Bourdon tube pressure gauge with electronic pressure switch
Stainless steel case, ingress protection IP41
Model PGS07

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

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. ±0.4 %/10 K of the span

Process connection
Copper alloy
Lower mount (radial) or centre back mount
NS 40: Centre back mount, G ⅛ B (male), SW 14
NS 50, 63: G ¼ 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

<table>
<thead>
<tr>
<th>Colour</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>red</td>
<td>(U_{B+})</td>
</tr>
<tr>
<td>black</td>
<td>GND</td>
</tr>
<tr>
<td>orange</td>
<td>SP1</td>
</tr>
<tr>
<td>brown</td>
<td>SP2</td>
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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

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
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<tbody>
<tr>
<td>CE</td>
<td>EC declaration of conformity</td>
<td>European Community</td>
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<td></td>
<td>■ EMC directive</td>
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<td></td>
<td>■ Pressure equipment directive</td>
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<tr>
<td>EAC</td>
<td>EAC</td>
<td>Eurasian Economic Community</td>
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<td>- CRN</td>
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<td>Safety (e.g. electr. safety, overpressure, ...)</td>
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### Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

### Dimensions in mm

#### Standard version

#### Lower mount (radial)

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
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</thead>
<tbody>
<tr>
<td>40 back mount</td>
<td>a: 10.7, h: -</td>
<td>b1: 30.6, b2: 48, D: 40, G: 0.5 B, SW: 14</td>
</tr>
<tr>
<td>50 radial</td>
<td>a: 11, h: 35.5</td>
<td>b1: 35, b2: - , D: 49, G: 0.5 B, SW: 14</td>
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<tr>
<td>50 back mount</td>
<td>a: 11, h: -</td>
<td>b1: 35, b2: 53.6, D: 49, G: 0.5 B, SW: 14</td>
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<tr>
<td>63 radial</td>
<td>a: 11.4, h: 53.5</td>
<td>b1: 35.1, b2: - , D: 61.9, G: 0.5 B, SW: 14</td>
</tr>
<tr>
<td>63 back mount</td>
<td>a: 11.4, h: -</td>
<td>b1: 35.1, b2: 55.1, D: 61.9, G: 0.5 B, SW: 14</td>
</tr>
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</table>

**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