

Features

- No minimum operating pressure required
- The original 3-way valve design
- High-speed general service
- Simplest valve for basic 3-way piloting operation, only a spring and two moving parts
- Moderate flow pilots, smaller control valves and actuators
- Can also be used for low-volume fluid diversion

Construction

| Valve Parts in Contact with Fluids | | |
|------------------------------------|---|---------------------|
| Body | Brass | 303 Stainless Steel |
| Seals and Disc | NBR, PA | |
| Core Tube | 305 Stainless Steel | |
| Core and Plugnut | 430F Stainless Steel | |
| Core Springs | 302 Stainless Steel and 17-7PH Stainless Steel | |
| Shading Coil | Copper | Silver |
| Core Guide | CA (All AC valves and 1/8" orifice Normally Open DC valves) | |

Electrical

| Standard Coil and Class of Insulation | Watt Rating and Power Consumption | | | | Spare Coil Part Number | | | |
|---------------------------------------|-----------------------------------|-------|------------|-----------|------------------------|--------|----------------|--------|
| | DC Watts | AC | | | General Purpose | | Explosionproof | |
| | | Watts | VA Holding | VA Inrush | AC | DC | AC | DC |
| F | 11.6 | 10.1 | 25 | 50 | 238610 | 238710 | 238614 | 238714 |

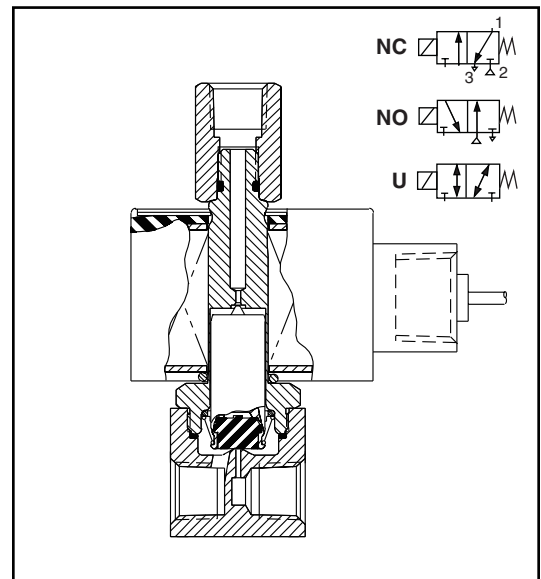
Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

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. UL listed General Purpose Valves. Meets applicable CE directives.

Refer to *Engineering Section* for details.

Specifications (English units)

| Pipe Size (ins.) | Orifice Size (ins.) | Cv Flow Factor | Operating Pressure Differential (psi) | | | | | | Max. Fluid Temp. °F | | Brass Body | | Stainless Steel Body | | Watt Rating/Class of Coil Insulation | |
|--|---------------------|----------------|---------------------------------------|-------|------------------|---------------|-------|------------------|---------------------|-----|----------------|-------------|----------------------|-------------|--------------------------------------|--------|
| | | | Max. AC | | | Max. DC | | | AC | DC | Catalog Number | Const. Ref. | Catalog Number | Const. Ref. | AC | DC |
| | | | Air-Inert Gas | Water | Lt. Oil @ 45 SSU | Air-Inert Gas | Water | Lt. Oil @ 45 SSU | | | | | | | | |
| UNIVERSAL OPERATION (Pressure at any port) | | | | | | | | | | | | | | | | |
| 1/8 | 3/64 | .04 | 160 | 160 | 160 | 70 | 65 | 65 | 200 | 104 | 8314G041 | 1 | - | - | 10.1/F | 11.6/F |
| 1/4 | 3/64 | .04 | 160 | 160 | 160 | 70 | 65 | 65 | 200 | 104 | 8314G006 | 2 | - | - | 10.1/F | 11.6/F |
| 1/4 | 3/32 | .15 | 80 | 40 | 40 | 35 | 35 | 15 | 200 | 104 | 8314G007 | 2 | 8314G120 ① | 4 | 10.1/F | 11.6/F |
| 1/4 | 1/8 | .25 | 45 | 25 | 25 | 20 | 15 | 15 | 200 | 104 | 8314G008 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | | | | |
| 1/8 | 3/64 | .04 | 230 | 230 | 230 | 120 | 140 | 135 | 200 | 104 | 8314G031 | 1 | - | - | 10.1/F | 11.6/F |
| 1/4 | 3/64 | .04 | 230 | 230 | 230 | 120 | 140 | 135 | 200 | 104 | 8314G034 | 2 | - | - | 10.1/F | 11.6/F |
| 1/4 | 3/32 | .15 | 150 | 100 | 100 | 60 | 70 | 30 | 200 | 104 | 8314G035 | 2 | 8314G121 ① | 4 | 10.1/F | 11.6/F |
| 1/4 | 1/8 | .25 | 75 | 60 | 60 | 30 | 40 | 25 | 200 | 104 | 8314G036 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY CLOSED (Closed when de-energized), Air Only - Exhausts to Atmosphere | | | | | | | | | | | | | | | | |
| 1/4 | 3/64 | .04 | 230 | - | - | 120 | - | - | 200 | 104 | 8314G022 | 3 | - | - | 10.1/F | 11.6/F |
| 1/4 | 3/32 | .15 | 150 | - | - | 60 | - | - | 200 | 104 | 8314G023 | 3 | - | - | 10.1/F | 11.6/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | | | |
| 1/8 | 3/64 | .04 | 300 | 300 | 300 | 200 | 200 | 120 | 200 | 104 | 8314G049 | 1 | - | - | 10.1/F | 11.6/F |
| 1/4 | 3/32 | .15 | 175 | 175 | 175 | 70 | 90 | 45 | 200 | 104 | 8314G053 | 2 | 8314G122 ① | 4 | 10.1/F | 11.6/F |
| 1/4 | 1/8 | .25 | 90 | 90 | 90 | 40 | 40 | 25 | 200 | 104 | 8314G054 | 2 | - | - | 10.1/F | 11.6/F |

① Can be used for *dry* natural gas service with the EF prefix.

Specifications (Metric units)

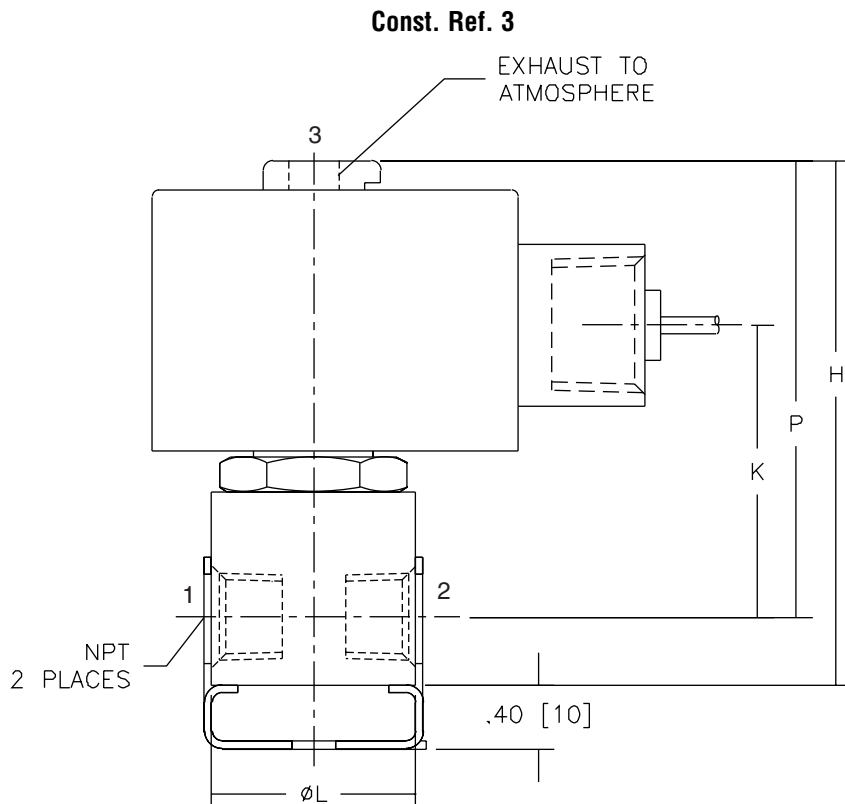
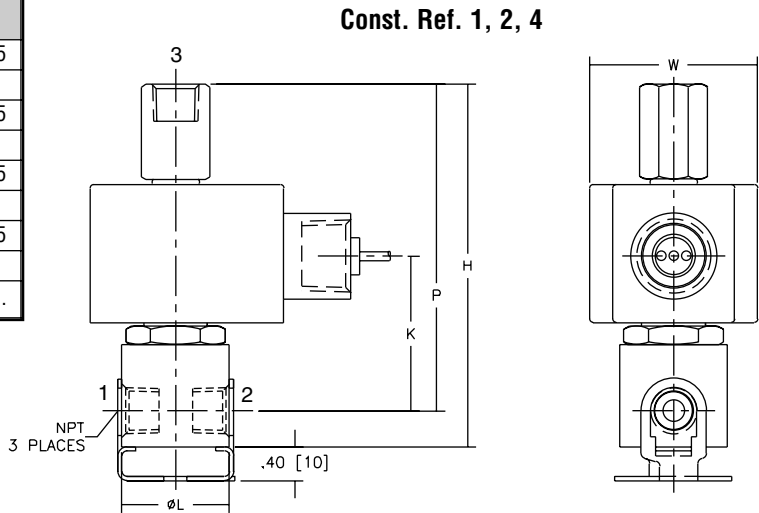
| Pipe Size (ins.) | Orifice Size (mm) | Kv Flow Factor (m3/h) | Operating Pressure Differential (bar) | | | | | | Max. Fluid Temp. °C | | Brass Body | | Stainless Steel Body | | Watt Rating/Class of Coil Insulation | |
|--|-------------------|-----------------------|---------------------------------------|-------|------------------|---------------|-------|------------------|---------------------|----|----------------|-------------|----------------------|-------------|--------------------------------------|--------|
| | | | Max. AC | | | Max. DC | | | AC | DC | Catalog Number | Const. Ref. | Catalog Number | Const. Ref. | AC | DC |
| | | | Air-Inert Gas | Water | Lt. Oil @ 45 SSU | Air-Inert Gas | Water | Lt. Oil @ 45 SSU | | | | | | | | |
| UNIVERSAL OPERATION (Pressure at any port) | | | | | | | | | | | | | | | | |
| 1/8 | 1 | .03 | 11 | 11 | 11 | 5 | 4 | 4 | 93 | 40 | 8314G041 | 1 | - | - | 10.1/F | 11.6/F |
| 1/4 | 1 | .03 | 11 | 11 | 11 | 5 | 4 | 4 | 93 | 40 | 8314G006 | 2 | - | - | 10.1/F | 11.6/F |
| 1/4 | 2 | .13 | 6 | 3 | 3 | 2 | 2 | 1 | 93 | 40 | 8314G007 | 2 | 8314G120 ① | 4 | 10.1/F | 11.6/F |
| 1/4 | 3 | .21 | 3 | 2 | 2 | 1 | 1 | 1 | 93 | 40 | 8314G008 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | | | | |
| 1/8 | 1 | .03 | 16 | 16 | 16 | 8 | 10 | 9 | 93 | 40 | 8314G031 | 1 | - | - | 10.1/F | 11.6/F |
| 1/4 | 1 | .03 | 16 | 16 | 16 | 8 | 10 | 9 | 93 | 40 | 8314G034 | 2 | - | - | 10.1/F | 11.6/F |
| 1/4 | 2 | .13 | 10 | 7 | 7 | 4 | 5 | 2 | 93 | 40 | 8314G035 | 2 | 8314G121 ① | 4 | 10.1/F | 11.6/F |
| 1/4 | 3 | .21 | 5 | 4 | 4 | 2 | 3 | 2 | 93 | 40 | 8314G036 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY CLOSED (Closed when de-energized), Air Only - Exhausts to Atmosphere | | | | | | | | | | | | | | | | |
| 1/4 | 1 | .03 | 16 | - | - | 8 | - | - | 93 | 40 | 8314G022 | 3 | - | - | 10.1/F | 11.6/F |
| 1/4 | 2 | .13 | 10 | - | - | 4 | - | - | 93 | 40 | 8314G023 | 3 | - | - | 10.1/F | 11.6/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | | | |
| 1/8 | 1 | .03 | 21 | 21 | 21 | 14 | 14 | 8 | 93 | 40 | 8314G049 | 1 | - | - | 10.1/F | 11.6/F |
| 1/4 | 2 | .13 | 12 | 12 | 12 | 5 | 6 | 3 | 93 | 40 | 8314G053 | 2 | 8314G122 ① | 4 | 10.1/F | 11.6/F |
| 1/4 | 3 | .21 | 6 | 6 | 6 | 3 | 3 | 2 | 93 | 40 | 8314G054 | 2 | - | - | 10.1/F | 11.6/F |

① Can be used for *dry* natural gas service with the EF prefix.

Dimensions: inches (mm)

| Const. Ref. | | H | K | L | P | W |
|-------------|------|------|------|-------|------|------|
| 1 | ins. | 3.87 | 1.67 | Ø1.19 | 3.51 | 1.95 |
| | mm | 98 | 42 | Ø30 | 89 | 50 |
| 2 | ins. | 4.21 | 1.80 | Ø1.25 | 3.79 | 1.95 |
| | mm | 107 | 46 | Ø32 | 96 | 50 |
| 3 | ins. | 3.34 | 1.80 | Ø1.25 | 2.92 | 1.95 |
| | mm | 85 | 46 | Ø32 | 74 | 50 |
| 4 | ins. | 4.14 | 1.78 | Ø1.63 | 3.77 | 1.95 |
| | mm | 105 | 45 | Ø41 | 96 | 50 |

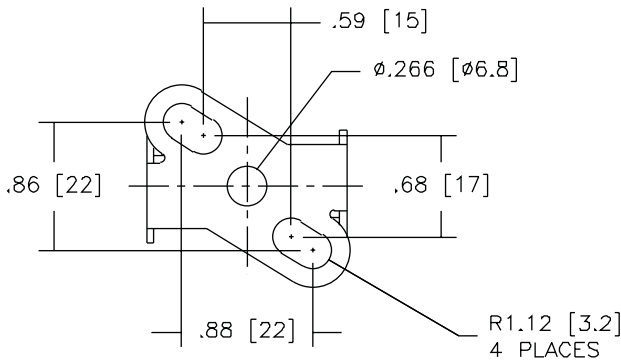
IMPORTANT: Valves can be mounted in any position.



Dimensions: inches (mm)

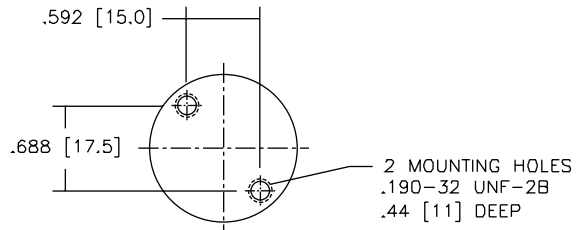
Mounting Bracket Standard
1/4 NPT Size only

Const. Ref. 2, 3, 4

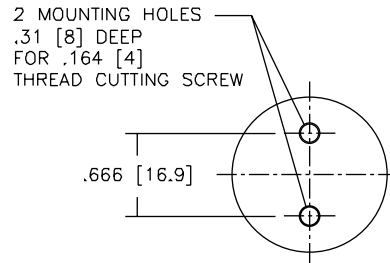


Mounting Holes in Valve Body

Const. Ref. 1



Const. Ref. 2, 3



FLOW DIAGRAMS

