

# Bourdon tube pressure gauge Stainless steel, safety version Models 232.30, 233.30

WIKA data sheet PM 02.04



for further approvals  
see page 3

## Applications

- Increased safety requirements
- With liquid-filled case for applications with high dynamic pressure loads or vibrations <sup>1)</sup>
- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive ambience
- Process industry: Chemical/petro-chemical, power stations, mining, on- and offshore, environmental technology, machine building and general plant construction

## Special features

- Safety pressure gauge with solid baffle wall designed in compliance with operational safety requirements of EN 837-1
- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- Scale ranges up to 0 ... 1,600 bar



**Bourdon tube pressure gauge model 232.30**

## Description

### Design

EN 837-1

### Nominal size in mm

63, 100, 160

### Accuracy class

NS 63: 1.6

NS 100, 160: 1.0

### Scale ranges

NS 63: 0 ... 1 to 0 ... 1,000 bar

NS 100: 0 ... 0.6 to 0 ... 1,000 bar

NS 160: 0 ... 0.6 to 0 ... 1,600 bar

or all other equivalent vacuum or combined pressure and vacuum ranges

### Pressure limitation

NS 63:	Steady:	3/4 x full scale value
	Fluctuating:	2/3 x full scale value
	Short time:	Full scale value
NS 100, 160:	Steady:	Full scale value
	Fluctuating:	0.9 x full scale value
	Short time:	1.3 x full scale value

### Permissible temperature

Ambient:	-40 ... +60 °C without liquid filling
	-20 ... +60 °C gauges with glycerine filling <sup>1)</sup>
Medium:	+200 °C maximum without liquid filling
	+100 °C maximum with liquid filling <sup>1)</sup>

### Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C):  
max. ±0.4 %/10 K of full scale value

### Ingress protection

IP65 per IEC/EN 60529

(gauges with back mount: IP55)

<sup>1)</sup> Model 233.30

## Standard version

### Process connection

Stainless steel 316L (NS 63: 1.4571), lower mount (LM) or lower back mount (LBM) <sup>1)</sup>

NS 63: G ¼ B (male), 14 mm flats

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

### Pressure element

Stainless steel 316L

C-type or helical type

### Movement

Stainless steel

### Dial

Aluminium, white, black lettering,

NS 63 with pointer stop pin

### Pointer

Aluminium, black

### Case

Stainless steel, case with solid baffle wall and blow-out back, scale ranges  $\leq 0 \dots 16$  bar (lower mount) with compensating valve to vent case

### Window

Laminated safety glass (NS 63: Polycarbonate)

### Bezel ring

Cam ring (bayonet type), stainless steel

### Filling liquid (for model 233.30)

Glycerine 99.7 %




(Glycerine 86.5 % for scale range  $\leq 0 \dots 2.5$  bar)

## Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Assembly on diaphragm seals see product review DS
- Measuring system Monel® (model 262.30)
- Panel mounting flange, stainless steel or polished stainless steel
- Surface mounting lugs on the back, stainless steel
- Ambient temperatures -40 °C: Silicone oil filling
- Ingress protection IP66, IP67
- Pressure gauge with switch contacts, see model PGS23.1x0, data sheet PV 22.02 or see model 232.30.063, data sheet PV 22.03
- Pressure gauge with electrical output signal, see model PGT23.1x0, data sheet PV 12.04

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

## Approvals

Logo	Description	Country
	<b>EU declaration of conformity</b> <ul style="list-style-type: none"> <li>■ Pressure equipment directive PS &gt; 200 bar, module A, pressure accessory</li> <li>■ ATEX directive (option) Ignition protection type "c" - constructive safety</li> </ul>	European Union
	<b>EAC (option)</b> <ul style="list-style-type: none"> <li>■ EMC directive</li> <li>■ Pressure equipment directive</li> <li>■ Low voltage directive</li> </ul>	Eurasian Economic Community
	<b>GOST (option)</b> Metrology, measurement technology	Russia
	<b>KazInMetr (option)</b> Metrology, measurement technology	Kazakhstan
-	<b>MTSCHS (option)</b> Permission for commissioning	Kazakhstan
	<b>BelGIM (option)</b> Metrology, measurement technology	Belarus
	<b>UkrSEPRO (option)</b> Metrology, measurement technology	Ukraine
	<b>Uzstandard (option)</b> Metrology, measurement technology	Uzbekistan
-	<b>CPA (option)</b> Metrology, measurement technology	China
	<b>KCs KOSHA (option)</b> Hazardous areas	South Korea
	<b>GL (option)</b> Ships, shipbuilding (e.g. offshore)	International
-	<b>CRN</b> Safety (e.g. electr. safety, overpressure, ...)	Canada

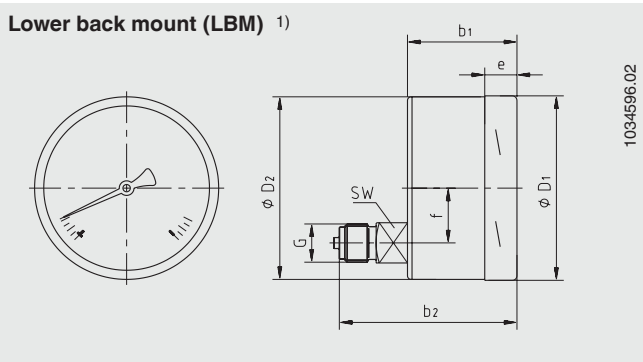
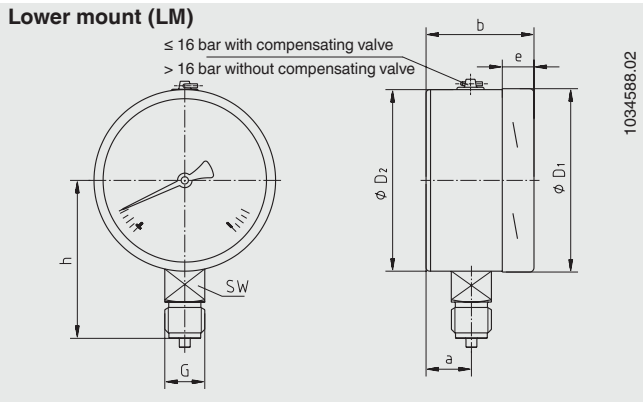
## Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Approvals and certificates, see website

# Dimensions in mm

## Standard version



1) Connection location back mount only for gauges NS 63 and 100 without liquid filling

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	Model 232.30	Model 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>3)</sup>	65 <sup>4)</sup>	-	-	161	159	17.5	-	G ½ B	118	22	1.30	2.34

Process connection per EN 837-1 / 7.3

3) With scale ranges ≥ 100 bar: 41.5 mm  
4) With scale ranges ≥ 100 bar: 79 mm

## Ordering information

Model / Nominal size / Scale range / Connection size / Connection location / Options

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