

# Bourdon Tube Pressure Gauges Stainless Steel, Safety Pattern Version Model 232.30/233.30, without/with Liquid Filling

WIKA Data Sheet PM 02.04



## Applications

- Increased safety requirements
- 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

- Safety pressure gauge with solid baffle wall designed in compliance with operational safety requirements of EN 837-1, BS 1780 and ASME B 40.1
- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- 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 232.30

### 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) <sup>1)</sup>

63 mm: G ¼ B (male), 14 mm flats

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

### 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, case with solid baffle wall and blow-out back

### Window

Laminated safety glass

### Bezel ring

Cam ring (bayonet type), natural finish stainless steel

### Liquid filling (for model 233.30)

Glycerine 99.7 %

<sup>1)</sup> Connector position back mount only for gauges NS 63 and 100 without liquid filling

## 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. 232.30	Mod. 233.30
63	17.5	42	42	61	63	63	14.5	18.5	G ¼ B	54	14	0.20	0.26
100	25	59.5	59.5	93	101	100	17	30	G ½ B	87	22	0.65	1.08
160	27 <sup>1)</sup>	65 <sup>2)</sup>	-	-	161	159	17.5	-	G ½ B	118	22	1.30	2.34

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

<sup>1)</sup> 41.5 mm with pressure ranges ≥ 100 bar

<sup>2)</sup> 79 mm with pressure ranges ≥ 100 bar

### Ordering information

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

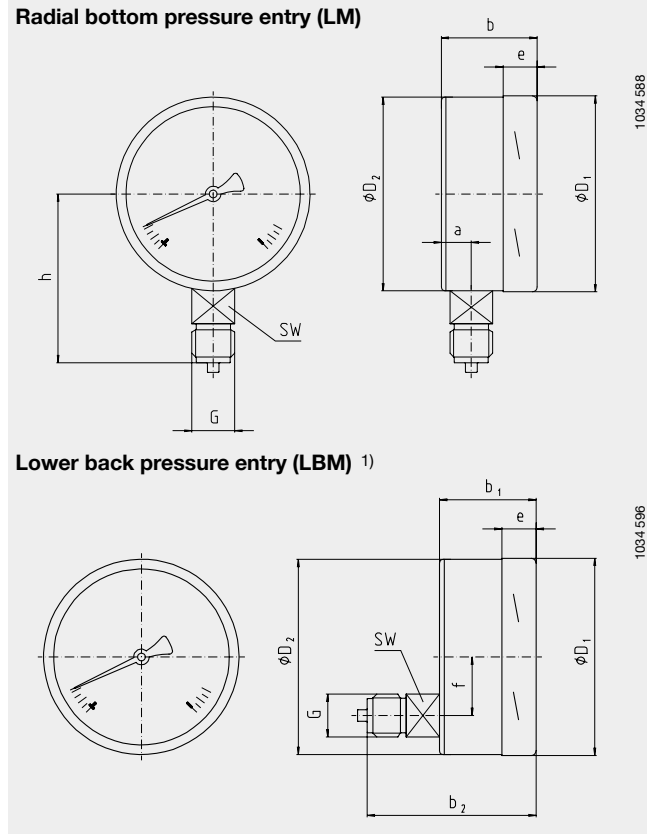
Modifications may take place and materials specified may be replaced by others without prior notice.

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

## Optional extras

- Other pressure connections
- Monel pressure system (model 262.30)
- Pressure system stainless steel 1.4571
- 3-hole panel mounting flange, stainless steel or stainless steel, polished
- Surface mounting lugs on case, stainless steel
- Ambient temperature -40 °C: silicon oil filling
- Ingress protection IP 66 / IP 67
- Alarm contacts (see data sheet AC 08.01)
- Transmitter (model 89X.34, see data sheet AE 08.02)

### Standard version



1034.588

1034.586

