

Mechanical
pressure measurement

Bourdon tube pressure gauge, copper alloy Model 113.13, liquid filling, plastic case

WIKA data sheet PM 01.04



for further approvals
see page 3

Applications

- For measuring points with high dynamic pressure loads and vibrations
- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts
- Hydraulics
- Compressors

Special features

- Vibration and shock-resistant
- Design per EN 837-1
- Scale ranges up to 0 ... 400 bar



Bourdon tube pressure gauge model 113.13

Description

The model 113.13 is a liquid-filled pressure gauge with plastic case.

The liquid filling causes damping of the internal components and contributes to an increased vibration resistance and shock resistance.

The pressure gauges are suitable for installation in machines and plants where vibrations and shocks are expected.

These pressure gauges are based on the proven Bourdon tube measuring system. The deflection of the Bourdon tube is transmitted to a movement and indicated.

The plastic case and the window are welded together and an O-ring seal seals the process connection at the case. In this way the instrument fulfils the high requirements for IP65 ingress protection. With accuracy class 2.5 and the available

nominal sizes 40, 50 and 63, this model is suited for a wide range of applications in industry. The mounting bracket, which is available as an option, enables the panel mounting of pressure gauges with back mount process connection. The nominal size 63 mm version with back mount process connection is alternatively offered with a mounting flange on the front of the instrument. This mounting flange is used, when, for example, panel mounting is only possible from the front.

WIKA data sheet PM 01.04 · 03/2017

Page 1 of 4



Specifications

Version

EN 837-1

Nominal size in mm

40, 50, 63

Accuracy class

2.5

Scale ranges

0 ... 1.6 to 0 ... 400 bar

or all other equivalent vacuum or combined pressure and vacuum ranges

Pressure limitation

Steady: $\frac{3}{4}$ x full scale value

Fluctuating: $\frac{2}{3}$ x full scale value

Short time: Full scale value

Permissible temperature

Ambient: -20 ... +60 °C

Medium: +60 °C maximum

Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C): max. ± 0.4 %/10 K of the span

Process connection

Copper alloy,

Lower mount (radial) or centre back mount,

NS 40: Centre back mount, G $\frac{1}{8}$ B (male), SW 14

NS 50, 63: G $\frac{1}{4}$ B (male), SW 14

Pressure element

Copper alloy

Movement

Copper alloy

Dial

Plastic, white, black lettering, with pointer stop pin

Pointer

Plastic, black

Case

Plastic, black

Window

Plastic, crystal-clear (PMMA), welded with case

Filling liquid

Glycerine






Ingress protection

IP65 per EN/IEC 60529

Options

- Panel mounting flange (only for NS 63 and back mount)
- Mounting clamp (only for back mount)
- Customer-specific version

Approvals

Logo	Description	Country
	EU declaration of conformity Pressure equipment directive	European Community
	EAC Pressure equipment directive	Eurasian Economic Community
	GOST Metrology, measurement technology	Russia
	KazInMetr Metrology, measurement technology	Kazakhstan
-	MTSCHS Permission for commissioning	Kazakhstan
	BeIGIM Metrology, measurement technology	Belarus
	UkrSEPRO Metrology, measurement technology	Ukraine
-	CPA Metrology, measurement technology	China
-	CRN Safety (e.g. electr. safety, overpressure, ...)	Canada

Certificates (option)

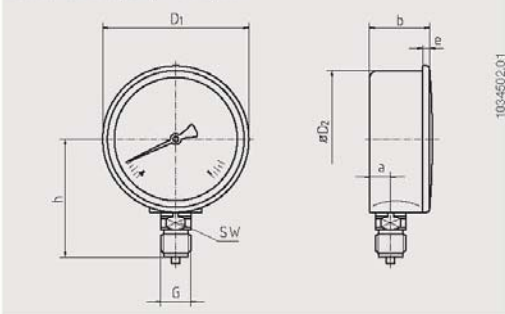
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)

Approvals and certificates, see website

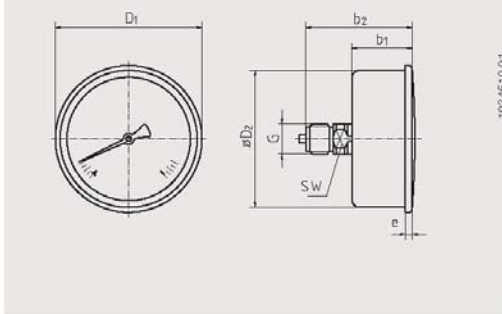
Dimensions in mm

Standard version

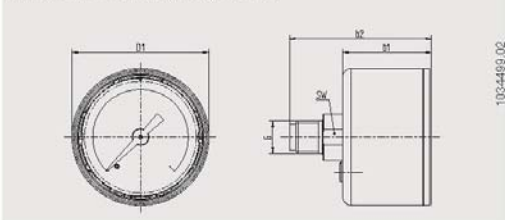
Lower mount (LM), NS 50, 63



Centre back mount (CBM), NS 50, 63



Centre back mount (CBM), NS 40



NS	Dimensions in mm										Weight in kg
	a	b	b1	b2	D1	D2	e	G	h ± 1	SW	
40	-	-	26.5	42.5	41	-	-	G 1/8 B	-	14	0.13
50	11.5	27	29	53	55	51	5	G 1/4 B	48	14	0.17
63	11.5	27	29	53	68	62.5	5	G 1/4 B	54	14	0.21

Process connection per EN 837-1 / 7.3

Ordering information

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

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We reserve the right to make modifications to the specifications and materials.



WIKAL
WIKAL Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. +49 9372 132-0
Fax +49 9372 132-406
info@wika.de
www.wika.de

Art. No.	Type No.
102068	700-K
102069	700/1-K
102070	700/2-K
102071	700/3-K
102072	700/4-K
102073	700/5-K
102074	702-K
102075	703-K
102076	704-K
102077	705-K
102078	706-K
102079	707-K
102080	708-K
102081	709-K
102082	710-K
102083	711-K
102084	712-K
102085	713-K
102086	714-K
102087	715-K

Art. No.	Type No.
102088	800-K
102089	800/1-K
102090	800/2-K
102091	800/3-K
102092	800/4-K
102093	800/5-K
102094	802-K
102095	803-K
102096	804-K
102097	805-K
102098	806-K
102099	807-K
102100	808-K
102101	809-K
102102	810-K
102103	811-K
102104	812-K
102105	813-K
102106	814-K
102107	815-K