

Adjustable dead band weatherproof type pressure switch

Model: P947

Spec. sheet no. PD09-07

Service intended

P947 bellows type pressure switch can be used in a variety of process lines. Internal micro switch is operated by pressure of various fluids such as atmospheric pressure and water pressure. The pressure sensing part is a piston actuated assembly.

Fluid

Gas and oil

Repeatability

±1.0% of adjustable range

Adjustable range (mbar, kPa, bar, MPa)

2 kPa to 15 MPa

Dead band

Within 8 to 20% of adjustable range

Working temperature

Ambient : -20 ~ 65°C

Fluid : Max. 100°C

Degree of protection

EN60529/IEC529/IP65



Standard features

Pressure connection

Stainless steel (316L SS), Monel and Hastelloy-C

Conduit connection

¾" NPF (F)

Element

Bellows

Stainless steel (316L SS), Monel and Hastelloy-C

Contact

Micro contact type

One SPDT

One DPDT

Case and cover

ALDC 12.1

Silver gray finished aluminium

Process connection

¼", ⅜", ½" PT, NPT and PF

Contact rating

Resistance load

AC 125 V / 250, 10 A

DC 125 V, 0.5 A

DC 8 V, 10 A

DC 14 V, 10 A

DC 30 V, 10 A

Inductive load

AC 125 V, 6 A / AC 250 V, 4 A

DC 125 V, 0.05 A

DC 8 V, 6 A

DC 14 V, 6 A

DC 30 V / 6 A

Optional

Bracket : Wall mounting, 304SS and 316SS

±0.5% of adjustable range

WISE[®]

1. Base model

P947 Adjustable dead band
Weatherproof type pressure switch
(Only single set point)

2. Dead band

A Adjustable (Within 8 ~ 20% of adjustable range)

3. Switch form

1 One SPDT
2 One DPDT

4. Process connection

C 1/4"
D 3/8"
E 1/2"

5. Connection type

B PF
C PT
D NPT
E NPT (F)

6. Unit

H bar
I MPa
J kPa
S mbar

7. Setting range

XXX Refer to pressure range table

8. Process connection and element material

3 316SS and 316L SS
Z Monel and Monel
H Hastelloy-C and Hastelloy-C

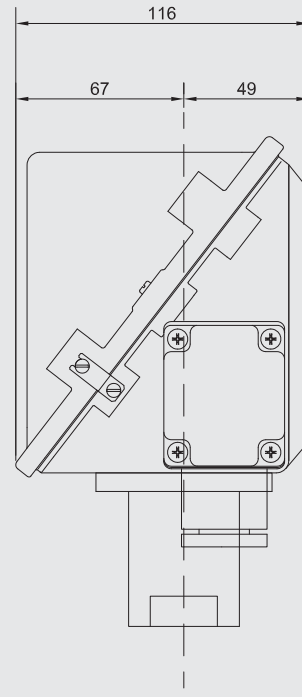
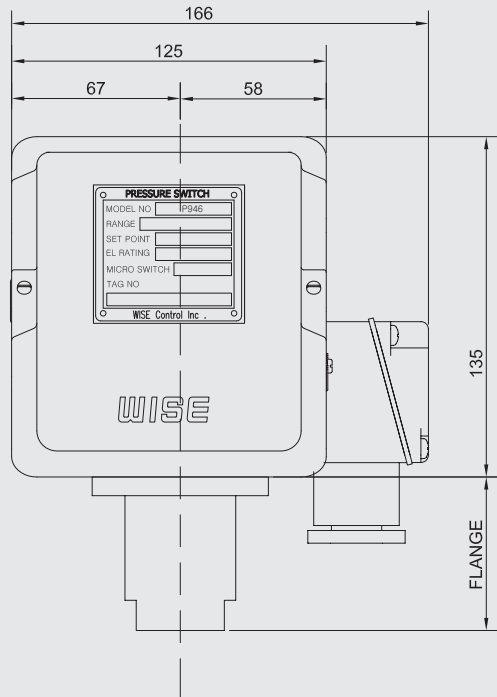
9. Options

0 None
1 Mounting bracket
2 Diaphragm seal
4 1/2" or 3/4" NPT (F) conduit connection

1	2	3	4	5	6	7	8	9
P947	A	1	C	B	H	XXX	3	0

Sample
ordering code

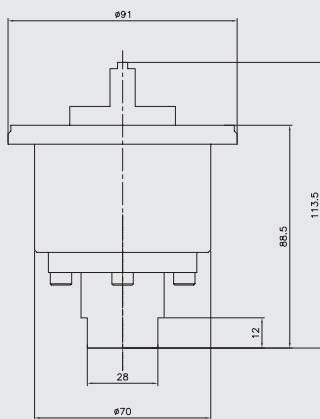
P947 : Type of mounting



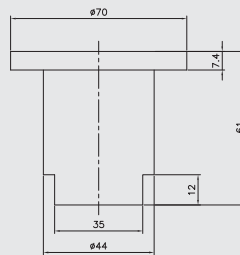
Vacuum & Low Pressure Range
-1~3 bar

Middle Pressure Range
3~20 bar

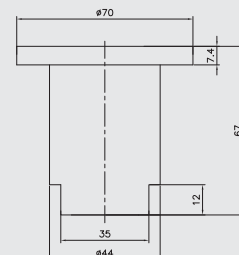
Middle-High & High Pressure Range
20~150 bar



Type A



Type B



Type C

Pressure switch

A bi-stable electro mechanical device than actuates/ deactuates one or more electrical switching element at a predetermined discrete pressure upon rising or falling.

Adjustable range

The span of pressure between upper and lower limits within which the pressure switch can be adjusted to actuate/deactuate. It is expressed for increasing pressure.

Setpoint

That discrete pressure at which the pressure switch is adjusted to actuate/deactuate on rising or falling pressure. It must fall with the adjustable range and be called out as increasing.

Deadband

The difference in pressure between the increasing set point and the decreasing setpoint.

Proofpressure (Pmax)

The maximum input pressure that can be continuously applied to the pressure switch without causing permanent change of set point, leakage or material failure.

Burst pressure

The maximum input pressure that can be continuously applied to the pressure switch without causing leakage or catastrophic material failure. Permanent change of set point may occur, or the device may be rendered inoperative.

Repeatability

The ability of a pressure switch to successively operate at a set point that is approached from a starting point in the same direction and returns to the starting point over three consecutive cycles to establish a pressure profile.

The closeness of the measures set point values is normally expressed as a percentage of full scale (maximum adjustable range pressure).

Pressure range table

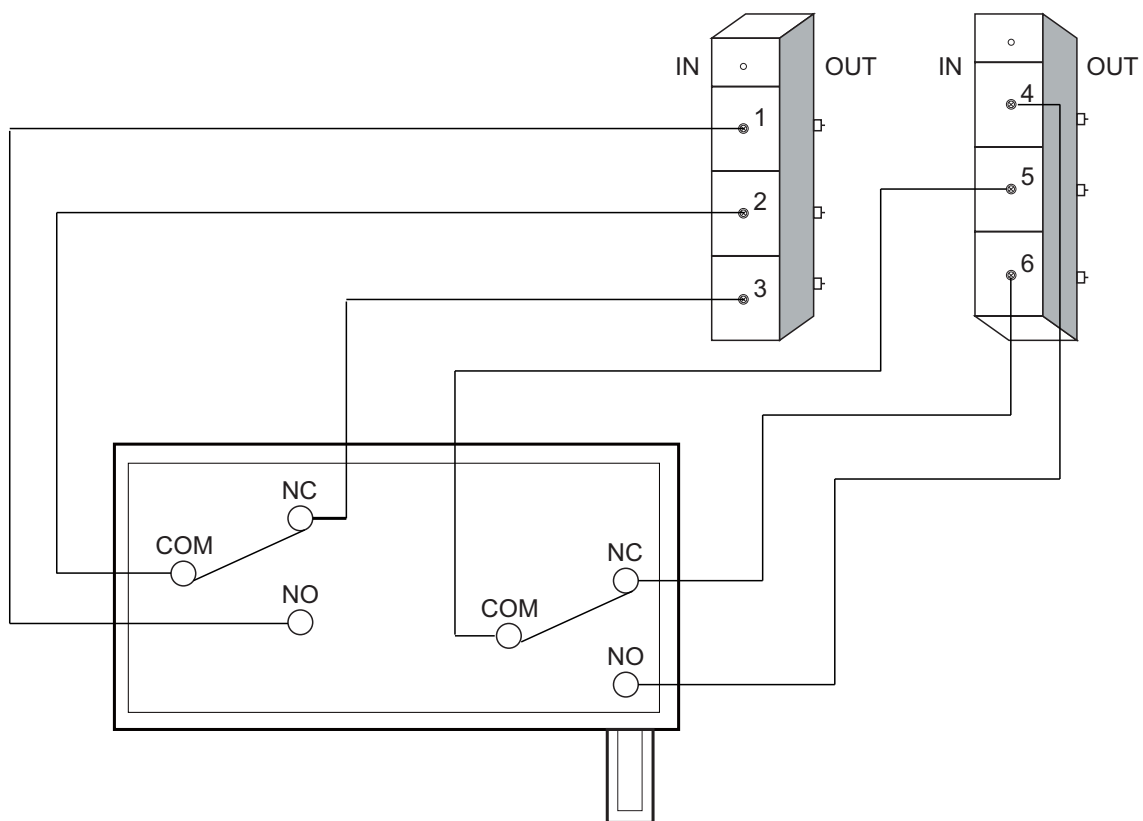
Code	Adjustable setting range		Dead band		Pmax	Frang size (mm)	Burst range	
			One SPDT Setpoint	One DPDT Setpoint				
	bar	kPa	bar		bar	bar	bar	MPa
929	0.003 ~ 0.07	0.3 ~ 7	Within 5% adjustable range	Within 10% adjustable range	10	88 ~ 98	35	3.5
933	0.027 ~ 0.15	2.7 ~ 15						
938	0.045 ~ 0.3	4.5 ~ 30						
941	0.075 ~ 0.5	7.5 ~ 50						
949	0.09 ~ 0.6	9 ~ 60						
942	0.12 ~ 0.8	12 ~ 80			20	63	70	7
902	0.15 ~ 1	15 ~ 100						
903	0.3 ~ 2	30 ~ 200						
904	0.45 ~ 3	45 ~ 300						
906	0.9 ~ 6	90 ~ 600						
908	1.5 ~ 10	0.15 ~ 1 MPa			50	60	170	17
911	2.25 ~ 15	0.225 ~ 1.5 MPa						
912	3 ~ 20	0.3 ~ 2 MPa						
914	4.5 ~ 30	0.45 ~ 3 MPa						
916	7.5 ~ 50	0.75 ~ 5 MPa						
923	8.5 ~ 70	0.85 ~ 7 MPa	100		200	20		
919	10.5 ~ 100	1.05 ~ 10 MPa						
926	15.5 ~ 150	1.55 ~ 15 MPa						
					150		400	40

Code	Resistance load (A)		Inductive load (A)	
	NC	NO	NC	NO
125 V AC		10		6
250 V AC		10		4
8 V DC		10		6
14 V DC		10		6
30 V DC		10		4
125 V DC		0.5		0.05
250 V DC		0.25		0.03

DPDT switching element

Switching elements operated by a common lever assembly so simultaneous actuation / deactuation occurs at both the increasing and the decreasing set point.

Two independent electrical circuits can be switched, i.e. one AC and one DC.



	NO	COM	NC
Switch 1	1	2	3
Switch 2	4	5	6