Bourdon tube pressure gauge
OEM version
Models 151.10, 151.12

Applications

- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts and polyamide
- Air pumps, compressors
- Plant protection
- Pneumatics
- Heating and sanitary techology

Special features

- One-piece construction of case and process connection from glass-fibre reinforced polyamide (PA)
- Cost-effective, modular design with low weight
- Nominal size 40 [1 ½"], 50 [2"] and 63 [2 ½"]
- Scale ranges from 0 … 2.5 to 0 … 25 bar [0 ... 30 to 0 ... 300 psi]

Fig. left: Model 151.12, centre back mount
Fig. right: Model 151.10, lower mount (radial)

Description

The modular design of this pressure gauge is cost-effective and specifically aimed at OEM customers. The one-piece construction of case and process connection makes the instrument resistant to mechanical damage and ensures a low weight.

The modular measuring system guarantees low temperature influence and high measuring stability.

This proven design concept of pressure gauges is ideal for customers who require customised, light-weight but robust pressure gauges.

Thanks to many years of experience in manufacturing and development for the OEM business, WIKA is able to offer support at every stage, from design and production to the delivery of customised solutions that meet individual requirements.

Data sheets showing similar products:
Bourdon tube pressure gauge, copper alloy, standard version; models 111.10, 111.12; see data sheet PM 01.01

Specifications

Basic information	
Standard	■ In line with EN 837-1 ■ In line with ASME B40.100
	For information on the “Selection, installation, handling and operation of pressure gauges”, see Technical information IN 00.05.
Nominal size (NS)	■ Ø 40 mm [1 ½"] ■ Ø 50 mm [2"] ■ Ø 63 mm [2 ½"]
Connection location	
Model 151.10	Lower mount (radial)
Model 151.12	Centre back mount
Window	Plastic, crystal-clear, snap-fitted in case
Case material	Polyamide (PA), black
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	
EN 837-1	Class 2.5
ASME B40.100	±3 % | ±2 % | ±3 % of measuring span (grade B)
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 ... 2.5	0 ... 16
0 ... 4	0 ... 20
0 ... 6	0 ... 25
0 ... 10	

kg/cm²	
0 ... 2.5	0 ... 16
0 ... 4	0 ... 20
0 ... 6	0 ... 25
0 ... 10	

kPa	
0 ... 250	0 ... 1,600
0 ... 400	0 ... 2,000
0 ... 600	0 ... 2,500
0 ... 1,000	

MPa	
0 ... 0.25	0 ... 1.6
0 ... 0.4	0 ... 2.0
0 ... 0.6	0 ... 2.5
0 ... 1	

psi	
0 ... 30	0 ... 160
0 ... 60	0 ... 200
0 ... 100	0 ... 300
0 ... 150	

Other scale ranges on request

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

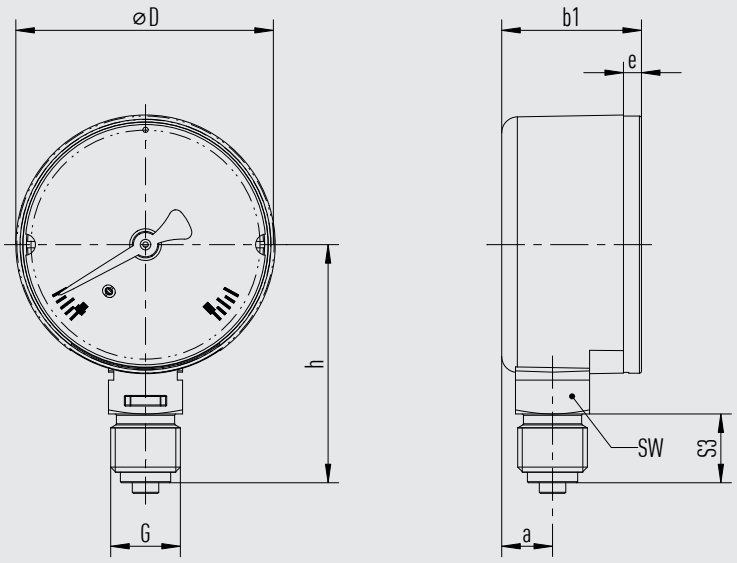
Process connection	
Standard	EN 837-1
Size	■ G ⅛ B, male thread ■ G ¼ B, male thread
Restrictor	■ Without ■ Ø 0.5 mm [0.02"], copper alloy
Material (wetted)	
Process connection	Glass-fibre reinforced polyamide (PA)
Bourdon tube	Copper alloy

Other process connections on request

Operating conditions	
Medium temperature	Max. +60 °C [+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	IP44

Dimensions in mm [in]

Model 151.10, lower mount (radial)



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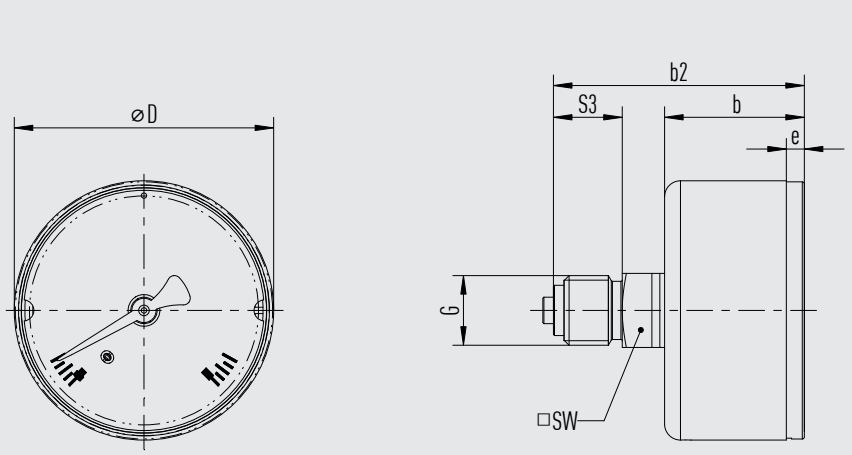
NS	G [1]	Dimensions in mm [in]						
		D	h ±0.1 [0.04]	S3	a	b1 ±0.5 [0.02]	e	SW
40 [1 ½"]	G ⅛ B	49 [1,92]	36 [1.42]	10 [0.39]	9.6 [0.38]	26.4 [1.04]	3.4 [0.13]	14 [0.55]
	G ¼ B	49 [1,92]	45 [1.77]	13 [0.51]	9.6 [0.38]	26.4 [1.04]	3.4 [0.13]	14 [0.55]
50 [2"]	G ⅛ B	55 [2.17]	36 [1.42]	10 [0.39]	9.6 [0.38]	26.4 [1.04]	3.4 [0.13]	14 [0.55]
	G ¼ B	55 [2.17]	45 [1.77]	13 [0.51]	9.6 [0.38]	26.4 [1.04]	3.4 [0.13]	14 [0.55]
63 [2 ½"]	G ⅛ B	68 [2.68]	36 [1.42]	10 [0.39]	9.6 [0.38]	26.4 [1.04]	3.4 [0.13]	14 [0.55]
	G ¼ B	68 [2.68]	45 [1.77]	13 [0.51]	9.6 [0.38]	26.4 [1.04]	3.4 [0.13]	14 [0.55]

1) The G ⅛ B process connection of this instrument is manufactured without a centring spigot and with a thread runout instead of a thread undercut.

NS	Weight in kg [lb]
40 [1 ½"]	0.03 [0.07]
50 [2"]	0.04 [0.09]
63 [2 ½"]	0.05 [0.1]

Model 151.12, centre back mount



NS	G [1)]	Dimensions in mm [in]					
		D	S3	b ±0.5 [0.02]	b2 ±0.5 [0.02]	e	SW
40 [1 ½"]	G ⅛ B	49 [1,92]	10 [0.39]	26.4 [1.04]	42.4 [1.67]	3.4 [0.13]	14 [0.55]
	G ¼ B	49 [1,92]	13 [0.51]	26.4 [1.04]	47.4 [1.87]	3.4 [0.13]	14 [0.55]
50 [2"]	G ⅛ B	55 [2.17]	10 [0.39]	26.4 [1.04]	42.4 [1.67]	3.4 [0.13]	14 [0.55]
	G ¼ B	55 [2.17]	13 [0.51]	26.4 [1.04]	47.4 [1.87]	3.4 [0.13]	14 [0.55]
63 [2 ½"]	G ⅛ B	68 [2.68]	10 [0.39]	26.4 [1.04]	42.4 [1.67]	3.4 [0.13]	14 [0.55]
	G ¼ B	68 [2.68]	13 [0.51]	26.4 [1.04]	47.4 [1.87]	3.4 [0.13]	14 [0.55]

1) The G ⅛ B process connection of this instrument is manufactured without a centring spigot and with a thread runout instead of a thread undercut.

NS	Weight in kg [lb]
40 [1 ½"]	0.03 [0.07]
50 [2"]	0.04 [0.09]
63 [2 ½"]	0.05 [0.1]

Ordering information

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

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