

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

WIKA data sheet PM 02.04



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 ... 1600 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 ... 1000 bar

NS 100: 0 ... 0.6 to 0 ... 1000 bar

NS 160: 0 ... 0.6 to 0 ... 1600 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 529
(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)

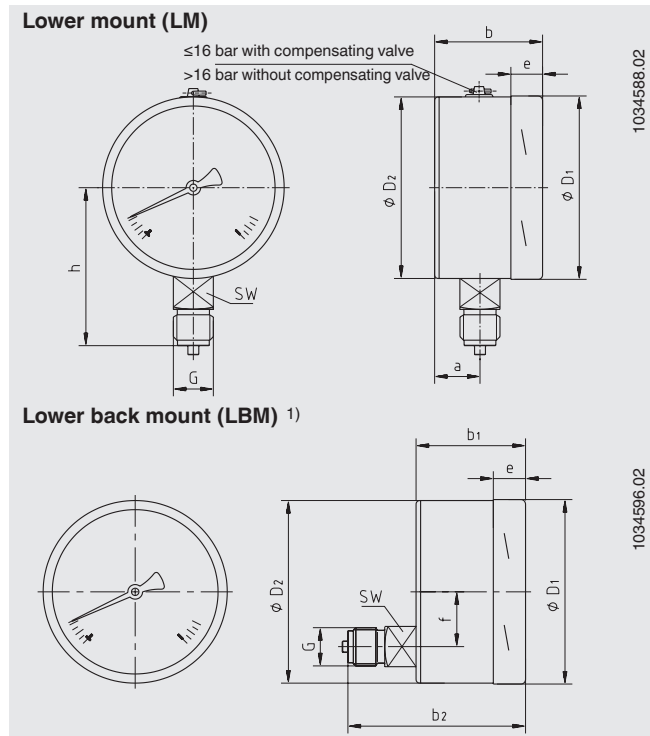
Glycerine 99.7 %

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

Options

- Other process connection
- Assembly on diaphragm seals see product review DS
- Measuring system Monel (model 262.30)
- Measuring system stainless steel 1.4571
- Panel mounting flange, stainl. steel or polished stainl. 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
PGT23.100/160, data sheet PV 12.04
- Version per ATEX Ex II 2 GD c TX
- DVGW conformity certificate for building services and
systems engineering

Standard version



Dimensions in mm

| 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 ²⁾ | 65 ³⁾ | - | - | 161 | 159 | 17.5 | - | G ½ B | 118 | 22 | 1.30 | 2.34 |

Process connection per EN 837-1 / 7.3

2) With scale ranges ≥ 100 bar: 41.5 mm

3) With scale ranges ≥ 100 bar: 79 mm

Ordering information

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

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