

Features

- Diaphragm poppet valves suitable for controlling air, inert gas, and liquids
- Internal piloting controls large orifices to provide high flows
- Can be used to pilot large actuators to provide quick closing of large control valves
- Resilient seating for tight shutoff
- Mountable in any position

Construction

| Valve Parts in Contact with Fluids | |
|--------------------------------------|--|
| Body | Brass |
| Seals and Disc | NBR |
| Diaphragm Assembly | NBR |
| Core Tube | 305 Stainless Steel |
| Core and Plugnut | 430F Stainless Steel |
| Core Springs | 302 Stainless Steel and 17-7PH Stainless Steel |
| Shading Coil | Copper |
| Pilot Seat Cartridge and Disc-Holder | CA |

Electrical

| Standard Coil and Class of Insulation | Watt Rating and Power Consumption | | | | Spare Coil Part Number | | | |
|---------------------------------------|-----------------------------------|----------|------------|-----------|------------------------|--------|----------------|--------|
| | DC Watts | AC Watts | VA Holding | VA Inrush | General Purpose | | Explosionproof | |
| | | | | | AC | DC | AC | DC |
| F | 10.6 | 6.1 | 16 | 30 | 238210 | 238310 | 238214 | 238314 |
| F | 22.6 | 17.1 | 40 | 70 | 238610 | 238710 | 238614 | 238714 |

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages available when required.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X.

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" to catalog number.)

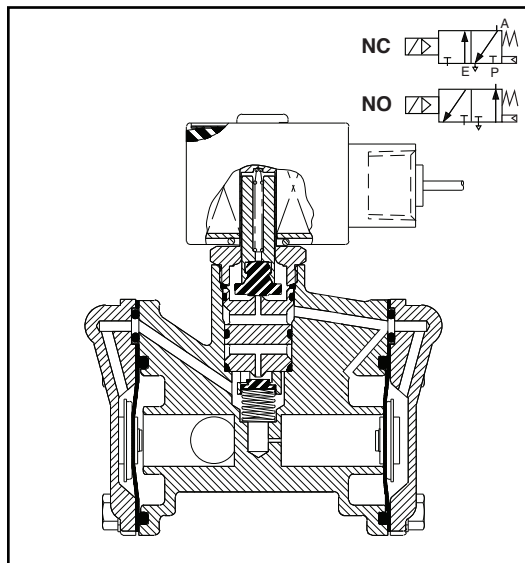
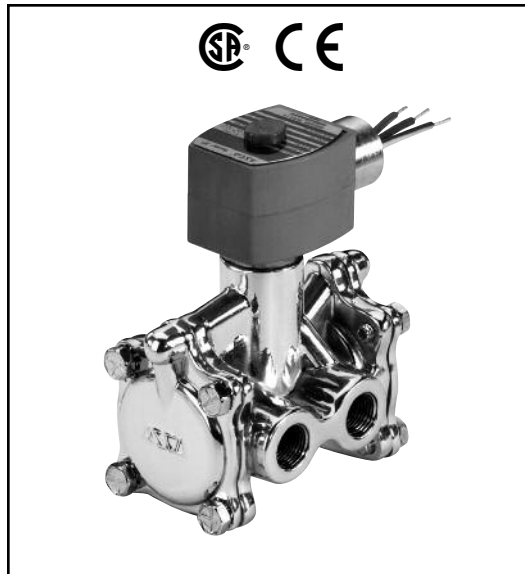
See *Optional Features Section* for other available options.

Nominal Ambient Temp. Ranges

AC: 32°F to 125°F (0°C to 52°C)

DC: 32°F to 104°F (0°C to 40°C)

Refer to *Engineering Section* for details.



Approvals

CSA certified. Meets applicable CE directives.

Refer to *Engineering Section* for details.

ATEX/IECEx certified with prefix "EV" as listed.

Refer to *Optional Features Electrical Section* for details.

Important

A minimum operating pressure differential must be maintained between the pressure and exhaust ports.

Supply and exhaust piping must be full area, unrestricted.

ASCO flow controls and other similar components must be installed in the cylinder lines only.

Specifications (English units)

| Pipe Size (in) | Orifice Size (in) | Cv Flow Factor | Operating Pressure Differential (psi) | | | | Max. Fluid Temp. °F | | Brass Body | | Const. Ref. | Watt Rating/ Class of Coil Insulation ② | |
|---|-------------------|----------------|---------------------------------------|---------------|---------|---------------|---------------------|-----|------------|----------------|-------------|---|--------|
| | | | Min. ① | Max. AC | | Max. DC | | AC | DC | Catalog Number | | AC | DC |
| | | | | Air-Inert Gas | Water ③ | Air-Inert Gas | Water ③ | | | | | | |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | |
| 3/8 | 5/8 | 2.5 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G054 | 1 | 6.1/F | 10.6/F |
| 3/8 | 5/8 | 2.5 | 10 | 250 | 250 | 250 | 250 | 180 | 120 | 8316G014 ④ | 2 | 17.1/F | 22.6/F |
| 1/2 | 5/8 | 3.2 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G064 | 1 | 6.1/F | 10.6/F |
| 1/2 | 5/8 | 3.2 | 10 | 250 | 250 | 250 | 250 | 180 | 120 | 8316G024 | 2 | 17.1/F | 22.6/F |
| 3/4 | 11/16 | 4.8 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G074 | 3 | 6.1/F | 10.6/F |
| 3/4 | 11/16 | 4.8 | 10 | 250 | 250 | 250 | 250 | 180 | 120 | 8316G044 | 4 | 17.1/F | 22.6/F |
| 1 | 1 | 12.5 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G034 | 5 | 6.1/F | 10.6/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | |
| 3/8 | 5/8 | 2.5 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G056 | 1 | 6.1/F | 10.6/F |
| 3/8 | 5/8 | 2.5 | 10 | 250 | 250 | 250 | 250 | 180 | 120 | 8316G016 | 2 | 17.1/F | 22.6/F |
| 1/2 | 5/8 | 3.2 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G066 | 1 | 6.1/F | 10.6/F |
| 1/2 | 5/8 | 3.2 | 10 | 250 | 250 | 250 | 250 | 180 | 120 | 8316G026 | 2 | 17.1/F | 22.6/F |
| 3/4 | 11/16 | 4.8 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G076 | 3 | 6.1/F | 10.6/F |
| 3/4 | 11/16 | 4.8 | 10 | 250 | 250 | 250 | 250 | 180 | 120 | 8316G046 | 4 | 17.1/F | 22.6/F |
| 1 | 1 | 12.5 | 10 | 150 | 125 | 125 | 125 | 180 | 120 | 8316G036 | 5 | 6.1/F | 10.6/F |

① 10 psi Minimum Operating Pressure Differential required. Valve vents to "zero" psi. ② On 50 hertz service, the watt rating for 6.1/F solenoid is 8.1 watts.
 ③ Water rating, CSA certified up to 232 psi. ④ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

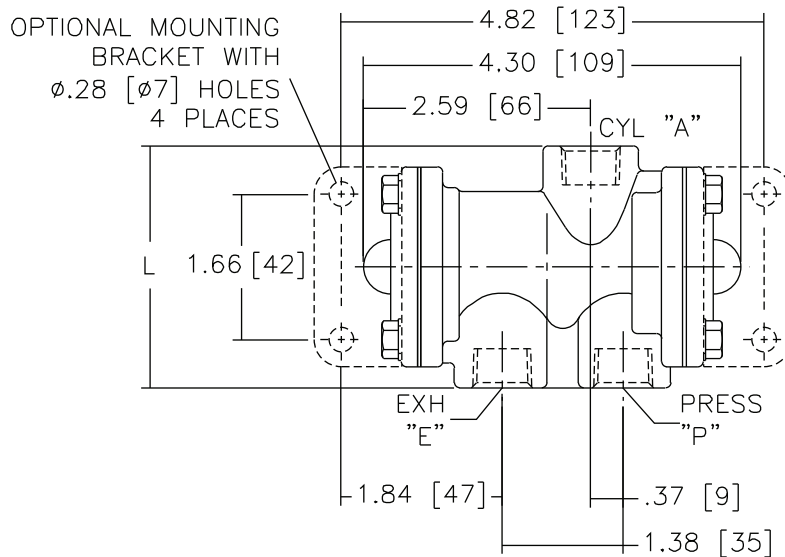
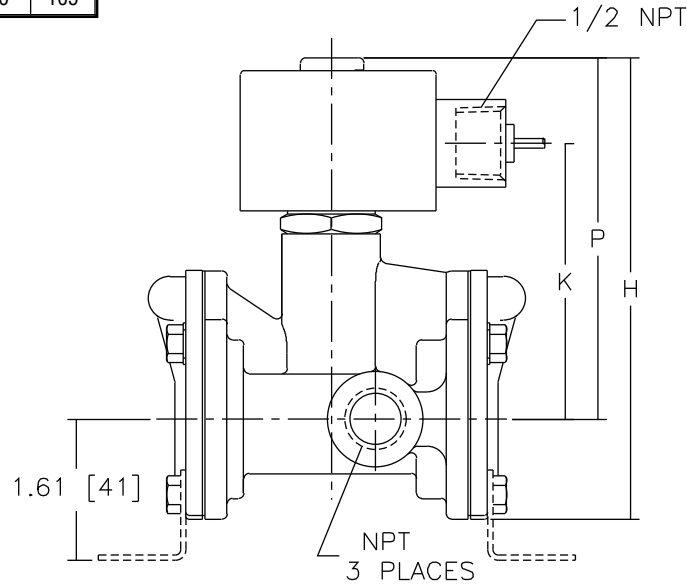
| Pipe Size (in) | Orifice Size (mm) | Kv Flow Factor (m³/h) | Operating Pressure Differential (bar) | | | | Max. Fluid Temp. °C | | Brass Body | | Const. Ref. | Watt Rating/ Class of Coil Insulation ② | |
|---|-------------------|-----------------------|---------------------------------------|---------------|---------|---------------|---------------------|----|------------|----------------|-------------|---|--------|
| | | | Min. ① | Max. AC | | Max. DC | | AC | DC | Catalog Number | | AC | DC |
| | | | | Air-Inert Gas | Water ③ | Air-Inert Gas | Water ③ | | | | | | |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | |
| 3/8 | 16 | 2.1 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G054 | 1 | 6.1/F | 10.6/F |
| 3/8 | 16 | 2.1 | 0.7 | 17 | 17 | 17 | 17 | 82 | 49 | 8316G014 ④ | 2 | 17.1/F | 22.6/F |
| 1/2 | 16 | 2.7 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G064 | 1 | 6.1/F | 10.6/F |
| 1/2 | 16 | 2.7 | 0.7 | 17 | 17 | 17 | 17 | 82 | 49 | 8316G024 | 2 | 17.1/F | 22.6/F |
| 3/4 | 17 | 4.1 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G074 | 3 | 6.1/F | 10.6/F |
| 3/4 | 17 | 4.1 | 0.7 | 17 | 17 | 17 | 17 | 82 | 49 | 8316G044 | 4 | 17.1/F | 22.6/F |
| 1 | 25 | 11 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G034 | 5 | 6.1/F | 10.6/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | |
| 3/8 | 16 | 2.1 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G056 | 1 | 6.1/F | 10.6/F |
| 3/8 | 16 | 2.1 | 0.7 | 17 | 17 | 17 | 17 | 82 | 49 | 8316G016 | 2 | 17.1/F | 22.6/F |
| 1/2 | 16 | 2.7 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G066 | 1 | 6.1/F | 10.6/F |
| 1/2 | 16 | 2.7 | 0.7 | 17 | 17 | 17 | 17 | 82 | 49 | 8316G026 | 2 | 17.1/F | 22.6/F |
| 3/4 | 17 | 4.1 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G076 | 3 | 6.1/F | 10.6/F |
| 3/4 | 17 | 4.1 | 0.7 | 17 | 17 | 17 | 17 | 82 | 49 | 8316G046 | 4 | 17.1/F | 22.6/F |
| 1 | 25 | 11 | 0.7 | 10 | 9 | 9 | 9 | 82 | 49 | 8316G036 | 5 | 6.1/F | 10.6/F |

① 1 bar Minimum Operating Pressure Differential required. Valve vents to "zero" bar. ② On 50 hertz service, the watt rating for 6.1/F solenoid is 8.1 watts.
 ③ Water rating, CSA certified up to 16 bar. ④ ATEX/IECEx certified with prefix "EV".

Dimensions: inches (mm)

| Const. Ref. | | H | K | L | P |
|-------------|----|------|------|------|------|
| 1 | in | 5.08 | 3.08 | 2.76 | 3.94 |
| | mm | 129 | 78 | 70 | 100 |
| 2 | in | 5.26 | 3.15 | 2.76 | 4.12 |
| | mm | 134 | 80 | 70 | 105 |

Const. Ref. 1, 2



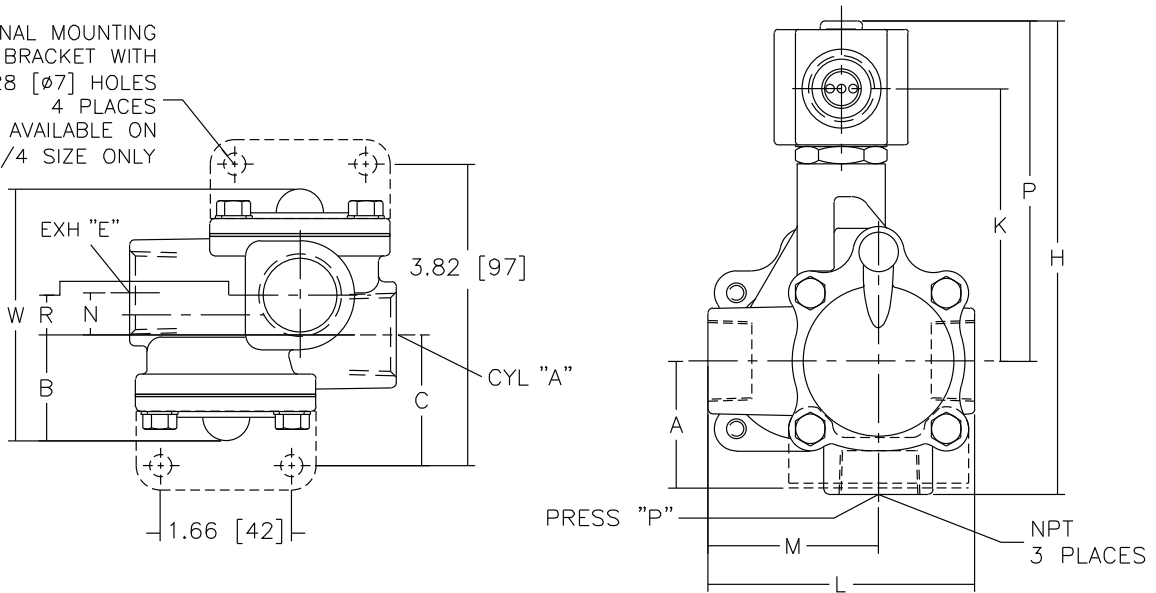
3-WAY

Dimensions: inches (mm)

| Const. Ref. | | A | B | C | H | K | L | M | N | P | R | W |
|-------------|----|------|------|------|------|------|------|------|-----|------|------|------|
| 3 | in | 1.61 | 1.41 | 1.66 | 6.01 | 3.46 | 3.38 | 2.16 | .53 | 4.32 | .50 | 3.31 |
| | mm | 41 | 36 | 42 | 153 | 88 | 86 | 55 | 13 | 110 | 13 | 84 |
| 4 | in | 1.61 | 1.41 | 1.66 | 6.19 | 3.53 | 3.38 | 2.16 | .53 | 4.50 | .50 | 3.31 |
| | mm | 41 | 36 | 42 | 157 | 90 | 86 | 55 | 13 | 114 | 13 | 84 |
| 5 | in | - | 1.80 | - | 6.63 | 3.71 | 4.44 | 2.81 | .88 | 4.57 | 1.74 | 5.32 |
| | mm | - | 46 | - | 168 | 94 | 113 | 71 | 22 | 116 | 44 | 135 |

Const. Ref. 3, 4, 5

OPTIONAL MOUNTING BRACKET WITH $\phi.28$ [$\phi 7$] HOLES 4 PLACES AVAILABLE ON 3/4 SIZE ONLY



FLOW DIAGRAMS

