

Weatherproof type pressure switch (Local setpoint adjustable)

Model: P940 series

Spec. sheet no. PD09-04

Service intended

P940 series pressure switches are micro contact type, and these are suitable for corrosive fluids and high pressure measurements. Dead band is fixed.

Nominal diameter

Refer to dimension drawing

Repeatability

±1.0 % of adjustable range

Adjustable setting range (MPa, kPa, bar)

-0.1 ~ 0 to -0.1 ~ 2.5 MPa

0 ~ 0.1 to 0 ~ 35 MPa

Dead band

Fixed

One SPDT : Approx. 5 % adjustable range

Two SPDT : Approx. 10 % of adjustable range

Working temperature

Ambient : -20 ~ 65 °C

Fluid : Max. 100 °C



Standard features

Pressure connection

Stainless steel (316SS)

Element

Stainless steel (316SS)

Case and cover

ALDC 12.1

Silver gray painted

Contact

Micro contact type

One SPDT or two SPDT

Contact rating

SPDT contact rating

AC 125 V / 250 V, 15 A

DC 125 V, 0.4 A for resistance load

DC 125V, 0.03 A for resistance load

Conduit connection

1/2" PF (Single setpoint) P941

3/4" PF (Dual setpoint) P942

Process connection

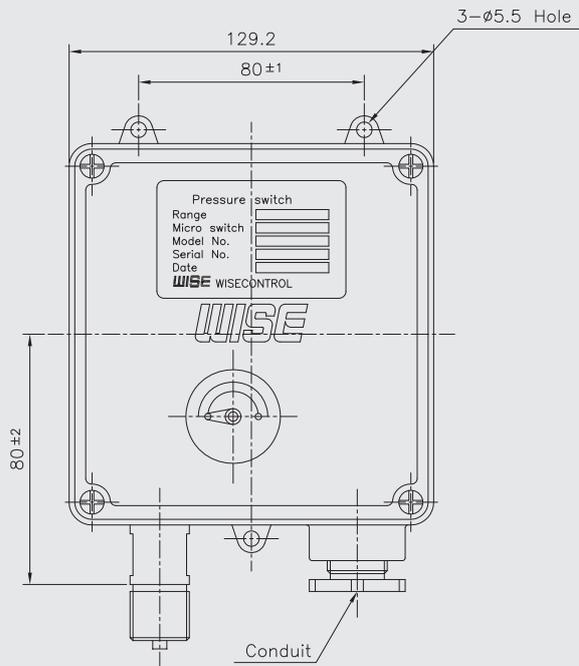
3/8", 1/2" PT, NPT and PF

1. Base model**P941** Weatherproof type pressure switch (Single setpoint)**P942** Weather proof type pressure switch (Dual setpoint)**2. Unused character****9B3** None**3. Process connection****D** 3/8"**E** 1/2"**4. Connection type****B** PF**C** PT**D** NPT**5. Measuring unit****X** Refer to pressure unit and range table**6. Range****XXX** Refer to pressure unit and range table**7. Pressure connection material****3** 316SS**8. Option****0** None**1** Accessories**Sample ordering code**

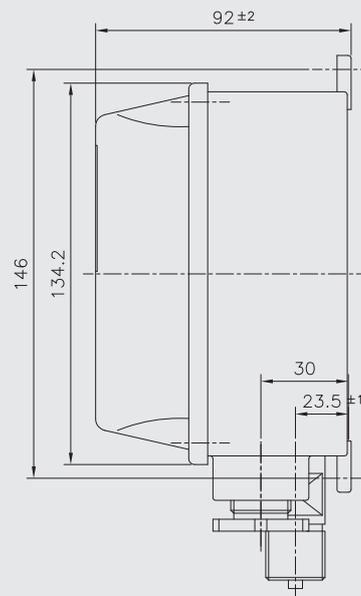
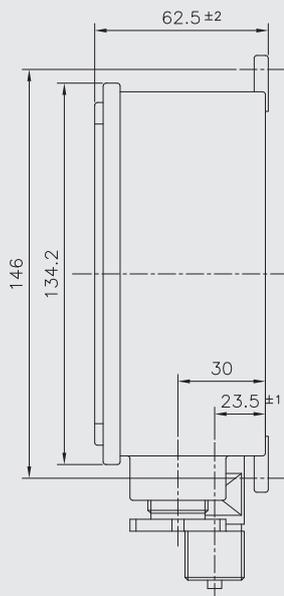
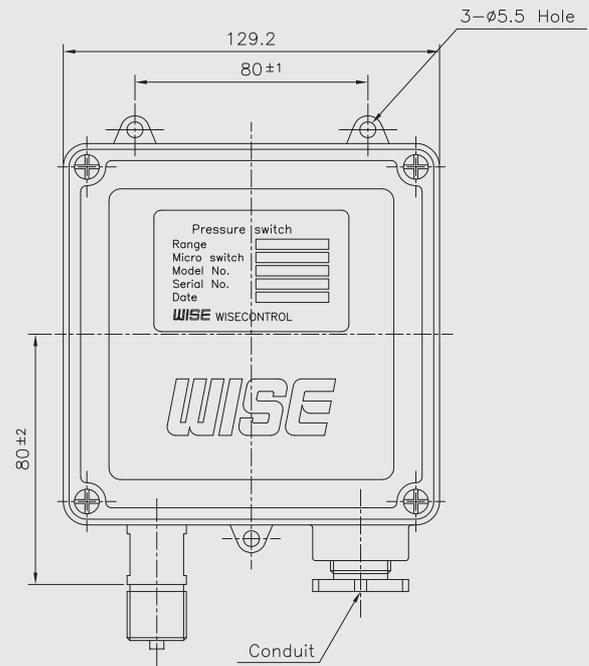
1	2	3	4	5	6	7	8
P941	9B3	D	B	X	XXX	3	0

P94X : Type of mounting

Code P941



Code P942



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.

Dead band

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

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 unit and range table

Range and code	Unit and code		Model number	
	H : bar	I : MPa	P941	P942
026*	-1 ~ 0	-0.1 ~ 0	O	O
041*	0 ~ 1	0 ~ 0.1	O	O
042	0 ~ 2	0 ~ 0.2	O	O
043	0 ~ 3	0 ~ 0.3	O	O
044	0 ~ 4	0 ~ 0.4	O	O
045	0 ~ 6	0 ~ 0.6	O	O
047	0 ~ 10	0 ~ 1	O	O
050	0 ~ 15	0 ~ 1.5	O	O
051	0 ~ 20	0 ~ 2	O	O
052	0 ~ 25	0 ~ 2.5	O	O
054	0 ~ 35	0 ~ 3.5	O	O
055	0 ~ 50	0 ~ 5	O	O
057	0 ~ 70	0 ~ 7	O	O
058	0 ~ 100	0 ~ 10	O	O
059	0 ~ 150	0 ~ 15	O	O
062	0 ~ 250	0 ~ 25	O	O
064	0 ~ 350	0 ~ 35	O	O
027	-1 ~ 1	-0.1 ~ 0.1	O	O
028	-1 ~ 2	-0.1 ~ 0.2	O	O
029	-1 ~ 3	-0.1 ~ 0.3	O	O
030	-1 ~ 4	-0.1 ~ 0.4	O	O
031	-1 ~ 6	-0.1 ~ 0.6	O	O
032	-1 ~ 10	-0.1 ~ 1	O	O
033	-1 ~ 15	-0.1 ~ 1.5	O	O
034	-1 ~ 20	-0.1 ~ 2	O	O

O : Available

* Note : Dead band

One SPDT : Approx. 10 % of adjustable range.

Two SPDT : Approx. 20 % of adjustable range.

Micro contact

General

The micro contact has a large switching capacity with high repeat accuracy. The contact mechanism is a crossbar type with gold alloy contacts, which ensures highly reliable operations for micro loads.

Characteristics

Item	Micro switch
Operating speed	0.01 mm to 1 m/s
Mechanical operating frequency	240 operations/min
Insulation resistance	100 MΩ 1 min at 500 VDC
Contact resistance	0.015 Ω max
Shock resistance	100 m/sec ² max
Ambient temperature	-25 ~ 80 °C
Ambient humidity	35 ~ 85 % RH

Specifications

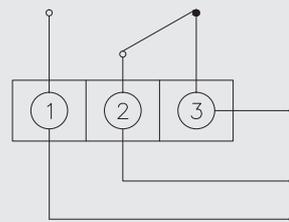
Rated voltage	Non inductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 V AC	15		3	1.5	15		5	2.5
250 V AC	15		2.5	1.25	15		3	1.5
8 V DC	15		3	1.5	15		5	2.5
30 V DC	2		2	1.4	1		1	1
125 V DC	0.4		0.4	0.4	0.03		0.03	0.03
250 V DC	0.2		0.2	0.2	0.02		0.02	0.02

SPDT switching element

Single-pole, double throw (SPDT) has three connection : C-common, NO-normally open and NC-normally close, which allows the switching element to be electrically to the circuit NO or NC state.

One SPDT

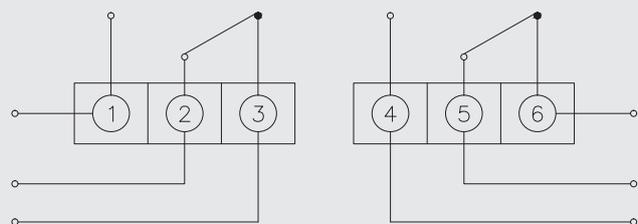
Pressure reach the upper or lower limit setpoint, circuit closed and opened.



①:NO ②:COM ③:NC

Two SPDT

Pressure reach the upper or lower limit setpoint, two circuit simultaneous closed and opened.



①,④:NO ②,⑤:COM ③,⑥:NC

NO : Normal open
NC : Normal close

Large empty rectangular area for writing or drawing.