

Bourdon tube pressure gauge with switch contact

Stainless steel case, with VdS approval

Model PGS21.050

WIKA data sheet SP 21.03



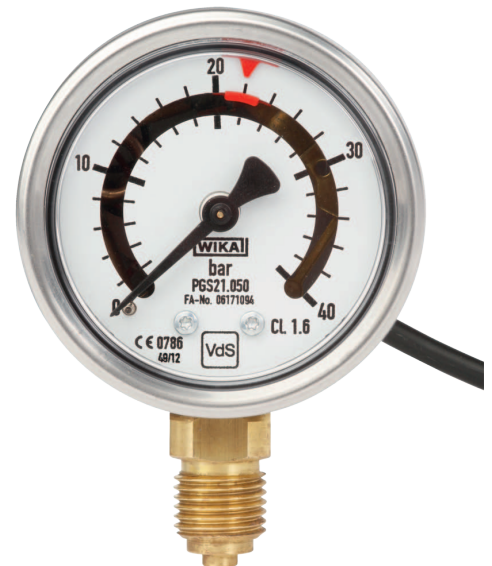
switchGAUGE

Applications

- Pressure gauge for indicating and monitoring the pressure in tanks and for signalling leaks
- Pressure gauge for use in gas extinguishing systems per EN 12094-10 (VdS/CE)

Special features

- High switching reliability and long service life
- Design per EN 837-1 and EN 12094-10
- Pressure indication over 270 angular degrees
- One fixed contact
- Increased ingress protection, IP 65



Bourdon tube pressure gauge model PGS21.050 with VdS approval

Description

The model PGS21.050 switchGAUGE with VdS-certification is a combination of a Bourdon tube pressure gauge and a pressure switch. It offers the usual analogue display, which can be read on-site irrespective of the power supply, and in addition the possibility to switch a potential-free electrical signal.

The switch point is factory-set to customer requirements (in line with the switch points approved by VdS) and indicated on the dial by a red mark pointer. Depending on the pressure gauge's pointer position, the circuit will be opened or closed. Thus the switchGAUGE can be used actively for process monitoring, for example to control the level of a gas cylinder or a hydraulic circuit.

For the model PGS21.050-VdS switchGAUGE, approval from VdS Schadenverhütung GmbH in accordance with DIN EN 12094-10 has been achieved. Among experts within the fire protection industry, this approval is increasingly being recognised as an important safety feature and creates confidence among producers and operators of fire protection systems. With the offer of VdS approved pressure measuring instruments, WIKA is supporting its customers in the fire protection industry to fulfil the criteria required by authorities and insurance companies.

The certificate is available for download online, on the product page.

The model PGS21.050 switchGAUGE offers an increased ingress protection of IP 65 and exceeds the demands of EN 12094-10.

Standard version

Design

EN 837-1 and EN 12094-10

Nominal size in mm

50

Accuracy class

1.6

Scale ranges

0 ... 40 to 0 ... 400 bar

Pressure limitation

Steady: 3/4 x full scale value

Fluctuating: 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, male thread, lower mount or centre back mount (CBM), for thread sizes see table on page 3

Pressure element

Copper alloy, helical type

Movement

Copper alloy

Dial

Aluminium, white

Pointer

Plastic, black

Case

Stainless steel

Window

Polycarbonate

Ingress protection

IP 65 per EN 60529 / IEC 529

Helium leak test

Leak rate 10^{-5} mbar³/s

Electrical connection

Cable outlet, standard length 1 m

Single contact	
red:	U _{B+}
black:	SP 1

Approval

Approval for VdS and CE per EN 12094-10

Switch point tolerance

Factory-set, fixed

Scale ranges/switch points

See certificate

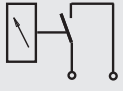
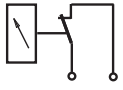
Electrical data

Switching voltage: DC / AC 4.5 ... 24 V

Switching current: 5 ... 100 mA

Contact load: max. 2.4 W

Switch contact: Normally closed (NC) or normally open (NO)

Index	Designation	Symbol	Switching function / setting direction	Code
1	Normally open (NO)		Contact makes with rising pressure or clockwise pointer motion (standard)	1
			Contact breaks with falling pressure or anticlockwise pointer motion	5
2	Normally closed (NC)		Contact breaks with rising pressure or clockwise pointer motion (standard)	2
			Contact makes with falling pressure or anticlockwise pointer motion	4

Potential-free

Options

- Instruments NS 40 with VdS approval (ingress protection IP 54, see data sheet SP 21.01)
- Other cable length
- LPCB approval

Option

Electrical connection via connector

Angular connector EN 175301-803-C



Single contact	Double contact
1: U _{B+}	1: U _{B+} (common)
2: SP 1	2: SP 1
	3: SP 2

Circular connector M12 x 1



Single contact	Double contact
1: U _{B+}	1: U _{B+} (common)
4: SP 1	4: SP 1
	2: SP 2

Circular connector M8 x 1



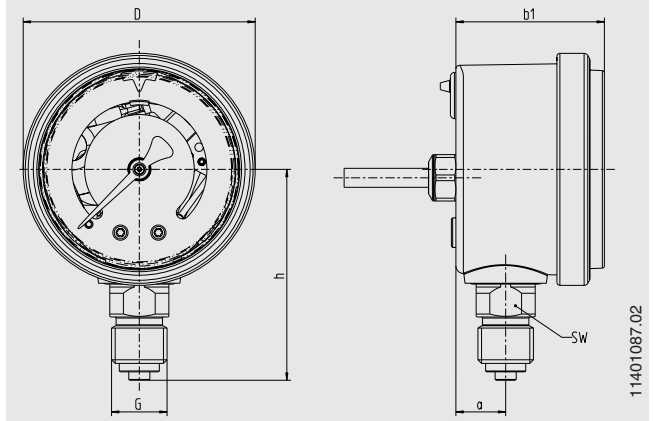
Single contact	Double contact
1: U _{B+}	1: U _{B+} (common)
4: SP 1	4: SP 1
	3: SP 2

If the IP ingress protection of the connector is lower than that of the pressure gauge, then this determines the overall ingress protection of the instrument.

Dimensions in mm

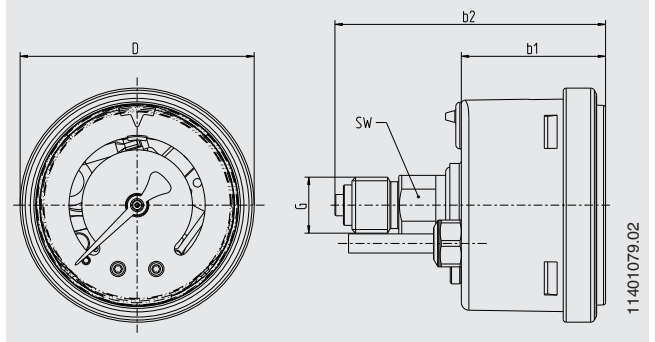
Standard version

Lower mount (LM)



11401087.02

Centre back mount (CBM)



11401079.02

Thread	Dimensions in mm					Weight	
	D	a	b ₁ ±0.5	b ₂ ±1	h	SW	in kg
G 1/8 B	55	11.5	35.5	58	45	14	0.18
G 1/4 B	55	11.5	35.5	63	50	14	0.18
1/8 NPT	55	11.5	35.5	58	45	14	0.18
1/4 NPT	55	11.5	35.5	61	48	14	0.18
R 1/8 ISO 7	55	11.5	35.5	58	45	14	0.18
R 1/4 ISO 7	55	11.5	35.5	61	48	14	0.18
M10 x 1	55	11.5	35.5	58	45	14	0.18
M12 x 1	55	11.5	35.5	63	50	14	0.18
M14 x 1	55	11.5	35.5	63	50	14	0.18

Ordering information

Model / Nominal size / Scale range / Connection size / Connection location / Switch point and function / Options

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