

# Bourdon tube pressure gauge

## For extremely low ambient temperatures down to -70 °C

### Model PG23LT

WIKA data sheet PM 02.22



#### Applications

- For outdoor use with ambient temperatures down to -70 °C (-94 °F)
- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive ambience
- Oil & gas, chemical and petrochemical industries

#### Special features

- Special instrument design for extremely low ambient temperatures down to -70 °C (-94 °F)
- Ingress protection IP66 and IP67
- All stainless steel construction
- Measuring ranges from 0 ... 0.6 to 0 ... 1,000 bar
- Optionally as safety version "S3" per EN 837-1



Bourdon tube pressure gauge, model PG23LT

## Description

The model PG23LT high-quality pressure gauge has been designed specifically for extremely low ambient temperatures down to -70 °C (-94 °F). The stainless steel Bourdon tube pressure gauge finds applications in particularly cold regions such as Russia, Canada, Scandinavia or China.

The PG23LT is used primarily in the oil and gas industries and in the petrochemical industry. The typical measuring points are located on pipelines or in pumping stations for oil and gas transportation.

As a result of the special low-temperature design of the instrument, the use of special seals and the case filling, the model PG23LT is suitable for outdoor applications down to an ambient temperature of -70 °C (-94 °F). The same instrument design fulfils the requirements for both IP66 and IP67 ingress protection for pressure ranges greater than 0 ... 16 bar.

Tested and qualified in our own laboratory, the suitability of the instrument for ambient temperatures down to -70 °C (-94 °F) is confirmed as standard with each order by a 2.2 test report.

## Standard version

### Nominal size in mm

100, 160

### Accuracy class

1.0

### Scale ranges

0 ... 0.6 to 0 ... 1,000 bar  
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: -70 ... +60 °C  
Medium: +100 °C maximum

### Temperature effect

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

### Ingress protection

Scale range > 0 ... 16 bar:  
IP66/IP67 per EN/IEC 60529

Scale range ≤ 0 ... 16 bar:  
IP65 per EN/IEC 60529

For further information, see Technical information IN 00.18

### Process connection

Stainless steel 316L, lower mount (LM) or lower back mount (LBM)  
G ½ B (male), 22 mm flats  
½ NPT (male), 22 mm flats  
M20 x 1.5 (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

Aluminium, black

### Case

Stainless steel, scale ranges ≤ 0 ... 16 bar can be vented and resealed for internal pressure compensation

### Window

Laminated safety glass

### Ring

Bayonet ring, stainless steel




### Filling liquid

Silicone oil

## Options

- Sealings for the process connection (model 910.17, see data sheet AC 09.08, sealing material stainless steel recommended)
- Safety version with solid baffle wall and blow-out back per EN-837-1, for lower mount (LM)
- Panel mounting flange, stainless steel
- Surface mounting flange, stainless steel
- Red mark printed on the dial
- Mark pointer on bayonet ring adjustable from the outside with nominal size 100

## Approvals

Logo	Description	Country
	<b>EC declaration of conformity</b> <ul style="list-style-type: none"> <li>■ Pressure equipment directive</li> <li>■ ATEX directive (option) Ex II 2GD c TX</li> </ul> Ignition protection type „c“, constructive safety	European Community
	<b>EAC</b> <ul style="list-style-type: none"> <li>■ Pressure equipment directive</li> <li>■ Hazardous areas (option)</li> </ul>	Eurasian Economic Community
	<b>GOST</b> Metrology, measurement technology	Russia

## Certificates

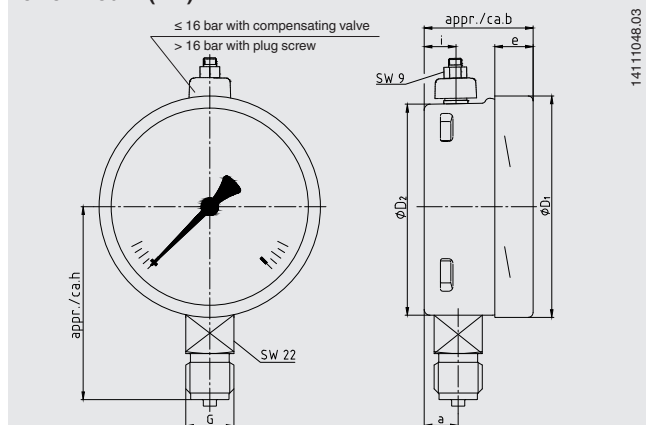
- 2.2 test report per EN 10204
- “Confirmation of operational capability at ambient temperatures down to -70°C”
- 2.2 test report per EN 10204 (option)
- e.g. state-of-the-art manufacturing, material proof, indication accuracy
- 3.1 inspection certificate per EN 10204 (option) e.g. material proof for wetted metallic parts, indication accuracy

Approvals and certificates, see website

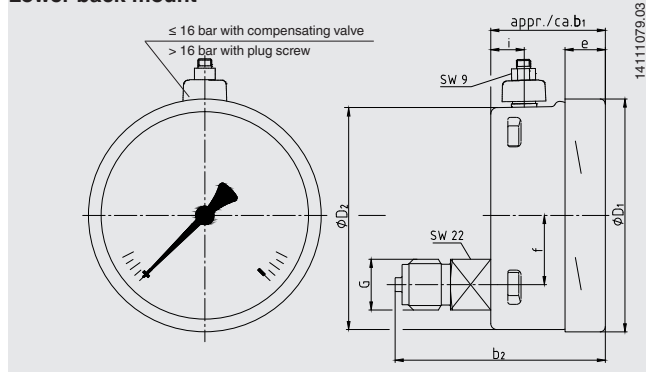
# Dimensions in mm

## Standard version

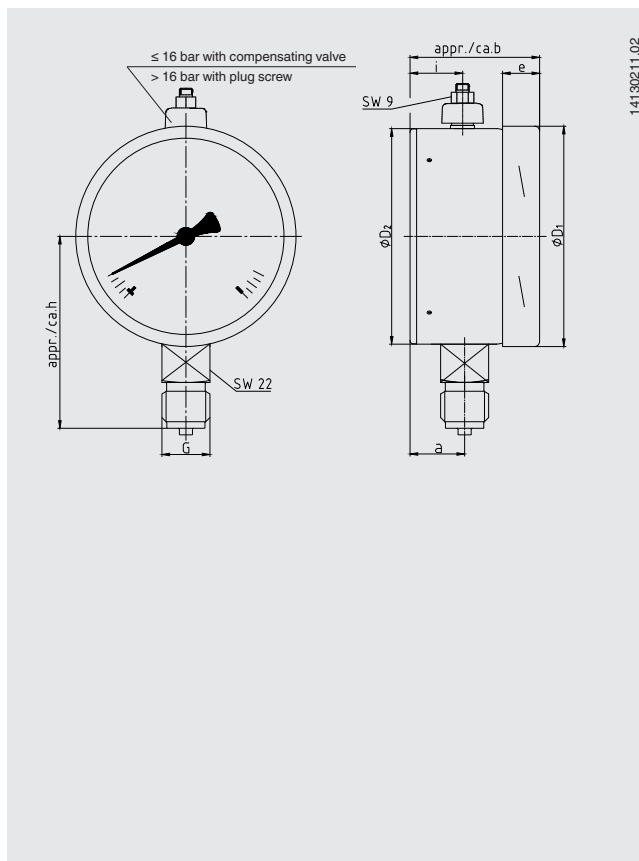
### Lower mount (LM)



### Lower back mount



## Safety version "S3"



## Standard version

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	i	unfilled	filled
100	15.5	49.5	49.5	83	101	99	17.5	30	G ½ B	87	14.5	0.60	0.90
160	15.5	49.5	49.5 <sup>1)</sup>	83 <sup>1)</sup>	161	159	17.5	50	G ½ B	118	14.5	1.10	2.00

Process connection per EN 837-1 / 7.3  
 1) Plus 16 mm with scale range ≥ 100 bar

## Safety version

NS	Dimensions in mm									Weight in kg	
	a	b	D <sub>1</sub>	D <sub>2</sub>	e	G	h ±1	i	unfilled	filled	
100	25	59	101	99	17	G ½ B	87	24	0.65	1.08	
160	27	65	161	159	17.5	G ½ B	118	26	1.30	2.34	

## Ordering information

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

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