Bourdon tube pressure gauge, copper alloy
Model 113.13, liquid filling, plastic case

Applications

- For measuring points with high dynamic pressure loads and vibrations
- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts
- Hydraulics
- Compressors

Special features

- Vibration and shock-resistant
- Design per EN 837-1
- Scale ranges up to 0 ... 400 bar

Description

The model 113.13 is a liquid-filled pressure gauge with plastic case.
The liquid filling causes damping of the internal components and contributes to an increased vibration resistance and shock resistance.
The pressure gauges are suitable for installation in machines and plants where vibrations and shocks are expected.

These pressure gauges are based on the proven Bourdon tube measuring system. The deflection of the Bourdon tube is transmitted to a movement and indicated.
The plastic case and the window are welded together and an O-ring seal seals the process connection at the case. In this way the instrument fulfills the high requirements for IP65 ingress protection. With accuracy class 2.5 and the available nominal sizes 40, 50 and 63, this model is suited for a wide range of applications in industry. The mounting bracket, which is available as an option, enables the panel mounting of pressure gauges with back mount process connection. The nominal size 63 mm version with back mount process connection is alternatively offered with a mounting flange on the front of the instrument. This mounting flange is used, when, for example, panel mounting is only possible from the front.
Specifications

Version
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, with pointer stop pin

Pointer
Plastic, black

Case
Plastic, black

Window
Plastic, crystal-clear (PMMA), welded with case

Filling liquid
Glycerine

Ingress protection
IP65 per EN/IEC 60529

Options

- Panel mounting flange (only for NS 63 and back mount)
- Mounting clamp (only for back mount)
- Customer-specific version
### Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
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</thead>
</table>
| ![CE](https://example.com/ce.png) | EU declaration of conformity  
Pressure equipment directive | European Community |
| ![EAC](https://example.com/eac.png) | Pressure equipment directive | Eurasian Economic Community |
| ![GOST](https://example.com/gost.png) | Metrology, measurement technology | Russia |
| ![KazInMetr](https://example.com/kazinmetr.png) | Metrology, measurement technology | Kazakhstan |
| ![MTSCHS](https://example.com/mtschs.png) | Permission for commissioning | Kazakhstan |
| ![BelGIM](https://example.com/belgim.png) | Metrology, measurement technology | Belarus |
| ![UkrSEPRO](https://example.com/ukrsepro.png) | Metrology, measurement technology | Ukraine |
| ![CPA](https://example.com/cpa.png) | Metrology, measurement technology | China |
| ![CRN](https://example.com/crn.png) | Safety (e.g. electr. safety, overpressure, ...) | Canada |

### Certificates (option)

- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)

Approvals and certificates, see website
### Dimensions in mm

**Standard version**

#### Lower mount (LM), NS 50, 63

#### Centre back mount (CBM), NS 50, 63

#### Centre back mount (CBM), NS 40

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
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<tbody>
<tr>
<td>40</td>
<td>-</td>
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</tr>
<tr>
<td>50</td>
<td>11.5</td>
<td>0.17</td>
</tr>
<tr>
<td>63</td>
<td>11.5</td>
<td>0.21</td>
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</table>

Process connection per EN 837-1 / 7.3

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<tbody>
<tr>
<td>50</td>
<td>11.5 27 29 53 55 51 5 48 14</td>
<td>0.17</td>
</tr>
<tr>
<td>63</td>
<td>11.5 27 29 53 68 62.5 5 54 14</td>
<td>0.21</td>
</tr>
</tbody>
</table>

**Ordering information**

Model / Nominal size / Scale range / Process connection / Options

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