

# Bourdon Tube Pressure Gauges Stainless Steel Series Model 232.50/233.50, without/with Liquid Filling

WIKA Data Sheet PM 02.02



## Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibrations
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industries: chemical/petro-chemical, power stations, mining, on- and offshore, environmental technology, mechanical engineering and plant construction

## Special Features

- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- Approval German Lloyd and Gosstandart
- Scale ranges up to 0 ... 1600 bar

## Description

### Design

EN 837-1

### Nominal size

63, 100 and 160 mm

### Accuracy class

63 mm: 1.6  
100, 160 mm: 1.0

### Scale ranges

63 mm: 0 ... 1 to 0 ... 1000 bar  
100 mm: 0 ... 0.6 to 0 ... 1000 bar  
160 mm: 0 ... 0.6 to 0 ... 1600 bar  
or other equivalent units of pressure or vacuum



Bourdon Tube Pressure Gauge Model 232.50

### Working pressure

63 mm:	Steady:	full scale value
	Fluctuating:	0.9 x full scale value
	Short time:	1.1 x full scale value
100, 160 mm:	Steady:	full scale value
	Fluctuating:	0.9 x full scale value
	Short time:	1.3 x full scale value

### Operating temperature

Ambient:	-40 ... +60 °C without liquid filling
	-20 ... +60 °C gauges with glycerine filling
Medium:	+200 °C maximum without liquid filling
	+100 °C maximum with liquid filling

### Temperature effect

When temperature of the pressure element deviates from reference temperature (+20 °C):  
max.  $\pm 0.4$  %/10 K of true scale value

### Ingress protection

IP 65 per EN 60 529 / IEC 529

## Standard features

### Pressure connection

Material: stainless steel 316L

Lower mount (LM) or lower back mount (LBM)

63 mm: G ¼ B (male), 14 mm flats

100, 160 mm: G ½ B (male), 22 mm flats

### Pressure element

Material: stainless steel 316L

< 100 bar: C-type

≥ 100 bar: helical type

### Movement

Stainless steel

### Dial

White aluminium with black lettering,

63 mm with pointer stop pin

### Pointer

Black aluminium

### Case

Natural finish stainless steel, with pressure relief in case top (63 mm) or in case back (100 and 160 mm), ranges ≤ 16 bar with compensating valve to vent case

**Window:** Laminated safety glass

**Bezel ring:** Cam ring (bayonet type), natural finish stainl. steel

**Liquid filling (for model 233.50):** Glycerine 99.7 %

## Special versions

**Ammonia gauges** (100 and 160 mm)

Scale in °C for refrigerant R 717 (NH<sub>3</sub>),

Pressure ranges: -1 ... 0 ... 15 bar or -1 ... 0 ... 26 bar

## Dimensions in mm

NS	Dimensions in mm										Weight in kg		
	a	b	b <sub>1</sub>	b <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	e	f	G	h ± 1	SW	Mod. 232.50	Mod. 233.50
63	9.5	33	33	57	63	62	11.5	- 1)	G ¼ B	54	14	0.16	0.20
100	15.5	49.5	49.5	83	101	99	17.5	30	G ½ B	87	22	0.60	0.90
160	15.5	49.5 <sup>3)</sup>	49.5 <sup>2)</sup>	83 <sup>2)</sup>	161	159	17.5	50	G ½ B	118	22	1.10	2.00

Standard pressure entry with parallel thread and sealing to EN 837-1 / 7.3

1) Centre back pressure entry (CBM)

2) Plus 16 mm with pressure ranges ≥ 100 bar

3) Plus 16 mm with pressure range 1600 bar

## Ordering information

Pressure gauge model / Nominal size / Scale range / Size and location of connection / Optional extras required

Modifications may take place and materials specified may be replaced by others without prior notice.

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.

## Optional extras

- Other pressure connection
- Monel pressure system (model 26X.50)
- Pressure system stainless steel 1.4571
- 3-hole surface or panel mounting flange, stainless steel
- 3-hole panel mounting flange, stainless steel, polished
- Triangular bezel, stainless steel, polished, with clamp
- Ambient temperature -40 °C: silicon oil filling
- Alarm contacts (see data sheet AC 08.01)
- Transmitter (model 232.30 with combined transmitter model 89X.34, see data sheets PM 02.04 and AE 08.02)
- Version per ATEX Ex II 2 GD c

## Standard version

