Bourdon tube pressure gauge with output signal
Standard version, cable outlet
Model PGT02

Applications
- For monitoring water pressure changes in heating systems (wall-type boilers, free-standing boilers)

Special features
- Non-contact sensor (wear-free)
- Plastic case with snap-fit cams for panel mounting
- Nominal size 40
- Scale ranges 0 ... 2.5 bar to 0 ... 10 bar
- Current signal 4 ... 20 mA or voltage signal, e.g. DC 0.5 ... 4.5 V

Description
The model PGT02 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 as a voltage signal (e.g. DC 0.5 ... 4.5 V ratiometric with DC 5 V supply voltage) or as a current signal (4 ... 20 mA, 2-wire).

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 und 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

Accuracy class
2.5

Scale ranges
0 ... 2.5 to 0 ... 10 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
Centre back mount, capillary, length 450 mm, with male thread G ¼ connection

Pressure element
Copper alloy

Movement
Copper alloy

Dial
Plastic, white, black lettering

Pointer
Plastic, black

Case
Plastic, black (PA)

Window
Plastic, crystal-clear (PC)

Ingress protection
IP40 per IEC/EN 60529

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>
</tr>
</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, 3-wire</td>
</tr>
<tr>
<td>DC 12 ... 32 V</td>
<td>4 ... 20 mA, 2-wire</td>
</tr>
</tbody>
</table>

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

Output signal and permissible load

Voltage output (3-wire): $R_A > 5 \, \text{k}\Omega$

Current output (2-wire)
4 ... 20 mA:
$R_A \leq (U_{SIG} - 10 \, \text{V}) / 0.02 \, \text{A}$
with $R_A$ in $\Omega$ and $U_{SIG}$ in DC V

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

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
</table>
| ![CE](image) | EU declaration of conformity  
- EMC directive ¹  
  EN 61326 emission (group 1, class B) and immunity (industrial application)  
  Per test standards EN 61000-4-6 / EN 61000-4-3  
- Pressure equipment directive | European Union |
| ![EAC](image) | EAC (option)  
- EMC directive  
- Pressure equipment directive | Eurasian Economic Community |
| ![GOST](image) | GOST (option)  
Metrology, measurement technology | Russia |
| ![BelGIM](image) | BelGIM (option)  
Metrology, measurement technology | Belarus |

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)**

![Diagram of Lower Mount (Radial)](image)

**Centre back mount**

![Diagram of Centre Back Mount](image)

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
</tr>
</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>
</tbody>
</table>

Process connection per EN 837-1 / 7.3

**Ordering information**

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

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