

HEAVY-DUTY DIVISION 1 INDUSTRIAL PRESSURE SWITCHES

See switch accessories on omega.com for audible alarms and relay modules.

Vacuum to 3000 psi

PSW-400 Series



- ✓ Dual-Chamber Design Isolates Electronics from Pressure Media
- ✓ Heavy-Duty Cast Aluminum with Corrosion-Resistant Epoxy Coating
- ✓ Meets NEMA 7 and 9 Classifications
- ✓ Gasketed Covers
- ✓ Tamper/Vibration-Resistant Setpoint Adjustment
- ✓ Surface and Mounting Bracket Standard

Designed for applications in hazardous atmospheres, PSW-400 Series pressure switches offer complete reliability thanks to a rugged, die-cast aluminum enclosure with waterproof gaskets and 2 separate chambers for electronics and actuator. Single or dual setpoints are available, with all critical parts made of stainless steel. In addition, the PSW-400 Series employs vibration-resistant setpoints and a calibrated scale.

Definition of Division 1:

Locations where hazardous material concentrations exist continuously, intermittently, or periodically under normal operating conditions.

SPECIFICATIONS

Approval: UL listed; Class I, Divisions 1 and 2, Groups B, C, D; Class II, Divisions 1 and 2, Groups E, F, G; CSA certified

Storage Temp: -29 to 65°C (-20 to 150°F)

Ambient Temp Limits: -29 to 65°C (-20 to 150°F)

Process Temp Limits:

Stainless Steel: 149°C (300°F)

Buna-N: 65°C (150°F)

PSW-405, 3 to 15 psi range, shown smaller than actual size.



Mounting bracket included

Enclosure Classification:

NEMA 7 and 9 hazardous location, explosion proof, dust-ignition proof

Setpoint Repeatability: ±1% of range

Switch Output: 1 or 2 SPDT switches can be wired "normally open" or "normally closed"

Electrical Rating:

10 A: 125/250 Vac

0.5 A: 125 Vdc

0.25 A: 250 Vdc

15 A: 125/250 Vac

Optional Hermetically Sealed 5 A: 125/250 Vac

Enclosure: Dual-chamber, epoxy-coated cast aluminum, gasketed

Electrical Connection: 2 ea. ¼ NPT electrical conduit hubs

Pressure Connection: ¼ FNPT, vacuum to 600 psi; ½ MNPT;

¼ FNPT, 1000 to 3000 psi

Connection Material:

Vacuum Through inH₂O Ranges:

Carbon steel

All psi Ranges: 316 SS

Dimensions:

psi Ranges:

206 (max) H x 140 W x 70 mm D

(from center line) (7.1 H x 5.5 W x 2.8" D

from center line)

inH₂O Ranges: W and D = 140 mm (5.5")



Setpoint chamber with 2 adjustable scales.

Weight: 2.7 kg (6 lb)

OPTIONAL CONFIGURATIONS:

Oxygen Service: Specify option "-X6B" for oxygen cleaning, and extra cost (316 SS only)

Pressure Switch Options:

(add suffix to part number and extra cost) Hermetically sealed 5 A 125/250 Vac switch for extra protection in severe environments:

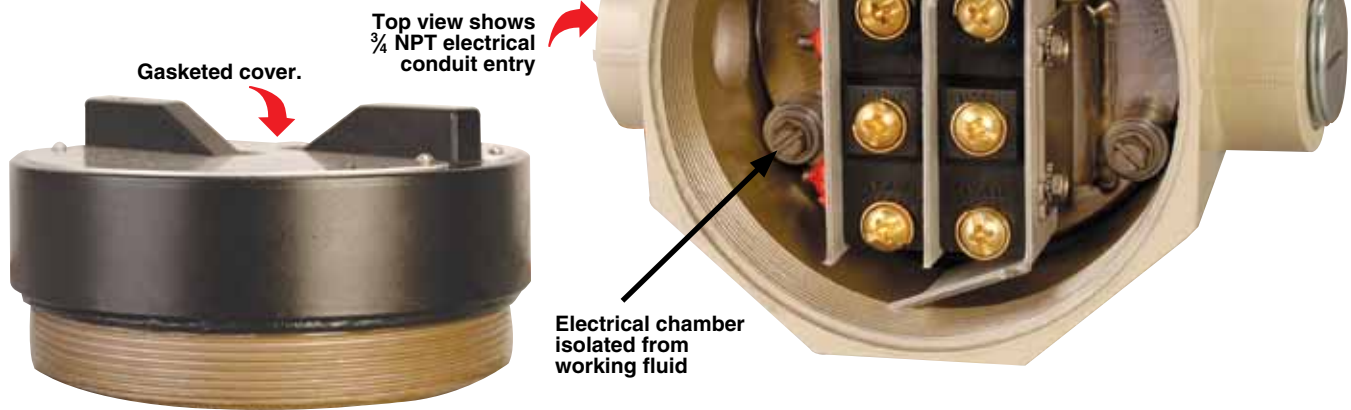
"-P" Single Setpoint.

"-PP" Dual Setpoint.

316 SS Welded Pressure Activator:

"-S" 15 to 600 psi ranges only.

INDUSTRIAL PRESSURE SWITCH WITH DUAL-CHAMBER DESIGN



To Order					
MODEL NO.	ADJUSTABLE RANGE		DEADBAND STANDARD UNITS	PROOF PRESSURE	SWITCH
	STANDARD	METRIC			
SINGLE SETPOINT, ADJUSTABLE DEADBAND, BUNA-N DIAPHRAGM, O-RING, 1/4 FNPT CONNECTION					
PSW-401	-6 to -30 inHg vac	-20 to -100 kPa	3 to 27 inHg	250 psi	10 A SPDT
PSW-402	6 to 30 inH ₂ O	1.5 to 7.5 kPa	3 to 27 inH ₂ O	20 psi	10 A SPDT
PSW-403	12 to 60 inH ₂ O	3 to 15 kPa	3 to 54 inH ₂ O	20 psi	10 A SPDT
PSW-404	30 to 150 inH ₂ O	7.4 to 37 kPa	15 to 135 inH ₂ O	20 psi	10 A SPDT
PSW-405	3 to 15 psi	20 to 100 kPa	2 to 13 psi	500 psi	10 A SPDT
PSW-406	6 to 30 psi	40 to 200 kPa	2 to 27	500 psi	10 A SPDT
PSW-407	20 to 100 psi	140 to 700 kPa	5 to 90	1000 psi	10 A SPDT
PSW-408	40 to 200 psi	280 to 1400 kPa	13 to 180	1000 psi	10 A SPDT
PSW-409	80 to 400 psi	0.56 to 2.8 MPa	20 to 360	2400 psi	10 A SPDT
PSW-410	200 to 1000 psi	1.4 to 7 MPa	100 to 900	12,000 psi	10 A SPDT
PSW-411	600 to 3000 psi	4.2 to 21 MPa	200 to 2800	12,000 psi	10 A SPDT
DUAL SETPOINT, FIXED DEADBAND, BUNA-N DIAPHRAGM, 1/4 FNPT CONNECTION					
PSW-421	-6 to -30 inHg vac	-20 to -100 kPa	0.5 to 1 inHg	250 psi	Two 15 A SPDT
PSW-422	6 to 30 inH ₂ O	1.5 to 7.5 kPa	0.5 to 1 inH ₂ O	20 psi	Two 15 A SPDT
PSW-423	12 to 60 inH ₂ O	3 to 15 kPa	0.5 to 1.3 inH ₂ O	20 psi	Two 15 A SPDT
PSW-424	30 to 150 inH ₂ O	7.4 to 37 kPa	1.5 to 3 inH ₂ O	20 psi	Two 15 A SPDT
PSW-425	3 to 15 psi	20 to 100 kPa	0.5 to 1 psi	500 psi	Two 15 A SPDT
PSW-426	6 to 30 psi	40 to 200 kPa	0.5 to 1.5 psi	500 psi	Two 15 A SPDT
PSW-427	20 to 100 psi	140 to 700 kPa	1 to 2.5 psi	1000 psi	Two 15 A SPDT
PSW-428	40 to 200 psi	280 to 1400 kPa	1 to 4 psi	1000 psi	Two 15 A SPDT
PSW-429	80 to 400 psi	0.56 to 2.8 MPa	4 to 8 psi	2400 psi	Two 15 A SPDT
PSW-430	200 to 1000 psi	1.4 to 7 MPa	7 to 30 psi	12000 psi	Two 15 A SPDT
PSW-431	600 to 3000 psi	4.2 to 21 MPa	30 to 70 psi	12000 psi	Two 15 A SPDT
DUAL SETPOINT, FIXED DEADBAND, 316 SS DIAPHRAGM, 1/4 FNPT CONNECTION					
PSW-445	3 to 15 psi	20 to 100 kPa	0.5 to 1 psi	500 psi	Two 15 A SPDT
PSW-446	6 to 30 psi	40 to 200 kPa	1 to 2 psi	500 psi	Two 15 A SPDT
PSW-447	20 to 100 psi	140 to 700 kPa	2 to 4 psi	1000 psi	Two 15 A SPDT
PSW-448	40 to 200 psi	280 to 1400 kPa	3 to 8 psi	1000 psi	Two 15 A SPDT

Comes complete with mounting bracket, and operator's manual.

Ordering Example: PSW-425, dual-setpoint switch, range 3 to 15 psi, with fixed deadband and Buna-N diaphragm.

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Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

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