

EXPLOSION-PROOF PRESSURE SWITCH

Model PS-12

The PS-12 Pressure Switch is supplied for use 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 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.



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

Standard Certification

- UL Listed, cUL Certified
- Class I, Division 1 & 2, Groups A, B, C & D
- Class II, Division 1 & 2, Groups E, F & G
- Class III
- Class I, Zone 1, Group IIC
- SIL2 Certification
- IP66 and Type 4X, 7 & 9 Certified

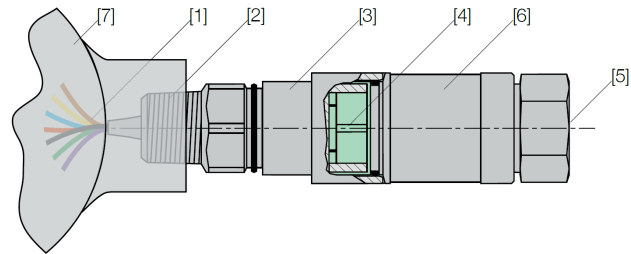
Optional *

- IECEX Certified
 - Ex d IIC T6 Gb
 - Ex tb IIIC T85°C Db
- ATEX Directive 2014/34/EU
 - II 2 G Ex db IIC T6 Gb
 - II 2 D Ex tb IIIC T85°C Db

End Connections

- Pressure (sensor): 1/2" NPT (F)
- Electric Cable Entry Port: 1/2" NPT (F)

Notes: * when provided without terminal box



Part	Description
1	Factory sealed leadwires
2	Electric port entry
3	Adjustment access cover
4	Adjusting screw
5	Pressure sensing connection
6	Cover
7	Terminal Box (optional)

Materials

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

Model Selection

Model 12-SHSN3B (standard):

one SPDT, S.S. 316 wetted parts

- **Model 12-SHDN3C:**

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: ±1% of adjustable range

Electrical Ratings

5 Amps @ 250 VAC

5 Amps @ and 3 amp inductive at 28 VDC

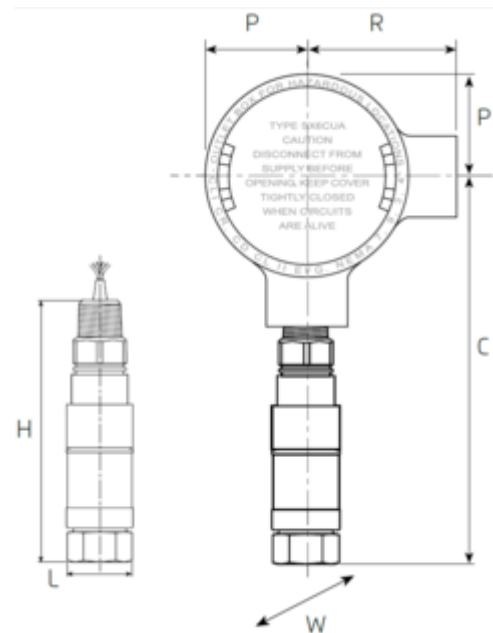
Silver contacts

Ambient Temperature & Weight

Ambient Temperature: -50°C to +80°C (-58°F to 176°F)

Weight: Pressure switch: approx. 0.34 kg (12 oz)

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



H	124mm/4.9"	W	85mm/3.3"
L	31.7mm/1.25"	C	185mm/2.4"
P	48mm/1.9"	R	70mm/2.75"

Installation

The Pressure switch is a critical unit in the safety system. It should be installed and wired by qualified and trained personnel only.

1. Refer to manufacturers Official Installation Instructions.
2. Make sure to select the proper equipment suited for the site hazardous location classifications, verify the enclosure marking is properly suited to this classifications.
2. The instrument should be wired in accordance with the requirements of the applied norm such as NEC, IEC or ATEX codes.
3. Certified fitting or cable gland shall be installed on the cable entry.
4. Apply Teflon tape to the pressure sensor threaded connection on the device.
5. The electric terminal connections shall follow the Electrical Wiring Diagrams shown in this document.
6. Ensure that the voltage supply and frequency corresponds with the marking on the enclosure label.

WARNING: This product shall be installed and wired by an authorized electrician only.

Electrical Wiring Diagrams



local alarm circuit

Waterflow alarm

Leadwires

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

Notes:

This pressure switch should be tested upon completion of installation and periodically thereafter in accordance with the applicable NFPA codes and standards and/or the authority having jurisdiction (the manufacturer recommendation is at least quarterly). Specifications subject to change without notice.