Bourdon tube pressure gauge, copper alloy
With capillary, NS 27 [1"] and 40 [1 ½"]
Models 101.00 and 101.12

For further approvals,
see page 4

Applications

- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts
- Heating technology

Special features

- Process connection: G ¼ B or plug connection
- Scale range: 0…4 bar [0 ... 60 psi] or 0… 6 bar [0 ... 100 psi]
- Model 101.00: Very simple to install (snap-in mounting)
- No bending or coiling of plastic capillary necessary
- Suitability of plastic capillary confirmed in long-term tests under characteristic application conditions

Fig. left: Model 101.00, NS 40 [1 ½"]
Fig. right: Model 101.12, NS 27 [1"]

Description

Models 101.00 and 101.12 are Bourdon tube pressure gauges with a capillary. These instruments are based on the proven Bourdon tube measuring system. The plastic case is available in nominal sizes of 27 mm [1"] and 40 mm [1 ½"].

Capillary features
Due to the length and flexibility of the capillary, the mounting position of the pressure gauge can be independent of the measuring point. The plastic capillary version uses a specific material, maintaining the long-term resistance also at high temperatures. An advantage of plastic capillaries, as against brass or copper capillaries, is that these do not need to be bent or coiled. Thus, the plastic capillary makes installation much easier and eliminates the risk of any fatigue fracture.

Application area in heating technology
These instruments are particularly suitable for application in the heating industry. The suitability of the instrument was confirmed in long-term tests under characteristic application conditions.

Individual customer variants
Based on many years of experience in manufacturing and development, WIKA is also happy to offer customer-specific solutions. The G ¼ B standard process connection can, on request, also be completed with a plastic sealing ring at the thread. This eliminates the time-consuming and error-prone sealing during mounting. For customer-specific process connection designs, WIKA also offers the development of plastic plug connections to meet the requirement.

Data sheets showing similar products:
Standard version; models 111.10, 111.12; see data sheet PM 01.01

Specifications

Basic information	
Standard	Following EN 837-1 → For information on the “Selection, installation, handling and operation of pressure gauges”, see technical information IN 00.05.
Nominal size (NS)	
Model 101.12	Ø 27 mm [1"]
Model 101.00	Ø 40 mm [1 ½"]
Connection location	Centre back mount
Window	Plastic, crystal-clear, snap-fitted in case
Case	■ Plastic, black ■ Plastic, white
Mounting	
Model 101.12	Slip-in mounting
Model 101.00	Snap-in mounting with lateral locating lugs
Movement	Copper alloy

Measuring element	
Type of measuring element	Bourdon tube, C-type
Material	Copper alloy
Leak tightness	Leakage rate: < $5 \cdot 10^{-3}$ mbar l/s

Accuracy specifications	
Accuracy class	
Model 101.12	Class 4.0
Model 101.00	Class 2.5
Temperature error	On deviation from the reference conditions at the measuring system: ≤ ±0.4 % per 10 °C [≤ ±0.4 % per 18 °F] of full scale value
Reference conditions	
Ambient temperature	+20 °C [68 °F]

Scale ranges

bar	
0 ... 4	0 ... 6

kg/cm²	
0 ... 4	0 ... 6

kPa	
0 ... 400	0 ... 600

MPa	
0 ... 0.4	0 ... 0.6

psi	
0 ... 60	0 ... 100

Further details on: Scale ranges		
Special scale ranges	Other scale ranges on request	
Unit	■ bar ■ psi ■ kg/cm² ■ kPa ■ MPa	
Dial		
Scale colour	Black	
Material	Plastic	
Special scale	Other scales or customer-specific dials, e.g. with red mark, circular arcs or circular sectors, on request	
Pointer		
Mark pointer/drag pointer	■ Without ■ Red mark pointer on window	
Instrument pointer	Plastic, black	
Pointer stop pin	At zero point	

Process connection		
Standard	■ EN 837-1 ■ Metric fine thread ■ Plug connection	
Size		
EN 837-1	G ¼ B, male thread [1]	
Metric fine thread	■ M14 x 1, male thread ■ M14 x 1, female thread	
Plug connection	Custom dimensions	
Capillary		
Material	■ Plastic (PE-LLD) [2] ■ Copper [3] ■ Copper, PE-coated [3]	
Length	Plastic capillary (PE-LLD)	170 ... 2,000 mm
	Copper capillary	86 ... 2,000 mm
	Copper capillary, PE-coated	195 ... 2,000 mm
Material (wetted)		
Bourdon tube	Copper alloy	
Process connection	EN 837-1, metric fine thread	Copper alloy
	Plug connection	■ Plastic ■ Copper alloy
Capillary	According to the chosen material	

1) A version with PTFE sealing at the thread is available
2) Not available in combination with metric fine thread process connections
3) Only available with process connections made of copper alloy

Other process connections on request

Operating conditions	
Medium temperature	-20 ... +60 °C [-4 ... +140 °F]
Ambient temperature	-20 ... +60 °C [-4 ... +140 °F]
Pressure limitation	
Steady	3/4 x full scale value
Fluctuating	2/3 x full scale value
Short time	Full scale value
Ingress protection per IEC/EN 60529	IP41

Approvals

Optional approvals

Logo	Description	Region
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	**PAC Ukraine** Metrology, measurement technology	Ukraine
	PAC Uzbekistan Metrology, measurement technology	Uzbekistan

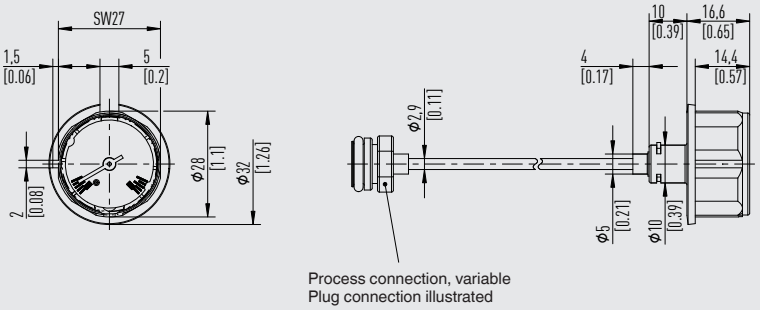
Certificates (option)

Certificates	
Certificates	2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy)
Recommended calibration interval	1 year (dependent on conditions of use)

→ For approvals and certificates, see website

Dimensions in mm [in]

Model 101.12



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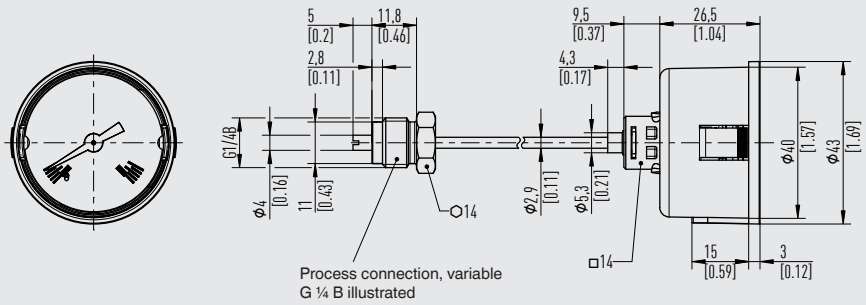
Weight: Approx. 22 g [0.78 oz]

Model 101.00



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Weight: Approx. 50 g [1.76 oz]

Ordering information

Model / Scale range / Process connection / Capillary length / Options

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