

Indicating type differential pressure switch with bellows element

Model: P640 series

Spec. sheet no. PD06-06

Service intended

The P640 series are designed to measure differential pressure from 25 kPa to 2.0 MPa at static pressure 10 MPa and have electrical contact. A set of two stainless steel bellows mounted on a force balance allows direct reading of the actual differential pressure.

Nominal diameter

160 mm

Accuracy

±1.0% of full scale

±1.5% of full scale

Scale range (MPa, kPa, bar, mbar)

0 ~ 25 kPa to 0 ~ 0.2 MPa (P641 model)

0 ~ 0.25 MPa to 0 ~ 2.0 MPa (P642 model)

Static pressure

Max. 10 MPa

Working temperature

Ambient : -20 ~ 65°C

Fluid : Max. 100°C

Degree of protection

EN60529/IEC529/IP65

Temperature effect

Accuracy at temperature above and below the reference temperature (20°C) will be effected by approximately ±0.5% per 10°C of full scale



Standard features

Pressure connection

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

Element

Bellows

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

Case and cover

ALDC12.1, Black painted

Screwed type

Window

Safety glass

Dial

White aluminium with black graduations

Filling liquid for differential cell

Silicone oil

Pointer

Black painted aluminium alloy (Zero adjustable)

Process connection

1/4" NPT(F)

1/2" NPT(F) at 3-way manifold valve and 5-way manifold valve

Standard accessories

Mounting bracket for 2" pipe

mounting with silver gray finished steel

Optional

■ Remote seal - Not available with less than 40 kPa of differential pressure range

■ Mounting bracket with 316SS for 2" pipe

■ 3-way manifold valve (316SS, Monel)

■ 5-way manifold valve (316SS, Monel)

Conduit connection

3/4" PF(F)

Contact

Contact rating : AC 250 V 3 A / 125 V 5 A

DC 250 V 0.2 A / 125 V 0.4 A / 30 V 4 A

Dielectric strength : AC 500 V / MIN

Type : Micro contact, One and two SPDT

WISE®

1. Base model

P641 Differential pressure indicating switch with bellows element
(0 ~ 25 kPa to 0 ~ 0.2 MPa)

P642 Differential pressure indicating switch with bellows element
(0 ~ 0.25 MPa to 0 ~ 2.0 MPa)

2. Switch form

- 1 High alarm contact differential pressure switch
- 2 High and low alarm contact differential pressure switch
- 3 Low alarm contact differential pressure switch
- 4 High and hi/high alarm contact differential pressure switch
- 5 Low and lo/low alarm contact differential pressure switch

3. Type of mounting

- D Bottom connection, mounting bracket for 2" pipe

4. Accuracy

- 3 ±1.0% of full scale (Optional)
- 4 ±1.5% of full scale (Standard)

5. Process connection

- C ¼" NPT(F)
- E ½" NPT(F) (Only at 3-way and 5-way manifold valve)

6. Mounting bracket

- D Standard bracket
- E 304SS mounting bracket
- F 316SS mounting bracket
- W Wall mounting bracket (316SS)
- N None

7. Unit

- H bar
- I MPa
- J kPa
- S mbar

8. Range

XXX Refer to pressure unit and range table

9. Element and flange material

- 1 316L SS
- 2 Monel
- 3 Hastelloy-C

10. Options

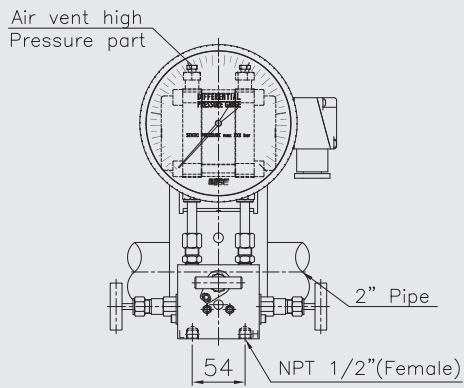
- 0 None
- 1 Manifold valve
- 8 ½" or ¾" NPT(F) conduit connection

1	2	3	4	5	6	7	8	9	10
P641	1	D	4	C	D	H	XXX	1	0

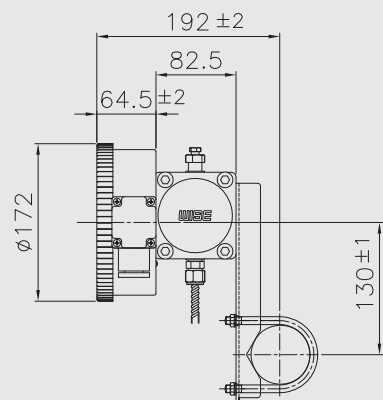
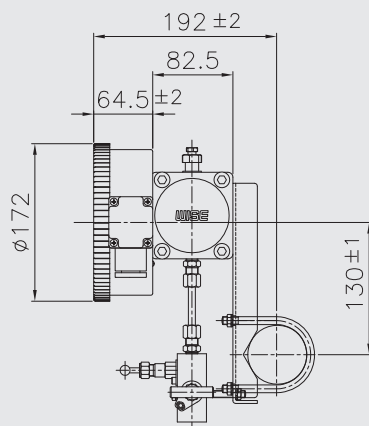
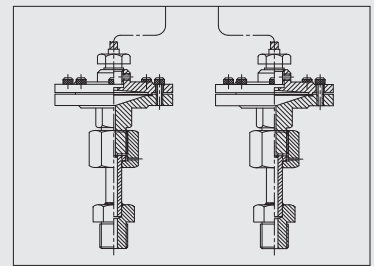
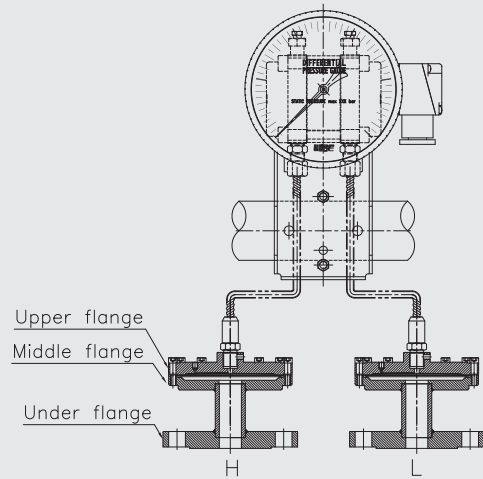
Sample
ordering code

P64X : Type of mounting

Code:(D) P640



Code:(D) P640(Remote seal)



Pressure unit and range table

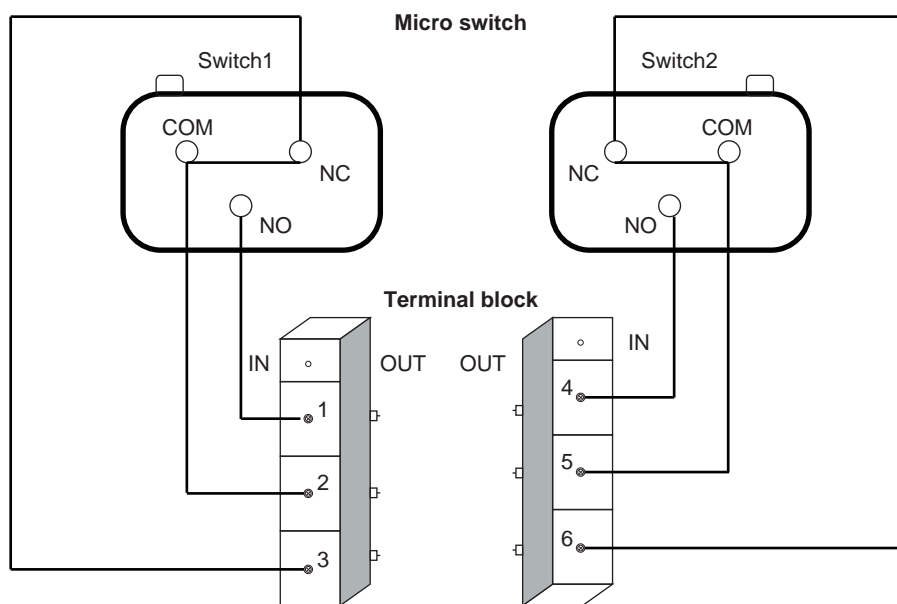
Range and code	Unit and code				Model
	J : kPa	S : mbar	H : bar	I : MPa	
118	0 ~ 25	0 ~ 250	X	X	P641
121	0 ~ 40	0 ~ 400	X	X	
125	0 ~ 60	0 ~ 600	X	X	
041	0 ~ 100	X	0 ~ 1	0 ~ 0.1	
133	0 ~ 160	X	0 ~ 1.6	0 ~ 0.16	
042	0 ~ 200	X	0 ~ 2	0 ~ 0.2	
134	0 ~ 250	X	0 ~ 2.5	0 ~ 0.25	P642
044	0 ~ 400	X	0 ~ 4	0 ~ 0.4	
045	0 ~ 600	X	0 ~ 6	0 ~ 0.6	
047	0 ~ 1,000	X	0 ~ 10	0 ~ 1	
143	X	X	0 ~ 16	0 ~ 1.6	
051	X	X	0 ~ 20	0 ~ 2	

O : Available X : Not available

Contact rating

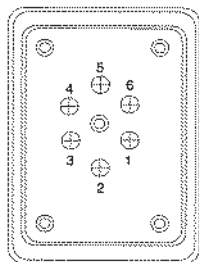
Rated voltage	Resistance load (A)		Inductive load (A)	
	NC	NO	NC	NO
125 V AC	5 A		3 A	
250 V AC	3 A		2 A	
8 V DC	5 A		5 A	4 A
14 V DC	5 A		4 A	4 A
30 V DC	4 A		3 A	3 A
125 V DC	0.4 A		0.4 A	0.4 A
250 V DC	0.2 A		0.2 A	0.2 A

Terminal block arrangement



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

Terminal block arrangement



1. High alarm

- ① Normal open
- ② Common
- ③ Normal close

2. High and low alarm

High alarm

- ① Normal open
- ② Common
- ③ Normal close

Low alarm

- ④ Normal open
- ⑤ Common
- ⑥ Normal close

3. Low alarm

- ① Normal open
- ② Common
- ③ Normal close

4. High and h/High alarm

High alarm

- ① Normal open
- ② Common
- ③ Normal close

High and high alarm

- ④ Normal open
- ⑤ Common
- ⑥ Normal close

5. Low and l/Low alarm

High alarm

- ① Normal open
- ② Common
- ③ Normal close

Low and low alarm

- ④ Normal open
- ⑤ Common
- ⑥ Normal close

