

P-SERIES Pressure Switches

Switches for Vacuum through 6000 psig with Adjustable Set Points and Fixed or Adjustable Deadband

Features:

- Set point repeatability, $\pm 1\%$ of operating range.
- All wiring terminals, adjustments and visual scales are accessible from the front of the switch.
- Choice of open frame type, general purpose or watertight enclosure.
- Choice of fixed, limited-adjustable or full-range adjustable deadband.
- Choice of single or two-stage units.
- Compact size.
- Mounts in any position.
- Rugged and vibration resistant; e.g., for compressors.
- Visual adjustment scales in psig and bars.
- Wide selection of transducer wetted materials suitable for air, water, oil or corrosive fluids.
- Mix and match switch and transducer components for increased stock flexibility or to change pressure ranges in field.

General Description:

ASCO P-Series pressure switches consist of an open frame or enclosure protected switch unit and a transducer unit. They can be ordered separately for customer stocking and/or field assembly or as a complete factory-assembled unit.

Switch

P-Series pressure switch units incorporate the unique ASCO TRI-POINT alternating fulcrum balance plate to control the operation of one or more electrical snap-action switches. The electrical snap-action switch together with the adjusting mechanism is a fully-tested, self-contained subassembly.

Transducer

Transducer unit incorporates a diaphragm/piston type pressure sensor, and is also a fully-tested, self-contained subassembly.

Operation

When pressure is applied to the transducer it is converted into movement of the piston. This piston movement is then used to control the operation of the electrical snap-action switch in the switch unit.

Options (See pages 34-35)



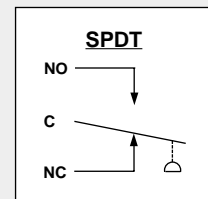
Standard Electrical Ratings

PA, PB, PC ① Series

- 15 Amp Res., 125 VAC
- 10 Amp Res., 250 VAC
- 1/8 HP, 125 VAC
- 1/4 HP, 250 VAC
- 1/2 Amp Res., 125 VDC
- 1/4 Amp Res., 250 VDC

PG Series

- 15 Amp Res., 125 VAC
- 10 Amp Res., 250 VAC
- 1/8 HP, 125 VAC
- 1/4 HP, 250 VAC



- ① PC Series, UL recognized component, rated 10 Amp Res., 125/250 VAC; 1/3 HP 125/250 VAC.
- ② Open frame construction, UL recognized component.
- ③ FM listed for air flow interlocking service.

Standard Temperature Ratings

- Ambient:** -4°F (-20°C) to 122°F (50°C)
- Fluid:**
 - For Buna "N" or Neoprene Diaphragm: -4°F (-20°C) to 180°F (82°C)
 - For Viton Diaphragm: -4°F (-20°C) to 250°F (121°C)
 - For 316 SS Diaphragm: -50°F (-45°C) to 300°F (149°C)
 - For Nylon Transducers: -4°F (-20°C) to 180°F (82°C)



General Purpose Enclosure



Watertight Enclosure

How to Select and Order

ASCO P-Series switches consist of two components, the switch unit and the transducer unit.

How to Select

1. Select the adjustable operating range based on desired actuation pressure.
2. Check that proof pressure is sufficient.
3. Read across and select the desired P-Series switch unit with the proper enclosure.
4. Continue across and select a matching transducer unit compatible with the fluid.

How to Order

Factory assembled – Simply order the switch and transducer unit by catalog number joined by a slash (/), e.g., PA36A/RD30A11.

Field assembled – Simply order the switch and transducer units separately by individual catalog number, e.g., one PA36A and one RD30A11.

Options – Add appropriate suffix for desired option or accessory (see pages 34-35).

Important Note: The third digit of each of the catalog numbers must be identical, e.g., PA 3]6A and RD 3]0A11.

Select transducer unit below






Standard connection is 1/4" NPT
(optional 1/2" NPT add suffix "B" to catalog number)

Transducer Unit

These **gauge pressure type transducers** provide for one pressure connection in the bottom of the transducer. They are diaphragm/piston type transducers using an elastomer in contact with the fluid, backed by a piston cylinder. This allows high sensitivity for low pressures and strength for high pressures.

PA, PB, or PC unit below

PA Switch Unit	PB Switch Unit	PC Switch Unit
<p>Single-Stage Adjustable Deadband units allow independent adjustment of the set and reset points over the full operating range of the switch. The minimum difference between set and reset points is the deadband listed below; the maximum difference is the full range of the switch.</p>  <p>Open Frame</p>	<p>Single-Stage Fixed Deadband units have an adjustable set point and a non-adjustable automatic reset point.</p>  <p>Open Frame</p>	<p>Two-Stage Fixed Deadband units consist of two separate snap-action switches, each with an independently adjustable set point and non-adjustable reset point. The difference between the set and reset points of each switch is the deadband listed below; the minimum difference between the set points of the two switches is the separation.</p>  <p>Open Frame</p>

Specifications		Adjustable Deadband				Fixed Deadband				Two-Stage Fixed Deadband					Transducer Units						
Adjustable Operating Range (psig)	Proof Pressure (psig)	Adjustable Deadband Maximum Full Scale	Minimum At Mid-Range (psig) ①	Open Frame	General Purpose	Watertight Enclosure	Fixed Deadband At Mid-Range (psig) ①	Open Frame	General Purpose	Watertight Enclosure	Fixed Deadband At Mid-Range (psig) ①	Separation Maximum Full Scale	Minimum At Mid-Range (psig) ①	Open Frame	General Purpose	Watertight Enclosure	Air or Gas ②	Air, Oil or Gas	Water, Air, Oil or Gas	Corrosive Fluids	
																				Catalog No.	Catalog No.
Vacuum 0 - 30" Hg	50	4" Hg	---	PA36A	PA30A	PA31B	1" Hg	PB36A	PB30A	PB31B	2.7" Hg	3" Hg	---	PC36A	PC30A	PC31B	---	RV34A11	RV34A21	---	RV34A32
Compound Pressure 30"Hg - 14 psig	50	6" Hg	---	PA26A	PA20A	PA21B	1" Hg	PB26A	PB20A	PB21B	4.3" Hg	6" Hg	---	PC26A	PC20A	PC21B	---	RV24A11	RV24A21	---	RV24A32
0 - 4	60	---	---	---	---	---	0.05	PB46A	PB40A	PB41B	---	---	---	---	---	---	RD40A71	RD40A11	RD40A21	---	RD40A42
0 - 9	60	1.2	---	PA36A	PA30A	PA31B	0.4	PB36A	PB30A	PB31B	0.6	1.0	---	PC36A	PC30A	PC31B	RD30A71	RD30A11	RD30A21	---	RD30A42
2 - 18	60	1.8	---	PA26A	PA20A	PA21B	0.4	PB26A	PB20A	PB21B	0.8	1.8	---	PC26A	PC20A	PC21B	RD20A71	RD20A11	RD20A21	---	RD20A42
2 - 18	100	2.5	---	PA36A	PA30A	PA31B	0.6	PB36A	PB30A	PB31B	1.2	1.8	---	PC36A	PC30A	PC31B	---	---	---	RE30A44	---
4 - 36	150	4.0	---	PA26A	PA20A	PA21B	0.7	PB26A	PB20A	PB21B	2.0	3.6	---	PC26A	PC20A	PC21B	RE20A71	RE20A11	RE20A21	RE20A44	RE20A42
6 - 60	150	5.4	---	PA16A	PA10A	PA11B	0.9	PB16A	PB10A	PB11B	2.4	6.0	---	PC16A	PC10A	PC11B	RE10A71	RE10A11	RE10A21	RE10A44	RE10A42
10 - 100	200	9	---	PA16A	PA10A	PA11B	1.5	PB16A	PB10A	PB11B	4	10	---	PC16A	PC10A	PC11B	RF10A71	RF10A11	RF10A21	RF10A44	RF10A42
20 - 200	400	18	---	PA16A	PA10A	PA11B	3.0	PB16A	PB10A	PB11B	8	20	---	PC16A	PC10A	PC11B	RG10A71	RG10A11	RG10A21	RG10A44	RG10A42
30 - 300	450	27	---	PA16A	PA10A	PA11B	5.0	PB16A	PB10A	PB11B	12	30	---	PC16A	PC10A	PC11B	---	RH10A11	RH10A21	RH10A44	RH10A42
40 - 400	500	36	---	PA16A	PA10A	PA11B	6	PB16A	PB10A	PB11B	16	40	---	PC16A	PC10A	PC11B	---	RJ10A11	RJ10A21	RJ10A44	RJ10A42
60 - 600	2000	54	---	PA26A	PA20A	PA21B	12	PB26A	PB20A	PB21B	30	60	---	PC26A	PC20A	PC21B	---	---	RL20A21	---	RL20A42
100 - 1000	2000	90	---	PA16A	PA10A	PA11B	15	PB16A	PB10A	PB11B	40	100	---	PC16A	PC10A	PC11B	---	---	RL10A21	---	RL10A42
160 - 1650	5000	250	---	PA26A	PA20A	PA21B	100	PB26A	PB20A	PB21B	200	300	---	PC26A	PC20A	PC21B	---	---	RN20B21	---	RN20B42
270 - 2700	5000	300	---	PA16A	PA10A	PA11B	125	PB16A	PB10A	PB11B	250	400	---	PC16A	PC10A	PC11B	---	---	RN10B21	---	RN10B42
600 - 6000	9000	650	---	PA16A	PA10A	PA11B	200	PB16A	PB10A	PB11B	400	600	---	PC16A	PC10A	PC11B	---	---	---	---	RQ10B42

All switch units above are in stock for immediate delivery.

All switch units and transducer units above are in stock for immediate delivery.

① Values shown are nominal. ② Rated proof pressure on RF10A71 is 150 psig and on RG10A71 is 300 psig.

③ 316 SS transducer deadbands are approx. 50% greater than listed. ④ Transducers ending in 32 have 303 SS process connections, not 316 SS.