

# 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.

EAC

### 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

**WISE**<sup>®</sup>

| P221\_01

**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**

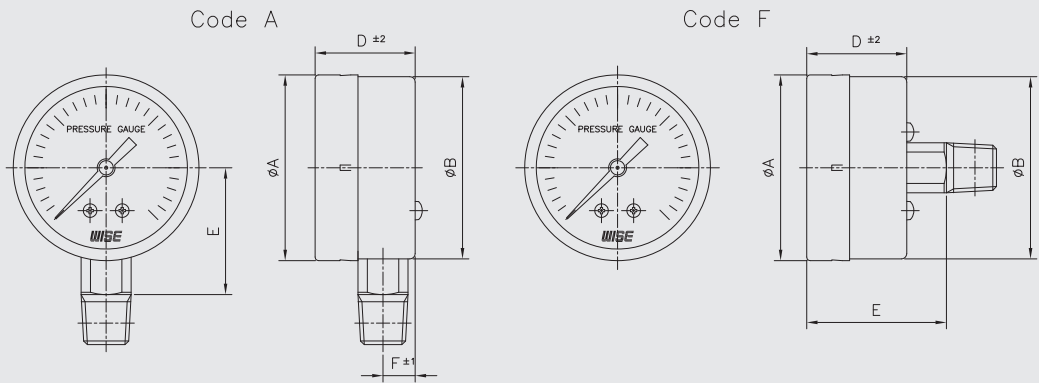
- 1** 2 colors (P253)  
**3** 2 colors (P221)  
**5** 3 colors (P253)  
**7** 3 colors (P221)

**10. Option**

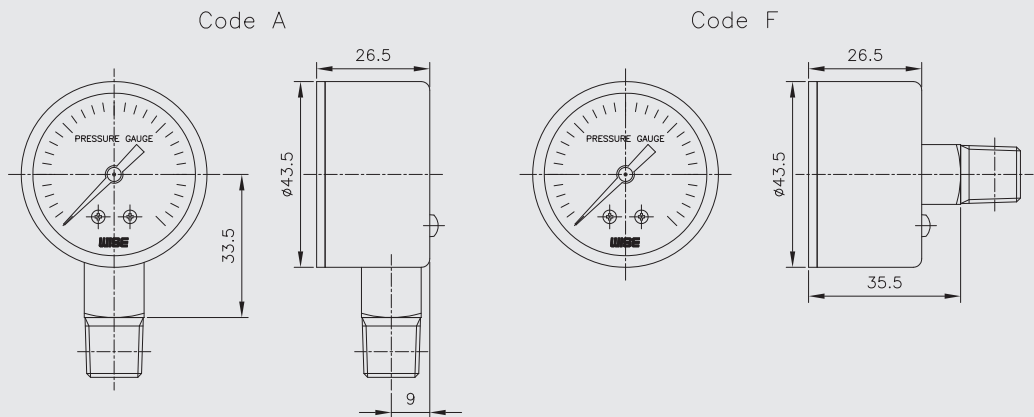
- 0** None  
**2** Safety glass with 304 stainless steel cover

|      |   |   |   |   |   |   |     |   |    |                         |
|------|---|---|---|---|---|---|-----|---|----|-------------------------|
| 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8   | 9 | 10 | Sample<br>ordering code |
| P221 | 1 | F | 4 | B | C | H | 044 | 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<br>E±2 | P253<br>E±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