Bourdon tube pressure gauge with output signal
Plastic case, NS 40, 50
Model PGT10

Applications
- General machine building

Special features
- Non-contact sensor (wear-free)
- Plastic case
- Nominal size 40, 50
- Scale ranges 0 ... 1.6 bar to 0 ... 400 bar
- Current signal 4 ... 20 mA or voltage signal, e.g. DC 0.5 ... 4.5 V

Description
The model PGT10 intelliGAUGE® is a combination of a Bourdon tube pressure gauge and a pressure sensor. On the one hand, the instrument offers the usual analogue display needing no external power, which makes it possible to read the process pressure on site, and on the other hand an additional electrical analogue signal is output.

The output signal is available either as a current signal (4 ... 20 mA, 2-wire) or as a voltage signal (e.g. DC 0.5 ... 4.5 V ratiometric with supply voltage DC 5 V or non-ratiometric with supply voltage DC 12 ... 32 V). In conjunction with the options for the electrical connection (round cable or connector), this variety enables the customer-specific definition of the instrument for the respective application.

The mechanical measuring system with Bourdon tube fulfils the requirements of EN 837-1 and the electronic components have been tested in accordance with EN 61000-4-3 and EN 61000-4-6.

Individual customer variants
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**
EN 837-1

**Nominal size in mm**
40, 50

**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. ±0.4 %/10 K of the span

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

**Pressure element**
Copper alloy

**Movement**
Copper alloy

**Dial**
Plastic, white, black lettering

**Pointer**
Plastic, black

**Case**
Plastic

**Window**
Plastic, crystal-clear (PC)

**Ingress protection**
IP41 per IEC/EN 60529

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**Electronics**

**Supply voltage (U_B)**
DC 5 V / DC 12 ... 32 V

**Electrical connection**
Cable outlet, standard length 2 m

<table>
<thead>
<tr>
<th>U_B</th>
<th>Output signal U_SIG</th>
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</thead>
<tbody>
<tr>
<td>DC 5 V</td>
<td>0.5 ... 2.5 V, 0.5 ... 3.5 V or 0.5 ... 4.5 V, ratiometric</td>
</tr>
<tr>
<td>DC 12 ... 32 V</td>
<td>0.5 ... 2.5 V, 0.5 ... 3.5 V or 0.5 ... 4.5 V, non-ratiometric or 4 ... 20 mA, 2-wire</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Colour</th>
<th>2-wire</th>
<th>3-wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>red</td>
<td>U_B</td>
<td>U_B</td>
</tr>
<tr>
<td>black</td>
<td>GND</td>
<td>GND</td>
</tr>
<tr>
<td>orange</td>
<td>-</td>
<td>U_SIG</td>
</tr>
</tbody>
</table>

**Output signal and permissible load**

- Voltage output (3-wire): RA > 5 kΩ
- Current output (2-wire) 4 ... 20 mA:
  - RA ≤ (U_SIG - 10 V) / 0.02 A with RA in Ω and U_SIG in DC V

**Options**
- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Other cable length
- Other electrical connection
Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
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<tr>
<td>![CE]</td>
<td>EU declaration of conformity</td>
<td>European Union</td>
</tr>
<tr>
<td></td>
<td>■ EMC directive ¹</td>
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<tr>
<td></td>
<td>■ EN 61326 emission (group 1, class B) and immunity (industrial application)</td>
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<tr>
<td></td>
<td>■ Per test standards EN 61000-4-6 / EN 61000-4-3</td>
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<tr>
<td></td>
<td>■ Pressure equipment directive</td>
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<td>■ Pressure equipment directive</td>
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<td></td>
<td>Metrology, measurement technology</td>
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</tbody>
</table>

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 ±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

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b1</td>
</tr>
<tr>
<td>40</td>
<td>9</td>
<td>34.1</td>
</tr>
<tr>
<td>50</td>
<td>10</td>
<td>34.5</td>
</tr>
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Process connection per EN 837-1 / 7.3

Ordering information

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