

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

WIKA data sheet PM 02.04



for further approvals
see page 2

Applications

- Increased safety requirements
- With liquid-filled case for applications with high dynamic pressure loads or vibrations ¹⁾
- 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

¹⁾ Model 233.30

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 ¹⁾
Medium:	+200 °C maximum without liquid filling
	+100 °C maximum with liquid filling ¹⁾

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

IP 65 per EN 60529 / IEC 60529
(gauges with back mount: IP 55)

Standard version

Process connection

Stainless steel 316L (NS 63: 1.4571),
lower mount (LM) or lower back mount (LBM) ¹⁾
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
< 100 bar: C-type
≥ 100 bar: 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 ≤ 0 ... 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 ≤ 0 ... 2.5 bar)

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

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)
- Measuring system stainless steel 1.4571
- 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 IP 66, IP 67
- 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

CE conformity

Pressure equipment directive

97/23/EC, PS > 200 bar, module A, pressure accessory

ATEX directive ²⁾

Ignition protection type „c“, constructive safety

Approvals

- **GL**, ships, shipbuilding (e.g. offshore), Germany
- **GOST**, metrology/measurement technology, Russia
- **GOST-R**, import certificate, Russia
- **DVGW**, safety (e.g. electrical safety, overpressure, ...), Germany
- **KBA**, automotive, European Community
- **CRN**, safety (e.g. electr. safety, overpressure, ...), Canada
- **KOSHA**, ignition protection type „i“ - intrinsic safety, South Korea

Certificates ²⁾

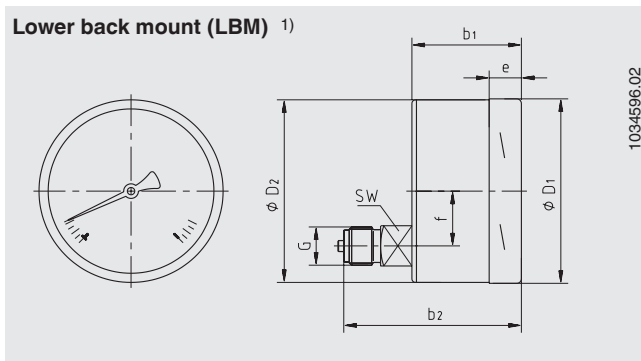
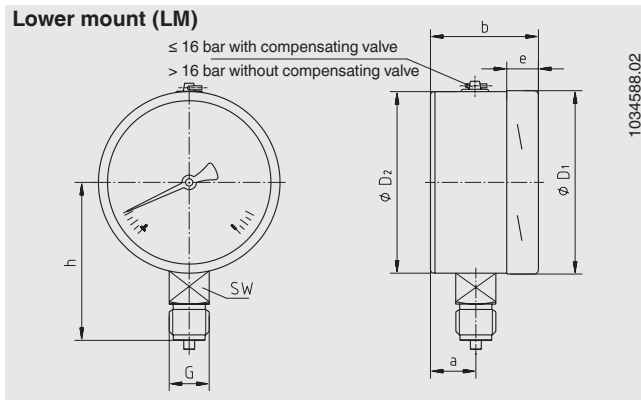
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)

²⁾ Option

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 ₁	b ₂	D ₁	D ₂	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 ³⁾	65 ⁴⁾	-	-	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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