

PRESSURE SWITCHES

- ▶ PS31
- ▶ PS32
- ▶ PS41

Features

- Compact size
- Numerous housing and diaphragm materials
- Choice of electrical connectors
- Auto-setter manufacturing
- IP 65 NEMA 4 protection
- Micro or blade contact switch options
- Oxygen cleaned
- Broad pressure fitting selection

Benefits

- Highly adaptable to application-specific requirements
- Rugged durability for harsh environments
- Proven long life for high cycle applications
- Effortless 1-to-1 interchangeability
- Perfect for small spaces
- Cost effective designs
- Handles high proof or over pressure while maintaining calibration
- Maintains accuracy over a wide temperature range
- Easily configurable for media compatibility

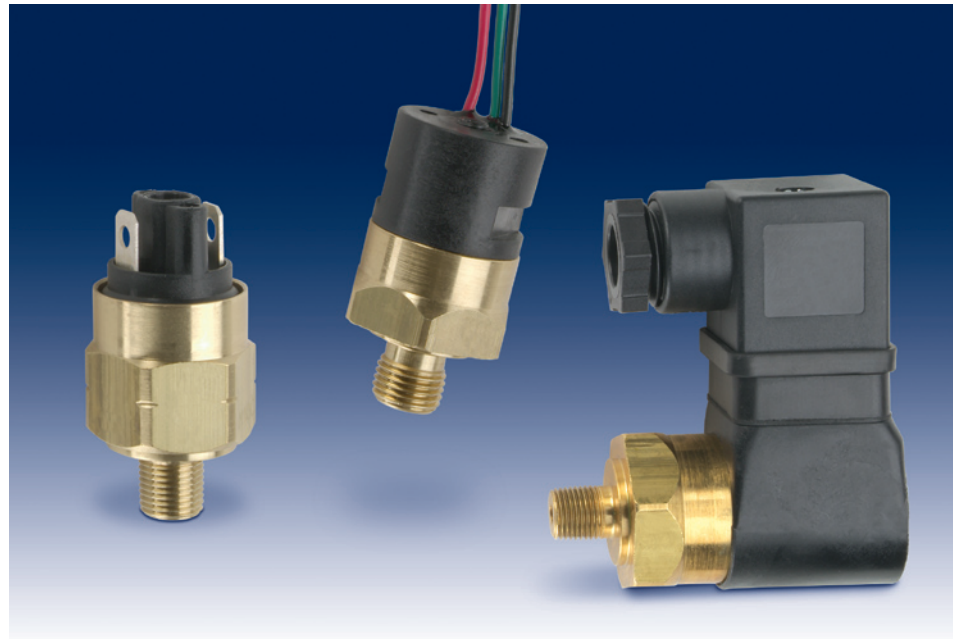
Equipment Used On

- Medical sterilizers
- Oxygen concentrators
- Endoscope reprocessors
- Ultra-pure water systems

Fluid Monitoring Applications

- Oxygen
- Pure H₂O
- Reagents
- Detergent/Wash
- Steam

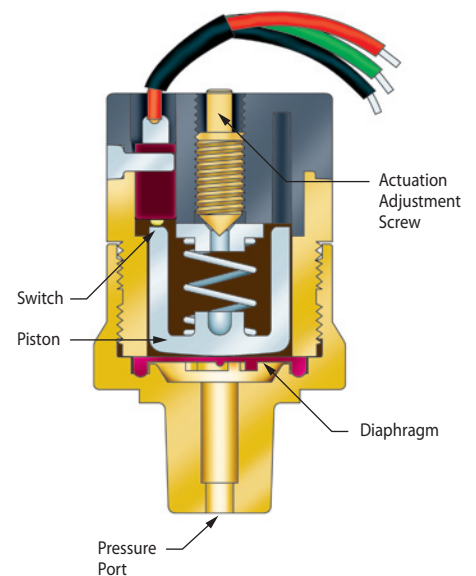
Subminiature Pressure Switches



GEMS offers medical equipment designers a choice of economical pressure switches. Three subminiature, electromechanical versions are shown here. These switches are ideal for a wide variety of switch actuation chores and as redundant systems to existing monitors such as pressure transducers. Using a piston/diaphragm design, the switches highlighted here marry a rigid piston, to provide high proof pressure value, with a flexible diaphragm for optimum sensitivity and accuracy. Repeatability ranges from 2% to 5% of the highest set point.

Operating Principle

Gems pressure switches employ a sensing element that consists of a flexible diaphragm and rigid piston working against a compression spring. The surface area of the diaphragm/piston combo and the degree of spring compression determine the amount of pressure necessary to actuate the switch. When pressure on the piston exceeds that exerted by the spring, the piston moves back and presses on a small electrical switch that closes or opens electrical contacts.

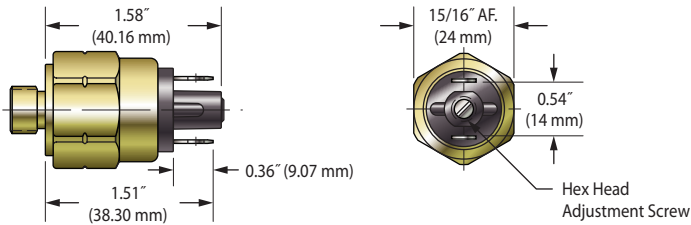


Comparison Chart

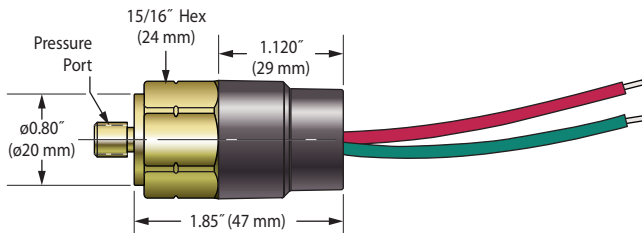
Model	PS31	PS32	PS41
Pressure Range – PSI (Bar)	2 to 150 (0.14 to 10)		3 to 100 (0.2 to 7)
Proof Pressure – PSI (Bar)	500 (35)		350 (25)
Diaphragm Material	Teflon®-coated Kapton®	Nitrile Elastomer, EPDM or Viton®	Nitrile Elastomer, EPDM or Viton®
Switch	SPST		SPST, SPDT
Repeatability	±5%		±2%
Approvals	CE		CE and UL
Housing Material	Brass or 316 Stainless Steel		

Dimensions

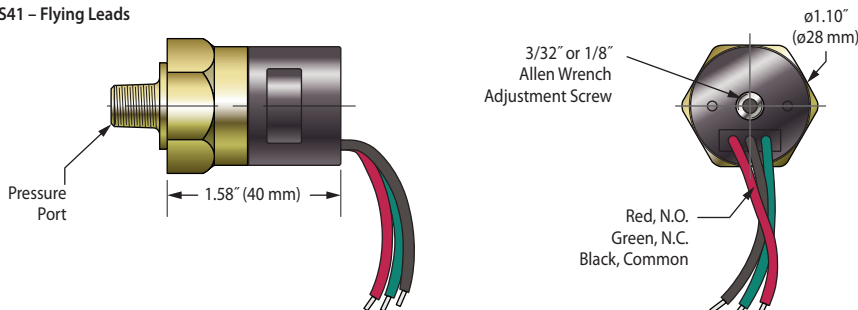
PS31 / PS32 – 1/4" Spades



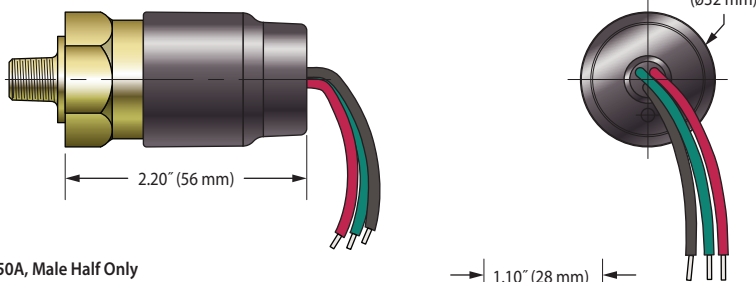
PS31 / PS32 – Flying Leads with IP option



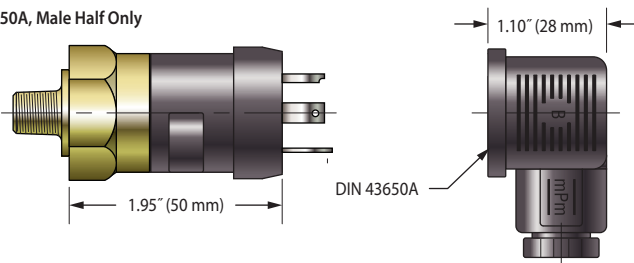
PS41 – Flying Leads



PS41 – Ingress Protection Option (IP66) with Flying Leads, Factory Set Only



PS41 – DIN 43650A, Male Half Only



PS31

- 5 to 150 psi (.345 to 10 bar)
- Ideal for pneumatic and low-pressure hydraulic applications
- Adjustable or factory set

These compact pressure switches are designed for OEM applications. Made economical with metal blade contacts in lieu of microswitches, the PS31 series features Kapton® diaphragms. Kapton® Polyimide maintains excellent physical properties over a wide temperature range. It also offers superb chemical resistance with no known organic solvents.

PS32

- 5 to 150 psi (.345 to 10 bar)
- Ideal for pneumatic and low-pressure hydraulic applications
- Adjustable or factory set

Like the PS31, these subminiature pressure switches incorporate metal blade contacts in lieu of microswitches for improved economy. This series differs from the PS31 with the use of long-lasting elastomer diaphragms made of Nitrile, EPDM or Viton®. Elastomer diaphragms offer increased sensitivity and life for applications without temperature extremes.

PS41

- 3 to 100 psi (0.2 to 7 bar)
- Field adjustable

These miniature pressure switches are designed for demanding applications where space and/or price are strong concerns. The PS41 series use robust microswitches, available in SPST or SPDT versions. Switches are field adjustable via an recessed-hex head screw that is hidden to protect against unauthorized tampering.

Our Medical Equipment Specialists are ready to discuss your sensor requirements, so don't hesitate to give us a call.

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