

# Bourdon Tube Pressure Gauges Process Gauge, Safety Pattern Version Model 232.34/233.34, without/with Liquid Filling

WIKA Data Sheet PM 02.10



## 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 ASME B 40.1
- Excellent load-cycle stability and shock resistance
- Scale ranges up to 0 ... 1000 bar

## Description

### Design

Per US Standard ASME B 40.1

### Nominal size

4 1/2"

### Accuracy class

Grade 2A per ASME B 40.1  
(corresponds to indication accuracy 0.5 %)

### Scale ranges

0 ... 0.6 bar to 0 ... 1000 bar (0 ... 10 psi to 0 ... 15000 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



Bourdon Tube Pressure Gauge Model 232.34

### Operating temperature

Ambient: -40 ... +65 °C without liquid filling  
-20 ... +65 °C gauges with glycerine filling  
Medium: +100 °C maximum 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 54 per EN 60 529 / IEC 529  
(with liquid filling IP 65)

1) Maximum continuous media temperature of 100 °C is recommended. However, higher temperatures can be maintained safely for short term exposure per table see below. The user should consider temperature error and gauge component degradation when exposing gauge to any medium or ambient temperature above 100 °C. For continuous use in either ambient or medium temperatures above 100 °C, a diaphragm seal or other heat dissipating means is recommended. Consult WIKA for technical inquiries and application assistance.

### Short term, intermittent maximum medium temperature limits

(Optional instrument glass window required)  
260 °C - without liquid filling  
130 °C - gauges with glycerine filling

## Standard version

### Process connection

Stainless steel 316L,  
lower mount (LM) or lower back mount (LBM)  
½ NPT (male), 22 mm flats

### Pressure element

Stainless steel 316L  
< 100 bar: C-type  
≥ 100 bar: 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  
Solid front safety pattern case with integral baffle wall and  
blow-out back,  
Integral surface mounting flange

### Window

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

### Liquid filling (for model 233.34)

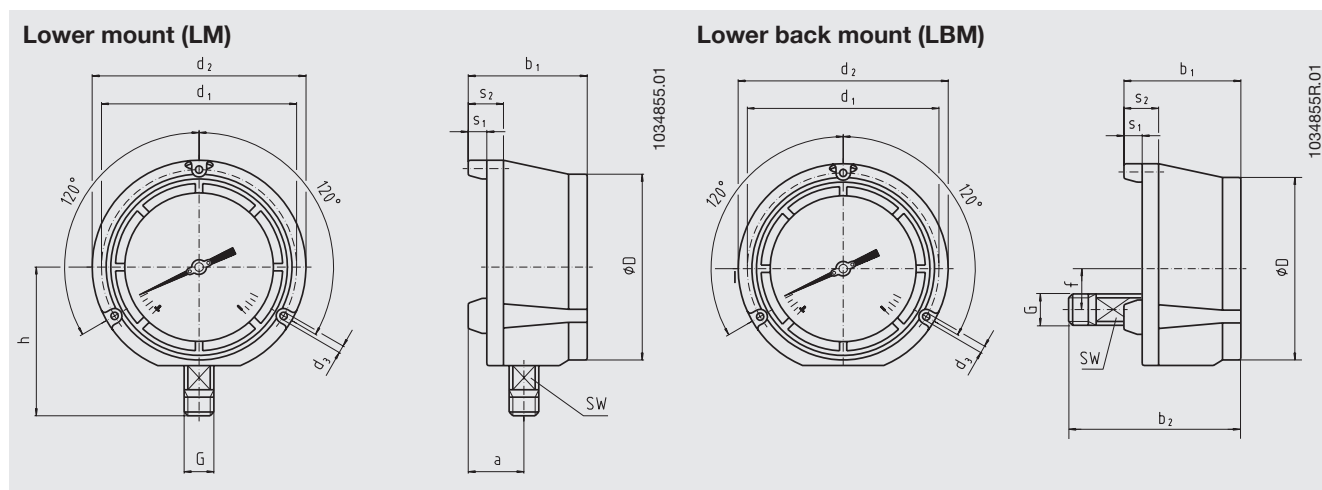
Glycerine 99.7 %

## Options

- Other process connections
- Assembly on diaphragm seals see product review DS
- Laminated safety glass or instrument glass window
- Measuring system Cu-alloy (model 212.34)
- Measuring system Monel (model 262.34)
- Alarm contacts (data sheet AC 08.01)

## 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>	b <sub>2</sub>	SW	Model 232.34	Model 233.34
4 ½"	40	84	120	128	136.5	148	6.3	28.5	½ NPT	103	12.5	25	22	0.91	1.36

Standard process connection with tapered thread ½ NPT, others available on request.

### Ordering information

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

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.



**WIKAI Alexander Wiegand GmbH & Co. KG**  
Alexander-Wiegand-Straße 30  
63911 Klingenberg/Germany  
Tel. (+49) 9372/132-0  
Fax (+49) 9372/132-406  
E-mail info@wika.de  
www.wika.de