

Ultra high purity pressure gauge

Model: P810 series (316L type)

Spec. sheet no. PD08-01

Service intended

P810 series are specially designed for the ultra-high purity gas distribution system used in a semiconductor, electronic, medical, biotechnology, and pharmaceutical industry.



Nominal diameter

35 (1½"), 50 (2") and 63 mm (2½")

Accuracy

Grade A : 50 (2") and 63 mm (2½")

Grade B : 35 (1½"), 50 (2") and 63 mm (2½")

Scale range

-0.1 ~ 0 to 0 ~ 28 MPa

Working pressure

Steady pressure : 75% of full scale value

Fluctuating pressure : 67% of full scale value

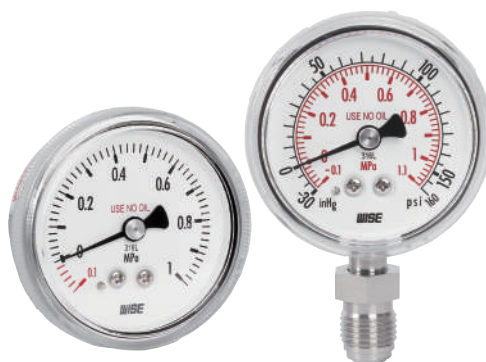
Working temperature

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

Pressure connection

Type 316L SS electropolished
low mount or center back mount

surface finish Ra≤0.25_{μm}

■ ¼" NPT male thread

■ VCR® male or female face seal fitting

Pressure element

Type 316L stainless steel

<6 MPa : C-type bourdon tube

≥6 MPa : Helical type bourdon tube

Case

Type 304 stainless steel,

Electropolished with pressure relief

Cover and window

Twist-lock polycarbonate

Movement

Stainless steel

Dial

White aluminium with pointer stop pin

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

Pointer

Black painted aluminium alloy

Helium leak rate

Tested to confirm leakage rates of less than

10⁻⁹ mbar • ℓ /sec

Optional

100 mm : P252 dimension

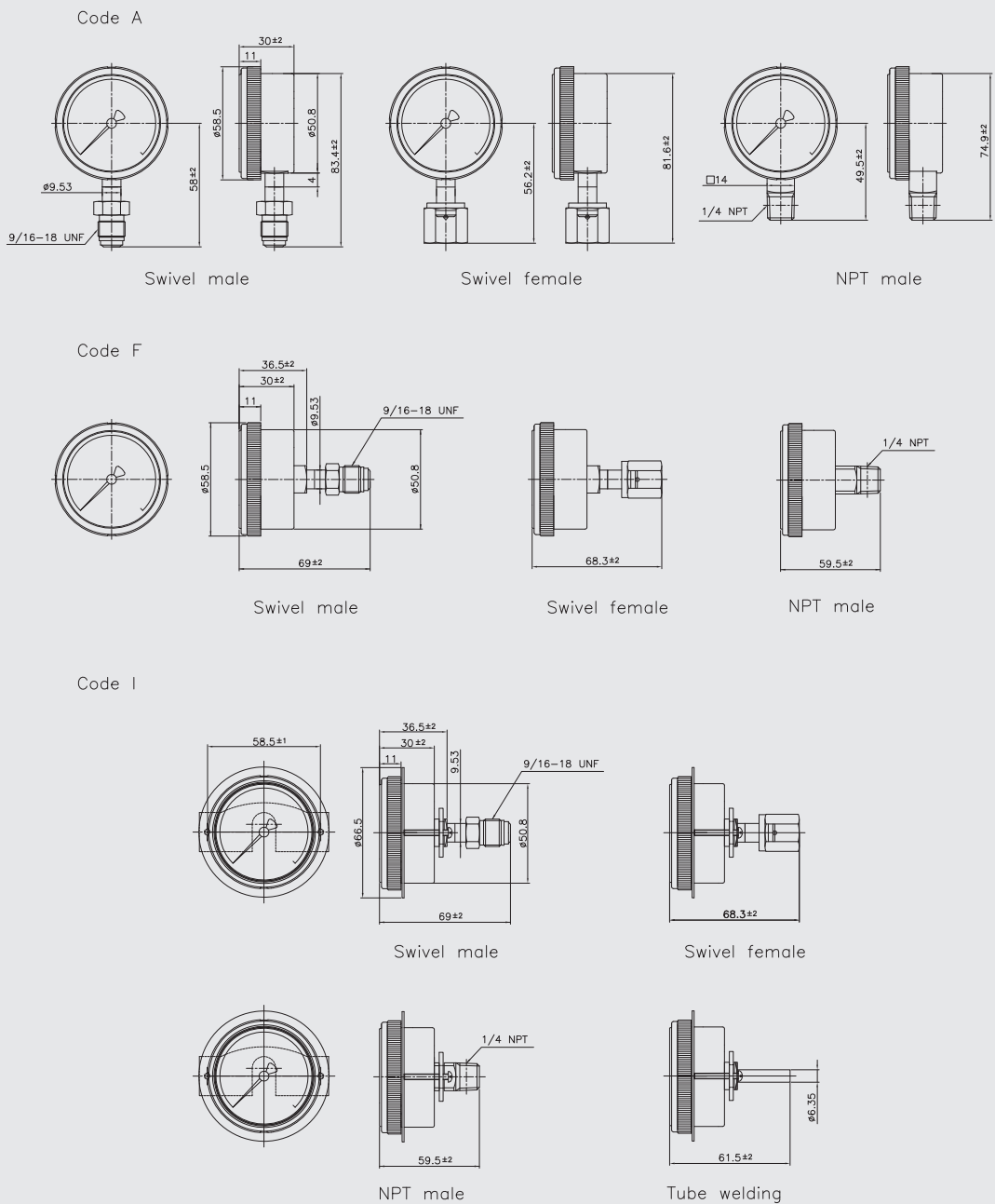
WISE®

1. Base model**P810** Ultra high purity gauge (316L type)**2. Nominal diameter and mounting type****M** 35 mm (1½")**1** 50mm (2")**2** 63 mm (2½")**3. Type of mounting****A** Low mount (LM)**F** Center back mount (CBM)**I** Center back connection, flush, case center mounting plate with bracket (Only available with diameter 50 mm)**4. Accuracy****3** Grade A : 50 and 63 mm only available**4** Grade B : 35 , 50 and 63 mm**5. Connection type****CD** ¼" NPT (Male)**SF** Swivel female face seal**SM** Swivel male face seal**TW** Tube welding**6. Unit****H** bar**I** MPa**7. Range****XXX** Refer to pressure range table**8. Pressure connection material and dials 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
P810	M	A	3	CD	H	XXX	4	0

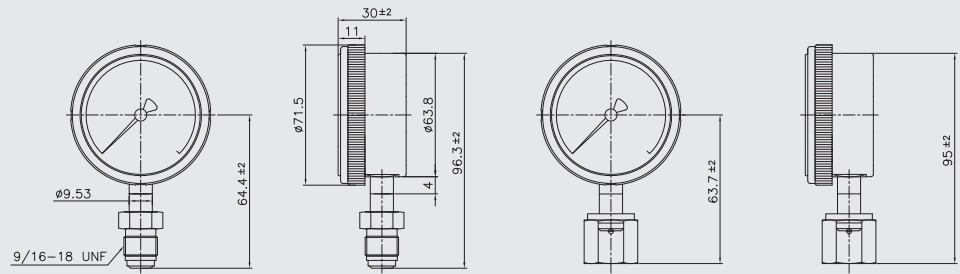
Sample
ordering code

P810 : Type of mounting (1/2)



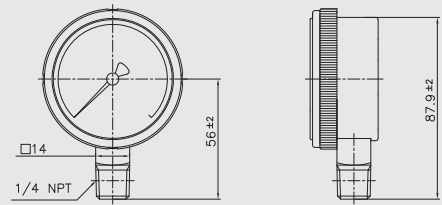
P810 : Type of mounting (2/2)

Code A



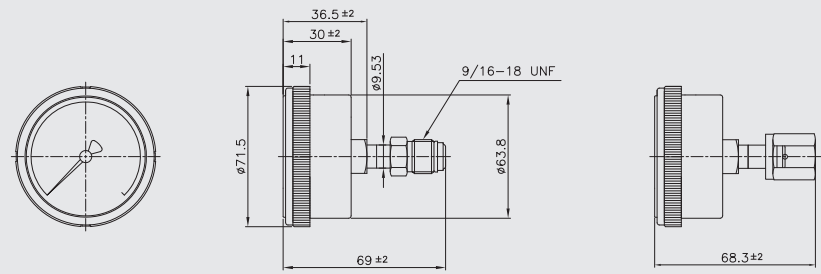
Swivel male

Swivel female



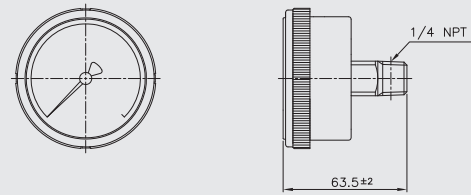
NPT male

Code F



Swivel male

Swivel female



NPT male

Range table

Range and code	Unit and code		Nominal diameter	
	H : bar	I : MPa	50 mm	63 mm
026	-1 ~ 0	-0.1 ~ 0	X	O
041	0 ~ 1	0 ~ 0.1	X	O
133	0 ~ 1.6	0 ~ 0.16	X	O
042	0 ~ 2	0 ~ 0.2	O	O
134	0 ~ 2.5	0 ~ 0.25	X	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
143	0 ~ 16	0 ~ 1.6	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
151	0 ~ 40	0 ~ 4	O	O
055	0 ~ 50	0 ~ 5	O	O
056	0 ~ 60	0 ~ 6	O	O
057	0 ~ 70	0 ~ 7	O	O
058	0 ~ 100	0 ~ 10	O	O
059	0 ~ 150	0 ~ 15	O	O
060	0 ~ 160	0 ~ 16	O	O
062	0 ~ 250	0 ~ 25	O	O
027	-1 ~ 1	-0.1 ~ 0.1	O	O
127	-1 ~ 1.6	-0.1 ~ 0.16	X	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
010	-1 ~ 5	-0.1 ~ 0.5	O	O
031	-1 ~ 6	-0.1 ~ 0.6	O	O
014	-1 ~ 9	-0.1 ~ 0.9	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
035	-1 ~ 25	-0.1 ~ 2.5	X	O

O : Available X : Not available

Conversion table

Pressure conversion chart

psi	atm	kgf/cm²	inH₂O	mmHg	inHg	kPa	bar	mmH₂O
1	0.068046	0.070307	27.7276	51.715	2.03602	6.835	0.06895	704.28104
14.696	1	1.0332	407.484	760	29.921	101.325	1.01325	10350.0936
14.2233	0.96784	1	394.38	735.559	28.959	98.096	0.98067	10,000
0.036092	0.002454	0.00253	1	1.8651	0.07343	0.249	0.00249	25.4
0.019336	0.001315	0.001359	0.53616	1	0.03937	0.1333	0.001333	13.618464
0.491154	0.0033421	0.03453	13.6185	25.4	1	3.3864	0.033864	345.9099
0.145	0.00987	0.010197	4.0186	7.5006	0.2953	1	0.01	102.07244
14.5038	0.98692	1.01972	402.156	750.062	29.53	100	1	10214.7624
0.00142	0.000097	0.0001	0.03937	0.0734	0.0029	0.0098	0.000098	1

Memo