

## ULTRA HIGH PURITY PRESSURE SWITCH

### MODEL : P840 Series

#### SERVICE INTENDED

The P840 Series specifically designed for ultra high purity gas distribution system used in semiconductor industry and electronic, medical, biotechnology, pharmaceutical industry. These gauges provide one or two Reed switching setpoint. Switching status is visible by optional LED indicators located on the front

#### NOMINAL DIAMETER

50mm ( 2" )

#### ACCURACY

±2.0% of full scale

#### SCALE RANGE

0.1mPa vacuum to 25MPa

#### WORKING PRESSURE

Steady pressure : 75% of full scale value  
Fluctuating pressure : 67% of full scale value



#### OPERATING TEMPERATURE

Ambient : -40 °C to +60 °C  
Medium : +100 °C maximum

### Standard Features

#### MECHANICAL

##### PRESSURE CONNECTION

Type 316L Stainless steel electropolished  
low mount or center back mount  
surface finish  $R_a \leq 0.25 \mu\text{m}$   
- 1/4 inch NPT male thread  
- VCR<sup>®</sup> male or female face seal fitting

##### PRESSURE ELEMENT

Type 316L Stainless steel  
< 60 bar : C-type bourdon tube  
≥ 60 bar : helical type bourdon tube

##### MOVEMENT

Type 304 Stainless steel

##### DIAL

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

##### POINTER

Black aluminum pointer

##### CASE

Type 304 Stainless steel,  
electropolished with pressure relief

#### RING AND WINDOW

Twist-lock polycarbonate

#### HELIUM LEAK RATE

Tested to confirm leakage rates of less than  $10^{-9}$  mbar·l/sec

#### ELECTRICAL

##### SWITCH TYPE

Reed Switch (SPST)

##### ELECTRICAL CONNECTION

26 AWG, Teflon insulated, 10 foot leads  
P841, P843 - 2wires(red,white)  
P842 - 3wires (red, white, black)

##### CONTACT RATING

Rivet type - 10W DC, 12VA AC  
LED type - 0.28W DC

##### MAXIMUM SWITCHING CURRENT

Rivet type - max 0.5A AC/DC noninductive  
LED type - min 0.1mA, max 15mA DC noninductive

##### MAXIMUM POWER REQUIREMENTS

Rivet type - 28V AC/DC  
LED type - 28V DC

##### OPTIONAL

LED INDICATOR

**Ordering Information**

**BASE MODEL**

- P841 : Ultra high purity pressure switch - single ( High alarm )
- P842 : Ultra high purity pressure switch - double ( Low, high alarm )
- P843 : Ultra high purity pressure switch - single ( Low alarm )

**NOMINAL DIAMETER**

1 : 50mm ( 2" )

**MOUNTING**

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

**ACCURACY**

5 : 2.0 Class

**CONNECTION TYPE**

- CD : 1/4" NPT( male )
- SF : Swivel female face seal
- SM : Swivel male face seal
- FM : Fixed male face seal

**UNIT**

- B : kgf/cm<sup>2</sup>
- K : psi
- H : bar
- I : Mpa
- Q : bar & psi

**RANGE**

Refer to range table

**PRESSURE CONNECTION**

**MAT'L & DAILS**

- 4 : 316LSS & 2 Colors
- 8 : 316LSS & 3 Colors

**LED INDICATOR**

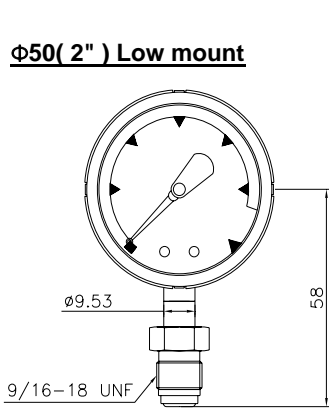
- 0 : None
- 1 : LED (Red Color)

P841	1	A	5	SF	Q	047	8	0
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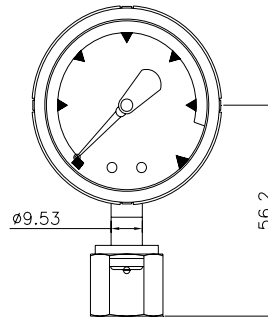
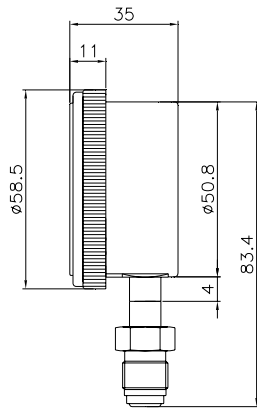
Example : Model P841 Pressure Switch, High alarm, dial size 50mm, low mounting, None LED swivel female face seal, bar&psi, 0 ~ 10, 316LSS & 3 Colors

**Dimensions**

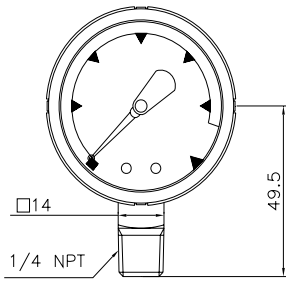
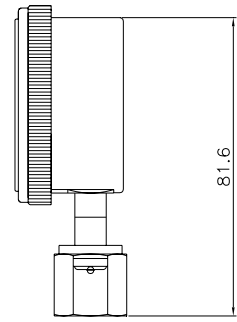
**φ50( 2" ) Low mount**



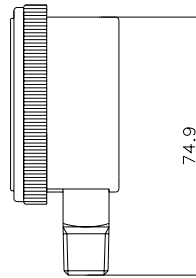
SWIVEL MALE



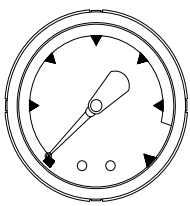
SWIVEL FEMALE



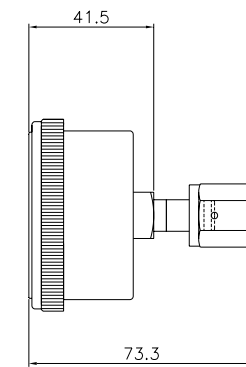
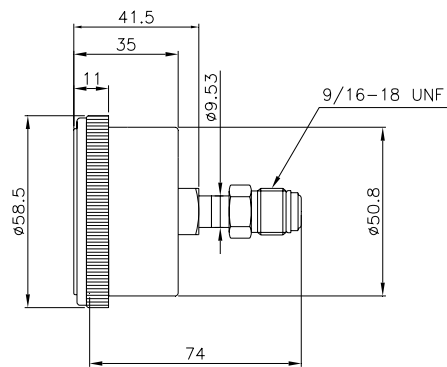
NPT MALE



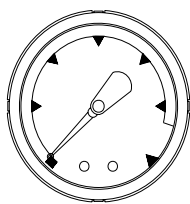
**φ50( 2" ) Center back mount**



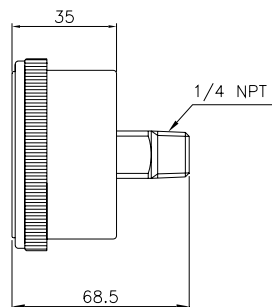
SWIVEL MALE



SWIVEL FEMALE



NPT MALE



## Range Table

CODE	kgf/cm <sup>2</sup>	bar	psi	Mpa	50mm
026	-76cmHg ~ 0	-1 ~ 0	-30inHg ~ 0	X	○
027	-76cmHg ~ 1	-1 ~ 1	-30inHg ~ 15	X	○
007	X	-1 ~ 1.5	X	X	○
028	-76cmHg ~ 2	-1 ~ 2	-30inHg ~ 30	X	○
029	-76cmHg ~ 3	-1 ~ 3	X	X	○
030	-76cmHg ~ 4	-1 ~ 4	-30inHg ~ 60	X	○
010	X	-1 ~ 5	X	X	○
031	-76cmHg ~ 6	X	X	X	○
012	X	-1 ~ 7	-30inHg ~ 100	X	○
014	X	-1 ~ 9	X	X	○
032	-76cmHg ~ 10	-1 ~ 10	-30inHg ~ 150	X	○
016	X	-1 ~ 11	-30inHg ~ 160	X	○
033	-76cmHg ~ 15	-1 ~ 15	-30inHg ~ 200	X	○
034	-76cmHg ~ 20	X	-30inHg ~ 300	X	○
041	0 ~ 1	0 ~ 1	0 ~ 15	X	○
133	X	0 ~ 1.6	X	X	○
042	0 ~ 2	0 ~ 2	0 ~ 30	X	○
134	X	0 ~ 2.5	X	X	○
043	0 ~ 3	X	X	X	○
044	0 ~ 4	0 ~ 4	0 ~ 60	0 ~ 0.4	○
045	0 ~ 6	0 ~ 6	X	X	○
046	X	0 ~ 7	0 ~ 100	0 ~ 0.7	○
047	0 ~ 10	0 ~ 10	X	X	○
048	X	0 ~ 11	0 ~ 160	0 ~ 1.1	○
050	0 ~ 15	0 ~ 15	0 ~ 200	0 ~ 1.5	○
143	X	0 ~ 16	X	0 ~ 1.6	○
051	0 ~ 20	0 ~ 20	0 ~ 300	0 ~ 2	○
052	0 ~ 25	0 ~ 25	X	0 ~ 2.5	○
148	X	X	0 ~ 400	X	○
054	0 ~ 35	X	X	0 ~ 3.5	○
151	X	0 ~ 40	X	0 ~ 4	○
152	X	X	0 ~ 600	X	○
055	0 ~ 50	X	X	0 ~ 5	○
155	X	X	0 ~ 800	X	○
056	X	0 ~ 60	X	0 ~ 6	○
057	0 ~ 70	X	0 ~ 1000	0 ~ 7	○
058	0 ~ 100	0 ~ 100	0 ~ 1500	0 ~ 10	○
170	X	X	0 ~ 2000	X	○
059	0 ~ 150	X	X	0 ~ 15	○
060	X	0 ~ 160	X	0 ~ 16	○
172	X	0 ~ 210	0 ~ 3000	0 ~ 21	○
062	0 ~ 250	0 ~ 250	X	0 ~ 25	○

○ : Available    X : Not available