

Industrial service pressure gauge (40, 50 mm)

Model : P221, P253 series

Spec. sheet no. PD02-01

Service intended

P221 and P253 series are suitable to be used in a corrosive environment, chemical, petro-chemical, refining facilities, power generation and marine and foods industry. Its stainless steel case and cover have a good appearance and an excellent protection against corrosion and chemical attack.

Nominal diameter

40 and 50 mm

Accuracy

40 mm : ± 3.0 % of full scale

50 mm : ± 1.5 % of full scale

Scale range (MPa, kPa, bar)

0 ~ 0.2, 0.3, 0.4, 0.6, 1, 1.5, 3.5 MPa

Working pressure

Steady : 75 % of full scale

Over range protection : 130 % of full scale

Working temperature

Ambient : Model P221 : -40 ~ 65 °C

Model P253 : -20 ~ 60 °C

Fluid : Model P221 : Max. 200 °C

Model P253 : Max. 60 °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

Model P221 : Stainless steel (316SS)

Model P253 : Nickel plated brass

Element

C type bourdon tube

Model P221 : Stainless steel (316SS)

Model P253 : Brass

Case

Stainless steel (304SS)

Cover

40 mm : Stainless steel (304SS) and polycarbonate

50 mm : Stainless steel (304SS)

Window

Polycarbonate (40 and 50 mm)

Movement

Model P221 : Stainless steel

Model P253 : Brass

Dial

White aluminium with black graduations

Pointer

Black painted aluminium alloy

Process connection

$\frac{1}{8}$ ", $\frac{1}{4}$ " PT, NPT and PF

Option

Window : Safety glass with 304 stainless steel cover

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1. Base model

- P221** Industrial service pressure gauge
P253 Process industrial service pressure gauge

2. Nominal diameter (mm)

- 0** 40
1 50

3. Type of mounting

- A** Bottom connection direct
F Center back connection direct

4. Accuracy

- 4** ±1.5 % of full scale, only available with diameter 50 mm
6 ±3.0 % of full scale, only available with diameter 40 mm

5. Process connection

- B** 1/8"
C 1/4"

6. Connection type

- B** PF
C PT
D NPT
Z Other

7. Unit

- H** bar
I MPa
J kPa

8. Range

- 042** 0 ~ 0.2 MPa (0 ~ 2 bar)
043 0 ~ 0.3 MPa (0 ~ 3 bar)
044 0 ~ 0.4 MPa (0 ~ 4 bar)
045 0 ~ 0.6 MPa (0 ~ 6 bar)
047 0 ~ 1 MPa (0 ~ 10 bar)
050 0 ~ 1.5 MPa (0 ~ 15 bar)
051 0 ~ 2 MPa (0 ~ 20 bar)
054 0 ~ 3.5 MPa (0 ~ 35 bar)

9. Dial color

- 1** 2 colors (P253)
3 2 colors (P221)
5 3 colors (P253)
7 3 colors (P221)

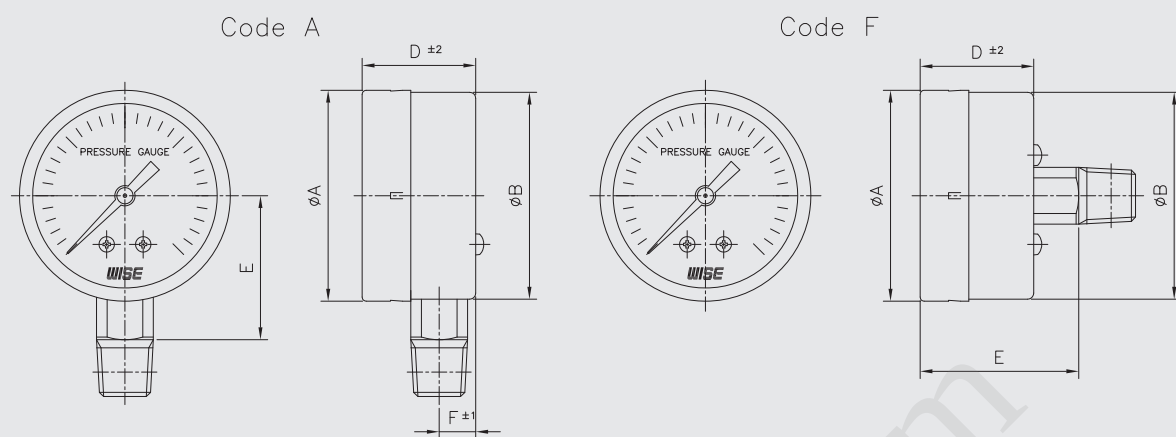
10. Option

- 0** None
2 Safety glass with 304 stainless steel cover

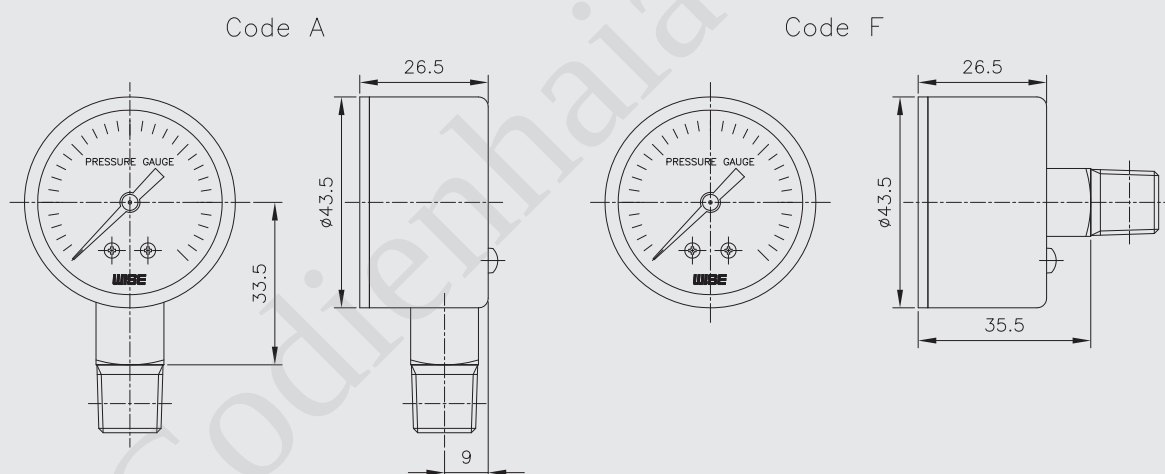
Sample ordering code

1	2	3	4	5	6	7	8	9	10
P221	0	A	4	B	B	H	042	1	0

P221, P253 : Type of mounting



<Cover type—Stainless steel>



<Cover type—polycarbonate>
(Only 40mm)

Dimensions (mm)

Dial size	Available code	A	B	D	F	P221 $E \pm 2$	P253 $E \pm 2$
40	A	44.7	43.5	29	9	34.5	27.8
	F				—	38.1	37.5
50	A	52	51	29	9	34.5	27.8
	F				—	38.1	37.5

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	10,350.0936
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	10,214.7624
0.00142	0.000097	0.0001	0.03937	0.0734	0.0029	0.0098	0.000098	1

Memo