

Mechanical
pressure measurement

Diaphragm pressure gauge Stainless steel version Models 432.50, 433.50

WIKA data sheet PM 04.03



for further approvals
see page 2

Applications

- For measuring points with increased overpressure
- With liquid-filled case for applications with high dynamic pressure loads or vibrations ¹⁾
- For gaseous and liquid, aggressive and highly viscous or contaminated media, also in aggressive ambience
- Process industry: Chemical/petro-chemical, power stations, mining, on- and offshore, environmental technology, machine building and general plant construction

Special features

- All stainless steel construction
- High overpressure safety
- Process connection thread or open flange
- Wide choice of special materials
- Scale ranges from 0 ... 16 mbar



Diaphragm pressure gauge model 432.50

Description

Design
EN 837-3

Nominal size in mm
100, 160

Accuracy class
1.6

Scale ranges
0 ... 16 mbar to 0 ... 250 mbar (flange Ø 160 mm)
0 ... 400 mbar to 0 ... 25 bar (flange Ø 100 mm)
or all other equivalent vacuum or combined pressure and vacuum ranges

Pressure limitation
Steady: Full scale value
Fluctuating: 0.9 x full scale value

Overpressure safety
5 x full scale value, however max. 40 bar

Permissible temperature
Ambient: -20 ... +60 °C
Medium: ≤ 100 °C
Storage: -40 ... +70 °C
(scale ranges ≤ 60 mbar: -20 ... +70 °C)

Temperature effect
When the temperature of the measuring system deviates from the reference temperature (+20 °C):
≤ ±0.8 %/10 K of full scale value

Ingress protection
IP 54 per EN 60529 / IEC 60529
(with liquid filling ¹⁾ IP 65)

¹⁾ Model 433.50

Standard version

Process connection with lower measuring flange
Stainless steel 316L, G ½ B (male), 22 mm flats

Pressure element
≤ 0.25 bar: Stainless steel 316L
> 0.25 bar: NiCr-alloy (Inconel)

Pressure chamber sealing
FPM/FKM

Movement
Stainless steel

Dial
Aluminium, white, black lettering

Pointer
Aluminium, black

Case with upper measuring flange
Stainless steel, with pressure relief,
gauges with liquid filling with compensating valve to vent
case

Window
Laminated safety glass

Bezel ring
Cam ring (bayonet type), stainless steel

Filling liquid (for model 433.50)
Glycerine 86.5 %

Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Safety version (model 43x.30)
- Overpressure safe: 10 x full scale value, max. 40 bar
- Vacuum safe up to -1 bar
- Max. medium temperature +200 °C
- Admissible ambient temperature -40 ... +60 °C (silicone oil filling)
- Higher indication accuracy, class 1.0 and 0.6
- Open connecting flanges per DIN/ASME from DN 15 to DN 80 (preferred nominal widths DN 25 and 50 or DN 1" and 2"; see data sheet IN 00.10)
- Wetted parts lined/coated with special materials such as PTFE (model 45x.50), Hastelloy, Monel, nickel, tantalum, titanium, silver (accuracy class 2.5, overpressure safety on request)
- Pressure gauge with switch contacts, see model PGS43.1x0, data sheet PV 24.03
- Pressure gauge with electrical output signal, see model PGT43.1x0, data sheet PV 14.03

CE conformity

ATEX directive ¹⁾
Ignition protection type „c“, constructive safety

Approvals

- VdTÜV, safety (e.g. electrical safety, overpressure, ...), Germany
- EAC, import certificate, customs union Russia/Belarus/Kazakhstan
- GOST, metrology/measurement technology, Russia
- PTB, type approval for connection to hazardous zone 0
- CRN, safety (e.g. electr. safety, overpressure, ...), Canada
- KOSHA, ignition protection type „i“ - intrinsic safety, South Korea

Certificates ¹⁾

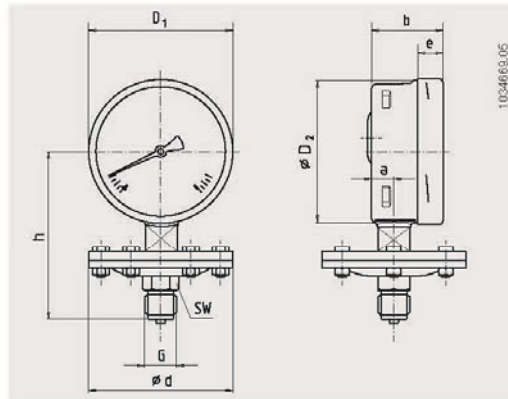
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)

¹⁾ Option

Approvals and certificates, see website

Dimensions in mm

Standard version



NS	Scale range in bar	Dimensions in mm									Weight in kg
		d	a	b	D ₁	D ₂	e	G	h ±2	SW	
100	≤ 0.25	160	15.5	49.5	101	99	17.5	G ½ B	119	22	2.50
160	≤ 0.25	160	15.5	49.5	161	159	17.5	G ½ B	149	22	2.90
100	> 0.25	100	15.5	49.5	101	99	17.5	G ½ B	117	22	1.30
160	> 0.25	100	15.5	49.5	161	159	17.5	G ½ B	147	22	1.70

Process connection per EN 837-3 / 7.3

Ordering information

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

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12/2015 EN

WIK-A data sheet PM 04.03 - 12/2015

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WIK-A 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