

# 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 :  $\pm 3.0$  % of full scale

50 mm :  $\pm 1.5$  % 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  $\pm 0.4$  % 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

**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)

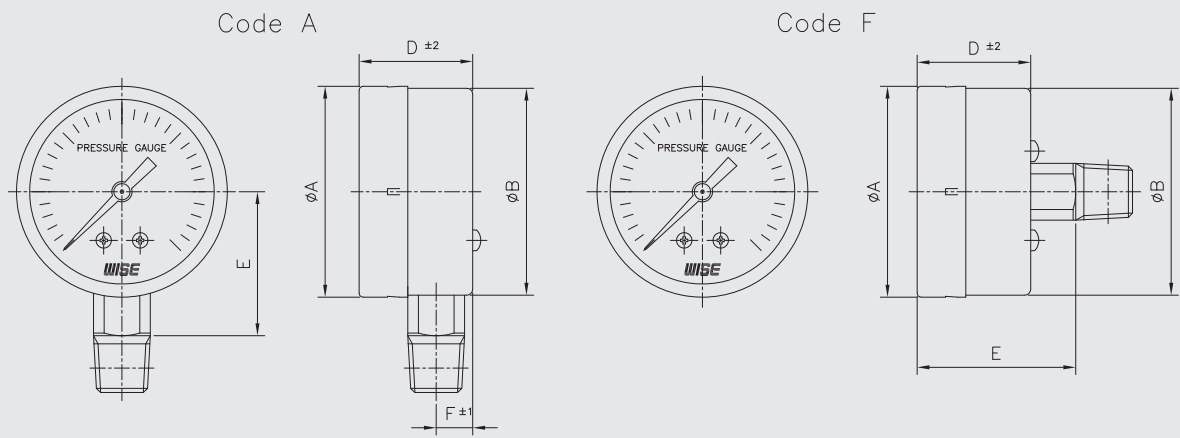
**10. Option**

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

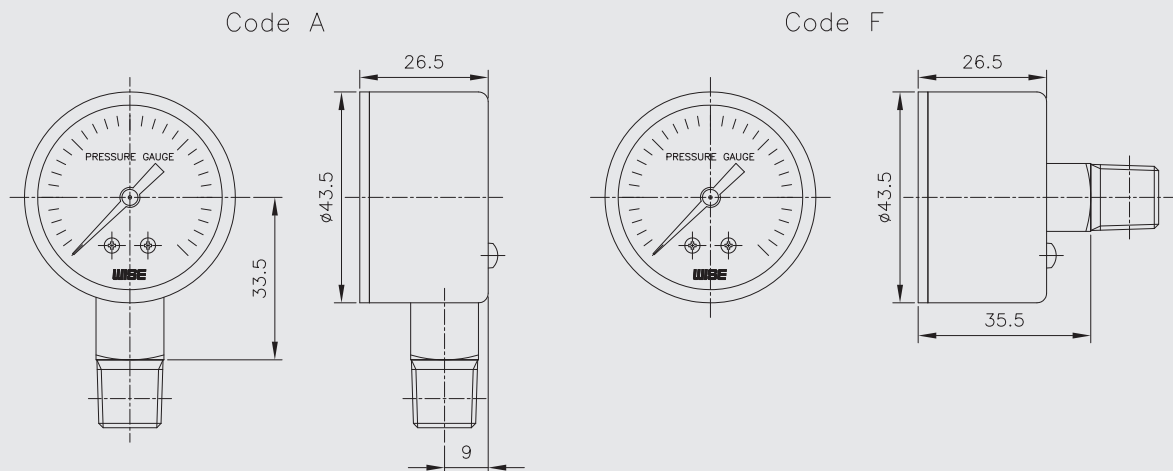
**Sample ordering code**

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 <sup>2</sup>	inH <sub>2</sub> O	mmHg	inHg	kPa	bar	mmH <sub>2</sub> 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