

Explosion-Proof Pressure Switch Model PS-12

The PS-12 Pressure Switch is for use in conjunction with BERMAD Deluge or other types of water control valves, to indicate discharge water pressure. This Pressure Switch offers reliability, repeatability and durability in a compact design. It is ideal for operation under the harsh conditions of DIV.1 or Zone 1 (II 2 G/D Ex d IIC T6 Certified) hazardous locations.

At the heart of the PS-12 is a snap action Belleville spring assembly, which transfers motion to a hermetically sealed 5 amp vibration resistant microswitch.

Applications: Chemical plants, refineries, gas and petroleum installations, offshore and marine vessels.



(for illustration only)

Features

- Stainless Steel construction
- Vibration resistant technology
- Hermetically sealed switch enclosure
- Convenient field adjustments
- Global approvals for hazardous locations
- Strain relief, high over pressure
- Mechanical contact lifecycle: 10 million cycle

Approvals

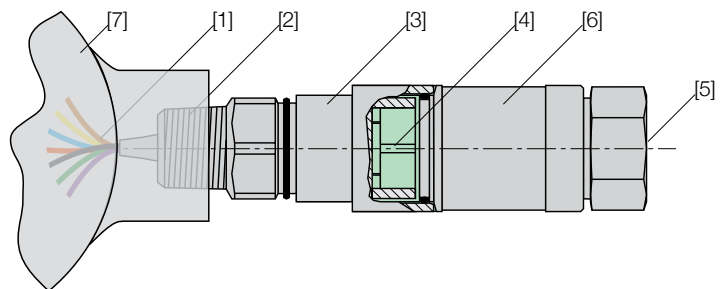
- UL Listed for hazardous locations
- Class I Div.1 & 2
- CENELEC Certified to ATEX directive II 2 Ex d IIC T6
- CSA Certified for Class I, Zone 1, Group IIC
- IP66 Certified

Materials

- Wetted parts: Stainless Steel 316
- Option: Monel 400
- Housing: Stainless Steel 316
- Diaphragm: Teflon® coated polyamide
- O-ring: NBR (Buna-N)
- Optional: Aluminum terminal box

End Connections

- Pressure: ½" NPT (F)
- Electric: ½" NPT (M)



Major Parts

- [1] Factory sealed leadwires
- [2] Electric port connection
- [3] Adjustment access cover
- [4] Slotted adjustment screw
- [5] Pressure connection (sensor)
- [6] Switch housing
- [7] Terminal Box (option)

Technical Data

Model Selection

- Model 12-SHSN3B (standard):
one SPDT, S.S. 316 wetted parts
- Model 12-SHDN3B:
two SPDT for DPDT action, S.S. 316 wetted parts
- Model 12-SHSN3B/M:
one SPDT Monel wetted parts

Pressure Setting & Range

- Factory Set: 2.5 bar high, 2.2 bar low
- Adjustable range: 1.0 to 3.8 bar (15 to 55 psi)
- Deadband: 0.2 bar low to 0.6 bar high (3 to 8 psi)
- Max. working pressure: 41 bar (600 psi)
- Set point repeatability: $\pm 1\%$ of adjustable range

Electrical Ratings

- 5 amp at 250 VAC
- 5 amp resistive and 3 amp inductive at 28 VDC
- Silver contacts

Enclosures Class

- NEMA 4X, 7 and 9⁽¹⁾ Classification Explosion-proof and watertight combination Class I Division 1 & 2 Groups A, B, C, D. Class II Division 1 & 2 Groups E, F, G
- ATEX Classification⁽²⁾ II 2 G/D Ex d IIC T6 Certified to ATEX directive IP 66 Certified, CE marked

Design Requirements

- NEMA 4X, 7 and 9⁽¹⁾ Classification Explosion-proof and watertight combination Class I Division 1 & 2 Groups A, B, C, D. Class II Division 1 & 2 Groups E, F, G
- ATEX Classification⁽²⁾ II 2 G/D Ex d IIC T6 Certified to ATEX directive IP 66 Certified, CE marked

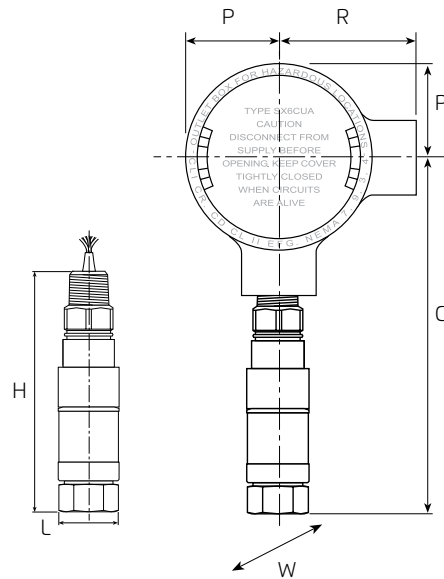
Note:

⁽¹⁾ UL-Listed for hazardous locations, CSA Class I, Zone 1, Group IIC.

⁽²⁾ Alternative certification: compliant to ATEX directive (94/9 EC) II 2 G/D Ex d IIC
IP 66, EN 50014, EN 50018, EN 50281, EN 60529

Ambient Temperature

- Storage and operation:
-50°C to +80°C (-58°F to +176°F)



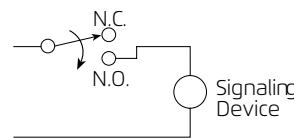
Pressure Switch

	mm	inch
H	124	4 ⁷ / ₈
L	31.7	1 ¹ / ₄

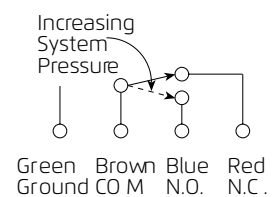
Pressure Switch with Terminal Box

	mm	inch
P	48	1 ⁷ / ₈
R	70	2 ³ / ₄
C	185	7 ³ / ₈
W	85	3 ³ / ₈

Typical Electrical Connections



Typical Local Alarm Circuit



Typical Waterflow Alarm

Leadwires

Standard wire length: 180 cm (72") when pressure switch is supplied without terminal box

Weight

- Pressure switch: approx. 0.34 kg (12 oz)
- Pressure switch with terminal box:
approx. 1.13 kg (40 oz)

