Bourdon tube pressure gauge
Model 213.53, liquid filling, stainless steel case

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

Special features
- Vibration and shock resistant
- Especially sturdy design
- NS 63 and 100 with German Lloyd and Gosstandart approval
- Scale ranges up to 0 ... 1,000 bar

Description

Design
EN 837-1

Nominal size in mm
50, 63, 100

Accuracy class
NS 50, 63: 1.6
NS 100: 1.0

Scale ranges
NS 50: 0 ... 1 to 0 ... 400 bar
NS 63, 100: 0 ... 0.6 to 0 ... 1,000 bar
or all other equivalent vacuum or combined pressure and vacuum ranges

Pressure limitation
NS 50, 63:
- Steady: 3/4 x full scale value
- Fluctuating: 2/3 x full scale value
- Short time: Full scale value
NS 100:
- Steady: Full scale value
- Fluctuating: 0.9 x full scale value
- Short time: 1.3 x 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

Ingress protection
IP 65 per EN 60529 / IEC 60529
**Standard version**

**Process connection**
Copper alloy, lower mount (LM) or back mount (BM),
NS 50, 63: G ¼ B (male), 14 mm flats
NS 100: G ½ B (male), 22 mm flats

**Pressure element**
NS 50: Copper alloy, C-type or helical type

NS 63:
≤ 400 bar: Copper alloy, C-type or helical type
> 400 bar: Stainless steel 316L, helical type

NS 100:
< 100 bar: Copper alloy, C-type
≥ 100 bar: Stainless steel 316L, helical type

**Movement**
Copper alloy

**Dial**
NS 50, 63: Plastic ABS, white, with pointer stop pin
NS 100: Aluminium, white, black lettering

**Pointer**
NS 50, 63: Plastic, black
NS 100: Aluminium, black

**Window**
Plastic, crystal-clear

**Case**
Natural finish stainless steel, with blow-out device with
NS 50: in case back, 12 o’clock
NS 63, 100: at case circumference, 12 o’clock
O-ring seal between case and connection.
Scale ranges ≤ 0 ... 16 bar with compensating valve to vent case.

**Bezel ring**
Crimp ring, glossy finish stainless steel, triangular bezel

**Filling liquid**
Glycerine

**Options**
- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Measuring system and movement from stainless steel (model 233.53)
- NS 100: Zero adjustment (in front)
- Increased medium temperature with special soft solder
  - NS 50, 63: 100 °C
  - NS 100: 150 °C
- Ambient temperature resistant -40 ... +60 °C with silicone oil filling
- NS 50: Higher scale ranges up to 0 ... 1,000 bar
- Panel mounting flange, stainless steel, for back connection
- Surface mounting flange, stainless steel (not NS 50)
- Mounting clamp (for back connection)

**CE conformity**

**Pressure equipment directive**
97/23/EC, PS > 200 bar, module A, pressure accessory

**Approvals**
- GL, ships, shipbuilding (e.g. offshore), Germany
- EAC, import certificate, customs union Russia/Belarus/Kazakhstan
- GOST, metrology/measurement technology, Russia
- KBA, automotive, European Community
- CRN, safety (e.g. electr. safety, overpressure, ...), Canada

**Certificates 1)**
- 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)

1) Option

Approvals and certificates, see website
Dimensions in mm
Standard version

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a  b ±0.5 b₂ ±0.5 D₁ D₂ e f G h ±1 SW</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>12 30 55 55 50 5.5 - G ¼ B 48 14 0.15</td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>13 32 56 68 62 6.5 - G ¼ B 54 14 0.21</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>15.5 48 81.5 107 100 8 30 G ½ B 87 22 0.80</td>
<td></td>
</tr>
</tbody>
</table>

Process connection per EN 837-1 / 7.3

Ordering information
Model / Nominal size / Scale range / Connection size / Connection location / Options

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