

# Bourdon tube pressure gauge, stainless steel

## Process gauge, safety version per ASME B40.100

### Models 232.34, 233.34, NS 4 1/2"

WIKA data sheet PM 02.10



for further approvals see  
page 3

#### Applications

- Increased safety requirements to protect the operator
- With case filling for applications with high dynamic pressure loads and vibrations
- For gaseous and liquid aggressive media that are not highly viscous or crystallising
- Process industry: Chemical industry, petrochemical industry, power plants, mining, on-/offshore, environmental technology, machine building and general plant construction

#### Special features

- Safety version with solid baffle wall designed in compliance with the requirements and test conditions of ASME B 40.100
- Excellent load-cycle stability and shock resistance
- Scale ranges from 0 ... 0.6 to 0 ... 1,000 bar



Bourdon tube pressure gauge model 232.34

#### Description

This high-quality Bourdon tube pressure gauge has been designed especially for increased safety requirements within the process industry.

By using stainless steel materials for the wetted parts and also a highly resistant plastic for the case, the model 232.34 achieves excellent corrosion resistance. With this, the instrument is ideal for liquid and gaseous media, even in aggressive environments.

Scale ranges of 0 ... 0.6 bar to 0 ... 1,000 bar ensure the measuring ranges required for a wide variety of applications.

WIKA manufactures and qualifies the model 232.34 in accordance with the requirements of the American standard ASME B 40.100 in the safety version.

The safety version is made up of a non-splintering plastic window, a solid baffle wall between measuring system and dial and a blow-out back. In the event of a failure, the operator is protected at the front side, as media or components can only be ejected via the back of the case.

For harsh operating conditions (e.g. vibrations), all instruments are also available with an optional case filling.

## Description

### Version

Per ASME B 40.100

### Nominal size

4 ½"

### Accuracy class

Grade 2A per ASME B 40.100

(corresponds to indication accuracy  $\pm 0.5\%$ )

### Scale ranges

0 ... 0.6 bar to 0 ... 1,000 bar (0 ... 10 psi to 0 ... 15,000 psi)  
or all other equivalent vacuum or combined pressure and vacuum ranges

### Pressure limitation

Steady: Full scale value  
Fluctuating: 0.9 x full scale value  
Short time: 1.3 x full scale value

### Permissible temperature

Ambient: -40 ... +65 °C with unfilled instruments  
-20 ... +65 °C with instruments with glycerine filling <sup>1)</sup>  
Medium: Long duration:  $\leq 100$  °C  
Short duration:  $\leq 130$ ° for instruments with glycerine filling <sup>1)</sup> and windows from instrument glass  
Short duration:  $\leq 260$ ° for unfilled instruments and windows from instrument glass

If the pressure gauge is exposed to a medium or ambient temperature of  $> 100$  °C, temperature errors and damage to components should be expected. For long-term operation of the instrument with medium or ambient temperatures  $> 100$  °C, we recommend the use of a diaphragm seal or an alternative heat-dissipating physical design measure. WIKA employees are available for any technical questions and for any application assistance you may require.

### Temperature effect

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

### Ingress protection per IEC/EN 60529

IP54 (with case filling IP65)

### Process connection

Stainless steel 316L  
Lower mount or lower back mount  
½ NPT (male), SW 22 mm

### Pressure element

Stainless steel 316L  
C-type or helical type

### Movement

Stainless steel

### Dial

Aluminium, white, black lettering, pointer stop pin at 6 o'clock

### Pointer

Adjustable pointer, aluminium, black

### Case

PBTP, black, with solid baffle wall (Solidfront) and blow-out back  
Integral surface mounting flange

### Window

Clear non-splintering plastic (PMMA), retained by internal threaded bezel

### Case filling (model 233.34)







Glycerine

## Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Diaphragm seal assembly
- Window from laminated safety glass or instrument glass
- Measuring system copper alloy (model 212.34)
- Measuring system Monel (model 262.34)
- Switch contacts (data sheet AC 08.01)

<sup>1)</sup> Model 233.34

## Approvals

Logo	Description	Country
	<b>EU declaration of conformity</b> Pressure equipment directive PS > 200 bar, module A, pressure accessory	European Union
	<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</b> Metrology, measurement technology	China
-	<b>CRN</b> Safety (e.g. electr. safety, overpressure, ...)	Canada

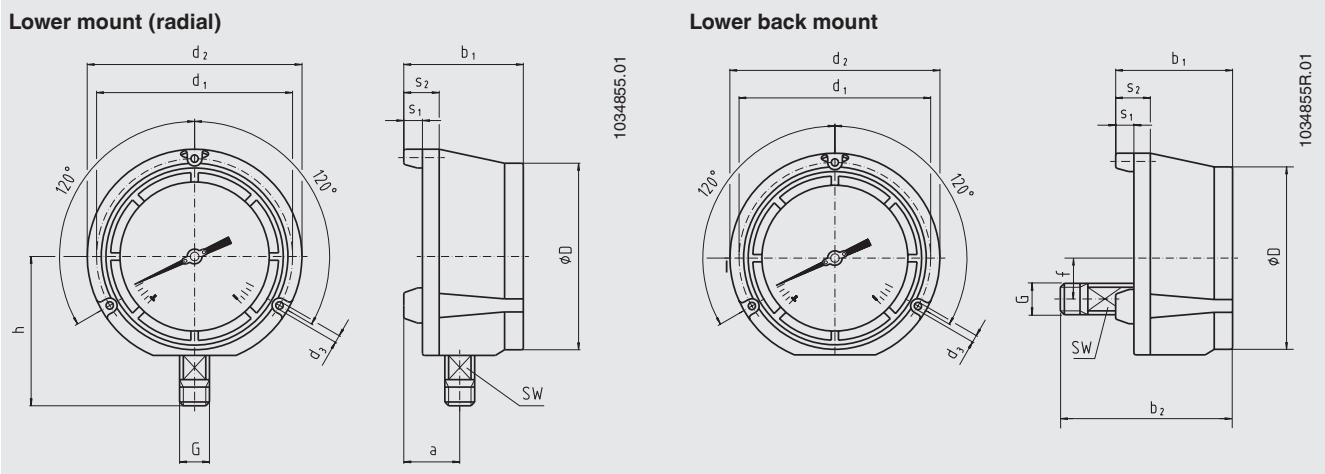
## Certificates (option)

- 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)

Approvals and certificates, see website

Dimensions in mm

Standard version



NS	Dimensions in mm													Weight in kg	
	a	b <sub>1</sub>	b <sub>2</sub>	D	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	f	G	h ±1	s <sub>1</sub>	s <sub>2</sub>	SW	Model 232.34	Model 233.34
4 1/2"	40	84	120	128	136.5	148	6.3	28.5	1/2 NPT	103	12.5	25	22	0.91	1.36

Standard process connection with tapered thread 1/2 NPT, other process connections on request.

Ordering information

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

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