

PS41 – Economical Miniature Pressure Switches

▶ 3.5 to 100 psi (0.24 to 7 bar)

These miniature pressure switches are designed for demanding applications where space and/or price are strong concerns. The switches utilize a piston/diaphragm design, which incorporates the high proof pressure of piston technology with the sensitivity of diaphragm designs. Switches are field adjustable via an Allen head screw that is hidden to protect against unauthorized tampering.

Specifications

Switch	SPST; SPDT
Repeatability	See Table 1
Wetted Parts	
Diaphragm Material	Nitrile (optional EPDM, Viton® or Neoprene)
Fitting	Brass (optional 316 Stainless Steel)
Electrical Termination	DIN 43650A IP65; Terminals IP00; Flying Leads IP65; Option IP: IP66; Conduit with Flying Leads IP65
Proof Pressure	350 psi (24 bar)
Burst Pressure	700 psi (48 bar)
Approvals	CE, UL Approved units available
Weight, Approximate	Brass: 0.3 lbs. (0.14 kg)

Recommended Operating Temperature Limits

Diaphragm Material	Options Selected		
	No option, -10A, -SP or -RD	-RD or -RD and -G	-SP or -10A
Nitrile	15°F to 185°F (-9°C to +85°C)	15°F to 250°F (-9°C to +121°C)	15°F to 212°F (-9°C to +100°C)
Viton®	0°F to 185°F (-18°C to +85°C)	0°F to 250°F (-18°C to +121°C)	0°F to 212°F (-18°C to +100°C)
EPDM	-10°F to +185°F (-23°C to +85°C)	-10°F to +250°F (-23°C to +121°C)	-10°F to +212°F (-23°C to +100°C)
Neoprene	-10°F to +185°F (-23°C to +85°C)	-10°F to +250°F (-23°C to +121°C)	-10°F to +212°F (-23°C to +100°C)

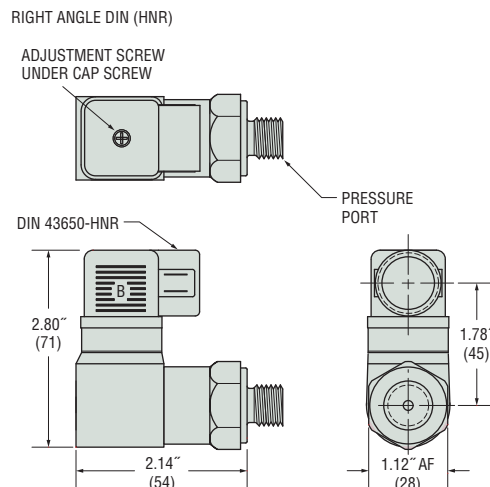
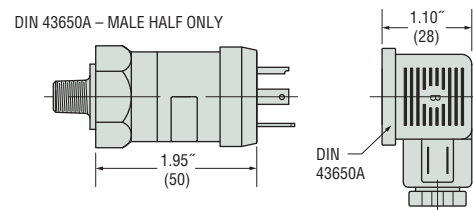
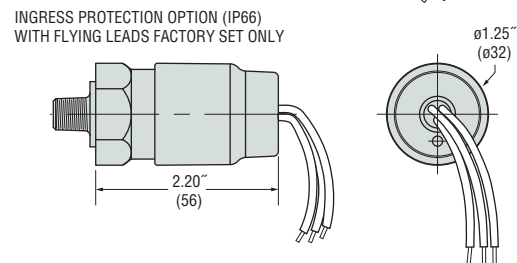
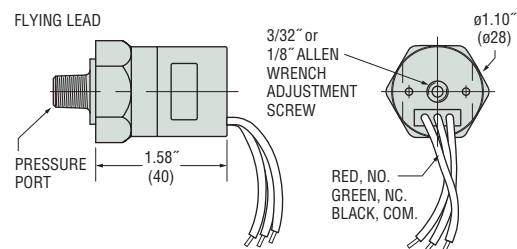
Note: Switches may function below the cold temperature limit but the set points and deadband will increase. Consult factory for details.

Electrical Switch Ratings

Options Selected	AC	DC
No option or -RD	5 amps @ 125/250 Volts	5 amps resistive, 3 amps inductive @ 28 Volts
-G or -RD with -G	1 amp @ 125 Volts	1 amp resistive, 0.5 amp inductive @ 28 Volts
-SP without -G	10.1 amps @ 125/250 Volts	—
-SP with -G	2 amps @ 125/250 Volts	—

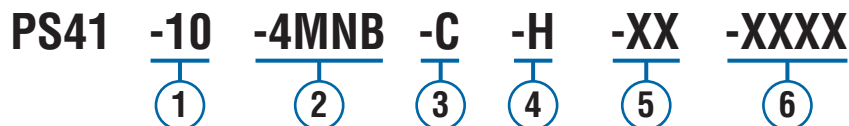


Dimensions



How To Order

Use the **Bold** characters from the chart below to construct a product code. Please reference Notes.



① Pressure Range Code

Insert Pressure Range Code from Table 1, below.

② Pressure Fitting¹

Brass

- 2MNB = 1/8" NPTM
- 4MNB = 1/4" NPTM
- 2MGB = 1/8" BSPM (G type)
- 4MGB = 1/4" BSPM (G type)
- 4MSB = 7/16"-20 SAE Male
- 6MSB = 9/16"-18 SAE Male

316 Stainless Steel

- 2MNS = 1/8" NPTM
- 4MNS = 1/4" NPTM
- 4MGS = 1/4" BSPM (G type)
- 4MSS = 7/16"-20 SAE Male

③ Circuit

- A = SPST/N.O.
- B = SPST/N.C.
- C = SPDT

④ Electrical Termination

- SP = Spade Terminals²
- FLXX = Flying Leads³
- FLSXX = Flying Leads w/PVC Shrink Tubing³
- ELXX = 1/2" NPT Male Conduit w/Flying Leads⁴
- CABXX = 18 AWG PVC Cable⁵
 - H = DIN 43650A Male Half Only⁶
 - HR = Right Angle DIN 43650A Male Half Only⁶
 - HC = DIN 43650A 9mm Cable Clamp⁶
 - HCR = Right Angle DIN 43650A 9mm Cable Clamp⁶
 - HN = DIN 43650A with 1/2" Female NPT Conduit⁶
 - HNR = Right Angle DIN 43650A with 1/2" Female NPT Conduit⁶

⑤ Options⁷

- V = Viton[®] Diaphragm
- N = Neoprene Diaphragm
- E = EPDM Diaphragm
- 10A = 10A @ 125/250 VAC Max. Rating
- G = Gold Contacts
(for loads less than 12 mA @ 12 VDC)
- RD = Reduced Differential
(25% reduction typical)
- IP = Ingress Protection⁸
- OXY = Oxygen Cleaned
- WF = Weather Pack Connector, Female
- WM = Weather Pack Connector, Male
- DE = Deutsch Connector, Male, DT04 Series

⑥ Fixed Set Point (optional)

- A. Specify set point **-FS**
(in PSI or BAR, see example)⁹
- B. Set Point Actuation
R on Rising Pressure
F on Falling Pressure
Example: **-FS0.5BARF** for 0.5 BAR Falling
or **-FS5PSIR** for 5 PSI Rising

Notes:

1. Other fittings available. Consult factory.
2. Requires **-10A** or **-G** option. (20% increase in deadband typical)
3. 1/8" is standard. Specify lead length in inches (max. 48"). e.g. **-FL18** or **-FLS30**.
4. 1/2" is standard. Specify lead length in inches (max. 48"). e.g. **-EL18** or **-EL30**.
5. 36" is minimum. Specify cable length in inches. e.g. **-CAB36** or **-CAB120**.
6. DIN connectors require **-C** SPDT circuit.
7. Options **-10A**, **-G** or **-RD** cannot be combined.
8. Ingress Protection is available only with **-FL**, **-FLS** or **-CAB** Electrical Termination choices. Ingress Protection requires Fixed Set Point **-FS**.
9. Set Point must be within Pressure Range selected in Step 1.

Table 1 — Pressure Range Codes

Pressure Range Code	Pressure Range	Repeatability*	Average Deadband**
10	3.5-8 psi (0.24-0.55 bar)	±0.35 psi (0.024 bar) +2% of setting	1.50 psi (0.14 bar) +7% of setting
20	7-30 psi (0.48-2.07 bar)	±0.8 psi (0.055 bar) +2% of setting	3 psi (0.21 bar) +8% of setting
30	25-100 psi (1.7-6.9 bar)	±2.0 psi (0.138 bar) +2% of setting	5 psig (0.28 bar) +10% of setting

* Repeatability and set point of units may change due to the effects of temperature.

** These numbers are for the standard microswitch. With either the **-SP** or **-10A** option, the values are typically 20% greater than those listed. With the **-RD** option, the values will be typically 25% less than those listed. In certain applications deadband can be tailored and controlled to customer specifications. Consult factory for details.