

Ultra high purity pressure switch

Model: P840 series (316L type)

Spec. sheet no. PD08-04

Service intended

P840 series are specially designed for the ultra-high purity gas distribution system used in a semiconductor, electronic, medical, biotechnology and pharmaceutical industry.



Nominal diameter

50mm (2")

Switch point accuracy

±2.0% of full scale

Scale range

0 ~ 28 MPa

Working pressure

Steady pressure : 75% of full scale value

Fluctuating pressure : 67% of full scale value

Working temperature

Ambient : -40 ~ 65°C

Fluid : Max. 100°C

Temperature effect

Accuracy at temperature above and below the reference temperature (20°C) will be effected by approximately ±0.4% per 10°C of full scale



Standard features

Mechanical

Pressure connection

Type 316L stainless steel electropolished

low mount or center back mount

surface finish $Ra \leq 0.25 \mu m$

■ 1/4" NPT male thread

■ VCR® male or female face seal fitting

Case

Type 304 stainless steel,

Electropolished with pressure relief

Cover and window

Twist-lock polycarbonate

Movement

Stainless steel

Pointer

Black painted aluminium alloy

Pressure element

Type 316L stainless steel

<6 MPa : C-type bourdon tube

≥6 MPa : Helical type bourdon tube

Dial

White PVC, with pointer stop pin

With black/red lettering, dual pressure scale (bar/psi)

Helium leak rate

Tested to confirm leakage rates of less than

10^{-9} mbar • ℓ /sec

Electrical

Connection

26 AWG, PVC

10 feet (3 m) leads (2 black wires)

Maximum switching current

0.5 amps AC/DC noninductive load

Maximum power

10 W/DC, 12 VA/AC

Maximum switching voltage

28 V AC/DC

1. Base model

- P841** Ultra high purity pressure switch - single (High alarm)
P842 Ultra high purity pressure switch - single (High and low alarm)
P843 Ultra high purity pressure switch - single (Low alarm)

2. Nominal diameter

- 1** 50mm (2")

3. Type of mounting

- A** Low mount (LM)
F Center back mount (CBM)

4. Accuracy

- 5** ±2.0% of full scale

5. Connection type

- CD** ¼" NPT (Male)
SF Swivel female face seal
SM Swivel male face seal

6. Unit

- H** bar
I MPa

7. Range

- XXX** Refer to pressure range table

8. Pressure connection material and dial color

- 4** 316L SS and 2 colors
8 316L SS and 3 colors

9. Options

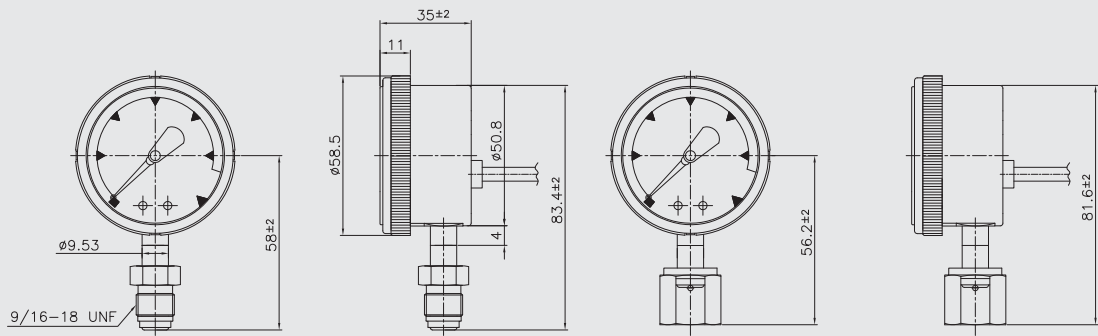
- 0** None
1 Accessories

1	2	3	4	5	6	7	8	9
P841	1	A	5	CD	H	XXX	4	0

Sample
ordering code

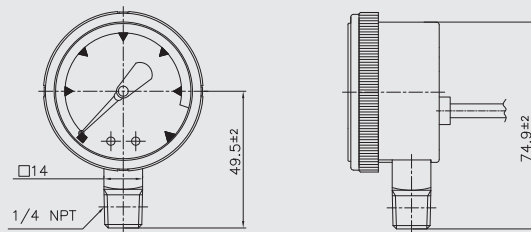
P84X : Type of mounting

Code A



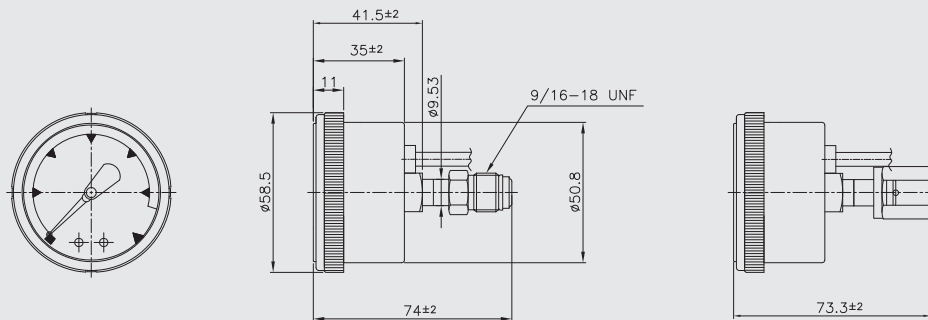
Swivel male

Swivel female



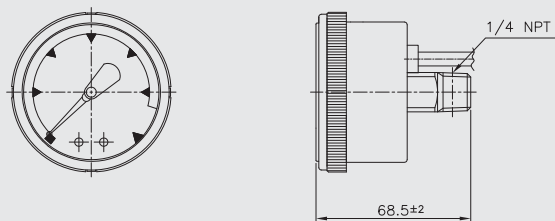
NPT male

Code F



Swivel male

Swivel female



NPT male

Range table

Range and code	Unit and code		Nominal diameter
	H : bar	I : MPa	50 mm
026	-1 ~ 0	-0.1 ~ 0	X
041	0 ~ 1	0 ~ 0.1	X
133	0 ~ 1.6	0 ~ 0.16	X
042	0 ~ 2	0 ~ 0.2	O
134	0 ~ 2.5	0 ~ 0.25	X
043	0 ~ 3	0 ~ 0.3	O
044	0 ~ 4	0 ~ 0.4	O
045	0 ~ 6	0 ~ 0.6	O
047	0 ~ 10	0 ~ 1	O
050	0 ~ 15	0 ~ 1.5	O
143	0 ~ 16	0 ~ 1.6	O
051	0 ~ 20	0 ~ 2	O
052	0 ~ 25	0 ~ 2.5	O
054	0 ~ 35	0 ~ 3.5	O
151	0 ~ 40	0 ~ 4	O
055	0 ~ 50	0 ~ 5	O
056	0 ~ 60	0 ~ 6	O
057	0 ~ 70	0 ~ 7	O
058	0 ~ 100	0 ~ 10	O
059	0 ~ 150	0 ~ 15	O
060	0 ~ 160	0 ~ 16	O
062	0 ~ 250	0 ~ 25	O
027	-1 ~ 1	-0.1 ~ 0.1	O
028	-1 ~ 2	-0.1 ~ 0.2	O
029	-1 ~ 3	-0.1 ~ 0.3	O
030	-1 ~ 4	-0.1 ~ 0.4	O
010	-1 ~ 5	-0.1 ~ 0.5	O
031	-1 ~ 6	-0.1 ~ 0.6	O
014	-1 ~ 9	-0.1 ~ 0.9	O
032	-1 ~ 10	-0.1 ~ 1	O
033	-1 ~ 15	-0.1 ~ 1.5	O
034	-1 ~ 20	-0.1 ~ 2	O
035	-1 ~ 25	-0.1 ~ 2.5	X

O : Available X : Not available