

Bourdon tube pressure gauge with electronic pressure switch

Standard version, cable outlet

Model PGS05

WIKA data sheet PV 21.03



for further approvals
see page 3

switchGAUGE

Applications

- For monitoring water pressure changes in heating systems (wall-type boilers, free-standing boilers)

Special features

- Non-contact sensor (wear-free)
- Case made of plastic with snap-fit cams for panel mounting
- Scale ranges 0 ... 2.5 bar to 0 ... 10 bar
- NPN or PNP switching output
- Switch point factory-programmable between 5 ... 95 % of the scale range



Bourdon tube pressure gauge model PGS05

Description

The model PGS05 switchGAUGE is a combination of a Bourdon tube pressure gauge and a pressure switch. With this combination, the measured value can be displayed on site without needing external power and a limit value can be monitored. The instrument can be used to control and regulate processes. The switch contact is pre-programmed at the factory between 5 ... 95 % of the scale range.

The robust Bourdon tube measuring system produces a pointer rotation proportional to the pressure. An electronic angle encoder, proven in safety-critical automotive applications, determines the position of the pointer shaft. The sensors work without contact and are therefore completely free from wear and friction. Depending on the signal of the angle encoder, the circuit is opened or closed. As standard, the switchGAUGE is supplied with scale ranges from 0 ... 2.5 bar to 0 ... 10 bar in the accuracy class 2.5, and with a cable length of 2 m. The plastic case of nominal size 40 fulfils the requirements for IP40 ingress protection.

Due to the process connection with capillary, the instrument is suitable for applications for water pressure monitoring in heating systems (wall-type boilers, free-standing boilers). Through various options (e.g. flexible plastic capillary, other cable length) the pressure gauge can be matched exactly to the customer-specific requirements of each application.

Based on many years of experience in manufacturing and development, WIKA is happy to offer support in the construction and production of customer-specific solutions.

Specifications

Version

EN 837-1

Nominal size in mm

40

Accuracy class

2.5

Scale ranges

0 ... 2.5 to 0 ... 10 bar

or all other equivalent vacuum or combined pressure and vacuum ranges

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. $\pm 0.4 \%$ /10 K of the span

Process connection

Copper alloy

Lower back mount, capillary, length 450 mm, with male thread G 1/4 connection

Pressure element

Copper alloy

Movement

Copper alloy

Dial

Plastic, white, black lettering

Pointer

Plastic, black

Case

Plastic, black (PA)

Window

Plastic, crystal-clear (PC)

Ingress protection

IP40 per IEC/EN 60579

Electronics

Supply voltage (U_B)

DC 12 ... 32 V

Switching output

■ NPN

■ PNP

Normally closed (NC) or normally open (NO)

Electrical connection

Cable outlet, standard length 2 m

Colour	Assignment
red	U_B
black	GND
orange	SP1





Switching current

Max. 300 mA

Options

- Other process connection
- Other capillary length
- Other cable length

Approvals

Logo	Description	Country
	EU declaration of conformity <ul style="list-style-type: none"> ■ EMC directive ¹⁾ EN 61326 emission (group 1, class B) and immunity (industrial application) Per test standards EN 61000-4-6 / EN 61000-4-3 ■ Pressure equipment directive 	European Union
	EAC (option) <ul style="list-style-type: none"> ■ EMC directive ■ Pressure equipment directive 	Eurasian Economic Community
	GOST (option) Metrology, measurement technology	Russia
	UkrSEPRO Metrology, measurement technology	Ukraine

1) In the case of electrostatic discharge per IEC 61000-4-2 and fast transients per IEC 61000-4-4, the measuring signal can deviate by up to $\pm 75\%$ of the measuring span for the duration of the failure. After the failure, the instrument will operate within the specification again. For cable lengths of > 3 m, shielded wires have to be used in order to efficiently reduce the effects of failures in the form of fast transients.

Certificates (option)

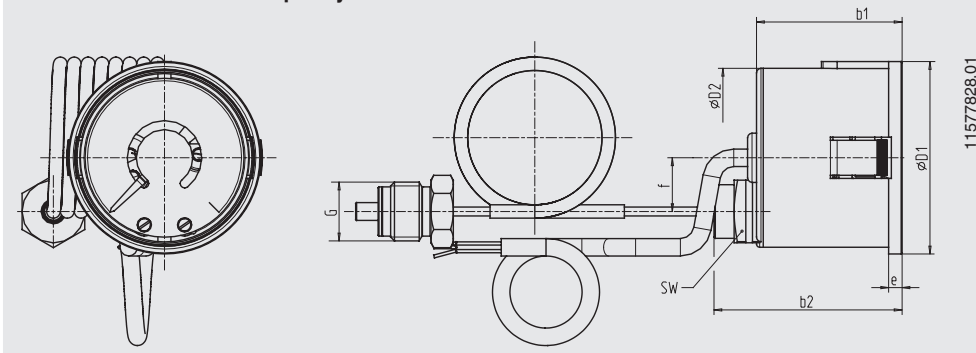
- 2.2 test report
- 3.1 inspection certificate

Approvals and certificates, see website

Dimensions in mm

Standard version

Lower back mount with capillary



NS	Dimensions in mm								Weight in kg
	b ₁	b ₂	D ₁	D ₂	G	e	f	SW	
40	32.5	42	43	40	G 1/4	3	12	14	0.12

Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Output signal / Options

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