

Euro gauge

Test pressure gauge

Model : P239 series

Spec. sheet no. **PD02-06**

Service intended

P239 test pressure gauges are designed to check the accuracy of pressure instruments. Its use expands to a laboratory instruments for research shops and test labs. External adjustable dial and zero adjustable pointers are available for some models. It is an excellent choice for the process applications where high accuracy is a must.

Nominal diameter

160 and 250 mm

Accuracy

±0.25 % of full scale

Scale range (MPa, kPa, bar)

0 ~ 60 kPa to 0 ~ 100 MPa

Working pressure

Steady : Full scale value

Working temperature

Ambient : -40 ~ 65 °C

Medium : 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

Stainless steel (316SS)

Movement

Brass

Element

Stainless steel (316SS)

<100 bar : C type bourdon tube

≥100 bar : Helical type bourdon tube

Dial

270° mirror band scale

White aluminium with black graduations

Case

160 mm - Stainless steel (304SS)

250 mm - Black painted aluminium, Solid front

Pointer

Black painted aluminium alloy

Cover

160 mm - Stainless steel (304SS), Bayonet type

250 mm - Black painted aluminium

Zero adjustment

Internal (160 mm)

External (250 mm)

Window

Safety glass

Process connection

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

WISE®

1. Base model**P239** Test pressure gauge**2. Nominal diameter (mm)**

6 160
8 250

3. Type of mounting

- A** Bottom connection, direct
B Bottom connection, surface, case mounting plate, only available with diameter 160 mm
G Lower back connection, direct
L Lower back connection, surface, case center mounting plate, only available with diameter 160 mm
M Lower back connection, flush, case center mounting bracket, only available with diameter 160 mm
N Lower back connection, flush, cover center mounting plate, only available with diameter 160 mm
W Lower back connection, flush, cover center mounting bracket, only available with diameter 160 mm

4. Accuracy**9** ±0.25 % of full scale**5. Process connection**

D 3/8"
E 1/2"

6. Connection type

B PF
C PT
D NPT

7. Unit

H bar
I MPa
J kPa

8. Range**XXX** Refer to pressure unit and range table**9. Dial color**

1 2 colors
5 3 colors

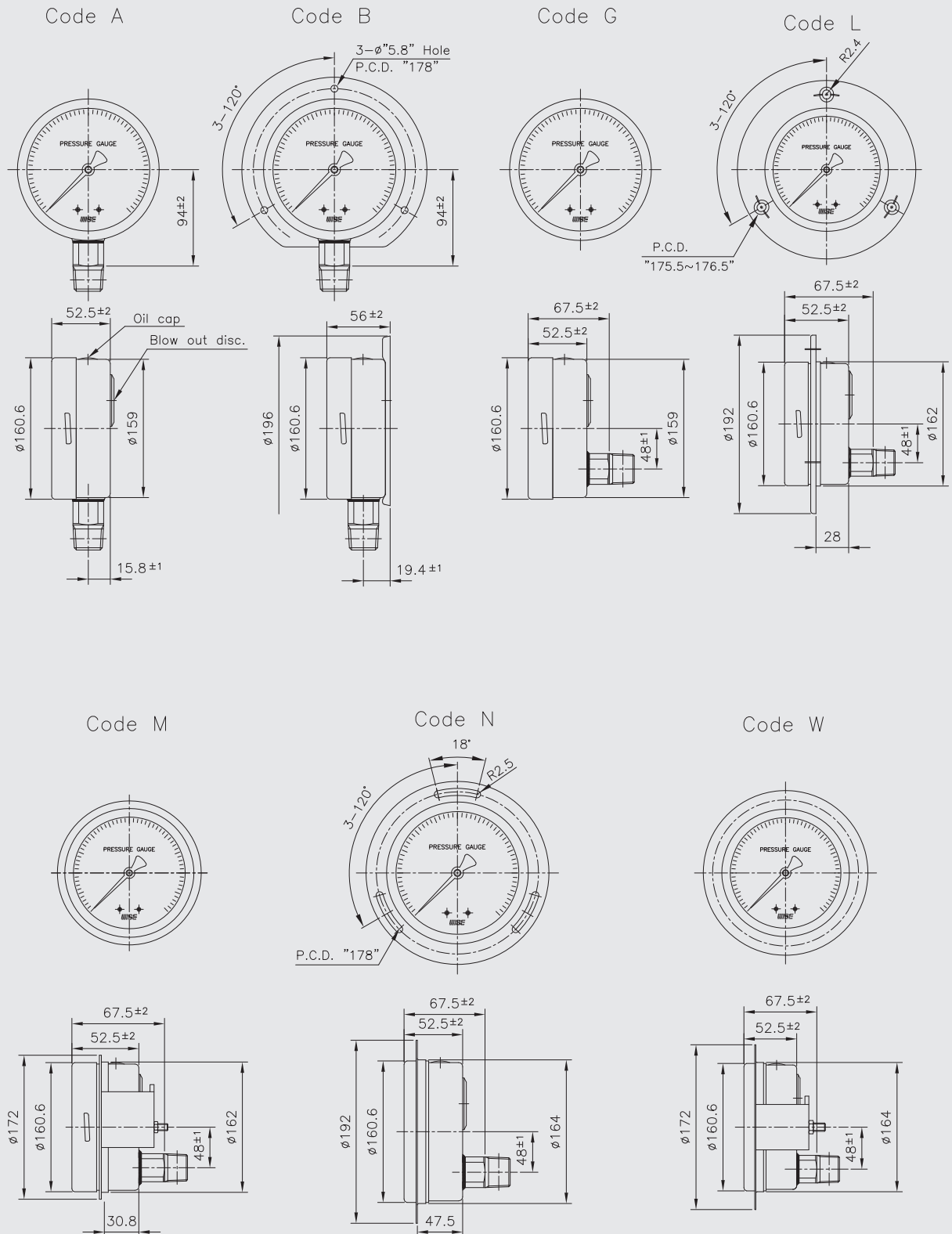
10. Option

0 None
1 Accessories
2 Orifice
3 Accessories and orifice

Sample ordering code

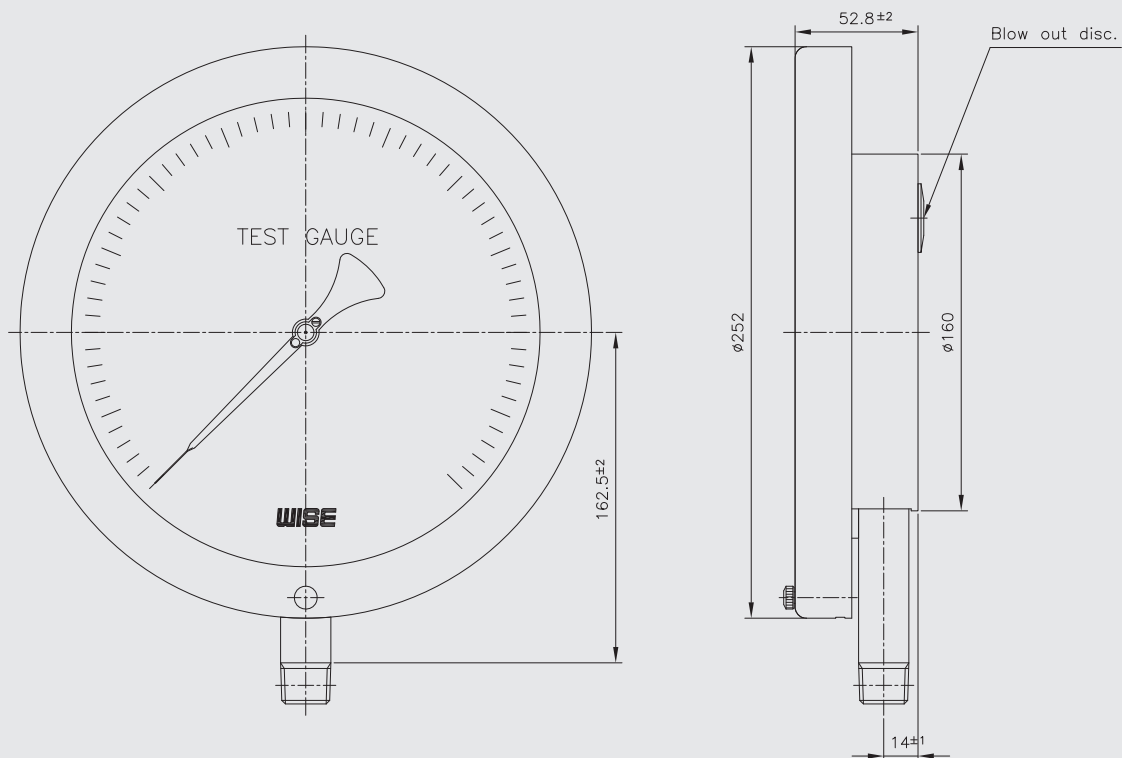
1	2	3	4	5	6	7	8	9	10
P239	8	A	9	E	C	H	XXX	5	0

P239 : Type of mounting

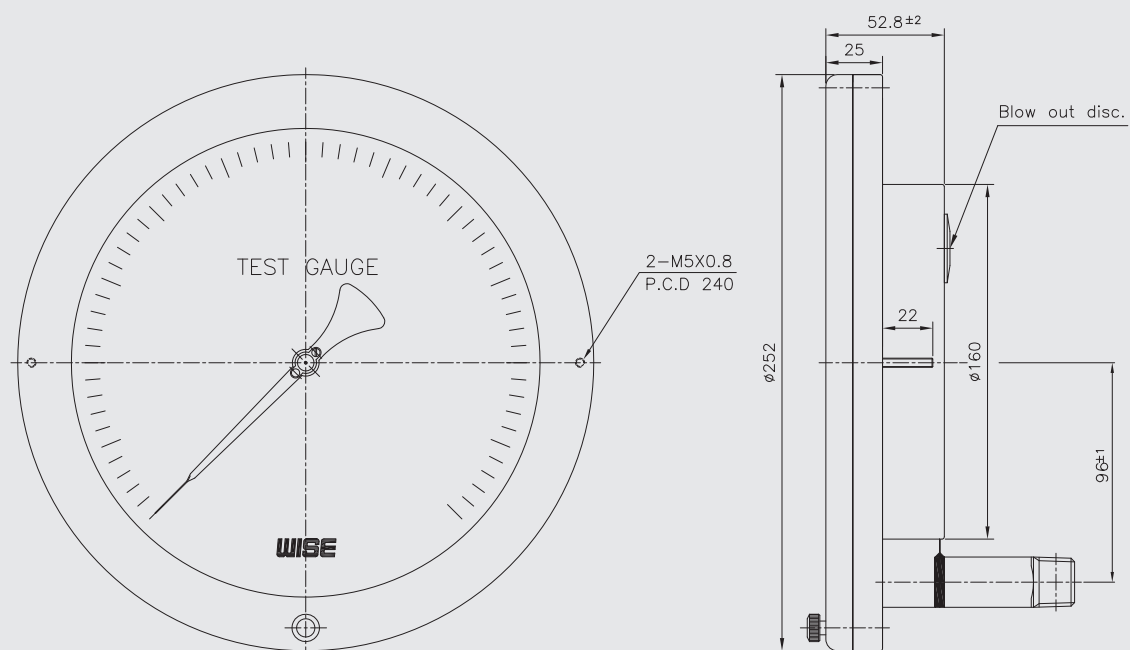


P239 : Type of mounting (2/2)

Code A



Code G



Pressure unit and range table

Range and code	Unit and code			Nominal diameter
	H : bar	I : MPa	J : kPa	P239
026	-1 ~ 0	-0.1 ~ 0	-100 ~ 0	O
041	0 ~ 1	0 ~ 0.1	0 ~ 100	O
133	0 ~ 1.6	0 ~ 0.16	1 ~ 160	O
042	0 ~ 2	0 ~ 0.2	0 ~ 200	O
134	0 ~ 2.5	0 ~ 0.25	0 ~ 250	O
043	0 ~ 3	0 ~ 0.3	0 ~ 300	O
044	0 ~ 4	0 ~ 0.4	0 ~ 400	O
045	0 ~ 6	0 ~ 0.6	0 ~ 600	O
047	0 ~ 10	0 ~ 1	0 ~ 1,000	O
050	0 ~ 15	0 ~ 1.5	X	O
143	0 ~ 16	0 ~ 1.6	X	O
051	0 ~ 20	0 ~ 2	X	O
052	0 ~ 25	0 ~ 2.5	X	O
054	0 ~ 35	0 ~ 3.5	X	O
151	0 ~ 40	0 ~ 4	X	O
055	0 ~ 50	0 ~ 5	X	O
056	0 ~ 60	0 ~ 6	X	O
057	0 ~ 70	0 ~ 7	X	O
058	0 ~ 100	0 ~ 10	X	O
059	0 ~ 150	0 ~ 15	X	O
060	0 ~ 160	0 ~ 16	X	O
062	0 ~ 250	0 ~ 25	X	O
064	0 ~ 350	0 ~ 35	X	O
065	0 ~ 400	0 ~ 40	X	O
066	0 ~ 500	0 ~ 50	X	O
067	0 ~ 600	0 ~ 60	X	O
068	0 ~ 700	0 ~ 70	X	O
070	0 ~ 1,000	0 ~ 100	X	O

O : Available X : Not available

Euro gauge

Industrial service pressure gauge

Model : P252 series

Spec. sheet no. **PD02-07**

Service intended

P252 series are suitable for a corrosive environment.
Typical application includes: Chemical, petro-chemical, refining process, power generation, marine and foods industry. Its stainless case and cover have a good appearance and the excellent proof against corrosive and chemical attack.

Nominal diameter

63, 80, 100 and 160 mm

Accuracy

P2522 (63 mm) and P2523 (80 mm) : ± 1.6 % of full scale
P2524 (100 mm) and P2526 (160 mm) : ± 0.5 % of full scale
 ± 1.0 % of full scale

Scale range (MPa, kPa, bar)

63 and 80 mm : -0.1 ~ 0 to 0 ~ 100 MPa
100 and 160 mm : -0.1 ~ 0 to 0 ~ 200 MPa

Working pressure

Steady : 75 % of full scale (63 and 80 mm)
100 % of full scale (100 and 160 mm)
Over range protection : 130 % of full scale

Working temperature

Ambient : -40 ~ 65 °C
Fluid : Max. 200 °C

Degree of protection

EN60529/IEC529/IP67
EN60529/IEC529/IP66

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

Stainless steel (316SS)

Element

Stainless steel (316SS),
Model : P2524 (100 mm) and P2526 (160 mm)
<10 MPa : C type bourdon tube
 ≥ 10 MPa : Helical type bourdon tube
Model : P2522 (63 mm) and P2523 (80 mm)
<6 MPa : C type bourdon tube
 ≥ 6 MPa : Helical type bourdon tube

Blowout protection

Back, Rubber disc for 80, 100 and 160 mm
Top, Rubber disc for 63 mm

Case

Stainless steel (304SS)

Cover

Stainless steel (304SS)
Bayonet type

Window

Laminated safety glass

Movement

Stainless steel

Dial

White aluminium with black graduations

Pointer

Black painted aluminium alloy

Process connection

63 mm : $\frac{1}{8}$ ", $\frac{1}{4}$ " PT, NPT and PF
80 mm : $\frac{1}{4}$ ", $\frac{3}{8}$ " PT, NPT and PF
100 and 160 mm : $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " PT, NPT and PF

Certificates

Pressure equipment directive (2014/68/EU) Annex III Module H
ATEX II 2G Ex h IIC T6...T1 Gb
ATEX II 2D Ex h IIIC T85°C....T450°C Db

Option

Zero adjustable pointer
(Only available with diameter 100 and 160 mm)
Zero adjustment (External) : 100 and 160 mm
Pressure connection and element : Monel
(Only available with diameter 100 and 160 mm)
Maximum Pointer
(Not applicable to under 3 bar, Only available with diameter 100 mm)

WISE®

1. Base model**P252** Industrial service pressure gauge**2. Nominal diameter (mm)**

2	63
3	80
4	100
6	160

3. Type of mounting

- A** Bottom connection, direct
- B** Bottom connection, surface, case mounting plate
- C** Bottom connection, flush, cover mounting plate
- F** Center back connection, direct, only available with diameter 63 mm
- G** Lower back connection, direct
- H** Center back connection, flush, case center mounting plate, only available with diameter 63 mm
- I** Center back connection, flush, case center mounting plate with bracket only available with diameter 63 mm
- J** Center back connection, flush, cover mounting plate, only available with diameter 63 mm
- L** Lower back connection, flush, case center mounting plate
- M** Lower back connection, flush, case center mounting bracket
- N** Lower back connection, flush, cover mounting plate
- V** Center back connection, flush, cover mounting bracket, only available with diameter 63 mm
- W** Lower back connection, flush, cover mounting bracket

4. Accuracy

- 2** ±0.5 % of full scale, only available with diameter 100 and 160 mm, not available with range 0.4 and 0.5 bar
- 3** ±1.0 % of full scale, not available with diameter 63 and 80 mm
- 4** ±1.6 % of full scale, only available with diameter 63 and 80 mm

5. Process connection

- B** 1/8"
- C** 1/4"
- D** 3/8", not available with diameter 63 mm
- E** 1/2", not available with diameter 63 and 80 mm

6. Connection type

- B** PF
- C** PT
- D** NPT
- F** BSPT
- G** BSP (G)
- Z** Other

7. Unit

- H** bar
- I** MPa
- J** kPa
- Z** Other

8. Range**XXX** Refer to pressure unit and range table**9. Pressure connection material and dial color**

- 3** 316SS and 2 colors
- 4** 316L SS and 2 colors
- 7** 316SS and 3 colors
- 8** 316L SS and 3 colors
- Z** Monel (Only available with diameter 100 and 160 mm)

10. Option

- 0** None
- 1** Accessories

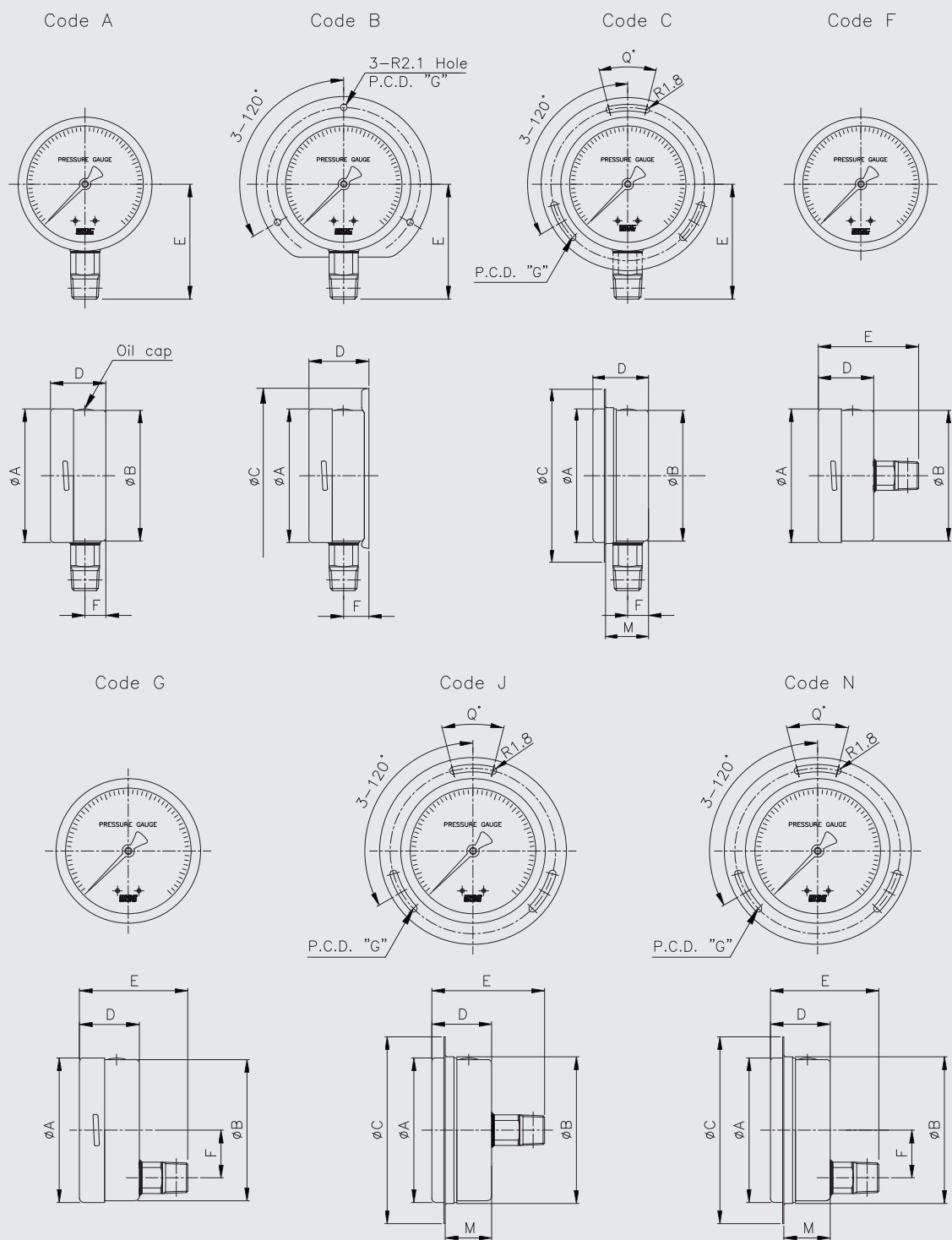
11. Adjustable pointer

- 0** None
- 1** Zero adjustable pointer
- 2** External zero adjustment

Sample ordering code

1	2	3	4	5	6	7	8	9	10	11
P252	4	A	3	E	C	H	XXX	3	0	1

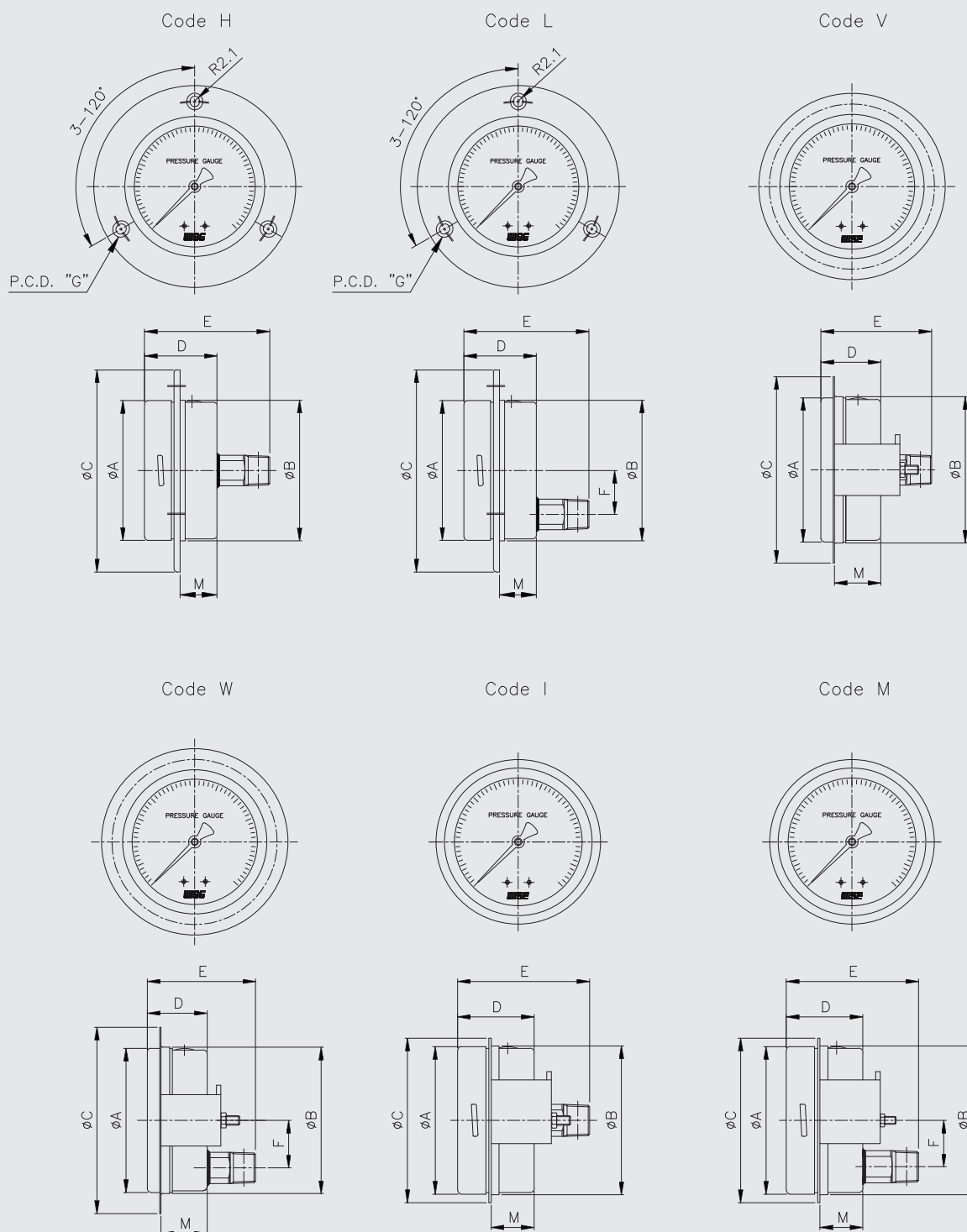
P252 : Type of mounting (1/3)



Dimensions (mm)

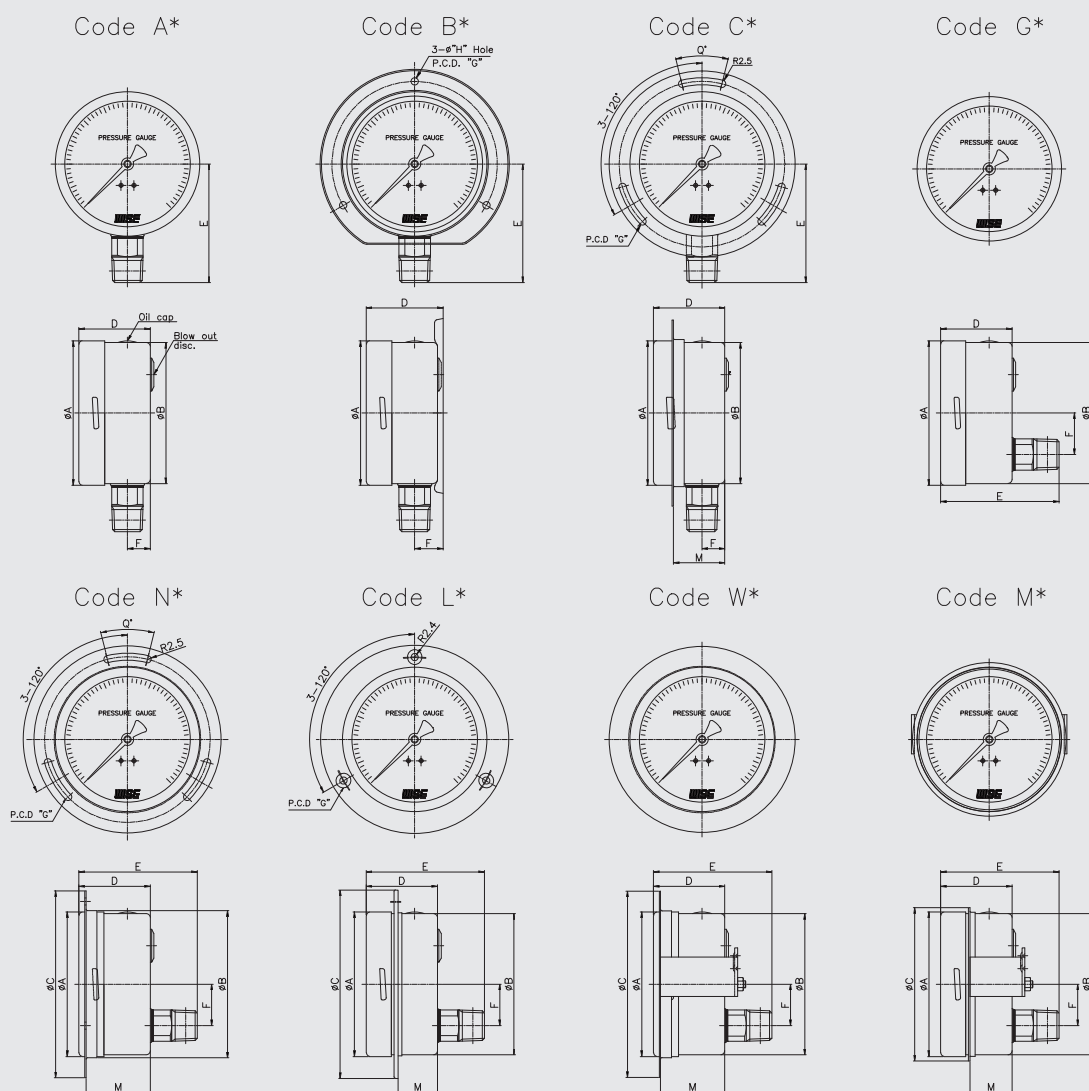
Dial size	Available code	A	B	C	D±2	E±2	F±1	M	G	H	Q
63	A	64	62		34	61	11				
	B	64		85	37	61	15		74~75		
	C	64	62	86	34	61	11	28	75		15
	F	64	62		34	64					
	G	64	62		34	64	13				
	J	64	66	86	34	64		28	75		15
	N	64	66	86	34	64	13	28	75		15

P252 : Type of mounting (2/3)



Dimensions (mm)									
Dial size	Available code	A	B	C	D ± 2	E ± 2	F ± 1	M	G
63	H	64	64.5	92	34	64		16.8	77~78
	L	64	64.5	92	34	64	13	16.8	77~78
	V	64	66	86	34	64		28	
	W	64	66	86	34	64	13	28	
	I	64	64.5	71	34	64		18.5	
	M	64	64.5	71	34	64	13	18.5	

P252 : Type of mounting (3/3)



Dimensions (mm)															
Dial size	Available code	A	B	C	D ±2		E ±2		F ±1		M		G	H	Q
					S.T.D	External	S.T.D	External	S.T.D	External	S.T.D	External			
80	A*	81.2	78.5		39.5	—	71.5	—	12	—					
	B*	81.2		108	43	—	71.5	—	15.5	—			95	5	
	C*	81.2	78.5	108	39.5	—	71.5	—	12	—	35	—	95		10
	G*	81.2	78.5		39.5	—	74.5	—	22	—					
	N*	81.2	83.2	108	39.5	—	74.5	—	22	—	35	—	95		10
	L*	81.2	80.8	112	39.5	—	74.5	—	22	—	21.8	—	94.5~95.5		
	W*	81.2	83.2	108	39.5	—	74.5	—	22	—	35	—			
100	M*	81.2	81.5	88	39.5	—	74.5	—	22	—	22.5	—			
	A*	101.3	99		50	63	88	16	30.6						
	B*	101.3		133	54.4	67.4	88	19.4	34				116	R2.5	
	C*	101.3	99	131	50	63	88	16	30.6	45	58		116		28
	G*	101.3	99		50	63	88	101.5	29						
	N*	101.3	103.1	131	50	63	88	101.5	29	45	58		116		28
	L*	101.3	100.4	132	50	63	88	101.5	29	27.7	40.7		115~116		
160	W*	101.3	103.1	131	50	63	88	101.5	29	45	58				
	M*	101.3	101	107.5	50	63	88	101.5	29	29.5	42.5				
	A*	160.6	159		52.5	66	117	15.8	29.3						
	B*	160.6		196	56	69.5	117	19.4	32.9				178	5.8	
	C*	160.6	159	192	52.5	66	117	15.8	29.3	47.5	61		178		18
	G*	160.6	159		52.5	66	90.5	104	29						
	N*	160.6	164	192	52.5	66	90.5	104	29	47.5	61		178		18
	L*	160.6	162	192	52.5	66	90.5	104	29	28	41.5		175.5~176.5		
	W*	160.6	164	172	52.5	66	90.5	104	29	47.5	61				
	M*	160.6	162	172	52.5	66	90.5	104	29	30.8	44.3				

Pressure unit and range table

Range and code	Unit and code			Nominal diameter			
	H : bar	I : MPa	J : kPa	63 mm	80 mm	100 mm	160 mm
026	-1 ~ 0	-0.1 ~ 0	-100 ~ 0	O	O	O	O
123	0 ~ 0.4	0 ~ 0.04	0 ~ 40	X	X	O	Δ
040	0 ~ 0.5	0 ~ 0.05	0 ~ 50	X	X	O	Δ
041	0 ~ 1	0 ~ 0.1	0 ~ 100	O	O	O	O
133	0 ~ 1.6	0 ~ 0.16	0 ~ 160	X	X	O	O
042	0 ~ 2	0 ~ 0.2	0 ~ 200	O	O	O	O
134	0 ~ 2.5	0 ~ 0.25	0 ~ 250	X	X	O	O
043	0 ~ 3	0 ~ 0.3	0 ~ 300	O	O	O	O
044	0 ~ 4	0 ~ 0.4	0 ~ 400	O	O	O	O
045	0 ~ 6	0 ~ 0.6	0 ~ 600	O	O	O	O
047	0 ~ 10	0 ~ 1	0 ~ 1,000	O	O	O	O
050	0 ~ 15	0 ~ 1.5	X	O	O	O	O
143	0 ~ 16	0 ~ 1.6	X	O	O	O	O
051	0 ~ 20	0 ~ 2	X	O	O	O	O
052	0 ~ 25	0 ~ 2.5	X	O	O	O	O
054	0 ~ 35	0 ~ 3.5	X	O	O	O	O
151	0 ~ 40	0 ~ 4	X	O	O	O	O
055	0 ~ 50	0 ~ 5	X	O	O	O	O
056	0 ~ 60	0 ~ 6	X	O	O	O	O
057	0 ~ 70	0 ~ 7	X	O	O	O	O
058	0 ~ 100	0 ~ 10	X	O	O	O	O
059	0 ~ 150	0 ~ 15	X	O	O	O	O
060	0 ~ 160	0 ~ 16	X	O	O	O	O
062	0 ~ 250	0 ~ 25	X	O	O	O	O
064	0 ~ 350	0 ~ 35	X	O	O	O	O
065	0 ~ 400	0 ~ 40	X	O	O	O	O
066	0 ~ 500	0 ~ 50	X	O	O	O	O
067	0 ~ 600	0 ~ 60	X	O	O	O	O
068	0 ~ 700	0 ~ 70	X	O	O	O	O
070	0 ~ 1,000	0 ~ 100	X	O	O	O	O
074	0 ~ 1,600	0 ~ 160	X	X	X	O	O
075	0 ~ 2,000	0 ~ 200	X	X	X	O	O
006	-1 ~ 0.6	-0.1 ~ 0.06	-100 ~ 60	X	X	O	O
027	-1 ~ 1	-0.1 ~ 0.1	-100 ~ 100	O	O	O	O
007	-1 ~ 1.5	-0.1 ~ 0.15	-100 ~ 150	X	X	O	O
028	-1 ~ 2	-0.1 ~ 0.2	-100 ~ 200	O	O	O	O
029	-1 ~ 3	-0.1 ~ 0.3	-100 ~ 300	O	O	O	O
030	-1 ~ 4	-0.1 ~ 0.4	-100 ~ 400	O	O	O	O
010	-1 ~ 5	-0.1 ~ 0.5	-100 ~ 500	O	O	O	O
031	-1 ~ 6	-0.1 ~ 0.6	-100 ~ 600	O	O	O	O
014	-1 ~ 9	-0.1 ~ 0.9	-100 ~ 900	O	O	O	O
032	-1 ~ 10	-0.1 ~ 1	-100 ~ 1,000	O	O	O	O
033	-1 ~ 15	-0.1 ~ 1.5	-100 ~ 1.5MPa	O	O	O	O
034	-1 ~ 20	-0.1 ~ 2	-100 ~ 2MPa	O	O	O	O
017	-1 ~ 24	-0.1 ~ 2.4	-100 ~ 2.4MPa	O	O	O	O
035	-1 ~ 25	-0.1 ~ 2.5	-100 ~ 2.5MPa	O	O	O	O

O : Available X : Not available Δ : Not available with ±0.5 % of full scale

General service liquid filled pressure gauge

Model : P254 series

Spec. sheet no. PD02-09

Service intended

P254 series are designed to measure a high dynamic pressure load and it can be used where severe vibrations are present. It is recommended to be used with a gaseous and a liquid media that are not highly viscous and not to be used where copper alloy parts could be corroded. Its application extends to hydraulics, compressors and shipbuilding.

Nominal diameter

50, 63, 75 and 100 mm

Accuracy

±1.5 % of full scale

Scale range (MPa, kPa, bar)

-0.1 ~ 0 to 0 ~ 40 MPa

Working pressure

Steady : 75 % of full scale

Over range protection : 130 % of full scale

Working temperature

Ambient : -20 ~ 60 °C

-20 ~ 60 °C (With glycerin filling)

-40 ~ 65 °C (With silicone filling)

Fluid : Max. 60 °C

Fluid

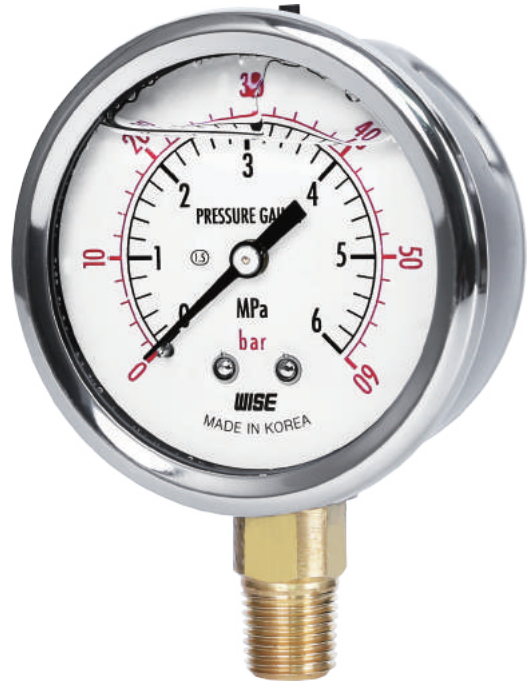
Glycerin

Degree of protection

EN60529/IEC529/IP67

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

Brass (50 and 63 mm)

Nickel plated brass (75 and 100 mm)

Element

Brass

<6 MPa : C type bourdon tube

≥6 MPa : Helical type bourdon tube

Case

Stainless steel (304SS)

Cover

Stainless steel (304SS)

Crimp ring type

Window

Polycarbonate (50 and 63 mm)

Safety glass (75 and 100 mm)

Movement

Brass

Dial

White aluminium with black graduations

Pointer

Black painted aluminium alloy

Process connection

50 and 63 mm : 1/8", 1/4" PT, NPT and PF

75 mm : 1/4", 3/8" PT, NPT and PF

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

One piece type connection (50 and 63 mm)

Two piece type connection (75 and 100 mm)

WISE[®]

Main order

Ordering information

1. Base model

P254 General service liquid filled pressure gauge

2. Nominal diameter (mm)

- 1** 50
- 2** 63
- 3** 75
- 4** 100

3. Type of mounting

- A** Bottom connection, direct
- B** Bottom connection, surface, case mounting plate, not available with diameter 50 mm
- F** Center back mount, direct
- H** Center back connection, flush, case center mounting plate, not available with diameter 50 mm
- I** Center back connection, case center mounting bracket, only available with diameter 63 mm

4. Accuracy

- 4** ±1.5 % of full scale

5. Process connection

- B** 1/8"
- C** 1/4"
- D** 3/8", not available with diameter 50 and 63 mm
- E** 1/2", not available with diameter 50, 63 and 75 mm
- P** 7/16" (UNF)

6. Connection type

- B** PF
- C** PT
- D** NPT
- F** BSPT
- G** BSP
- E** UNF
- Z** Other

7. Unit

- H** bar
- I** MPa
- J** kPa
- Z** Other

8. Range

XXX Refer to pressure unit and range table

9. Dial color

- 1** 2 colors
- 5** 3 colors

10. Option

- 0** None
- 1** Accessories
- 8** Silicone filling
- 9** Glycerin filling

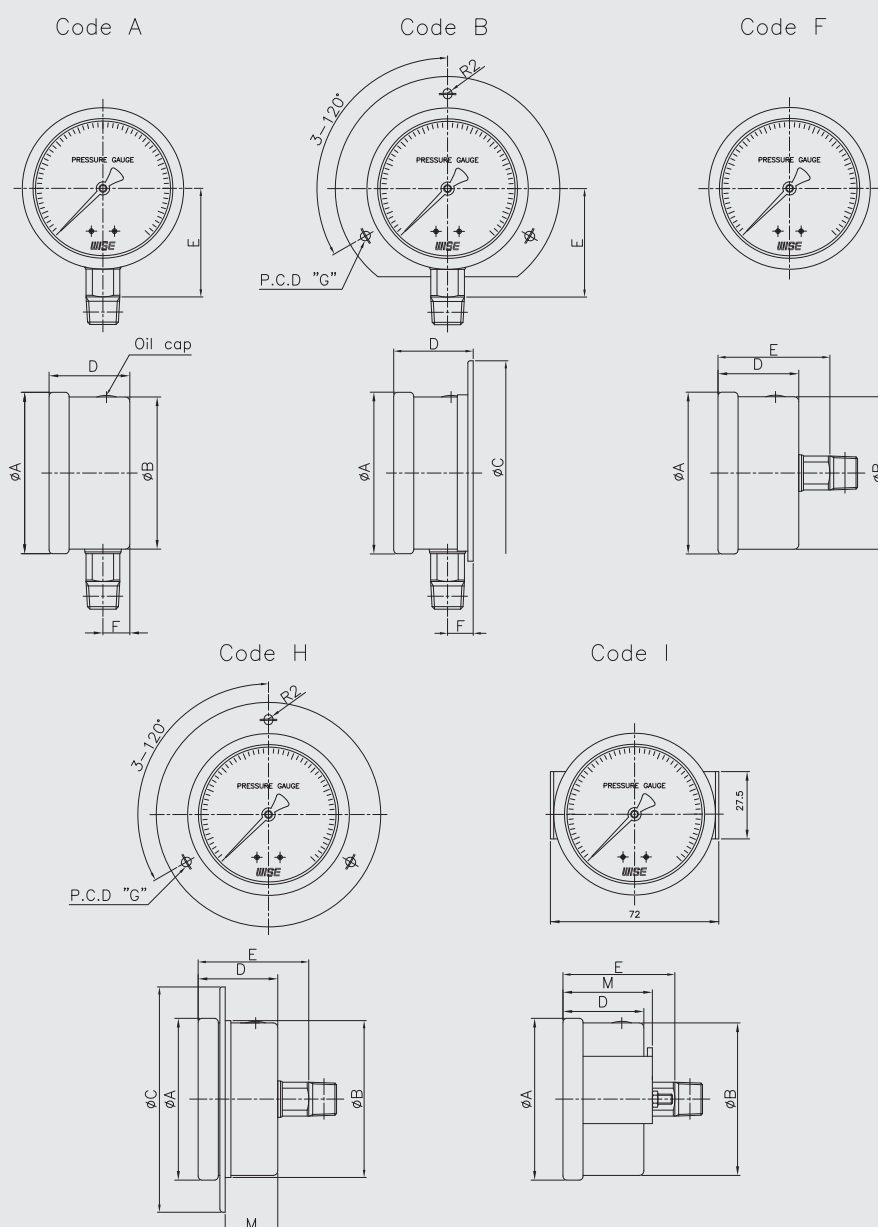
Sample ordering code

1	2	3	4	5	6	7	8	9	10
P254	4	A	4	E	D	H	XXX	1	0



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P254 : Type of mounting



Dimensions (mm)									
Dial size	Available code	A	B	C	D ± 2	E ± 2	F ± 1	M	G
50	A	58.3	52		29.5	37.5	10.4		
	F	58.3	52		29.5	38			
63	A	68	62		33	44.3	12.7		
	B	68		86	34	44.3	13.7		74~78
	F	68	62		33	42.5			
	H	68	64	86	33	42.5		26	74~78
	I	68	62		33	42.5		42	
75	A	85.5	76.5		34	56	10		
	B	85.5		105	36	56	12		93.5
	F	85.5	76.5		34	52			
	H	85.5	79	105	34	52		28	93.5
100	A	109.8	101.3		38.5	65	12.5		
	B	109.8		128	41.5	65	14		115
	F	109.8	101.3		38.5	52			
	H	109.8	103	128	38.5	52		27	114~117

Pressure unit and range table

Range and code	Unit and code			Nominal diameter			
	H : bar	I : MPa	J : kPa	50 mm	63 mm	75 mm	100 mm
026	-1 ~ 0	-0.1 ~ 0	-100 ~ 0	X	O	O	O
041	0 ~ 1	0 ~ 0.1	0 ~ 100	X	O	O	O
042	0 ~ 2	0 ~ 0.2	0 ~ 200	O	O	O	O
043	0 ~ 3	0 ~ 0.3	0 ~ 300	O	O	O	O
044	0 ~ 4	0 ~ 0.4	0 ~ 400	O	O	O	O
045	0 ~ 6	0 ~ 0.6	0 ~ 600	O	O	O	O
047	0 ~ 10	0 ~ 1	0 ~ 1,000	O	O	O	O
050	0 ~ 15	0 ~ 1.5	X	O	O	O	O
051	0 ~ 20	0 ~ 2	X	O	O	O	O
052	0 ~ 25	0 ~ 2.5	X	O	O	O	O
054	0 ~ 35	0 ~ 3.5	X	O	O	O	O
055	0 ~ 50	0 ~ 5	X	O	O	O	O
057	0 ~ 70	0 ~ 7	X	X	O	O	O
058	0 ~ 100	0 ~ 10	X	X	O	O	O
059	0 ~ 150	0 ~ 15	X	X	O	O	O
062	0 ~ 250	0 ~ 25	X	X	O	O	O
064	0 ~ 350	0 ~ 35	X	X	O	O	O
065	0 ~ 400	0 ~ 40	X	X	O	O	O
027	-1 ~ 1	-0.1 ~ 0.1	-100 ~ 100	X	O	O	O
028	-1 ~ 2	-0.1 ~ 0.2	-100 ~ 200	X	O	O	O
029	-1 ~ 3	-0.1 ~ 0.3	-100 ~ 300	X	O	O	O
030	-1 ~ 4	-0.1 ~ 0.4	-100 ~ 400	X	O	O	O
031	-1 ~ 6	-0.1 ~ 0.6	-100 ~ 600	X	O	O	O
032	-1 ~ 10	-0.1 ~ 1	-100 ~ 1,000	X	O	O	O
033	-1 ~ 15	-0.1 ~ 1.5	X	X	O	O	O
034	-1 ~ 20	-0.1 ~ 2	X	X	O	O	O

O : Available X : Not available

Euro gauge

Safety pattern type overpressure protection pressure gauge

Model : P256 series

Spec. sheet no. PD02-11

Service intended

P256 series are made with a solid plate wall and a blow-out back. Its stainless steel case and cover have a good appearance. It has the excellent proof against corrosion and chemical attack.

Suitable for protection against damage to the measuring element when high overpressure is applied to the gauge instantaneously.

Max overpressure is up to 4 times of measuring range.

Nominal diameter

100 and 160 mm

Accuracy

±1.0 % of measuring range

Scale range (MPa, kPa, bar)

-0.1 ~ 0 to 0 ~ 4 MPa

Working pressure

Steady : 100 % of full scale

Over range protection : 4 times the measuring range

Working temperature

Ambient : -40 ~ 65 °C

-20 ~ 65 °C (With glycerin filling)

-40 ~ 65 °C (With silicone filling)

Fluid : Max. 200 °C

Max. 100 °C (With glycerin filling)

Max. 100 °C (With silicone filling)

Degree of protection

EN60529/IEC529/IP67

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

* NOTE : P256 series is not applied with diaphragm seal.

Standard features

Pressure connection

Stainless steel (316SS)

Element

Stainless steel (316SS)

Case

Stainless steel (304SS)

Cover

Stainless steel (304SS)

Bayonet type

Blowout protection

Solid front

Blow-out back

Window

Laminated safety glass



Movement

Stainless steel

Dial

White aluminium with black graduations
overpressure range indicated by a black sector

Pointer

Black painted aluminium alloy

Process connection

½", ¾" PT, NPT and PF

Option

Zero adjustable pointer

Pressure connection and element : Monel

Case and cover material : 316SS

WISE®

1. Base model

P256 Safety pattern type overpressure protection
pressure gauge

2. Nominal diameter (mm)

4 100

6 160

3. Type of mounting

A Bottom connection, direct

C Bottom connection, surface, cover mounting plate

4. Accuracy

3 ±1.0 % of full scale

5. Process connection

D 3/8"

E 1/2"

6. Connection type

B PF

C PT

D NPT

F BSPT

G BSP(G)

7. Unit

H bar

I MPa

J kPa

Z Other

8. Range

XXX Refer to pressure unit and range table

9. Pressure connection material and dial color

3 316SS and 2 colors

4 316L SS and 2 colors

7 316SS and 3 colors

8 316L SS and 3 colors

Z Monel

10. Option

0 None

1 Accessories

8 Silicone filling

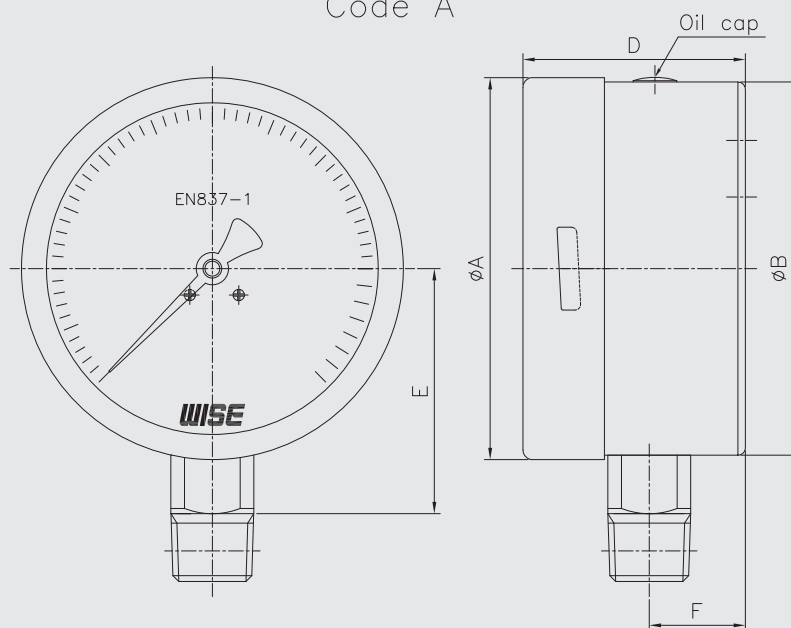
9 Glycerin filling

Sample ordering code

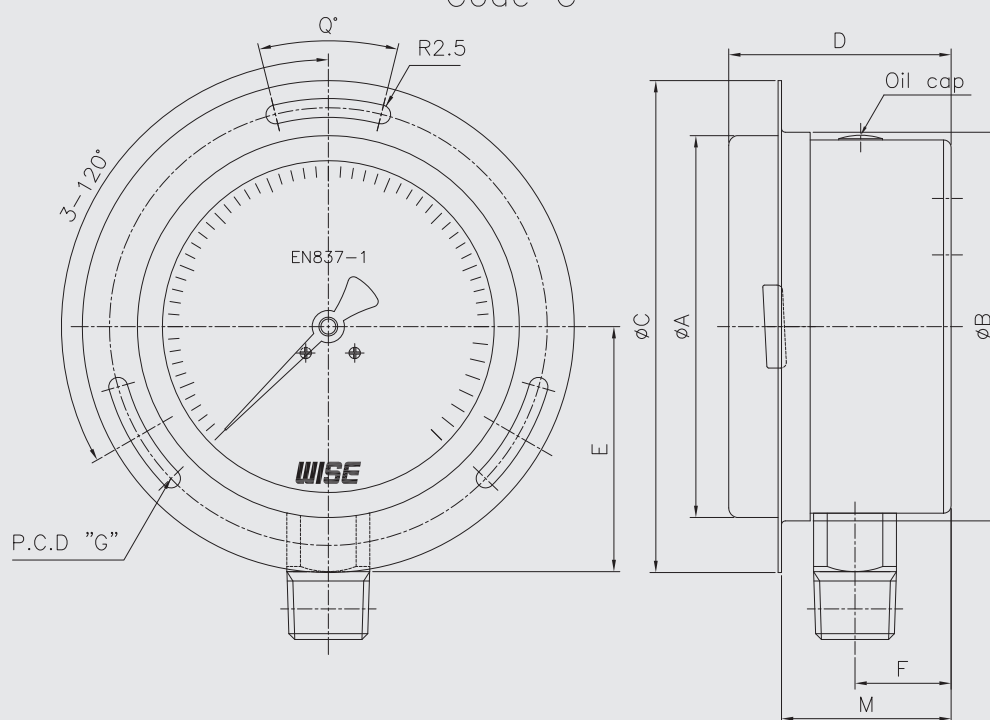
1	2	3	4	5	6	7	8	9	10
P256	4	A	3	D	B	H	XXX	3	0

P256 : Type of mounting

Code A



Code C



Dimensions (mm)

Dial size	Available code	A	B	C	D ± 2	E ± 2	F ± 1	G	M	Q
100	A	101.3	99		59	65	25.5			
	C	101.3	103.1	130.5	59	65	25.5	116	45	28
160	A	160.8	159.6		62	90	25.6			
	C	160.8	164	196	62	90	25.6	178	57	18

Pressure unit and range table

Range and code	Measuring range	Overpressure range
	H : bar	H : bar
026	-1 ~ 0	3
131	0 ~ 0.6	2.5
041	0 ~ 1	4
133	0 ~ 1.6	6
042	0 ~ 2	8
134	0 ~ 2.5	10
044	0 ~ 4	16
045	0 ~ 6	24
047	0 ~ 10	40
050	0 ~ 15	60
051	0 ~ 20	80
052	0 ~ 25	80
051	0 ~ 35	100
052	0 ~ 40	100

Euro gauge

Liquid filled industrial pressure gauge (Internal brass)

Model : P259 series

Spec. sheet no. PD02-14

Service intended

P259 series are designed for long and reliable service under rugged conditions. P259 series are intended for adverse service conditions where pulsating or vibration exists, Hydraulic & compressors and are suitable for gaseous or liquid media that will not obstruct.

Nominal diameter

63, 100 and 160 mm

Accuracy

P2592 (63 mm) : ± 1.6 % of full scale

P2594 (100 mm) and P2596 (160 mm) : ± 1.0 % of full scale

Scale range (MPa, kPa, bar)

63 mm : -0.1 ~ 0 to 0 ~ 40 MPa

100 and 160 mm : -0.1 ~ 0 to 0 ~ 100 MPa

Filling liquid

Glycerine

Working pressure

Steady : 75 % of full scale (63 mm)

100 % of full scale (100 and 160 mm)

Over range protection : 130 % of full scale

Working temperature

Ambient : -20 ~ 60 °C (With glycerin filling)

-40 ~ 60 °C (With silicone filling)

Fluid : Max. 60 °C

Degree of protection

EN60529/IEC529/IP67

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

Brass

Element

Brass

Model : P2594 (100 mm) and P2596 (160 mm)

<10 MPa : C type bourdon tube

≥ 10 MPa : Helical type bourdon tube with 316SS

Model : P2592 (63 mm)

<6 MPa : C type bourdon tube

≥ 6 MPa : Helical type bourdon tube

Blowout protection

Back, Rubber disc for 100 and 160 mm

Top, Rubber disc for 63 mm

Case

Stainless steel (304SS)

Cover

Stainless steel (304SS)

Bayonet type

Window

Laminated safety glass

Movement

63 mm : Brass

100 and 160 mm : Stainless steel

Dial

White aluminium with black graduations

Pointer

Black painted aluminium alloy

Process connection

63 mm : $\frac{1}{4}$ " PT, NPT and PF

100 and 160 mm : $\frac{3}{8}$ ", $\frac{1}{2}$ " PT, NPT and PF

Certificates

ATEX II 2G Ex h IIC T6...T1 Gb

ATEX II 2D Ex h IIIC T85°C...T450°C Db

Option

Zero adjustable pointer

(Only available with diameter 100 and 160 mm)

Silicone filling

WISE[®]

1. Base model**P259** Liquid filled industrial pressure gauge (Internal brass)**2. Nominal diameter (mm)**

2	63
4	100
6	160

3. Type of mounting

- A** Bottom connection, direct
- B** Bottom connection, surface, case mounting plate
- F** Center back connection, direct, only available with diameter 63 mm
- G** Lower back connection, direct, only available with diameter 100 mm
- H** Center back connection, flush, case center mounting plate, only available with diameter 63 mm
- I** Center back connection, flush, case center mounting plate with bracket, only available with diameter 63 mm
- J** Center back connection, flush, cover mounting plate, only available with diameter 63 mm
- L** Lower back connection, flush, case center mounting plate, only available with diameter 100 mm
- M** Lower back connection, flush, case center mounting bracket, only available with diameter 100 mm
- N** Lower back connection, flush, cover mounting plate, only available with diameter 100 mm
- V** Center back connection, flush, cover mounting bracket, only available with diameter 63 mm
- W** Lower back connection, flush, cover mounting bracket, only available with diameter 100 mm

4. Accuracy

- 3** ±1.0 % of full scale, not available with diameter 63 mm
- 4** ±1.6 % of full scale, only available with diameter 63 mm

5. Process connection

- C** 1/4"
- D** 3/8", not available with diameter 63 mm
- E** 1/2", not available with diameter 63 mm

6. Connection type

- B** PF
- C** PT
- D** NPT
- F** BSPT
- G** BSP (G)
- Z** Other

7. Unit

- H** bar
- I** MPa
- J** kPa
- Z** Other

8. Range**XXX** Refer to pressure unit and range table**9. Dial color**

- 1** 2 colors
- 5** 3 colors

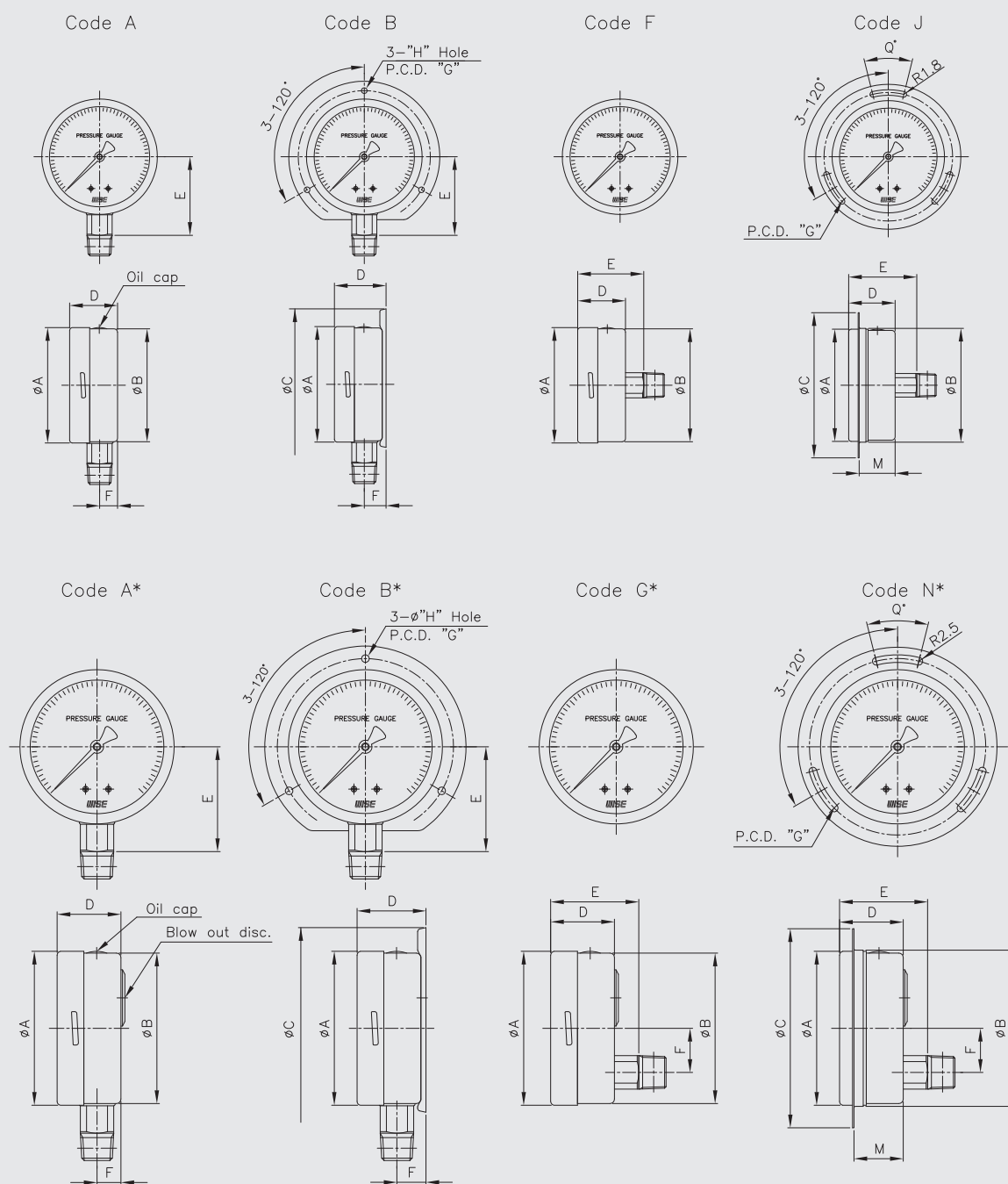
10. Option

- 0** None
- 1** Accessories
- 2** Silicone filling
- 3** Accessories and silicone filling

Sample ordering code

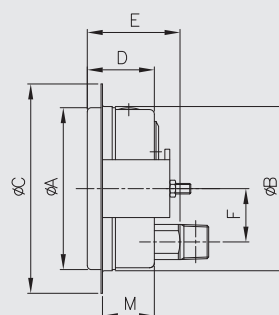
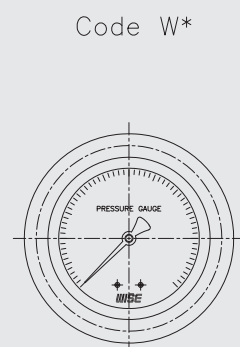
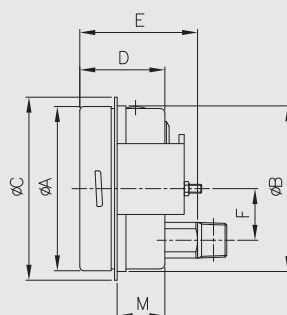
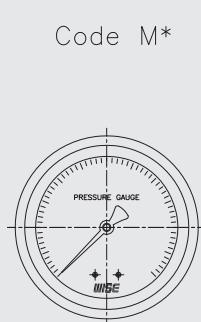
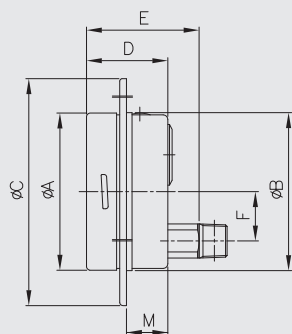
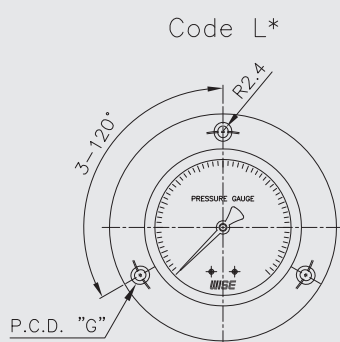
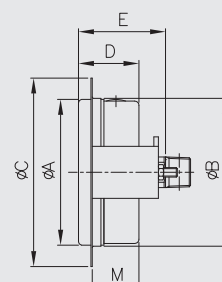
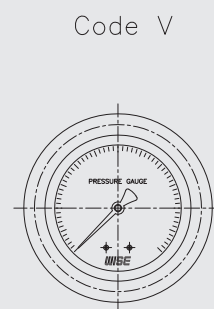
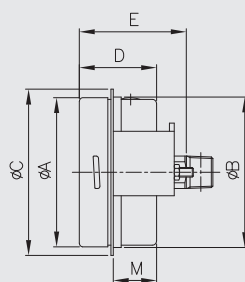
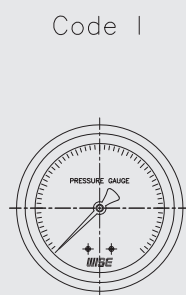
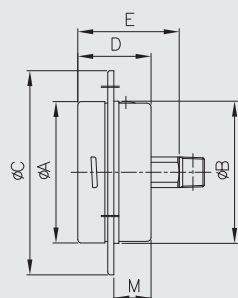
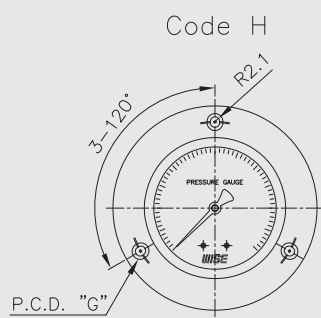
1	2	3	4	5	6	7	8	9	10
P259	4	A	3	C	D	H	XXX	5	0

P259 : Type of mounting (1/2)



Dimensions (mm)											
Dial size	Available code	A	B	C	D±2	E±2	F±1	M	G	H	Q
63	A	64	62		34	41.7	11				
	B	64		85	37	41.7	15		74~75	R2.1	
	F	64	62		34	45					
	J	64	66	86	34	45		28	75		15
100	A*	101.3	99		50	65	16				
	B*	101.3		133	54.4	65	19.4		115~116	R2.5	
	G*	101.3	99		50	65	29				
	N*	101.3	103.1	130.5	50	65	29	45	116		28
160	A*	160.6	159		52.5	94	15.8				
	B*	160.6		196	56	94	19.3		178	5.8	

P259 : Type of mounting (2/2)



Dimensions (mm)

Dial size	Available code	A	B	C	D±2	E±2	F ±1	M	G
63	H	64	64.5	92	34	45			77~78
	I	64	63.7	71	34	45		18.5	
	V	64	66	86	34	45		28	
100	L*	101.3	100.4	132	50	65	29	27.7	115~116
	M*	101.3	101	107.5	50	65	29	29.5	
	W*	101.3	103.1	130.5	50	65	29	45	

Pressure unit and range table

Range and code	Unit and code			Nominal diameter		
	H : bar	I : MPa	J : kPa	63 mm	100 mm	160 mm
026	-1 ~ 0	-0.1 ~ 0	-100 ~ 0	O	O	O
041	0 ~ 1	0 ~ 0.1	0 ~ 100	O	O	O
133	0 ~ 1.6	0 ~ 0.16	0 ~ 160	O	O	O
042	0 ~ 2	0 ~ 0.2	0 ~ 200	O	O	O
134	0 ~ 2.5	0 ~ 0.25	0 ~ 250	O	O	O
043	0 ~ 3	0 ~ 0.3	0 ~ 300	O	O	O
044	0 ~ 4	0 ~ 0.4	0 ~ 400	O	O	O
045	0 ~ 6	0 ~ 0.6	0 ~ 600	O	O	O
047	0 ~ 10	0 ~ 1	0 ~ 1,000	O	O	O
050	0 ~ 15	0 ~ 1.5	X	O	O	O
143	0 ~ 16	0 ~ 1.6	X	O	O	O
051	0 ~ 20	0 ~ 2	X	O	O	O
052	0 ~ 25	0 ~ 2.5	X	O	O	O
054	0 ~ 35	0 ~ 3.5	X	O	O	O
151	0 ~ 40	0 ~ 4	X	O	O	O
055	0 ~ 50	0 ~ 5	X	O	O	O
056	0 ~ 60	0 ~ 6	X	O	O	O
057	0 ~ 70	0 ~ 7	X	O	O	O
058	0 ~ 100	0 ~ 10	X	O	O	O
059	0 ~ 150	0 ~ 15	X	O	O	O
060	0 ~ 160	0 ~ 16	X	O	O	O
062	0 ~ 250	0 ~ 25	X	O	O	O
064	0 ~ 350	0 ~ 35	X	O	O	O
065	0 ~ 400	0 ~ 40	X	O	O	O
066	0 ~ 500	0 ~ 50	X	X	O	O
067	0 ~ 600	0 ~ 60	X	X	O	O
068	0 ~ 700	0 ~ 70	X	X	O	O
070	0 ~ 1,000	0 ~ 100	X	X	O	O
027	-1 ~ 1	-0.1 ~ 0.1	-100 ~ 100	O	O	O
007	-1 ~ 1.5	-0.1 ~ 0.15	-100 ~ 150	O	O	O
028	-1 ~ 2	-0.1 ~ 0.2	-100 ~ 200	O	O	O
029	-1 ~ 3	-0.1 ~ 0.3	-100 ~ 300	O	O	O
030	-1 ~ 4	-0.1 ~ 0.4	-100 ~ 400	O	O	O
010	-1 ~ 5	-0.1 ~ 0.5	-100 ~ 500	O	O	O
031	-1 ~ 6	-0.1 ~ 0.6	-100 ~ 600	O	O	O
014	-1 ~ 9	-0.1 ~ 0.9	-100 ~ 900	O	O	O
032	-1 ~ 10	-0.1 ~ 1	-100 ~ 1,000	O	O	O
033	-1 ~ 15	-0.1 ~ 1.5	X	O	O	O
034	-1 ~ 20	-0.1 ~ 2	X	O	O	O
017	-1 ~ 24	-0.1 ~ 2.4	X	O	O	O
035	-1 ~ 25	-0.1 ~ 2.5	X	O	O	O

O : Available X : Not available

Conversion table

Pressure conversion chart

psi	atm	kgf/cm ²	inH ₂ O	mmHg	inHg	kPa	bar	mmH ₂ O
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

Volume conversion chart

Gallon (U.S)	Cubic feet	Cubic inches	Barrels (Oil)	Cubic cm	Cubic meter	Liter	IMP. Gallon
1	0.1337	231	0.02381	3,785	0.003785	3.785	0.8327
7.481	1	1,728	0.1781	28,320	0.02832	28.32	6.229
0.004329	0.000578	1	0.000103	16.39	0.000016	0.01639	0.003605
42	5.615	9,702	1	159,000	0.159	158.94	34.97
0.000264	0.000035	0.06102	0.000006	1	0.000001	0.001	0.00022
264.17	35.3144	61,023	6.2906	1,000,000	1	1,000	220.1
0.264	0.0353	61.03	0.0629	1,000	0.001	1	0.22
1.201	0.1606	277.4	0.0286	4,546	0.004546	4.546	1

Mass conversion chart

lb.	oz.	kg	gm	gal H ₂ O (32F)	Long ton	Metric tonne	ton
1	16	0.4536	453.6	0.1198	0.000446	0.000453	0.0005
0.0625	1	0.02835	28.35	0.00749	0.000027	0.000028	0.000031
2.205	35.27	1	1,000	0.2642	0.009839	0.001	0.001102
0.002205	0.03527	0.001	1	0.00264	0.000000	0.000001	0.000001
8.345	133.5	3.785	3,785	1	0.003726	0.003786	0.004171
2,240	35,840	1016.4	1,016,363	268.352	1	1.016	1.12
2,204.6	35,273	1,000	1,000,000	264.11	0.9842	1	1.1023
2,000	32,000	907.03	909,090.9	239.7	0.892857	0.907194	1

Density conversion chart

lb / ft ³	gm / cm ³	ka / m ³	lb / in ³
1	0.016018	16.0184	0.000578
62.43	1	1,000	0.03613
0.06243	0.001	1	0.000036
1728	27.68	27,679.8	1

Safety pattern type pressure gauge

Solid-front and turret style thermoplastic case

Model : P359 series

Spec. sheet no. PD03-03

Service intended

P359 safety pattern pressure gauge comes with 4½" thermoplastic case for corrosive environment and heat resistance. Its solid front and blowout back case are designed to meet the safety requirements.



Nominal diameter

125 mm (4½")

Accuracy

±0.5 % of full scale

±1.0 % of full scale

Scale range (MPa, kPa, bar)

-0.1 ~ 0 to 0 ~ 200 MPa

Working pressure

Steady : 75 % of full scale

100 % of full scale

Over range protection : 130% of full scale

Working temperature

Ambient : -40 ~ 65 °C

-20 ~ 65 °C (With glycerin filling)

-40 ~ 65 °C (With silicone filling)

Fluid : Max. 200 °C

Max. 100 °C (With glycerin filling)

Max. 100 °C (With silicone filling)



Degree of protection

EN60529/IEC529/IP67 only applies to mounting B type

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

Stainless steel (316SS)

Element

Stainless Steel (316SS)

<10 MPa : C type bourdon tube

≥10 MPa : Helical type bourdon tube

Case

Black glass reinforced thermoplastic (PBTB)

Solid front, Blow-out back

Turret style case with built in rear flange lugs

Window

Polycarbonate

Movement

Stainless steel

Dial

White aluminium with black graduations

Pointer

Black painted aluminium alloy

Zero adjustment

Internal

Process connection

⅜", ½" PF, NPT and PF

Certificates

Pressure equipment directive (2014/68/EU) Annex III Module H
ATEX Ex II GD c IIB TX

Option

Zero adjustment : External

Window : Safety glass

Pressure connection and element : Monel

WISE®

1. Base model**P359** Safety pattern type pressure gauge**2. Nominal diameter (mm)****5** 125**3. Type of mounting**

- B** Bottom connection, surface, case mounting lugs
L Lower back connection, surface, case mounting lugs

4. Accuracy

- 2** ±0.5 % of full scale
3 ±1.0 % of full scale

5. Process connection

- D** 3/8"
E 1/2"

6. Connection type

- B** PF
C PT
D NPT

7. Unit

- H** bar
I MPa
J kPa

8. Range**XXX** Refer to pressure unit and range table**9. Pressure connection material and dial color**

- 3** 316SS and 2 colors
4 316L SS and 2 colors
7 316SS and 3 colors
8 316L SS and 3 colors
Z Monel

10. Option

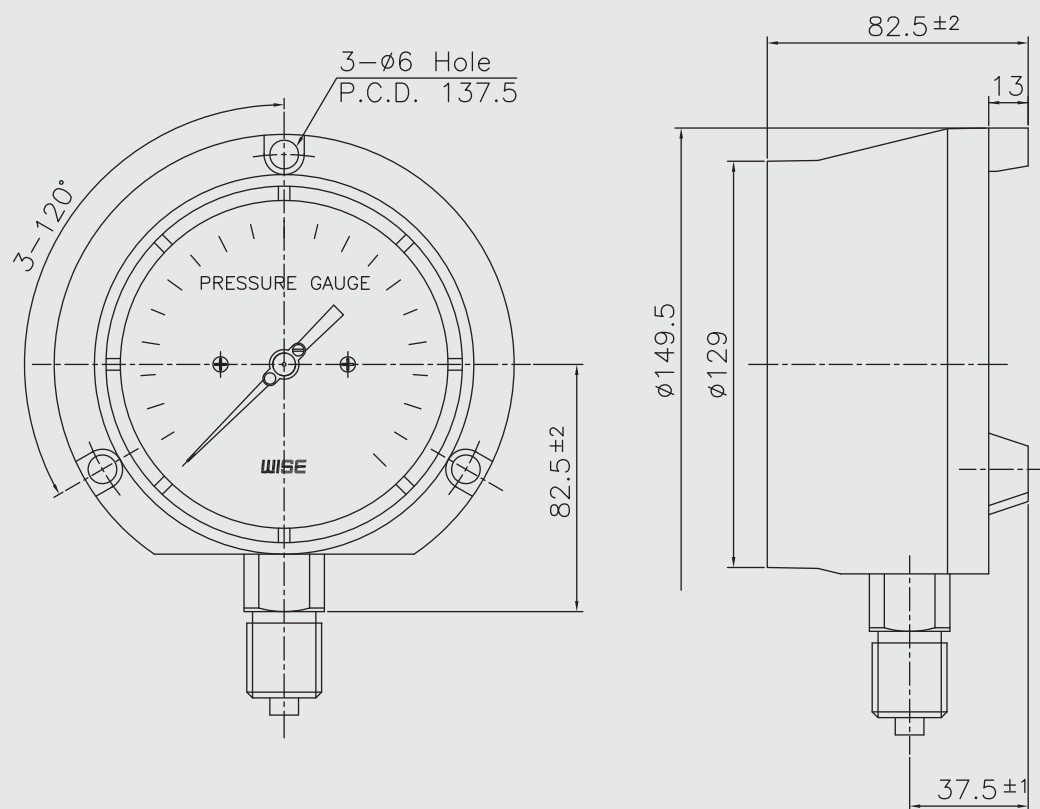
- 0** None
1 Accessories
2 Glycerin filling
3 Silicone filling

Sample ordering code

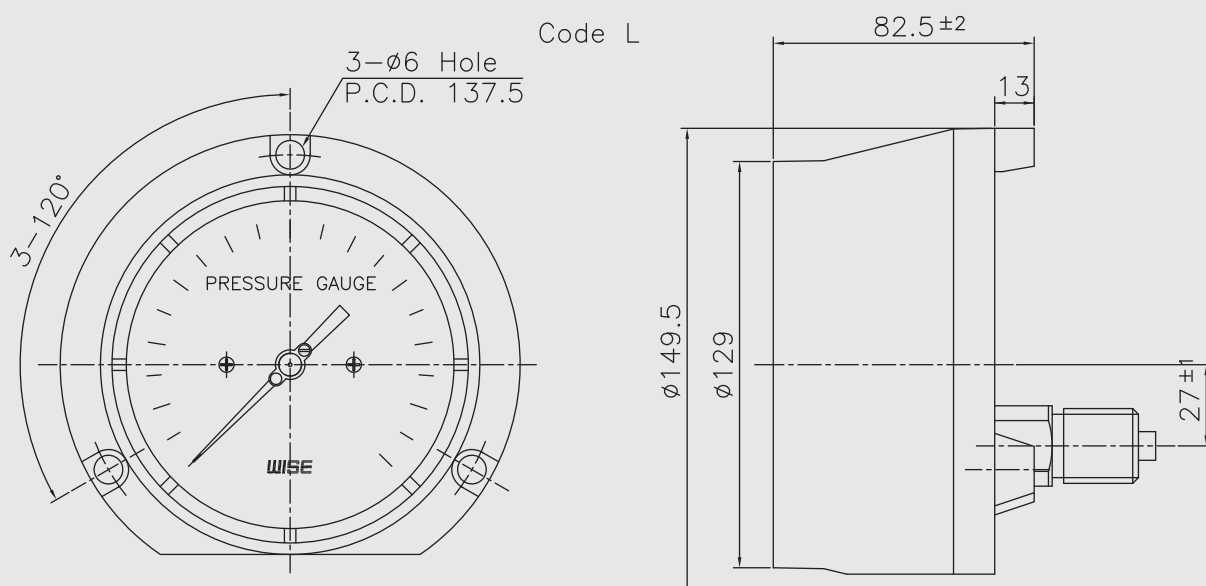
1	2	3	4	5	6	7	8	9	10
P359	5	B	3	E	C	I	XXX	3	0

P359 : Type of mounting

Code B



Code L



Pressure unit and range table

Range and code	Unit and code			Accuracy	
	H : bar	I : MPa	J : kPa	±0.5%	±1.0%
026	-1 ~ 0	-0.1 ~ 0	-100 ~ 0	O	O
041	0 ~ 1	0 ~ 0.1	0 ~ 100	O	O
133	0 ~ 1.6	0 ~ 0.16	0 ~ 160	O	O
042	0 ~ 2	0 ~ 0.2	0 ~ 200	O	O
134	0 ~ 2.5	0 ~ 0.25	0 ~ 250	O	O
043	0 ~ 3	0 ~ 0.3	0 ~ 300	O	O
044	0 ~ 4	0 ~ 0.4	0 ~ 400	O	O
045	0 ~ 6	0 ~ 0.6	0 ~ 600	O	O
047	0 ~ 10	0 ~ 1	0 ~ 1,000	O	O
050	0 ~ 15	0 ~ 1.5	X	O	O
143	0 ~ 16	0 ~ 1.6	X	O	O
051	0 ~ 20	0 ~ 2	X	O	O
052	0 ~ 25	0 ~ 2.5	X	O	O
054	0 ~ 35	0 ~ 3.5	X	O	O
151	0 ~ 40	0 ~ 4	X	O	O
055	0 ~ 50	0 ~ 5	X	O	O
056	0 ~ 60	0 ~ 6	X	O	O
057	0 ~ 70	0 ~ 7	X	O	O
058	0 ~ 100	0 ~ 10	X	O	O
059	0 ~ 150	0 ~ 15	X	O	O
060	0 ~ 160	0 ~ 16	X	O	O
062	0 ~ 250	0 ~ 25	X	O	O
064	0 ~ 350	0 ~ 35	X	O	O
065	0 ~ 400	0 ~ 40	X	O	O
066	0 ~ 500	0 ~ 50	X	O	O
067	0 ~ 600	0 ~ 60	X	O	O
068	0 ~ 700	0 ~ 70	X	O	O
070	0 ~ 1,000	0 ~ 100	X	O	O
074	0 ~ 1,600	0 ~ 160	X	O	O
075	0 ~ 2,000	0 ~ 200	X	O	O
027	-1 ~ 1	-0.1 ~ 0.1	-100 ~ 100	O	O
127	-1 ~ 1.5	-0.1 ~ 0.15	-100 ~ 150	O	O
028	-1 ~ 2	-0.1 ~ 0.2	-100 ~ 200	O	O
029	-1 ~ 3	-0.1 ~ 0.3	-100 ~ 300	O	O
030	-1 ~ 4	-0.1 ~ 0.4	-100 ~ 400	O	O
010	-1 ~ 5	-0.1 ~ 0.5	-100 ~ 500	O	O
031	-1 ~ 6	-0.1 ~ 0.6	-100 ~ 600	O	O
014	-1 ~ 9	-0.1 ~ 0.9	-100 ~ 900	O	O
032	-1 ~ 10	-0.1 ~ 1	-100 ~ 1,000	O	O
033	-1 ~ 15	-0.1 ~ 1.5	-100 ~ 1.5 MPa	O	O
034	-1 ~ 20	-0.1 ~ 2	-100 ~ 2 MPa	O	O
035	-1 ~ 25	-0.1 ~ 2.5	-100 ~ 2.5 MPa	O	O

O : Available X : Not available