

Bourdon tube pressure gauge with electronic pressure switch

Stainless steel case, ingress protection IP41

Model PGS07

WIKA data sheet PV 21.06



for further approvals
see page 3

switchGAUGE

Applications

- General machine building
- Industrial and medical gases
- Renewable energies

Special features

- Non-contact sensor (wear-free)
- Robust stainless steel case
- Scale ranges 0 ... 1.6 bar to 0 ... 400 bar
- NPN or PNP switching outputs
- Both switch points factory-programmable between 5 ... 95 % of the scale range


switchGAUGE model PGS07

Description

The model PGS07 switchGAUGE is a combination of a Bourdon tube pressure gauge and a pressure switch. It offers the usual analogue display, which enables reading the process pressure on-site, and in addition the possibility to switch up to two electrical signals. The switch contacts are 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.

The switchGAUGE is, for example, used for controlling the level of gas cylinders or hydraulic circuits.

As standard, the switchGAUGE is supplied with a robust stainless steel case and scale ranges from 0 ... 1.6 to 0 ... 400 bar in the accuracy class 2.5, and with a cable length of 2 m. By means of options (such as increased accuracy, other cable lengths, etc.) the pressure gauge can be adapted to customer-specific requirements for 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

Design

Following 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: 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 mount (radial) or centre back mount

NS 40: G 1/8 B (male), SW 14

NS 50: G 1/4 B (male), SW 14

Pressure element

Copper alloy

Movement

Copper alloy

Dial

Plastic, white, black lettering

Pointer

Plastic, black

Case

Stainless steel

Window

Plastic, crystal-clear (PC)

Ingress protection

IP41 per IEC/EN 60529

Electronics

Supply voltage (U_B)

DC 12 ... 32 V

Switching output

■ NPN

■ PNP

Normally closed (NC) or normally open (NO)

NS 40: 1 switching output

NS 50: 1 or 2 switching outputs selectable

Electrical connection

Cable outlet, standard length 2 m

Colour	Assignment
red	U_B
black	GND
orange	SP1
brown	SP2






Switching current

Max. 1 A, short-circuit-proof

Options

- Other process connection (with adapter, copper alloy)
- Other cable length
- Other electrical connection (e.g. M12 x 1)
- Increased accuracy

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 EMC directive	Eurasian Economic Community
	GOST Metrology, measurement technology	Russia
	BelGIM Metrology, measurement technology	Belarus
	UkrSEPRO Metrology, measurement technology	Ukraine
-	CRN Safety (e.g. electr. safety, overpressure, ...)	Canada

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.

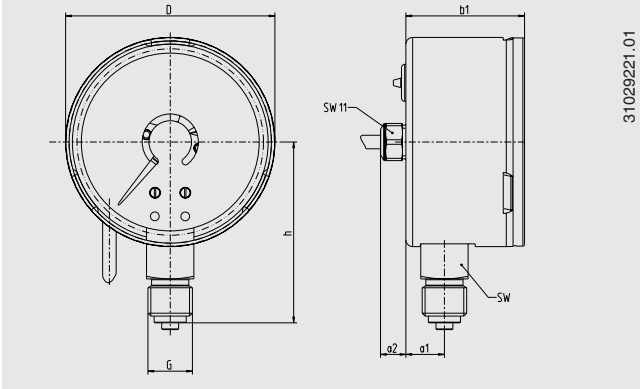
Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

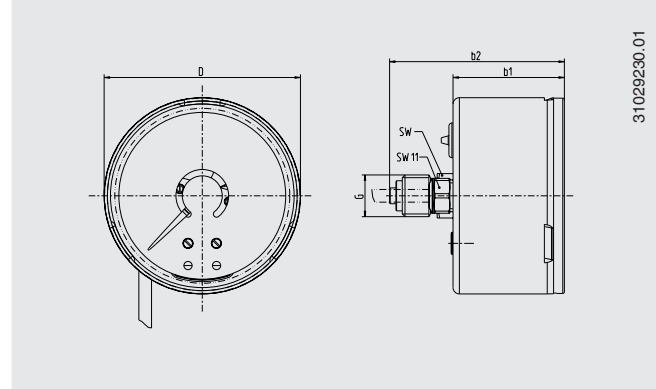
Dimensions in mm

Standard version

Lower mount (radial)



Centre back mount



NS	Dimensions in mm							Weight in kg
	a	h	b ₁	b ₂	D	G	SW	
40 back mount	10.7	-	30.6	48	40	G 1/8 B	14	0.1
50 radial	11	35.5	35	-	49	G 1/4 B	14	0.2
50 back mount	11	-	35	53.6	49	G 1/4 B	14	0.2
63 radial	11.4	53.5	35.1	-	61.9	G 1/4 B	14	0.2
63 back mount	11.4	-	35.1	55.1	61.9	G 1/4 B	14	0.2

Process connection per EN 837-1 / 7.3

Ordering information

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

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