

# Explosion proof pressure switch

**Model: P955**

Spec. sheet no. **PD09-14**

## Service intended

P955 diaphragm-type pressure switch can be utilized in a boiler processing line. Its internal micro switch is triggered by the pressure of various fluids, such as atmospheric pressure or water pressure.

The pressure setting range is adjustable.



## Fluid

Gas and oil

## Repeatability

±1.0 % of adjustable range

## Adjustable range (mbar, kPa, bar, MPa)

0.3 kPa to 50 kPa

-1.0 ~ -0.1 bar

## Dead band

Fixed

One SPDT : Approx. 5~6 % adjustable range

## Working temperature

Ambient : -25~65 °C (O-ring material: NBR, Viton)

-40~65 °C (O-ring material: Silicone)

Fluid : Max. 100 °C

## Degree of protection

EN60529/IEC529/IP67



## Standard features

### Pressure connection

Stainless steel (316SS)

316L SS

### Element

Stainless steel (316L SS)

Viton (Up to 4 kPa adjustable range)

### Case and cover

ALDC 12.1

Silver gray finished aluminium

### Process connection

1/4", 3/8", 1/2" PT, NPT and PF

### Contact

Micro contact type

One SPDT (P953-1B3)

### 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 inductive load

### Conduit connection

3/4" NPT (F)

### Certificates

KCS Ex db IIC T6 Gb

**WISE®**

**1. Base model****P955** Explosion proof pressure switch**2. Switch form****1** One SPDT**3. Unused character****B3** None**4. Process connection****C** 1/4"**D** 3/8"**E** 1/2"**5. Connection type****B** PF**C** PT**D** NPT**6. Unit****H** bar**I** MPa**J** kPa**S** mbar**7. Range****XXX** Refer to pressure range table**8. Element material and Pressure connection****3** 316SS / 316L SS**V** Viton / 316SS (Up to 4 kPa adjustable range)**9. Options****0** None**2** 2" pipe mounting bracket 304SS**3** 2" pipe mounting bracket 316SS**10. Ambient temperature (°C)****1** -25~65 °C (O-ring material: NBR, Viton)**2** -40~65 °C (O-ring material: Silicone)**Sample ordering code**

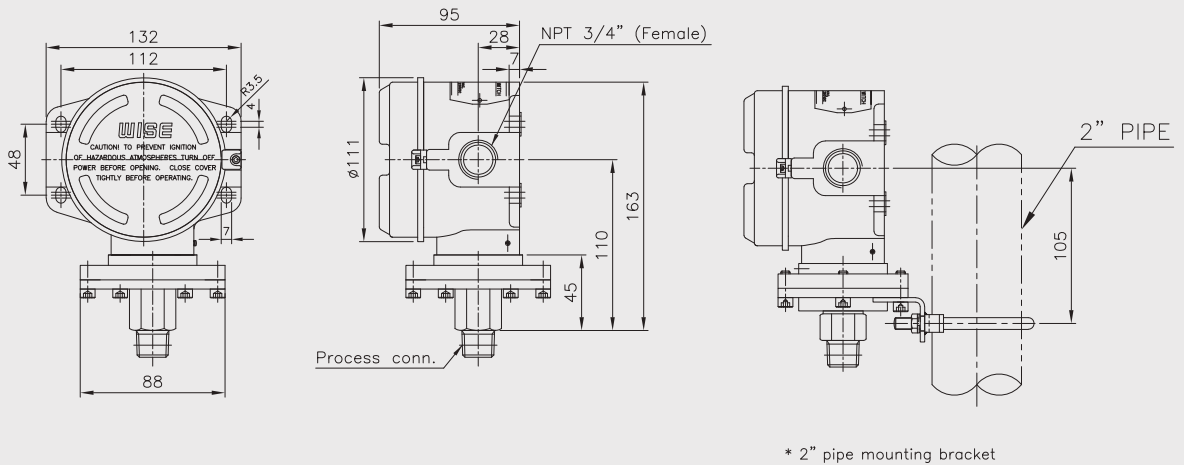
1	2	3	4	5	6	7	8	9	10
P955	1	B3	C	B	H	XXX	3	0	1



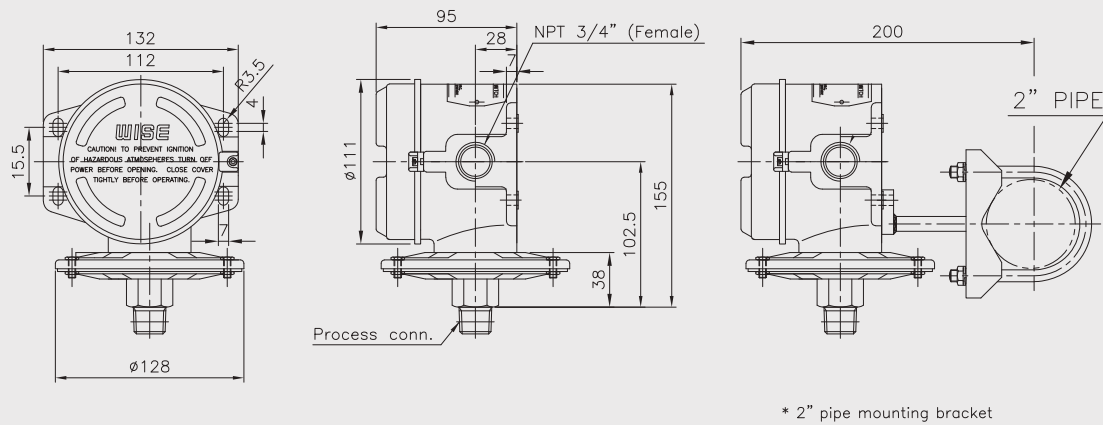
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## P955 : Type of mounting

- ① P1\_Nominal diameter  $\varnothing 88$  : 7.5 ~ 50 kPa  
(Pmax. 10 bar)



- ② P5\_0.3 ~ 3 kPa  
(Pmax 2 bar)



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 setpoint.

Working range

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

Max.Working 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.

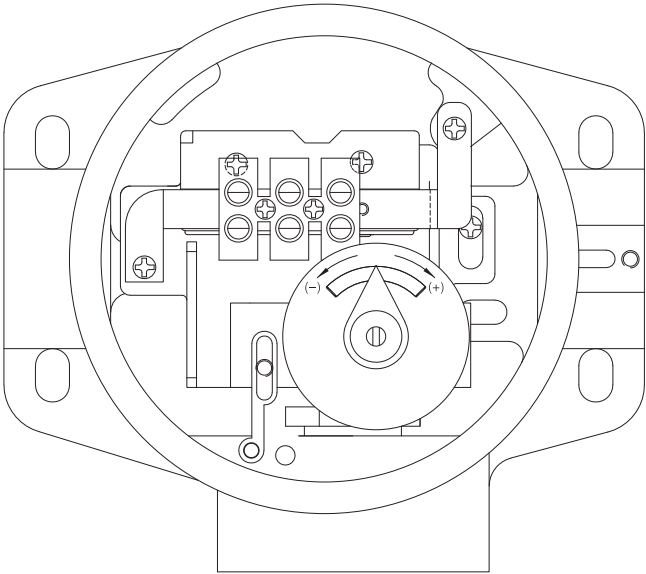
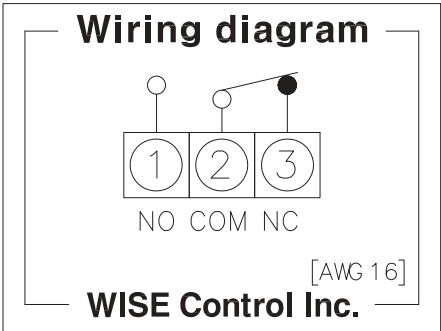
Repeatability

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).

Adjust setting point

This product can be adjusted locally within the range specified on the control panel on-site.  
It is important to note that the product is certified as explosion-proof, and therefore, adjusting the setting point in an explosion-proof area is strictly prohibited.



Pressure range table

Code	Adjustable Setting range		Dead band	Working range	Flange size (mm)	Max. Working pressure		Type of mounting
	bar	kPa		bar	bar	bar	MPa	
900	-1 ~ -0.1	-100 ~ -10	Within 5~6 % adjustable range	10	88 ~ 98	35	3.5	P1
927	0.003 ~ 0.03	0.3 ~ 3		2	128	6	0.6	P5
930	0.02 ~ 0.07	2 ~ 7		5	88	35	3.5	P1
929	0.003 ~ 0.07	0.3 ~ 7						
901	0.075 ~ 0.15	7.5 ~ 15		10				
938	0.045 ~ 0.3	4.5 ~ 30						
941	0.075 ~ 0.5	7.5 ~ 50						

## 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

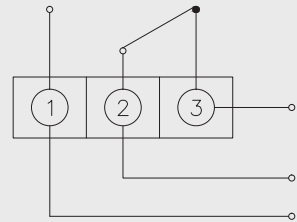
Item	Micro switch
Operating speed	0.01 mm to 1 m/s
Mechanical operating frequency	240 operations/min
Insulation resistance	100 MΩ 1 min at 500 VDC
Contact resistance	0.015 Ω max
Shock resistance	100 m/sec <sup>2</sup> max
Ambient temperature	-25 ~ 80 °C
Ambient humidity	35 ~ 85 % RH

### 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

### One SPDT

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



①:NO ②:COM ③:NC

