

Bourdon tube pressure gauge with electronic pressure switch

Stainless steel case, ingress protection IP65

Model PGS25

WIKA data sheet PV 21.04



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 % and 95 % of the scale range



switchGAUGE model PGS25

Description

The robust model PGS25 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 factory-set in a range between 5 % and 95 % of the scale range.

The measuring system with Bourdon tube per EN 837-1 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 - it is a non-contact sensor and therefore completely free from wear and friction. That provides a pressure-proportional signal for further processing. Depending on the switch point setting, the circuit is opened or closed when the alarm value is reached. Thus the switchGAUGE can be used actively for process monitoring, for example to control the level of a gas cylinder or a hydraulic circuit.

The switchGAUGE is available as standard in scale ranges from 0 ... 1.6 bar to 0 ... 400 bar with an accuracy class of 2.5 and a 1 m round cable for the electrical connection. The stainless steel case fulfils the requirements of IP65 ingress protection. The resistance to shock and vibration can be increased by the silicone oil case filling. Thus the instrument is perfectly suited for use in harsh industrial environments. Through various options (e.g. higher accuracy class, other cable length) the pressure measuring instrument can be matched exactly to the the customer-specific requirements of each application.

Specifications

Design

Measuring system with Bourdon tube per EN 837-1

Nominal size in mm

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

Storage temperature: -40 ... +70 °C

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 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

IP65 per EN/IEC 60529

Electronics

Power supply (U_{B+})

DC 12 ... 32 V

Switching output

■ NPN

■ PNP

Normally closed (NC) or normally open (NO)

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)
- Ingress protection IP67
- Accuracy class 1.6
- Liquid filling (silicone oil)

Approvals

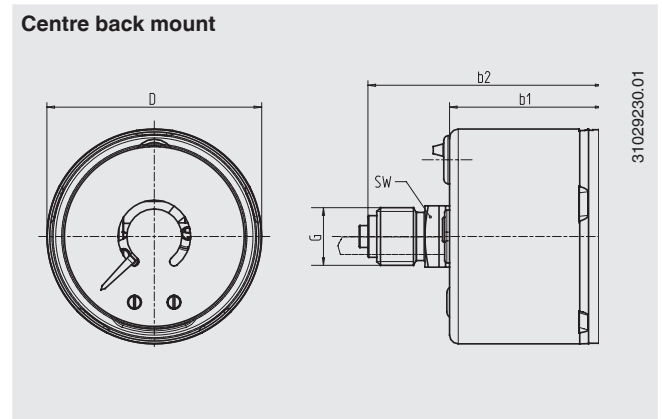
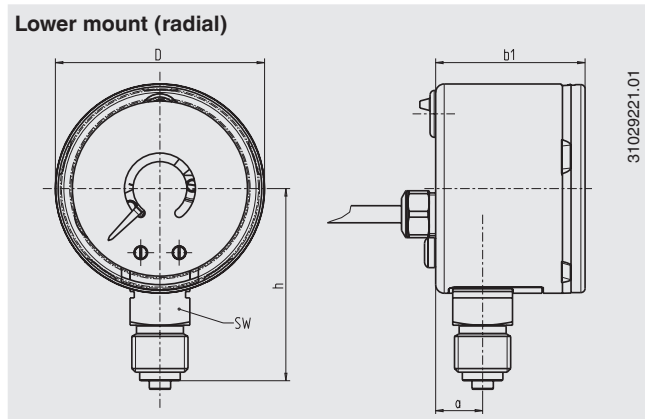
Logo	Description	Country
	EC declaration of conformity ■ EMC directive ■ Pressure equipment directive	European Community
	EAC Pressure equipment directive	Eurasian Economic Community
	GOST Metrology, measurement technology	Russia
	KazInMetr Metrology, measurement technology	Kazakhstan
	BelGIM Metrology, 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
	D	a	b ₁ ±0.5	b ₂ ±1	G	h	SW	
50	55	11.8	35.5	63	G ¼ B	50	14	0.18
63	68	13	36.8	63	G ¼ B	54.2	14	0.20

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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