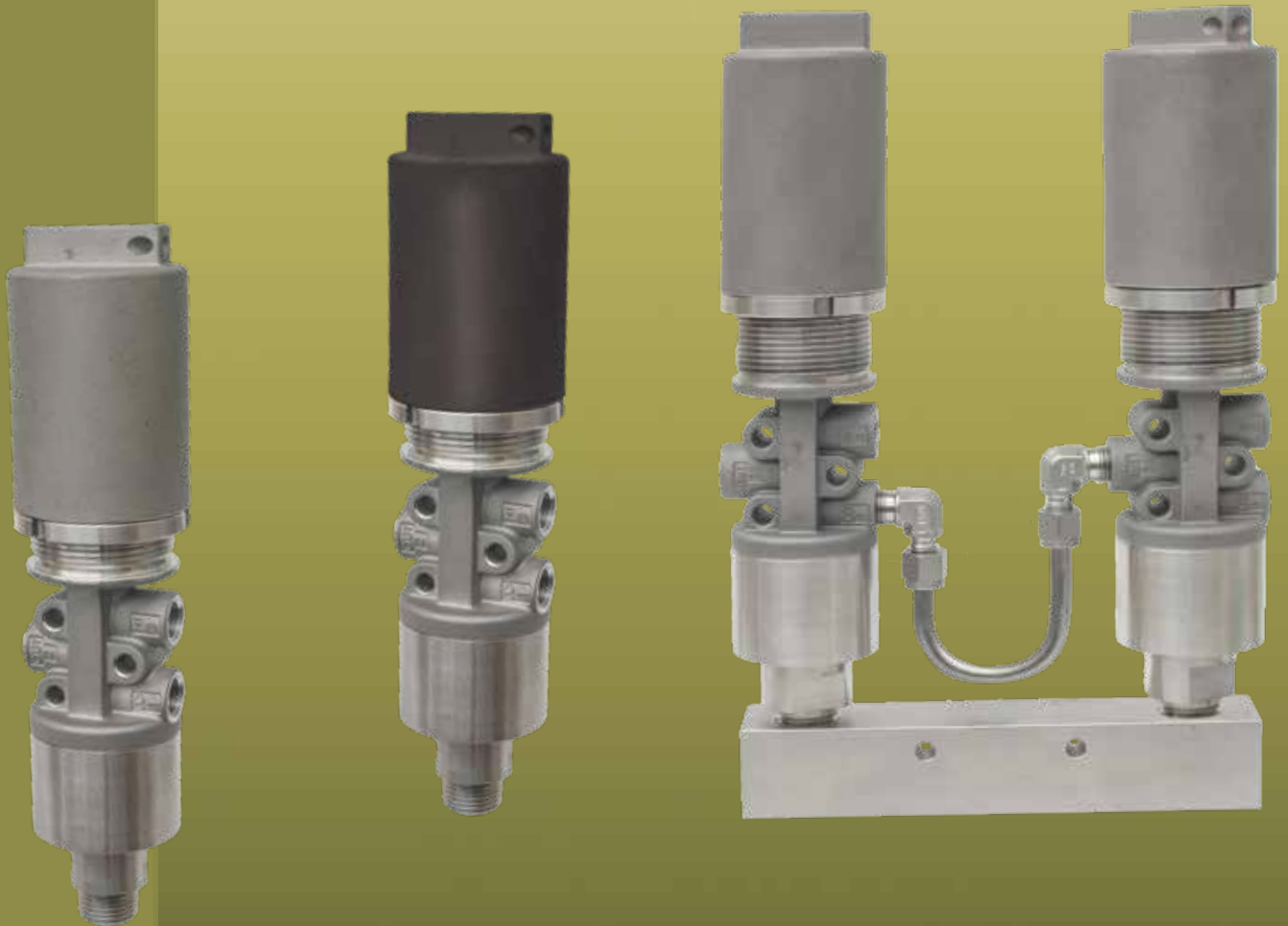




Bulletin BPS
Revised 02/2023

Pressure Sensor Hydraulic & Pneumatic



High/Low Pressure Sensor

General Description

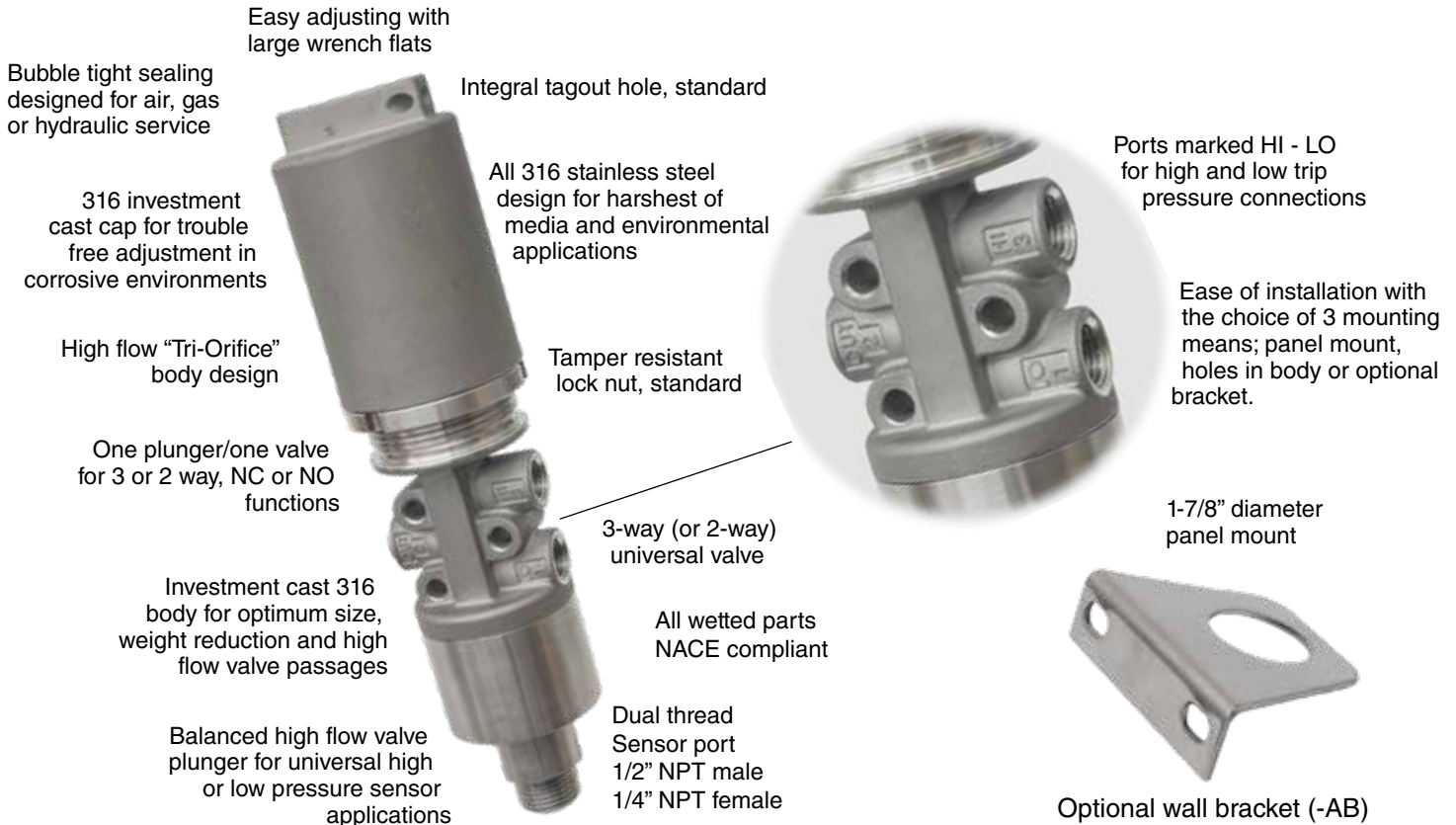
The Versa pneumatic/hydraulic pressure sensor is a 3-way block and bleed or a 2-way bleed, 2 position valve that is operated by pressure acting on a piston opposing an adjustable spring force. It functions as either a normally closed or normally open valve, depending on which of the two "IN" ports the instrument pressure is supplied. These ports are marked as HI or LO on the valve body.

The output port, marked 'OUT', is the same for either mode of operation. Pressure changes at the sensor

port, outside the set point range, will cause the valve to operate or shift.

The use of two pilot sensors mounted on a common manifold allows for a high/low pressure sensor system. One sensor functions as a low pressure cut off and the other as high pressure limit, protecting your system from pressure extremes in a complete, easy to mount package.

These sensors are also known as Stick Pilots.



| Valve | |
|--------------------|--|
| Function: | 3-way Universal |
| Media: | Pneumatic and Hydraulic |
| Pressure: | 10 - 150 psi (0.7 - 10.3 bar) |
| Cv: | 0.12 |
| Port Size: | 1/4" NPT F |
| Temperature Range: | 5 to 250°F (-15°C to 121°C) -31°F to 149°F (-35°C to 65°C) (-44) -67°F to 194°F (-55°C to 90°C) (-T40) |

| Sensor | |
|-------------------|---|
| Pressure: | 20 to 10,000 psi (1.4 to 690 bar) Consult factory for 20,000 psi (1379 bar) |
| Media: | Pneumatic and Hydraulic |
| Dead Band: | < 5% of full range |
| Repeatability: | 1% of pressure setting |
| Port Size: | 1/2" NPT M & 1/4" NPT F |
| Mounting: | Bracket, body mounting holes (3) or panel mount for 1-7/8" diameter hole |
| Adjustment means: | Rotating spring cap. Features a wrench flat and hole for "tagout" |

| Pilot Pressure Range* | | | |
|-----------------------|-----------------|-------------|--------------|
| Part Number | Supply Pressure | Piston Size | Max Pressure |
| 911 | 20-140 psi | 2.25" | 13000 psi |
| 912 | 50-260 psi | 1.68" | 6700 psi |
| 913 | 200-1500 psi | 0.69" | 15000 psi |
| 913A | 500-3000 psi | 0.50" | 15000 psi |
| 914 | 1000-5000 psi | 0.35" | 15000 psi |
| 915 | 2500-10000 psi | 0.27" | 14000 psi |

| Materials** | |
|-----------------|------------------------|
| Body: | 316 Stainless steel |
| Spring: | 17 - 7 Stainless steel |
| Seals: | FKM |
| Lock Nut: | 316 Stainless steel |
| Adjusting Cap: | 316 Stainless steel |
| Internal Parts: | 316 Stainless steel |

| Suffix | Description |
|--------|---|
| -44 | Seals, low temperature Buna |
| -T40 | Seals, low temperature Fluorosilicone |
| -43E | Panel mounting nut |
| -AB | Mounting bracket supplied with additional nut |
| -BAC | Engineered Polymer Spring Cap |
| -NA | NACE (inconel spring) |

*Guidance for pressure range

If desired pilot pressure is, for example, 80 psi and there's an overlap of 2 pressure ranges of 20 – 140 psi and 50 – 260 psi. For better deadband performance: choose 20 – 140 psi. For easier spring cap adjustment: choose 50 – 260 psi.

**All NACE compliant materials except adjusting spring. For full NACE valve add -NA

Single Unit Pressure Sensor BAA - 8 3 0 2 - 912 - 44



BAA-2301 = 2-way NC (valve plugged at the factory)
 BAA-2302 = 2-way NO (valve plugged at the factory)
 BAA-8302 = 3-way NC or NO (universal flow)

Suffix: None = No options
 -44 = Low temperature
 -T40 = Low temperature
 -43E = Panel mounting nut
 -AB = Mounting bracket
 -BAC = Engineer polymer spring cap
 -NA = NACE (Inconel Spring)

911 = 20 - 140 psi (1.4 - 9.7 bar)
 912 = 50 - 260 psi (3.4 - 18.0 bar)
 913 = 200 - 1500 psi (13.8 - 103.4 bar)
 913A = 500 - 3000 psi (34.5 - 206.8 bar)
 914 = 1000 - 5000 psi (69.0 - 344.7 bar)
 915 = 2500 - 10000 psi (172.3 - 690 bar)

Single Unit Pressure Sensor
 BAA-8302-914
 Shown

High/Low Pressure Sensor 2 Valve Assembly

BA 3 - 8 2 1 2 - 8 2 1 2 - 44

BA: = B-316 Series, Hi/low
 2 valve assembly

Manifold:
 3 = 1/4" NPT Unit

Valve 1

Valve 2

Suffix: None = No options
 -44 = Low temperature
 -T40 = Low temperature
 -43E = Panel mounting nut
 -AB = Mounting bracket
 -BAC = Engineer polymer spring cap
 -NA = NACE (Inconel Spring)

8

Function:
 2 = 2-way (valve plugged at the factory)
 8 = 3-way NC and NO (universal flow)

8

2

Plunger:
 1 = NC function (for 2-way only)
 2 = 3-way NC or NO, 2-way NO

2

1

Suffix:
 1 = Stainless Spring, Stainless Adjusting Cap

1

2

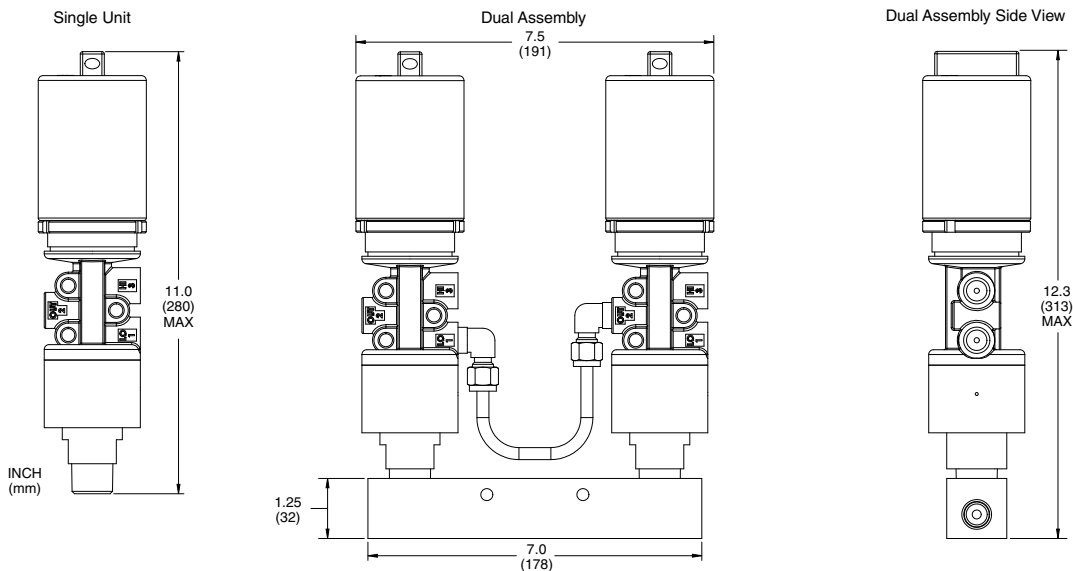
Sensor Pressure:
 2 = 50 - 260 psi (3.4 - 18.0 bar)
 3 = 200 - 1500 psi (13.8 - 103.4 bar)
 3A = 500 - 3000 psi (34.5 - 206.8 bar)
 4 = 1000 - 5000 psi (69.0 - 344.7 bar)
 5 = 2500 - 10000 psi (172.3 - 690 bar)

2



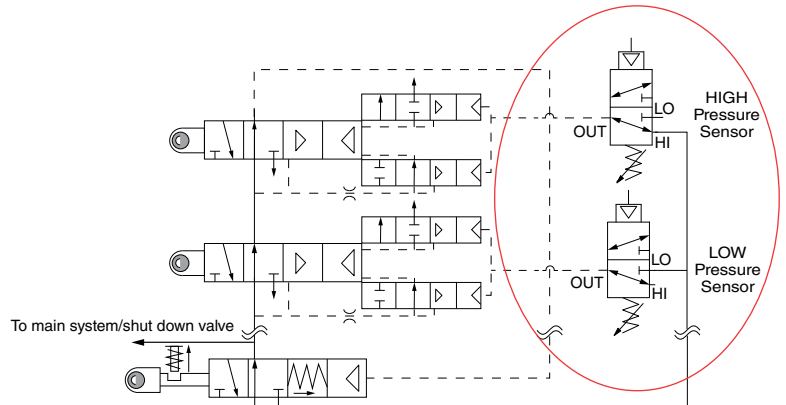
High/Low Pressure Sensor
 2 Valve Assembly
 BA3-8213-8214 Shown

Dimensions

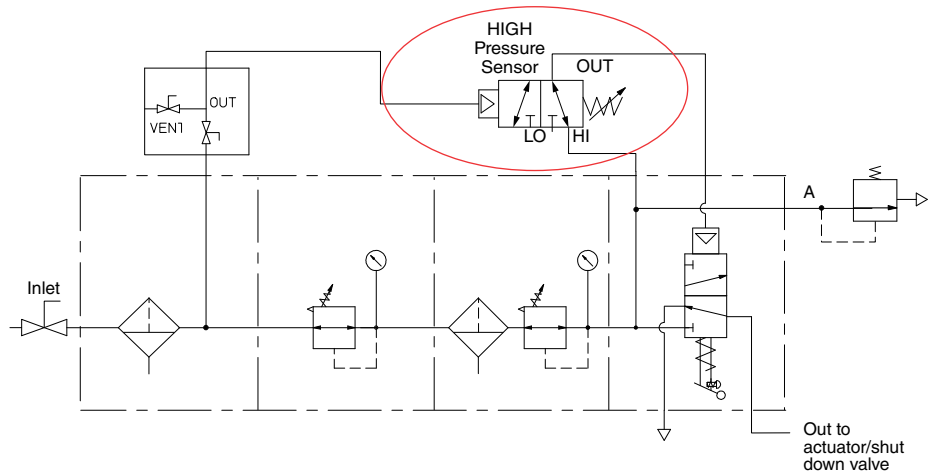


Applications

Well Head Control Typical First Out Indicator



Pipeline Control Over Pressure Protection



High-Low Trip System Manifold Assembly

