steel / V-ring (same material as seat) |
| <b>Actuator Enclosure</b>                 | Anti-corrosive Polyamide, UV protection              |
| <b>Manual Override/Position Indicator</b> | Glass-filled Polyamide / Clear Polyamide Dome        |
| <b>Auxiliary Limit Switches</b>           | 2 x SPST 3A@125/250VAC, 30VDC resistive load         |
| <b>Fasteners</b>                          | Stainless Steel                                      |




## Description

Electric operated direct mount butterfly valves with epoxy-coated ductile iron wafer body are designed for commercial and industrial applications. Valve mounts between two standard ANSI/ASME Class 150 flanges, and other international flange types. Seat to flange seal, eliminates the need for flange gaskets. Disc is precision machined 316SS. Two piece stem and disc design enhances the flow capacity and reduces turbulence. Rugged long life brushless electric actuator includes a manual override, thermostatically controlled anti-condensation heater, and over-torque protection.

## Approvals

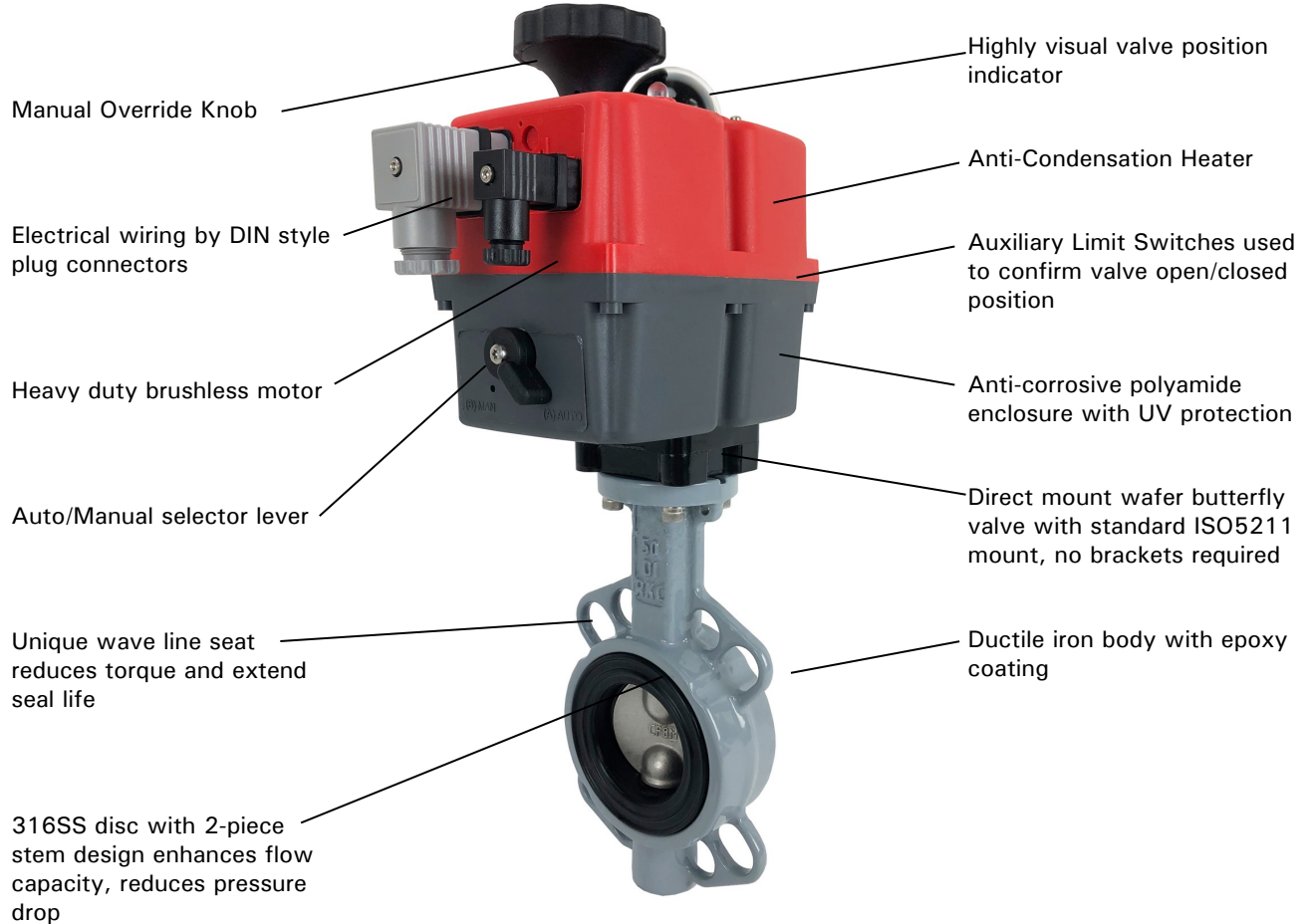
### Actuators

- CE mark conforming to: 
- Machinery directive
- Low voltage directive
- EMC Compatibility directive
- ISO5211 valve mounting

### Valves

- Design complies with API-609, MSS SP-67
- Tests per API-598, AWWA C502-87
- CE according to PED 97/23/EC, ISO5208

### Construction Features



### Pressure Rating

Pressure Rating: 230 PSI (16 Bar), Vacuum 29in Hg

### Temperature Rating

Actuator Temperature Rating: -4 to +158° F (-20 to 70° C)

Valve Temperature Rating: EPDM seals 0 to 248° F (-18 to 120° C)

NBR seals 5 to 185° F (-15 to 85° C)

### Optional Functions

BSR: Battery Spring Return Kit

- actuator fails to a safe position with loss of power

DPS: Digital Positioning System

- valve disc position controlled by 4-20mA or 0-10V control signal

**Specifications (English units)**

| Stock Number  | Pipe Size (inch) | Orifice Diam. (inch) | Cv Flow Factor | Pressure Max. (PSI) | Fluid Media*     | Cycle Time /90° (sec) +/-10% | Max. Current Draw (Amps) |        |       |       |
|---|------------------|----------------------|----------------|---------------------|------------------|------------------------------|--------------------------|--------|-------|-------|
|   |                  |                      |                |                     |                  |                              | 110VAC                   | 240VAC | 24VAC | 24VDC |
| <b>Wafer Body EPDM Seals: 24-240V AC or 24-135V DC</b>                                    |                  |                      |                |                     |                  |                              |                          |        |       |       |
| 562602C   | 2                | 2.0                  | 124            | 230                 | Water            | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562603C   | 2-1/2            | 2.5                  | 247            | 230                 | Water            | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562604C   | 3                | 3.0                  | 470            | 230                 | Water            | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562605C   | 4                | 4.0                  | 929            | 230                 | Water            | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562607C   | 6                | 6.0                  | 2243           | 230                 | Water            | 58                           | 0.8                      | 0.5    | 3.3   | 2.7   |
| <b>Wafer Body NBR (Buna- N) Seals: 24-240V AC or 24-135V DC</b>                           |                  |                      |                |                     |                  |                              |                          |        |       |       |
| 562621C   | 2                | 2.0                  | 124            | 230                 | Air, Oil, Vacuum | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562622C   | 2-1/2            | 2.5                  | 247            | 230                 | Air, Oil, Vacuum | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562623C   | 3                | 3.0                  | 470            | 230                 | Air, Oil, Vacuum | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562624C   | 4                | 4.0                  | 929            | 230                 | Air, Oil, Vacuum | 13                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562626C   | 6                | 6.0                  | 2243           | 230                 | Air, Oil, Vacuum | 58                           | 0.8                      | 0.5    | 3.3   | 2.7   |
| Cv is the GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop |                  |                      |                |                     |                  |                              |                          |        |       |       |
| * Consult compatibility chart for other media. Suitable for vacuum up to 29 inHg          |                  |                      |                |                     |                  |                              |                          |        |       |       |
| Models with 240 volt are single phase   |                  |                      |                |                     |                  |                              |                          |        |       |       |

**Specifications (Metric units)**

| Stock Number  | Pipe Size (DN) | Orifice Diam. (mm) | Kv Flow Factor | Pressure Max. (Bar) | Fluid Media*     | Cycle Time /90° (sec) +/-10% | Max. Current Draw (Amps) |        |       |       |
|---|----------------|--------------------|----------------|---------------------|------------------|------------------------------|--------------------------|--------|-------|-------|
|   |                |                    |                |                     |                  |                              | 110VAC                   | 240VAC | 24VAC | 24VDC |
| <b>Wafer Body EPDM Seals: 24-240V AC or 24-135V DC</b>          |                |                    |                |                     |                  |                              |                          |        |       |       |
| 562602C   | 50             | 50                 | 107            | 16                  | Water            | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562603C   | 65             | 65                 | 212            | 16                  | Water            | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562604C   | 80             | 80                 | 404            | 16                  | Water            | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562605C   | 100            | 100                | 799            | 16                  | Water            | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562607C   | 150            | 150                | 1929           | 16                  | Water            | 58                           | 0.8                      | 0.5    | 3.3   | 2.7   |
| <b>Wafer Body NBR (Buna- N) Seals: 24-240V AC or 24-135V DC</b> |                |                    |                |                     |                  |                              |                          |        |       |       |
| 562621C   | 50             | 50                 | 107            | 16                  | Air, Oil, Vacuum | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562622C   | 65             | 65                 | 212            | 16                  | Air, Oil, Vacuum | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562623C   | 80             | 80                 | 404            | 16                  | Air, Oil, Vacuum | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562624C   | 100            | 100                | 799            | 16                  | Air, Oil, Vacuum | 14                           | 0.43                     | 0.21   | 1.98  | 1.63  |
| 562626C   | 150            | 150                | 1929           | 16                  | Air, Oil, Vacuum | 58                           | 0.8                      | 0.5    | 3.3   | 2.7   |

Kv = The number of m<sup>3</sup> per hour of 20° C water at 1 bar pressure drop

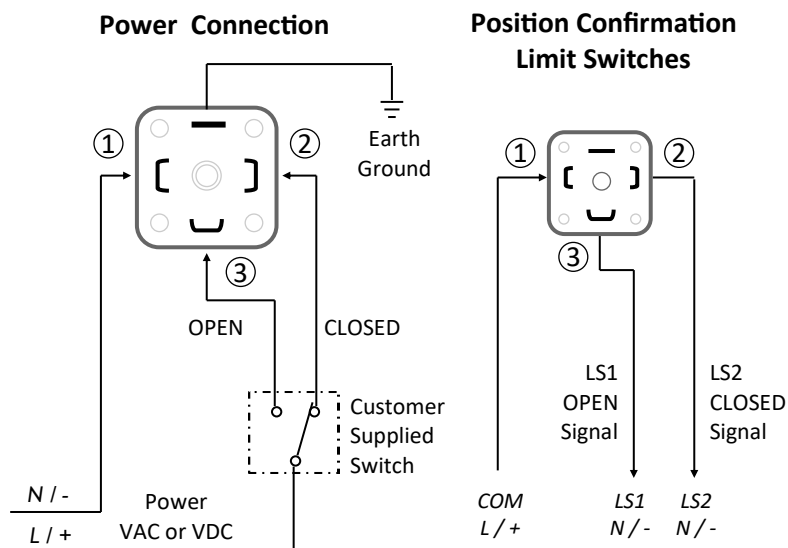
\* Consult compatibility chart for other media. Suitable for vacuum up to 29 inHg

Models with 240 volt are single phase

## Electrical Wiring: On/Off and BSR Battery Spring Return Versions

Voltage: 24-240 Volts AC or 24-135 Volts DC, 1ph, -0/+ 5%

Auto-voltage sensing



**Function: ON-OFF version**

**Power Connections**

Power to PIN 1 and 2  
- actuator CLOSED (pos 1)

Power to PIN 1 and 3  
- actuator OPEN (pos 2)

Stays in last known position with loss of power.

**Function: ON-OFF version with BSR option**

Wiring is the same as standard ON-OFF version.

Power to open, power to close - maintain power to trickle charge the battery system in either open or closed position.

Actuator sent by battery power to failsafe position with power failure.

Actuator returns to pre-failure position on power resumption.

**Function: Position confirmation limit switches**

Dry contact 3A @ 125/250 VAC, 30VDC resistive load

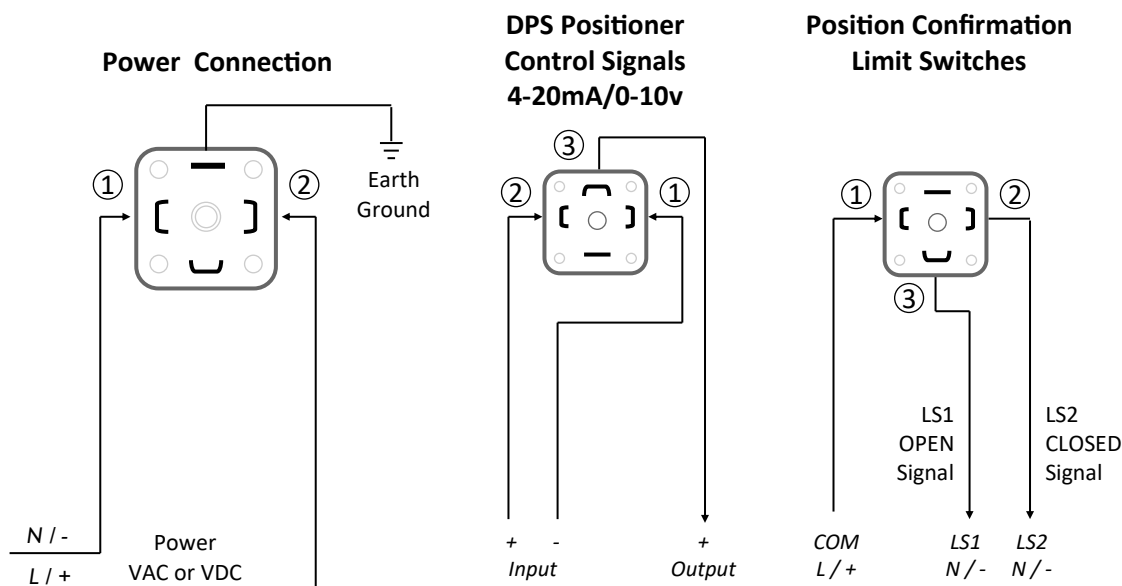
PIN 1 (COM) and 2 to confirm actuator is closed

PIN 1 (COM) and 3 to confirm actuator is open

## Electrical Wiring: Actuators with DPS Digital Positioner Option

Voltage: 24-240 Volt AC or 24-135 Volts DC Models (auto-voltage sensing)

Control Signal: 4-20mA or 0-10 VDC



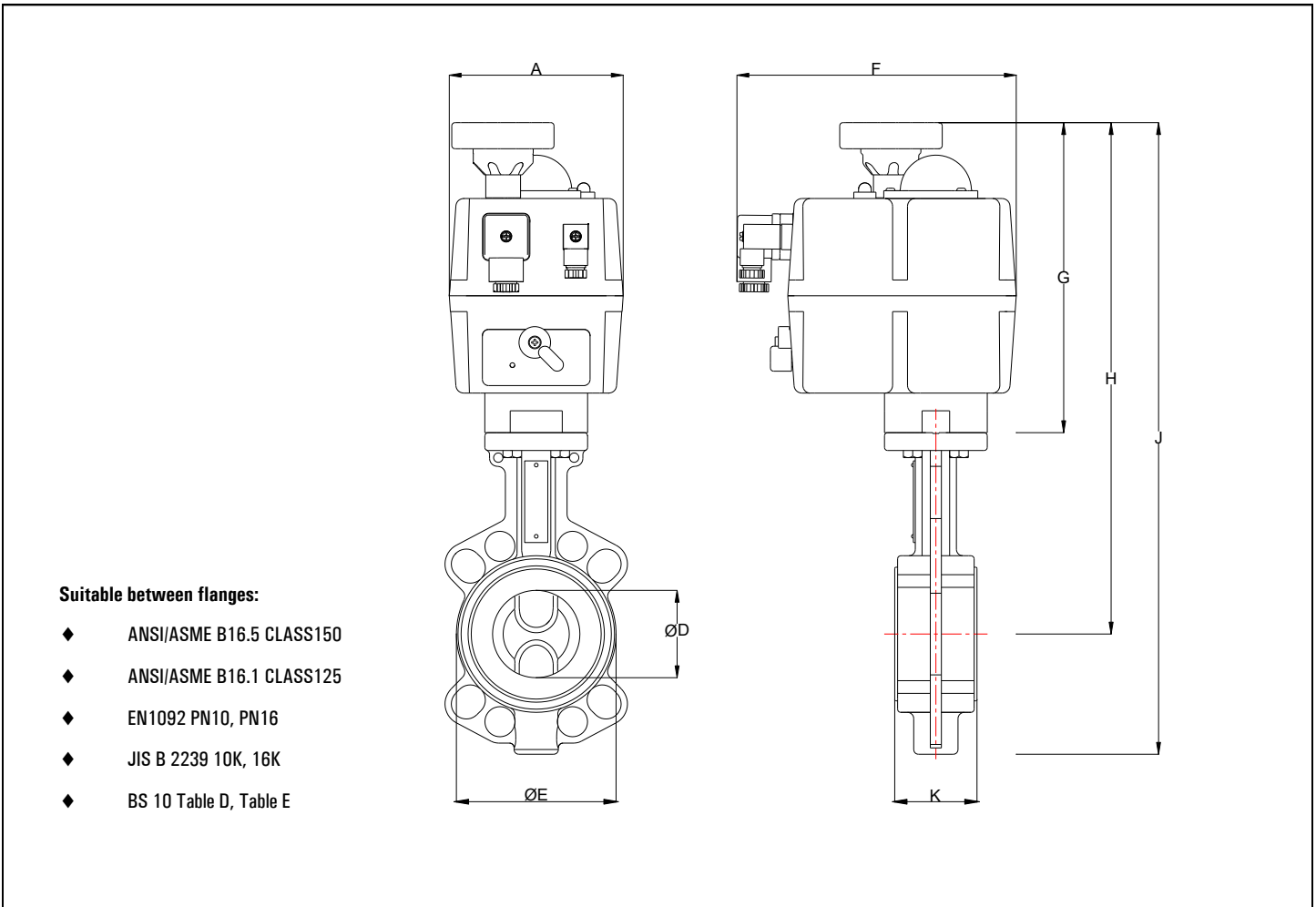
**Function: Actuators with DPS—Digital Positioner Option**

Power open, power close - actuator movement controlled by 4-20mA or 0-10VDC input signal.  
 Standard operation: 4mA or 0V = actuator closed, 20mA or 10V = actuator open (can be set-up reverse acting).  
 Actuator closes with loss of control signal, stays in last known position with loss of main power.  
 Output monitoring signal (in same format as supply signal) provided as standard.

**Function: Position confirmation limit switches**

Dry contact 3A @ 125/250 VAC, 30VDC resistive load  
 PIN 1 (COM) and 2 to confirm actuator is closed  
 PIN 1 (COM) and 3 to confirm actuator is open

**Dimensions:**



| Pipe Size     |      | A     | D     | E     | F     | G     | H     | J     | K    | ISO     | Weight  |
|---------------|------|-------|-------|-------|-------|-------|-------|-------|------|---------|---------|
| 2<br>DN50     | inch | 4.3   | 2.0   | 3.9   | 7.0   | 7.7   | 12.7  | 15.7  | 1.8  | F05     | 9.7 lb  |
|               | mm   | 110.0 | 50.0  | 99.0  | 177.0 | 196.0 | 322.0 | 398.0 | 46.0 |         | 4.4 kg  |
| 2-1/2<br>DN65 | inch | 4.3   | 2.6   | 4.5   | 7.0   | 7.7   | 13.0  | 16.2  | 1.9  | F05     | 10.8 lb |
|               | mm   | 110.0 | 65.0  | 113.0 | 177.0 | 196.0 | 330.0 | 412.0 | 49.0 |         | 4.9 kg  |
| 3<br>DN80     | inch | 4.3   | 3.2   | 5.1   | 7.0   | 7.7   | 13.9  | 17.7  | 1.9  | F05     | 12.6 lb |
|               | mm   | 110.0 | 80.0  | 129.0 | 177.0 | 196.0 | 353.0 | 449.0 | 49.0 |         | 5.7 kg  |
| 4<br>DN100    | inch | 4.3   | 3.9   | 6.2   | 7.0   | 7.7   | 14.3  | 18.8  | 2.2  | F05/F07 | 16.1 lb |
|               | mm   | 110.0 | 100.0 | 157.0 | 177.0 | 196.0 | 363.0 | 477.0 | 56.0 |         | 7.3 kg  |
| 6<br>DN150    | inch | 8.4   | 5.9   | 8.4   | 9.3   | 9.9   | 18.0  | 23.6  | 2.3  | F07     | 28.3 lb |
|               | mm   | 214.0 | 150.0 | 213.0 | 235.0 | 254.0 | 457.0 | 599.0 | 59.0 |         | 12.8 kg |

Dimensions remain unchanged for all versions (On-Off, BSR failsafe & DPS positioning)