

Bourdon tube pressure gauge with switch contact

Stainless steel case, with VdS approval

Models PGS21.040 and PGS21.050, NS 40 and NS 50

WIKA data sheet SP 21.03



for further approvals
see page 3

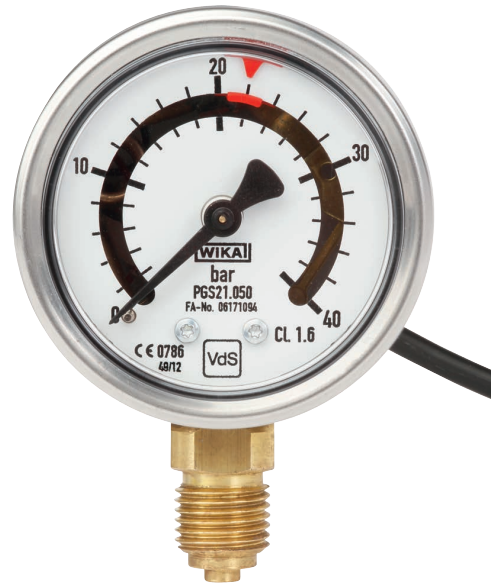
switchGAUGE

Applications

- Vessel monitoring by pressure display with integrated switch contact for level control
- 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 DIN EN 12094-10
- Pressure indication over 270 angular degrees
- One fixed contact
- Increased ingress protection, IP65



Bourdon tube pressure gauge with switch contact, model PGS21.050, with VdS approval

Description

The model PGS21 switchGAUGE with VdS approval 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 instrument's pointer position, the circuit will be opened or closed. Thus the switchGAUGE can be used for process monitoring, for example to control the level of a gas cylinder.

For the switchGAUGE models PGS21.040 and PGS21.050, 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 with VdS approval offers an increased ingress protection of IP65 and exceeds the demands of EN 12094-10.

Specifications

Design

EN 837-1 and EN 12094-10

Nominal size in mm

40, 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

Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C): max. ±0.4 %/10 K of the span

Ingress protection per IEC/EN 60529

IP65

Process connection

Copper alloy, male thread

NS 40: Centre back mount

NS 50: Lower mount or centre back mount

For thread sizes see table on page 4

Pressure element

Copper alloy

Movement

Copper alloy

Dial

Aluminium, white, black lettering

Pointer

Plastic, black

Case

Stainless steel

Window

Polycarbonate

Electrical data

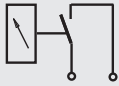
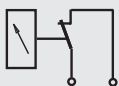
Switching voltage U_{B+} : DC / AC 4.5 ... 24 V

Switching current: 5 ... 100 mA

Contact load: max. 2.4 W/VA

Contact version: 1 x normally closed (NC) or 1 x normally open (NO), potential-free contact

Switch point SP 1: Factory-set, fixed


Index	Switching function	Symbol	Switch point/ reset point	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

Electrical connection and pin assignment


Cable outlet, length 2 m (standard)

Pin assignment	Wire colour
U_+	Red
SP 1	Black


Angular connector EN 175301-803-C (option)

	Pin assignment	
	U_+	1
	SP 1	2

Circular connector M12 x 1 (option)





	Pin assignment	
	U_+	1
	SP 1	4

Circular connector M8 x 1 (option)

	Pin assignment	
	U+	1
	SP 1	4

In order to achieve an IP65 ingress protection for the plug connections shown above, the mating connector used must also provide this ingress protection.

Approvals

Logo	Description	Country
	EU declaration of conformity per construction products regulation (EU) no. 305/2011	European Union
	EAC Pressure equipment directive	Eurasian Economic Community
	KazInMetr Metrology, measurement technology	Kazakhstan
-	CRN Safety (e.g. electr. safety, overpressure, ...)	Canada
	VdS Fire-extinguishing systems Recognition per VDS 2344 and DIN EN 12094-10	European Union
-	LPCB (option only for model PGS21.050) Fire-extinguishing systems	Great Britain

Certificates (option)

- 2.2 test report
- 3.1 material certificate for the wetted parts

Approvals and certificates, see website

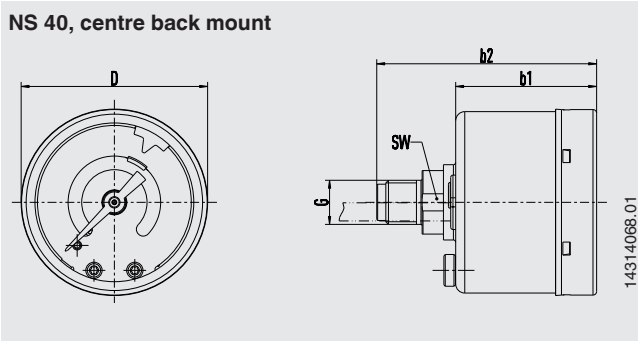
Other versions

Model PGS21B.050

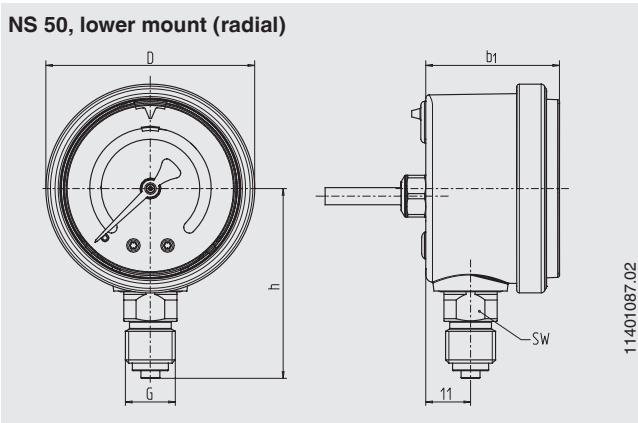
The model PGS21B.050 Bourdon tube pressure gauge corresponds to the specifications and dimensions of PGS21.050 without electrical switch contact. This basic version is a purely mechanical pressure display with VdS approval.

Dimensions

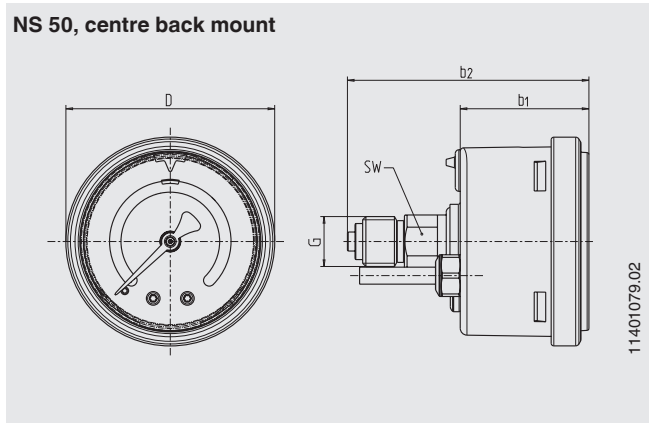
NS 40, centre back mount



NS 50, lower mount (radial)



NS 50, centre back mount



NS	Dimensions in mm						Weight in kg
	D	b ₁ ±0.5	b ₂ ±1	G	h	SW	
40	40	30.5	53	G 1/8 B	-	14	0.10
50	55	35.5	63	G 1/4 B	50	14	0.18

Process connection per EN 837-1 / 7.3

Ordering information

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

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