

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
- Technical 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. Due to this, it is not only possible to display the measured value locally without the need for external power, but also to monitor up to two limit values and to control and regulate processes. 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 1 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.

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: Centre back mount, G 1/8 B (male), SW 14

NS 50, 63: 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 EN 60529 / IEC 60529

Electronics

Power supply (U_{B+})

DC 12 ... 32 V

Switching output

■ NPN

■ PNP

Normally closed (NC) or normally open (NO)

NS 40: 1 switching output

NS 50, 63: 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






Electromagnetic compatibility

Per test standards EN 61000-4-6 / EN 61000-4-3

Options

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

Approvals

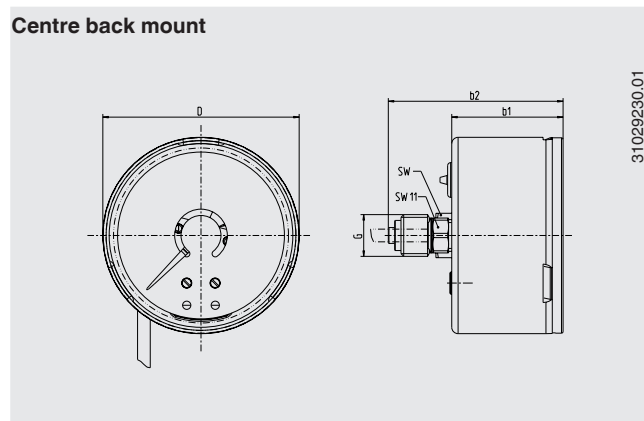
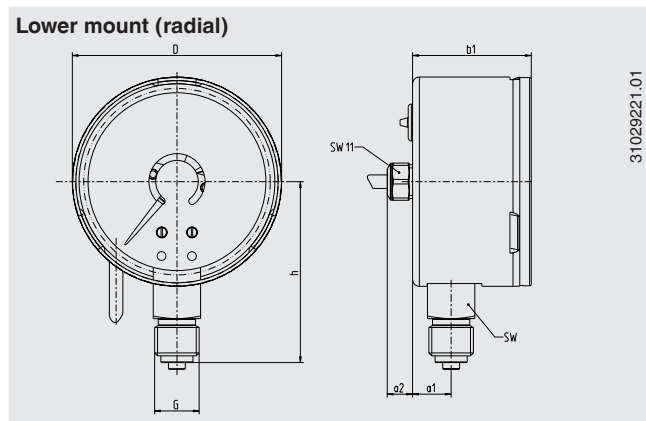
Logo	Description	Country
	EC declaration of conformity ■ EMC directive ■ Pressure equipment directive	European Community
	EAC Pressure equipment directive	Eurasian Economic Community
	GOST Metrology, measurement technology	Russia
	BelGIM Metrology, measurement technology	Belarus
	UkrSEPRO Metrology, measurement technology	Ukraine
-	CRN Safety (e.g. electr. safety, overpressure, ...)	Canada

Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Dimensions in mm

Standard version



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 / Connection size / Connection location / Switch point and function (1 or 2) / Options

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