Pressure gauges
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-ABS 40

Dry Plastic Case DN40 Bottom Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 12 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.042 kg

Options: see page 11
FOR GENERAL INDUSTRIAL APPLICATIONS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

**M1-ABS 50**

**Dry Plastic Case DN50 Bottom Entry**

**Materials**
- Case: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect:
  - Deviation from reference temperature (+20°C):
    - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.073 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging**
--- | --- | --- | --- | ---
M1-ABS 50 | PA2101EJ00 | -1/0 bar/lbHg | G 1/4 B | 100/100
M1-ABS 50 | PA2101DJ00 | 0-1 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA210214 | 0-1,6 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA2203DJ00 | 0-2,5 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA2204DJ00 | 0-4 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA220624 | 0-6 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA2210DJ00 | 0-10 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA2216DJ00 | 0-16 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA222514 | 0-25 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | PA224014 | 0-40 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | 0-60 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | 0-100 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | 0-160 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | 0-250 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | 0-315 bar/psi | G 1/4 B | 100/100
M1-ABS 50 | 0-400 bar/psi | G 1/4 B | 100/100

Options: see page 11
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-ABS 63
Dry Plastic Case DN63 Bottom Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.089 kg

Type | Part No  | Pressure Range | Connection | Packagin
M1-ABS 63 | PA3101DJ00 | -1/0 bar/inHg | G 1/4 B | 100/100
M1-ABS 63 | PA3101DJ01 | 0-1 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3102DJ00 | 0-1.6 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3203DJ00 | 0-2.5 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3204DJ00 | 0-4 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3206DJ00 | 0-6 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3210DJ02 | 0-10 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3216DJ00 | 0-16 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3225DJ00 | 0-25 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3240DJ00 | 0-40 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA3260DJ00 | 0-60 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA32100DJ00 | 0-100 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA32200DJ00 | 0-200 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA32300DJ00 | 0-300 bar/psi | G 1/4 B | 100/100
M1-ABS 63 | PA32400DJ00 | 0-400 bar/psi | G 1/4 B | 100/100

Options : see page 11
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

**M1-ABS 80**

**Dry Plastic Case DN80 Bottom Entry**

**Materials**
- Case: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.128 kg

**Options : see page 11**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-ABS 80</td>
<td></td>
<td>-1/0 bar/inHg</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 80</td>
<td></td>
<td>0-1 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 80</td>
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<td>0-1.6 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 80</td>
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<td>0-2.5 bar/psi</td>
<td>G3/8B</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-4 bar/psi</td>
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<td>1/50</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-6 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 80</td>
<td>PA4210DC00</td>
<td>0-10 bar/psi</td>
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<td>M1-ABS 80</td>
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<td>0-16 bar/psi</td>
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<td>1/50</td>
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<td>M1-ABS 80</td>
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<td>0-25 bar/psi</td>
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<td>1/50</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-40 bar/psi</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-60 bar/psi</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-100 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-160 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
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<tr>
<td>M1-ABS 80</td>
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<td>0-250 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 80</td>
<td></td>
<td>0-315 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 80</td>
<td></td>
<td>0-400 bar/psi</td>
<td>G3/8B</td>
<td>1/50</td>
</tr>
</tbody>
</table>
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-ABS 100

Dry Plastic Case DN100 Bottom Entry

Materials

Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered < 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications

Design: EN 837-1
Working pressure:
  Steady: 75 % of full scale value
  Fluctuating: 60 % of full scale value
Operating temperature:
  Ambient: -20 ... +60 °C
  Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.175 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M1-ABS 100 | -1/0 bar/inHg | G 1/2 B | 1/30 |
M1-ABS 100 | PA5101DL00 | 0-1 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-1.6 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | PA5204DD01 | 0-2.5 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-4 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | PA5210DD01 | 0-6 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-10 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | PA5216BD01 | 0-16 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-25 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | PA5210DD01 | 0-40 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-60 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | PA5204DD01 | 0-100 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-160 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | PA5216BD01 | 0-250 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-315 bar/psi | G 1/2 B | 1/30 |
M1-ABS 100 | 0-400 bar/psi | G 1/2 B | 1/30 |

Options: see page 11
M1-ABS 40/50/63/80/100

High temperature version c.l. 2.5 only

Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M1-ABS 40/50/63/80/100

MS - silicone movement for dampened pointer travel

Customized dials, other scale ranges or connections on request
FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M1-ABS 40/R**

Dry Plastic Case DN40 Bottom Entry

**Materials**
- **Case:** Black plastic
- **Window:** Clear plastic with adjustable red mark pointer
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 12 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered C-type
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  \[ \pm 0.04\% / 1K \text{ of the span} \]
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.042 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-ABS 40/R</td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 40/R</td>
<td>0-4 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 40/R</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 40/R</td>
<td>0-10 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 40/R</td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 40/R</td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 40/R</td>
<td>0-40 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 17
**BOURDON TUBE PRESSURE GAUGE**

FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

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**M1-ABS 50/R**

**Dry Plastic Case DN50 Bottom Entry**

**Materials**
- Case: Black plastic
- Window: Clear plastic with adjustable red mark pointer
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.073 kg

**Options**: see page 17

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### Type | Part No. | Pressure Range | Connection | Packaging |
---|---|---|---|---|
M1-ABS 50/R | PA220401 | 0-2.5 bar | G1/4B | 100/100 |
M1-ABS 50/R | PA220601 | 0-6 bar | G1/4B | 100/100 |
M1-ABS 50/R | PA221001 | 0-10 bar | G1/4B | 100/100 |
M1-ABS 50/R | PA221601 | 0-16 bar | G1/4B | 100/100 |
M1-ABS 50/R | PA222501 | 0-25 bar | G1/4B | 100/100 |
M1-ABS 50/R | PA2240BB00 | 0-40 bar | G1/4B | 100/100 |
FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-ABS 63/R  EX F+R 201 DN63
Dry Plastic Case DN63 Bottom Entry

Materials
Case: Black plastic
Window: Clear plastic with adjustable red mark pointer
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type,
> 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 2.5, class 1.6 on request
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight:
0.089 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-ABS 63/R</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tr>
<tr>
<td>M1-ABS 63/R</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 63/R</td>
<td>0-6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 63/R</td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-ABS 63/R</td>
<td>0-16 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M1-ABS 63/R</td>
<td>PA322501</td>
<td>0-25 bar</td>
<td>100/100</td>
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<td>PA324001</td>
<td>0-40 bar</td>
<td>100/100</td>
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</tbody>
</table>

Options: see page 17
M1-ABS 80/R

**Dry Plastic Case DN80 Bottom Entry**

**Materials**
- Case: Black plastic
- Window: Clear plastic with adjustable red mark pointer
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.128 kg

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**Type | Part No. | Pressure Range | Connection | Packaging**
--- | --- | --- | --- | ---
M1-ABS 80/R | 0-2.5 bar | G3/8B | 1/50
M1-ABS 80/R | 0-4 bar | G3/8B | 1/50
M1-ABS 80/R | 0-6 bar | G3/8B | 1/50
M1-ABS 80/R | 0-10 bar | G3/8B | 1/50
M1-ABS 80/R | 0-16 bar | G3/8B | 1/50
M1-ABS 80/R | PA4225BC00 0-25 bar | G3/8B | 1/50
M1-ABS 80/R | PA4240BC00 0-40 bar | G3/8B | 1/50

Options: see page 17
FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M1-ABS 100/R**

**EX F+R 201 DN100**

**Dry Plastic Case DN100 Bottom Entry**

**Materials**
- Case: Black plastic
- Window: Clear plastic with adjustable red mark pointer
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.175 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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</thead>
<tbody>
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<td>M1-ABS 100/R</td>
<td>PA5203BD00</td>
<td>0-2.5 bar</td>
<td>G1/2B</td>
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<tr>
<td>M1-ABS 100/R</td>
<td>PA5204BD00</td>
<td>0-4 bar</td>
<td>G1/2B</td>
<td>1/50</td>
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<tr>
<td>M1-ABS 100/R</td>
<td>PA5206BD00</td>
<td>0-6 bar</td>
<td>G1/2B</td>
<td>1/50</td>
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<tr>
<td>M1-ABS 100/R</td>
<td>PA5210BD00</td>
<td>0-10 bar</td>
<td>G1/2B</td>
<td>1/50</td>
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<tr>
<td>M1-ABS 100/R</td>
<td>PA5216BD00</td>
<td>0-16 bar</td>
<td>G1/2B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 100/R</td>
<td>PA5225BD00</td>
<td>0-25 bar</td>
<td>G1/2B</td>
<td>1/50</td>
</tr>
<tr>
<td>M1-ABS 100/R</td>
<td>PA5240BD00</td>
<td>0-40 bar</td>
<td>G1/2B</td>
<td>1/50</td>
</tr>
</tbody>
</table>

**Options : see page 17**
**BOURDON TUBE PRESSURE GAUGE**

**OPTIONAL EXTRAS**

**M1-ABS 50/63/80/100/R**

- Options subject to minimum quantity
  - **V** - adjustable red mark pointer with green sector

**M1-ABS 40/50/63/80/100/R**

- Options subject to minimum quantity
  - **AT** - PTFE sealing ring on parallel threads only

**M1-ABS 40/50/63/80/100/R**

High temperature version c.l. 2.5 only

- Options subject to minimum quantity
  - **T2** - 40°C/+90°C - Aluminium dial + aluminium pointer, (QA+I)

**M1-ABS 40/50/63/80/100/R**

- Options subject to minimum quantity
  - **Z** - Restrictor 0.5mm

**M1-ABS 50/63/80/100/R**

- Options subject to minimum quantity
  - **MS** - silicone movement for dampened pointer travel

**M1-ABS 40/50/63/80/100/R**

- Options subject to minimum quantity
  - Customized dials, other scale ranges or connections on request
FOR EXPANSION VESSEL TESTING IN HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

PV M1-ABS 63/QG
Dry Plastic Case DN63 Bottom Entry

Materials
Case: Black plastic with black rubber cap
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Valve with rubber hose
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.200 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
PV M1-ABS 63/QG | PV3112DC00 | 0-12 bar/psi | V40 | 50/50 |

Options: see below

OPTIONAL EXTRAS

280 PV M1-ABS 63/QG

Options subject to minimum order
Customized dials on request
FOR GENERAL INDUSTRIAL APPLICATIONS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 40/FR
Dry Plastic Case DN40 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.039 kg

Options : see page 26
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3A-ABS 40**

Dry Plastic Case DN40 Centre Back Entry

**Materials**
- **Case:** Black plastic
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 12 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, ≤ 60 bar C-type, > 60 bar helical type
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.048 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 40</td>
<td>0-40 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 40</td>
<td>0-60 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 40</td>
<td>0-100 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 40</td>
<td>0-160 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 40</td>
<td>0-250 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 40</td>
<td>0-315 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 40</td>
<td>0-400 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 26
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 50/FR
Dry Plastic Case DN50 Centre Back Entry

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 50/FR</td>
<td>190501001599</td>
<td>-1/0 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>001501001541</td>
<td>0-1 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>106501000218</td>
<td>0-1.6 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>205501000062</td>
<td>0-2.5 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>004501000296</td>
<td>0-4 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>006501000152</td>
<td>0-6 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>010501000103</td>
<td>0-10 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>016501000069</td>
<td>0-16 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50/FR</td>
<td>025501000453</td>
<td>0-25 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Higher pressure ranges: see M3A-ABS 50 on page 22

Options: see page 26
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 50
Dry Plastic Case DN50 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, < 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.086 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 50</td>
<td>PB224014</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50</td>
<td></td>
<td>0-60 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50</td>
<td></td>
<td>0-100 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50</td>
<td></td>
<td>0-160 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50</td>
<td></td>
<td>0-250 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50</td>
<td></td>
<td>0-315 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 50</td>
<td></td>
<td>0-400 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options: see page 26
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 63/FR
Dry Plastic Case DN63 Centre Back Entry

Materials:
- Case: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

Technical Specifications:
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.060 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 63/FR</td>
<td>001631001587</td>
<td>0-1 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>106631000219</td>
<td>0-1.6 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>205631000258</td>
<td>0-2.5 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>004631000109</td>
<td>0-4 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>006631000096</td>
<td>0-6 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>010631000002</td>
<td>0-10 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>016631000007</td>
<td>0-16 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS 63/FR</td>
<td>025631000104</td>
<td>0-25 bar</td>
<td>G 1/4 B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Higher pressure ranges: see M3A-ABS 63 on page 24
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 63
Dry Plastic Case DN63 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, ≤ 60 bar C-type,
> 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.094 kg

Type | Part No. | Pressure Range | Connection | Packaging
--- | --- | --- | --- | ---
M3A-ABS 63 | PB324014 | 0-40 bar/psi | G1/4B | 100/100
M3A-ABS 63 | PB335414 | 0-160 bar/psi | G1/4B | 100/100
M3A-ABS 63 | PB336014 | 0-315 bar/psi | G1/4B | 100/100
M3A-ABS 63 | PB32414 | 0-60 bar/psi | G1/4B | 100/100
M3A-ABS 63 | PB33514 | 0-100 bar/psi | G1/4B | 100/100
M3A-ABS 63 | PB33614 | 0-250 bar/psi | G1/4B | 100/100
M3A-ABS 63 | PB32414 | 0-400 bar/psi | G1/4B | 100/100

Options : see page 26
FOR GENERAL INDUSTRIAL APPLICATIONS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 80
Dry Plastic Case DN80 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, < 60 bar C-type,
> 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Accuracy class:
cl. 2.5, cl. 1.6 on request
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.109 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 80</td>
<td>-0.5 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-1 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-1.6 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-2.5 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-4 bar</td>
<td>G3/8B</td>
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<td></td>
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<td>M3A-ABS 80</td>
<td>0-16 bar</td>
<td>G3/8B</td>
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</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-25 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
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<td>M3A-ABS 80</td>
<td>0-40 bar</td>
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<td>0-60 bar</td>
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<td>G3/8B</td>
<td>50/50</td>
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<tr>
<td>M3A-ABS 80</td>
<td>0-160 bar</td>
<td>G3/8B</td>
<td>50/50</td>
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</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-250 bar</td>
<td>G3/8B</td>
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<tr>
<td>M3A-ABS 80</td>
<td>0-315 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS 80</td>
<td>0-400 bar</td>
<td>G3/8B</td>
<td>50/50</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 26
M3A-ABS 40/50/63/FR
M3A-ABS 40/50/63/80

Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M3A-ABS 40/50/63/80

High temperature version c.l. 2.5 only

Options subject to minimum quantity
T2 - 40°C/+90°C - Aluminium dial + aluminium pointer, (QA+I)

M3A-ABS 40/50/63/FR

Options subject to minimum quantity
Z3 - Restrictor 0.35 mm

M3A-ABS 50/63/80

Customized dials, other scale ranges or connections on request

Options subject to minimum quantity
T2 - 40°C/+90°C - Aluminium dial + aluminium pointer, (QA+I)

M3A-ABS 40/50/63/FR
M3A-ABS 50/63/80

MS - silicone movement for dampened pointer travel
BOURDON TUBE PRESSURE GAUGE
FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 40/FR/R
Dry Plastic Case DN40 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic with printed red mark pointer
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
c. 2.5, cl. 1.6 on request
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.039 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M3A-ABS 40/FR/R | 0-2.5 bar | G1/8B | 100/100 |
M3A-ABS 40/FR/R | 004401013720 | 0-4 bar | G1/8B | 100/100 |
M3A-ABS 40/FR/R | 006401013190 | 0-6 bar | G1/8B | 100/100 |
M3A-ABS 40/FR/R | 0-10 bar | G1/8B | 100/100 |
M3A-ABS 40/FR/R | 016401013353 | 0-16 bar | G1/8B | 100/100 |
M3A-ABS 40/FR/R | 0-25 bar | G1/8B | 100/100 |

Options: see page 32
FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

**M3A-ABS 50/FR/R**  
Dry Plastic Case DN50 Centre Back Entry

### Materials
- **Case:** Black plastic
- **Window:** Clear plastic with adjustable red mark pointer
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, C-type
- **Movement:** Cu-alloy / Polyester combination

### Technical Specifications
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C): ±0,04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.052 kg

### Type and Part Numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 50/FR/R</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
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<tr>
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<td>006501013187 0-6 bar</td>
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<tr>
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<td>010501013188 0-10 bar</td>
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<tr>
<td>M3A-ABS 50/FR/R</td>
<td>016501013171 0-16 bar</td>
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<tr>
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<td>0-25 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tbody>
</table>

Higher pressure ranges: see M3A-ABS 50/R on page 29

**Options:** see page 32
M3A-ABS 50/R
Dry Plastic Case DN50 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic with adjustable red mark pointer
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Accuracy class:
cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.086 kg

<table>
<thead>
<tr>
<th>Type</th>
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<tr>
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<td>0-60 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3A-ABS 50/R</td>
<td>0-100 bar</td>
<td>G1/4B</td>
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</tr>
<tr>
<td>M3A-ABS 50/R</td>
<td>0-160 bar</td>
<td>G1/4B</td>
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</tr>
<tr>
<td>M3A-ABS 50/R</td>
<td>0-250 bar</td>
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<tr>
<td>M3A-ABS 50/R</td>
<td>0-315 bar</td>
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<tr>
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<td>0-400 bar</td>
<td>G1/4B</td>
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</tbody>
</table>
FOR HEATING AND SANITARY SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 63/FR/R
Dry Plastic Case DN63 Centre Back Entry

**Materials**
- **Case:** Black plastic
- **Window:** Clear plastic with adjustable red mark pointer
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, C-type
- **Movement:** Cu-alloy / Polyester combination

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  ±0,04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.060 kg

**Type** | **Part No.**  | **Pressure Range** | **Connection** | **Packaging** |
--- | --- | --- | --- | --- |
M3A-ABS 63/FR/R | 205631013168 | 0-2.5 bar | G1/4B | 100/100 |
M3A-ABS 63/FR/R | 004631013273 | 0-4 bar | G1/4B | 100/100 |
M3A-ABS 63/FR/R | 006631016337 | 0-6 bar | G1/4B | 100/100 |
M3A-ABS 63/FR/R | 010631016336 | 0-10 bar | G1/4B | 100/100 |
M3A-ABS 63/FR/R | 025631013166 | 0-25 bar | G1/4B | 100/100 |

Higher pressure ranges: see M3A-ABS 63/R on page 31

**Options:** see page 32
M3A-ABS 63/R
Dry Plastic Case DN63 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic with adjustable red mark pointer
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.094 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 63/R</td>
<td>0-40 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-ABS 63/R</td>
<td>0-60 bar</td>
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<td>M3A-ABS 63/R</td>
<td>0-100 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3A-ABS 63/R</td>
<td>0-160 bar</td>
<td>G1/4B</td>
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</tr>
<tr>
<td>M3A-ABS 63/R</td>
<td>0-250 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tr>
<tr>
<td>M3A-ABS 63/R</td>
<td>0-315 bar</td>
<td>G1/4B</td>
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</tr>
<tr>
<td>M3A-ABS 63/R</td>
<td>0-400 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 32
OPTIONAL EXTRAS

M3A-ABS 50/63/FR/R
M3A-ABS 50/63/R

Options subject to minimum quantity
V - adjustable red mark pointer with green sector

M3A-ABS 40/50/63/FR/R
M3A-ABS 40/R

Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M3A-ABS 40/50/63/R

High temperature version c.l. 2.5 only

Options subject to minimum quantity
T2 - 40°C/+90°C - Aluminium dial + aluminium pointer, (QA+I)

M3A-ABS 40/50/63/FR/R

Options subject to minimum quantity
Z3 - Restrictor 0.35 mm

M3A-ABS 50/63/R

Options subject to minimum quantity
Z - Restrictor 0.5 mm

M3A-ABS 40/50/63/FR/R
M3A-ABS 50/63/80/R

Options subject to minimum quantity
MS - silicone movement for dampened pointer travel

M3A-ABS 40/50/63/FR/R
M3A-ABS 40/50/63/R

Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 40/TP
Dry Plastic Case DN40 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Black plastic
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.032 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tbody>
<tr>
<td>M3A-ABS 40/TP</td>
<td>-1/0 bar</td>
<td>G1/8B</td>
<td>100/100</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-1 bar</td>
<td>G1/8B</td>
<td>100/100</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-1.6 bar</td>
<td>G1/8B</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-4 bar</td>
<td>G1/8B</td>
<td>100/100</td>
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<td>M3A-ABS 40/TP</td>
<td>0-6 bar</td>
<td>G1/8B</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-10 bar</td>
<td>G1/8B</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-16 bar</td>
<td>G1/8B</td>
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<tr>
<td>M3A-ABS 40/TP</td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>100/100</td>
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</tbody>
</table>

Options: see page 35
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3A-ABS 50/TP**

**Dry Plastic Case DN50 Centre Back Entry**

**Materials**
- **Case:** Black plastic
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Black plastic
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, C-type
- **Movement:** Cu-alloy / Polyester combination

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0,04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.046 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tr>
<td>M3A-ABS 50/TP</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-ABS 50/TP</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
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<tr>
<td>M3A-ABS 50/TP</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-ABS 50/TP</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-ABS 50/TP</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>M3A-ABS 50/TP</td>
<td>0-6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>G1/4B</td>
<td>100/100</td>
<td></td>
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<tr>
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<td>0-16 bar</td>
<td>G1/4B</td>
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<tr>
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<td>0-25 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tbody>
</table>

**Options:** see page 35
M3A-ABS 40/TP

Options subject to minimum quantity
R - printed red mark pointer

M3A-ABS 50/TP

Options subject to minimum quantity
R - adjustable red mark pointer

M3A-ABS 50/TP

Options subject to minimum quantity
V - adjustable red mark pointer with green sector

M3A-ABS 40/50/TP

Options subject to minimum quantity
Z3 - Restrictor 0.35 mm

M3A-ABS 40/50/TP

Options subject to minimum quantity
Customized dials, other scale ranges on request
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS 50/ECC

Dry Plastic Case DN50 Lower Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 2.5, class 1.6 on request
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.086 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<td>G1/4B</td>
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<td>M3A-ABS 50/ECC</td>
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<td>G1/4B</td>
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<td>M3A-ABS 50/ECC</td>
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<td>G1/4B</td>
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<td>0-16 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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Options: see page 37
### M3A-ABS 50/ECC

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
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</thead>
<tbody>
<tr>
<td>R - adjustable red mark pointer</td>
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### M3A-ABS 50/ECC

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>V - adjustable red mark pointer with green sector</td>
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</table>

### M3A-ABS 50/ECC

<table>
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<tr>
<th>Options subject to minimum quantity</th>
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<tbody>
<tr>
<td>PTFE - Sealing ring on G1/4B only</td>
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### M3A-ABS 50/ECC

<table>
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<tr>
<th>Options subject to minimum quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z3 - Restrictor 0.5mm</td>
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</tbody>
</table>

### M3A-ABS 50/ECC

<table>
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<tr>
<th>Options subject to minimum quantity</th>
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</thead>
<tbody>
<tr>
<td>Customized dials, other scale ranges or connections on request</td>
</tr>
</tbody>
</table>
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

M3A-ABS CLIPS 40
Dry Plastic Case with Clips
DN40 Centre Back Entry

Materials:
- Case with clips: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

Technical Specifications:
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 30 per EN 60 529 / IEC 529
- Individual Weight: 0.042 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
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<td>190401094236</td>
<td>-1/0 bar</td>
<td>G1/8B</td>
<td>50/50</td>
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<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-1 bar</td>
<td>G1/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-1.6 bar</td>
<td>G1/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-4 bar</td>
<td>G1/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-10 bar</td>
<td>G1/8B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>50/50</td>
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<tr>
<td>M3A-ABS CLIPS 40</td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>50/50</td>
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</tr>
</tbody>
</table>

Options: see page 41
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS CLIPS 40/M5

Dry Plastic Case with Clips DN40
Plastic Centre Back Entry for Capillary

Materials
Case with clips: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, M5 female for fixing capillary only
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 30 per EN 60 529 / IEC 529
Individual Weight: 0.030 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>-1/0 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-1 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-1.6 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-2.5 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-4 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-6 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-10 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-16 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS CLIPS 40/M5</td>
<td>0-25 bar</td>
<td>M5 female</td>
<td>50/50</td>
<td></td>
</tr>
</tbody>
</table>

Capillary: see page 40

Options: see page 41
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCIOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

COPPER CAPILLARY
for M3A-ABS CLIPS 40/M5

EX F+R 999

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Length</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPPER CAPILLARY</td>
<td>999999994115</td>
<td>500mm</td>
<td>G1/4B rotary</td>
<td>50/50</td>
</tr>
</tbody>
</table>

Options: see page 41
M3A-ABS CLIPS 40

Options subject to minimum quantity
Z3 - Restrictor 0.35mm

M3A-ABS CLIPS 40
M3A-ABS CLIPS 40/M5

Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS QUA 40
Dry Plastic Square Case DN40x40 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure:
  Steady: 75 % of full scale value
  Fluctuating: 60 % of full scale value
  Short time: full scale value
Operating temperature:
  Ambient: -20 ... +60 °C
  Medium: +60 °C maximum
  Storage: -20 ... +60 °C
Temperature effect:
  Deviation from reference temperature (+20°C):
  ±0.04%/1K of the span
Accuracy class:
  cl. 2.5, cl. 1.6 on request
Degree of protection:
  IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.054 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS QUA 40</td>
<td>190401072187</td>
<td>-1/0 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>001401072189</td>
<td>0-1 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>106401072250</td>
<td>0-1.6 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>006401072180</td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>006401072180</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>010401072181</td>
<td>0-10 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>016401073752</td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 40</td>
<td>025401072188</td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options : see page 46
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS QUA 48/CLIPS

Dry Plastic Square Case with Clips DN48x48 Centre Back Entry

**Materials**
- Case with clips: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 30 per EN 60 529 / IEC 529
- Individual Weight: 0.060 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>190481071545</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-1</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-1.6</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-2.5</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-4</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-6</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-10</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-16</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-ABS QUA 48/CLIPS</td>
<td>0-25</td>
<td>bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options: see page 46
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3A-ABS QUA 48/M5 CLIPS**  
Dry Plastic Square Case with Clips DN48x48 M5 Centre Back Entry for Capillary

**Materials**
- Case with clips: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Copper alloy, M 5 female for fixing capillary only
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0,04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 30 per EN 60 529 / IEC 529
- Individual Weight: 0.052 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging** |
---|---|---|---|---|
M3A-ABS QUA 48/M5 CLIPS | -1/0 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-1 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-1.6 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-2.5 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-4 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-6 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-10 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-16 bar | M5 female | 100/100 |
M3A-ABS QUA 48/M5 CLIPS | 0-25 bar | M5 female | 100/100 |

**COPPER CAPILLARY**  
for M3A-ABS QUA 48/M5 CLIPS

For Nominal dimensions see page 40

**Type** | **Part No.** | **Length** | **Connection** | **Packaging** |
---|---|---|---|---|
COPPER CAPILLARY | 999999994115 | 500mm | G1/4B rotary | 50/50 |
FOR GENERAL INDUSTRIAL APPLICATIONS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-ABS QUA 52/CLIPS

Dry Plastic Square Case with Clips DN52x52 Centre Back Entry

Materials
- Case with clips: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

Technical Specifications
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 30 per EN 60 529 / IEC 529
- Individual Weight: 0.070 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>016521071529 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-ABS QUA 52/CLIPS</td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 46
OPTIONAL EXTRAS

M3A-ABS QUA 40
M3A-ABS QUA CLIPS 48/52

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
</tr>
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<tbody>
<tr>
<td>Z3 - Restrictor 0.35mm</td>
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M3A-ABS QUA CLIPS 48/M5

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>R - adjustable red mark pointer</td>
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</tbody>
</table>

M3A-ABS QUA 40
M3A-ABS QUA CLIPS 48/52

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT - PTFE sealing ring on paralell threads only</td>
</tr>
</tbody>
</table>

M3A-ABS QUA 40
M3A-ABS QUA CLIPS 48/52
M3A-ABS QUA CLIPS 48/M5

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customized dials, other scale ranges or connections on request</td>
</tr>
</tbody>
</table>
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3B-ABS 40/C**

**EX F+R 106 DN40**

Dry Plastic Case DN40 Centre Back Entry with 3-Hole Panel Mounting Flange

**Materials**
- Case: Black plastic
- 3-hole flange: Chrome-plated plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 43 per EN 60 529 / IEC 529
- Individual Weight: 0.060 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging**
---|---|---|---|---
M3B-ABS 40/C | 190401062247 | -1/0 bar | G1/8B | 1/125
M3B-ABS 40/C | 001401062215 | 0-1 bar | G1/8B | 1/125
M3B-ABS 40/C | 106401062273 | 0-1.6 bar | G1/8B | 1/125
M3B-ABS 40/C | 205401062217 | 0-2.5 bar | G1/8B | 1/125
M3B-ABS 40/C | 004401062107 | 0-4 bar | G1/8B | 1/125
M3B-ABS 40/C | 006401062628 | 0-6 bar | G1/8B | 1/125
M3B-ABS 40/C | 010401061707 | 0-10 bar | G1/8B | 1/125
M3B-ABS 40/C | 016401062390 | 0-16 bar | G1/8B | 1/125
M3B-ABS 40/C | 025401062216 | 0-25 bar | G1/8B | 1/125

Options: see page 50
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

M3B-ABS 50/C
Dry Plastic Case DN50 Centre Back Entry with 3-Hole Panel Mounting Flange

Materials
Case: Black plastic
3-hole flange: Chrome-plated plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C): ±0,04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.070 kg

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3B-ABS 50/C</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3B-ABS 50/C</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3B-ABS 50/C</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3B-ABS 50/C</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3B-ABS 50/C</td>
<td>004501061741 0-4 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3B-ABS 50/C</td>
<td>010501060539 0-10 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3B-ABS 50/C</td>
<td>025501060728 0-25 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
</tbody>
</table>

Options: see page 50
M3B-ABS 63/C

EX F+R 106 DN63

Dry Plastic Case DN63 Centre Back Entry with 3-Hole Panel Mounting Flange

Materials
Case: Black plastic
3-hole flange: Chrome-plated plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
cl. 2.5, cl. 1.6 on request
Degree of protection:
IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.080 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3B-ABS 63/C</td>
<td>190631062221</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>106631062223</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>205631062276</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>004631060673</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>006631060690</td>
<td>0-6 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>010631060691</td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>016631060692</td>
<td>0-16 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
<tr>
<td>M3B-ABS 63/C</td>
<td>025631062222</td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>1/72</td>
</tr>
</tbody>
</table>

Options: see page 50
OPTIONAL EXTRAS

**M3B-ABS 40/50/63/N**

Options subject to minimum quantity
- FNA - 3-Hole flange black plastic

**M3B-ABS 40/50/63/C**

Options subject to minimum quantity
- VV = instrument glass

**M3B-ABS 50/63/C**

Options subject to minimum quantity
- R - adjustable red mark pointer for clear plastic window only

**M3B-ABS 40/50/63/C**

Options subject to minimum quantity
- AT - PTFE sealing ring on parallel threads only

**M3B-ABS 40/50/63/C**

Options subject to minimum quantity
- Z3 - Restrictor 0.35mm

**M3B-ABS 40/50/63/C**

Options subject to minimum quantity
- Customized dials, other scale ranges or connections on request
M3F-ABS 40/C

Dry Plastic Case DN40 Centre Back Entry with Panel Mounting Fixing Ring

Materials
Case + Fixing ring: Black plastic
Triangular ring: Chrome-plated plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy / Polyester combination

Technical Specifications
Design: EN 837-1
Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
Temperature effect:
  - Deviation from reference temperature (+20°C):
    ±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.055 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3F-ABS 40/C</td>
<td>190401113358</td>
<td>-1/0 bar</td>
<td>G1/8B</td>
<td>1/100</td>
</tr>
<tr>
<td>M3F-ABS 40/C</td>
<td>190401112335</td>
<td>0-1 bar</td>
<td>G1/8B</td>
<td>1/100</td>
</tr>
<tr>
<td>M3F-ABS 40/C</td>
<td>106401112335</td>
<td>0-1.6 bar</td>
<td>G1/8B</td>
<td>1/100</td>
</tr>
<tr>
<td>M3F-ABS 40/C</td>
<td>205401112335</td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
<td>1/100</td>
</tr>
<tr>
<td>M3F-ABS 40/C</td>
<td>004401112644</td>
<td>0-4 bar</td>
<td>G1/8B</td>
<td>1/100</td>
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<td>M3F-ABS 40/C</td>
<td>006401111711</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>1/100</td>
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<td>010401112084</td>
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<td>G1/8B</td>
<td>1/100</td>
</tr>
<tr>
<td>M3F-ABS 40/C</td>
<td>016401112401</td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>1/100</td>
</tr>
<tr>
<td>M3F-ABS 40/C</td>
<td>025401112333</td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>1/100</td>
</tr>
</tbody>
</table>

Options: see page 54
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

**M3F-ABS 50/C**

**EX F+R 111 DN50**

Dry Plastic Case DN50 Centre Back Entry with Panel Mounting Fixing Ring

### Materials
- Case + Fixing ring: Black plastic
- Triangular ring: Chrome-plated plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

### Technical Specifications
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 43 per EN 60 529 / IEC 529
- Individual Weight: 0.065 kg

### Type Part No. Pressure Range Connection Packaging

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3F-ABS 50/C</td>
<td>190501111938</td>
<td>-1/0 bar</td>
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<td>1/125</td>
</tr>
<tr>
<td>M3F-ABS 50/C</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>1/125</td>
<td></td>
</tr>
<tr>
<td>M3F-ABS 50/C</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>1/125</td>
<td></td>
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<tr>
<td>M3F-ABS 50/C</td>
<td>205501111175</td>
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<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3F-ABS 50/C</td>
<td>004501111172</td>
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<tr>
<td>M3F-ABS 50/C</td>
<td>006501111170</td>
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<td>G1/4B</td>
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<tr>
<td>M3F-ABS 50/C</td>
<td>010501111176</td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>1/125</td>
</tr>
<tr>
<td>M3F-ABS 50/C</td>
<td>016501111171</td>
<td>0-16 bar</td>
<td>G1/4B</td>
<td>1/125</td>
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<td>M3F-ABS 50/C</td>
<td>025 bar</td>
<td>G1/4B</td>
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<td></td>
</tr>
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</table>

Options: see page 54
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3F-ABS 63/C
Dry Plastic Case DN63 Centre Back Entry with Panel Mounting Fixing Ring

**Materials**
- Case + Fixing ring: Black plastic
- Triangular ring: Chrome-plated plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy / Polyester combination

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 43 per EN 60 529 / IEC 529
- Individual Weight: 0.075 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging**
--- | --- | --- | --- | ---
M3F-ABS 63/C | 190631112238 | -1/0 bar | G1/4B | 1/72
M3F-ABS 63/C | 106631112271 | 0-1 bar | G1/4B | 1/72
M3F-ABS 63/C | 205631113512 | 0-2.5 bar | G1/4B | 1/72
M3F-ABS 63/C | 004631114791 | 0-4 bar | G1/4B | 1/72
M3F-ABS 63/C | 006631111076 | 0-6 bar | G1/4B | 1/72
M3F-ABS 63/C | 010631113726 | 0-10 bar | G1/4B | 1/72
M3F-ABS 63/C | 016631111169 | 0-16 bar | G1/4B | 1/72
M3F-ABS 63/C | 025631112239 | 0-25 bar | G1/4B | 1/72

Options: see page 54
### Optional Extras

**M3F-ABS 40/50/63/N**

Options subject to minimum quantity

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
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<tbody>
<tr>
<td>GAN</td>
<td>triangular ring black plastic</td>
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</tbody>
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**M3F-ABS 40/50/63/C**

Options subject to minimum quantity

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>VV</td>
<td>instrument glass</td>
</tr>
</tbody>
</table>

**M3F-ABS 40/50/63/C**

Options subject to minimum quantity

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>PTFE sealing ring on paralell threads only</td>
</tr>
</tbody>
</table>

**M3F-ABS 40/50/63/C**

Options subject to minimum quantity

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z3</td>
<td>Restrictor 0.35mm</td>
</tr>
</tbody>
</table>

**M3F-ABS 40/50/63/C**

Options subject to minimum quantity

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Customized dials, other scale ranges or connections on request</td>
</tr>
</tbody>
</table>
M1-40  EX F+R 250 DN40

Dry Steel Case DN40 Bottom Entry

Materials
- Case: Black steel, powder coated
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 12 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

Technical Specifications
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect:
  - Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.060 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-40</td>
<td></td>
<td>0-1.6 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
<td></td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
<td>PA150421</td>
<td>0-4 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
<td>PA1506B100</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
<td>PA151021</td>
<td>0-10 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
<td></td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
<td></td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
<tr>
<td>M1-40</td>
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<td>0-40 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M1-40</td>
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<td>0-60 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M1-40</td>
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<td>0-100 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M1-40</td>
<td></td>
<td>0-160 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M1-40</td>
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<td>0-250 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M1-40</td>
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<td>0-315 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M1-40</td>
<td></td>
<td>0-400 bar</td>
<td>G1/8B</td>
<td>240/240</td>
</tr>
</tbody>
</table>

Options: see page 60
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M1-50**

**Dry Steel Case DN50 Bottom Entry**

**Materials**
- **Case:** Black steel, powder coated
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.095 kg

<table>
<thead>
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<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tbody>
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<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M1-50</td>
<td></td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M1-50</td>
<td></td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
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<td>M1-50</td>
<td></td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>M1-50</td>
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<td>0-6 bar</td>
<td>G1/4B</td>
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<td>0-16 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M1-50</td>
<td></td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M1-50</td>
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<td>0-160 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M1-50</td>
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<td>0-250 bar</td>
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<tr>
<td>M1-50</td>
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<td>0-315 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M1-50</td>
<td></td>
<td>0-400 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options : see page 60
BOURDON TUBE PRESSURE GAUGE
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-63
Dry Steel Case DN63 Bottom Entry

Materials
Case: Black steel, powder coated
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.115 kg

<table>
<thead>
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<th>Part No.</th>
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<th>Connection</th>
<th>Packaging</th>
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</thead>
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<td>-1/0 bar</td>
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<td>100/100</td>
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</tr>
<tr>
<td>M1-63</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-63</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-63</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-63</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tr>
<tr>
<td>M1-63</td>
<td>0-6 bar</td>
<td>G1/4B</td>
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<tr>
<td>M1-63</td>
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<td>G1/4B</td>
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<tr>
<td>M1-63</td>
<td>0-16 bar</td>
<td>G1/4B</td>
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<tr>
<td>M1-63</td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tr>
<tr>
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<td>0-40 bar</td>
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<tr>
<td>M1-63</td>
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<td>M1-63</td>
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</tr>
<tr>
<td>M1-63</td>
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<td>G1/4B</td>
<td>100/100</td>
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</tr>
<tr>
<td>M1-63</td>
<td>0-250 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-63</td>
<td>0-315 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M1-63</td>
<td>0-400 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 60
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M1-80**

Dry Steel Case DN50 Bottom Entry

**Materials**
- **Case:** Black steel, powder coated
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.170 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-80</td>
<td>-1/-0 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-1 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-1.6 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-2.5 bar</td>
<td>G3/8B</td>
<td>1/50</td>
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</tr>
<tr>
<td>M1-80</td>
<td>0/-4 bar</td>
<td>G3/8B</td>
<td>1/50</td>
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</tr>
<tr>
<td>M1-80</td>
<td>0/-6 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-10 bar</td>
<td>G3/8B</td>
<td>1/50</td>
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</tr>
<tr>
<td>M1-80</td>
<td>0/-16 bar</td>
<td>G3/8B</td>
<td>1/50</td>
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</tr>
<tr>
<td>M1-80</td>
<td>0/-25 bar</td>
<td>G3/8B</td>
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<tr>
<td>M1-80</td>
<td>0/-40 bar</td>
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<td>1/50</td>
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</tr>
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<td>M1-80</td>
<td>0/-60 bar</td>
<td>G3/8B</td>
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</tr>
<tr>
<td>M1-80</td>
<td>0/-100 bar</td>
<td>G3/8B</td>
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<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-160 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-250 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-315 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
<tr>
<td>M1-80</td>
<td>0/-400 bar</td>
<td>G3/8B</td>
<td>1/50</td>
<td></td>
</tr>
</tbody>
</table>

**Options:** see page 60
BOURDON TUBE PRESSURE GAUGE

FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

M1-100

Dry Steel Case DN63 Bottom Entry

Materials

Case: Black steel, powder coated
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications

Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.255 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-100</td>
<td>-1/0 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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<tr>
<td>M1-100</td>
<td>0-1 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
<tr>
<td>M1-100</td>
<td>0-1.6 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
<tr>
<td>M1-100</td>
<td>0-2.5 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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</tr>
<tr>
<td>M1-100</td>
<td>0-4 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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<td>M1-100</td>
<td>0-6 bar</td>
<td>G1/2B</td>
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<td>M1-100</td>
<td>0-10 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
<tr>
<td>M1-100</td>
<td>0-16 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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</tr>
<tr>
<td>M1-100</td>
<td>0-25 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
<tr>
<td>M1-100</td>
<td>0-40 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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</tr>
<tr>
<td>M1-100</td>
<td>0-60 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
<tr>
<td>M1-100</td>
<td>0-100 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
<tr>
<td>M1-100</td>
<td>0-160 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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</tr>
<tr>
<td>M1-100</td>
<td>0-250 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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<tr>
<td>M1-100</td>
<td>0-315 bar</td>
<td>G1/2B</td>
<td>1/30</td>
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</tr>
<tr>
<td>M1-100</td>
<td>0-400 bar</td>
<td>G1/2B</td>
<td>1/30</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 60
M1-50/63/80/100

Options subject to minimum quantity
R - adjustable red mark pointer

M1-40/50/63/80/100
High temperature version c.l. 2.5 only

Options subject to minimum quantity
T2 - 40°C/+90°C - Aluminium dial + aluminium pointer (QA+I)
T1 - 40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+A+VV)

M1-40/50/63/80/100
Options subject to minimum quantity
Z - Restrictor 0.5mm

M1-40/50/63/80/100
Options subject to minimum quantity
A+VV - Chrome-plated bezel ring + instrument glass window

M1-40/50/63/80/100
Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M1-40/50/63/80/100
Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3A-40**

**Dry Steel Case DN40 Centre Back Entry**

**Materials**
- **Case:** Black steel, powder coated
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 12 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.069 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-40</td>
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<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-40</td>
<td>0-1 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-40</td>
<td>0-1.6 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-40</td>
<td>0-2.5 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-40</td>
<td>0-4 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-40</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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</tr>
<tr>
<td>M3A-40</td>
<td>0-10 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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</tr>
<tr>
<td>M3A-40</td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>M3A-40</td>
<td>0-25 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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</tr>
<tr>
<td>M3A-40</td>
<td>0-40 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M3A-40</td>
<td>0-60 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M3A-40</td>
<td>0-100 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M3A-40</td>
<td>0-160 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M3A-40</td>
<td>0-250 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>M3A-40</td>
<td>0-515 bar</td>
<td>G1/8B</td>
<td>240/240</td>
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</tr>
<tr>
<td>M3A-40</td>
<td>0-400 bar</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
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</tbody>
</table>

Options: see page 66
FOR GENERAL INDUSTRIAL APPLICATIONS, INDOOR SERVICE. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-50
Dry Steel Case DN50 Centre Back Entry

Materials
Case: Black steel, powder coated
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type,
> 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 2.5, class 1.6 on request
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.116 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-50</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-50</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-50</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-50</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-50</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>PB2504BB00</td>
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<td>G1/4B</td>
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<td>0-10 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-50</td>
<td>0-16 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-50</td>
<td>0-25 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3A-50</td>
<td>0-40 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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</tr>
<tr>
<td>M3A-50</td>
<td>0-60 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3A-50</td>
<td>0-100 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>M3A-50</td>
<td>0-160 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>M3A-50</td>
<td>0-250 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>0-315 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3A-50</td>
<td>0-400 bar</td>
<td>G1/4B</td>
<td>100/100</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 66
FOR GENERAL INDUSTRIAL APPLICATIONS, INDOOR SERVICE. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3A-63**

**Dry Steel Case DN63 Centre Back Entry**

**Materials**
- **Case:** Black steel, powder coated
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- **Accuracy class:** cl. 2.5, cl. 1.6 on request
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.126 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging**
---|---|---|---|---
M3A-63 | -1/0 bar | G1/4B | 100/100 |
M3A-63 | 0-1 bar | G1/4B | 100/100 |
M3A-63 | 0-1.6 bar | G1/4B | 100/100 |
M3A-63 | 0-2.5 bar | G1/4B | 100/100 |
M3A-63 | 0-4 bar | G1/4B | 100/100 |
M3A-63 | 0-6 bar | G1/4B | 100/100 |
M3A-63 | 0-10 bar | G1/4B | 100/100 |
M3A-63 | PB351622 0-16 bar | G1/4B | 100/100 |
M3A-63 | 0-25 bar | G1/4B | 100/100 |
M3A-63 | 0-40 bar | G1/4B | 100/100 |
M3A-63 | 0-60 bar | G1/4B | 100/100 |
M3A-63 | 0-100 bar | G1/4B | 100/100 |
M3A-63 | 0-160 bar | G1/4B | 100/100 |
M3A-63 | 0-250 bar | G1/4B | 100/100 |
M3A-63 | 0-315 bar | G1/4B | 100/100 |
M3A-63 | 0-400 bar | G1/4B | 100/100 |

**Options:** see page 66
FOR GENERAL INDUSTRIAL APPLICATIONS, INDOOR SERVICE. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-80
Dry Steel Case DN80 Centre Back Entry

Materials
Case: Black steel, powder coated
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered < 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.156 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
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<td>G3/8B</td>
<td>-1/0 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-1 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-1.6 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-2.5 bar</td>
<td>G3/8B</td>
<td>50/50</td>
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<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-4 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-6 bar</td>
<td>G3/8B</td>
<td>50/50</td>
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<td>M3A-80</td>
<td>G3/8B</td>
<td>0-10 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-16 bar</td>
<td>G3/8B</td>
<td>50/50</td>
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<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-25 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-40 bar</td>
<td>G3/8B</td>
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</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-60 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-100 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-160 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-250 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-315 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
<tr>
<td>M3A-80</td>
<td>G3/8B</td>
<td>0-400 bar</td>
<td>G3/8B</td>
<td>50/50</td>
</tr>
</tbody>
</table>

Options: see page 66
FOR GENERAL INDUSTRIAL APPLICATIONS, INDOOR SERVICE. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCIOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-100
Dry Steel Case DN100 Centre Back Entry

Materials
- Case: Black steel, powder coated
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy

Technical Specifications
- Design: EN 837-1
- Working pressure: Steady: 75 % of full scale value
- Fluctuating: 60 % of full scale value
- Short time: full scale value
- Operating temperature: Ambient: -20 ... +60 °C
- Medium: +60 °C maximum
- Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.176 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M3A-100 | -1/0 bar | G1/2B | 1/30 |
M3A-100 | 0-1 bar | G1/2B | 1/30 |
M3A-100 | 0-1.6 bar | G1/2B | 1/30 |
M3A-100 | 0-2.5 bar | G1/2B | 1/30 |
M3A-100 | 0-4 bar | G1/2B | 1/30 |
M3A-100 | 0-6 bar | G1/2B | 1/30 |
M3A-100 | 0-10 bar | G1/2B | 1/30 |
M3A-100 | 0-16 bar | G1/2B | 1/30 |
M3A-100 | 0-25 bar | G1/2B | 1/30 |
M3A-100 | 0-40 bar | G1/2B | 1/30 |
M3A-100 | 0-60 bar | G1/2B | 1/30 |
M3A-100 | 0-100 bar | G1/2B | 1/30 |
M3A-100 | 0-160 bar | G1/2B | 1/30 |
M3A-100 | 0-250 bar | G1/2B | 1/30 |
M3A-100 | 0-315 bar | G1/2B | 1/30 |
M3A-100 | 0-400 bar | G1/2B | 1/30 |

Options: see page 66
OPTIONAL EXTRAS

M3A-50/63/80/100

Options subject to minimum quantity
R - adjustable red mark pointer

M3A-40/50/63/80/100

Options subject to minimum quantity
Z - Restrictor 0.5mm

M3A-40/50/63/80/100

High temperature version c.l. 2.5 only

Options subject to minimum quantity
T2 - 40°C/+90°C - Aluminium dial + aluminium pointer (QA+I)
T1 - 40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+A+VV)

M3A-40/50/63/80/100

Options subject to minimum quantity
A+VV - Chrome-plated bezel ring + instrument glass window

M3A-40/50/63/80/100

Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M3A-40/50/63/80/100

Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
BOURDON TUBE PRESSURE GAUGE

FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3B-40

Dry Steel Case DN40 Centre Back Entry with 3-Hole Panel Mounting Flange

**Materials**
- **Case**: Black steel, powder coated
- **3-hole flange**: Chrome-plated steel
- **Window**: Clear plastic
- **Dial**: White plastic
- **Pointer**: Black plastic
- **Pressure connection**: Cu-alloy, 12 mm flats
- **Pressure element**: Bourdon tube Cu-alloy soft soldered C-type
- **Movement**: Cu-alloy

**Technical Specifications**
- **Design**: EN 837-1
- **Working pressure**:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature**:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect**: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- **Accuracy class**: cl. 2.5, cl. 1.6 on request
- **Degree of protection**: IP 43 per EN 60 529 / IEC 529
- **Individual Weight**: 0.086 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging**
--- | --- | --- | --- | ---
M3B-40 | PC1401Ei00 | -1/0 bar/inHg | G1/8B | 100/100
M3B-40 | PC1503DI00 | 0-2.5 bar/psi | G1/8B | 100/100
M3B-40 | PC1504DI00 | 0-4 bar/psi | G1/8B | 100/100
M3B-40 | PC1505DI00 | 0-6 bar/psi | G1/8B | 100/100
M3B-40 | PC1510DI00 | 0-10 bar/psi | G1/8B | 100/100
M3B-40 | PC1516DI00 | 0-16 bar/psi | G1/8B | 100/100
M3B-40 | PC1525DI00 | 0-25 bar/psi | G1/8B | 100/100
M3B-40 | PC1540DI00 | 0-40 bar/psi | G1/8B | 100/100

**Options**: see page 70
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3B-50
Dry Steel Case DN50 Centre Back Entry with 3-Hole Panel Mounting Flange

Materials
- Case: Black steel, powder coated
- 3-hole flange: Chrome-plated steel
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered C-type
- Movement: Cu-alloy

Technical Specifications
- Design: EN 837-1
- Working pressure:
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 43 per EN 60 529 / IEC 529
- Individual Weight: 0.126 kg

Type | Part No. | Pressure Range | Connection | Packaging |
-----|---------|----------------|------------|-----------|
M3B-50 | -1/0 bar/inHg | G1/4B | 100/100 |
M3B-50 | 0-1 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-1.6 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-2.5 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-4 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-6 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-10 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-16 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-25 bar/psi | G1/4B | 100/100 |
M3B-50 | 0-40 bar/psi | G1/4B | 100/100 |

Options: see page 70
M3B-63

FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

Dry Steel Case DN63 Centre Back Entry with 3-Hole Panel Mounting Flange

Materials
Case: Black steel, powder coated
3-hole flange: Chrome-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
cl. 2.5, cl. 1.6 on request
Degree of protection:
IP 43 per EN 60 529 / IEC 529
Individual Weight:
0.126 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3B-63</td>
<td>PC3401EJ00</td>
<td>-1/0 bar/inHg</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3B-63</td>
<td>PC3503DJ00</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3B-63</td>
<td>PC3510DJ00</td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3B-63</td>
<td>PC3516DJ00</td>
<td>0-16 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3B-63</td>
<td>PC3525DB00</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
</tbody>
</table>

Options : see page 70
**Optional Extras**

**M3B-50/63**

Options subject to minimum quantity
- **R** - adjustable red mark pointer

**M3B-40/50/63**

Options subject to minimum quantity
- **Z** - Restrictor 0.5mm

**M3B-40/50/63**
High temperature version c.i. 2.5 only

Options subject to minimum quantity
- **T2** - 40°C/+90°C - Aluminium dial + aluminium pointer (QA+I)
- **T1** - 40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+VV)

**M3B-40/50/63**

Options subject to minimum quantity
- **AT** - PTFE sealing ring on parallel threads only

**M3B-40/50/63**

Options subject to minimum quantity
- Customized dials, other scale ranges or connections on request
M3F-40
EX F+R 152 DN40
Dry Steel Case DN40 Centre Back Entry with Panel Mounting Brackets

Materials
Case and brackets: Zinc-plated steel
Triangular ring: Chrome-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 12 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.094 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3F-40</td>
<td>PD14015E00</td>
<td>-1/0 bar/inHg</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD14015101</td>
<td>0-1 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD14020100</td>
<td>0-1.6 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1503D000</td>
<td>0-2.5 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1504D000</td>
<td>0-4 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1506D000</td>
<td>0-6 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1510D000</td>
<td>0-10 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1516D000</td>
<td>0-16 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1525D000</td>
<td>0-25 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-40</td>
<td>PD1540D000</td>
<td>0-40 bar/psi</td>
<td>G1/8B</td>
<td>1/50</td>
</tr>
</tbody>
</table>

Options: see page 76
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3F-50
Dry Steel Case DN50 Centre Back Entry with Panel Mounting Brackets

Materials
Case and brackets: Zinc-plated steel
Triangular ring: Chrome-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
   Steady: 75 % of full scale value
   Fluctuating: 60 % of full scale value
   Short time: full scale value
Operating temperature:
   Ambient: -20 ... +60 °C
   Medium: +60 °C maximum
   Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
   ±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.108 kg

Options: see page 76

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3F-50</td>
<td>PD2401EJ00</td>
<td>-1/0 bar/inHg</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2401EJ00</td>
<td>0-1 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2401EJ00</td>
<td>0-1.6 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD250314</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2506DJ00</td>
<td>0-6 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2510DJ00</td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2516DJ00</td>
<td>0-16 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2516DJ00</td>
<td>0-25 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-50</td>
<td>PD2516DJ00</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
</tbody>
</table>
M3F-63

Dry Steel Case DN63 Centre Back Entry with Panel Mounting Brackets

Materials
Case and brackets: Zinc-plated steel
Triangular ring: Chrome-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 2.5, class 1.6 on request
Degree of protection: IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.146 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>M3F-63</td>
<td>PD3401EJ00</td>
<td>-1/0 bar/inHg</td>
<td>G1/4B</td>
<td>1/50</td>
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<tr>
<td>M3F-63</td>
<td>PD3401DJ01</td>
<td>0-1 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
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<tr>
<td>M3F-63</td>
<td>PD3403DJ01</td>
<td>0-1.6 bar/psi</td>
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<td>1/50</td>
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<tr>
<td>M3F-63</td>
<td>PD3503DJ00</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-63</td>
<td>PD3504DJ00</td>
<td>0-4 bar/psi</td>
<td>G1/4B</td>
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<td>PD3506DJ00</td>
<td>0-6 bar/psi</td>
<td>G1/4B</td>
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<td>M3F-63</td>
<td>PD3510DJ00</td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>M3F-63</td>
<td>PD3516DJ01</td>
<td>0-16 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
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<td>PD3516DJ01</td>
<td>0-25 bar/psi</td>
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<tr>
<td>M3F-63</td>
<td>PD3516DJ01</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
</tbody>
</table>

Options: see page 76
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3F-80

Dry Steel Case DN80 Centre Back Entry with Panel Mounting Brackets

Materials
Case and brackets: Zinc-plated steel
Triangular ring: Chrome-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
   Steady: 75 % of full scale value
   Fluctuating: 60 % of full scale value
   Short time: full scale value
Operating temperature:
   Ambient: -20 ... +60 °C
   Medium: +60 °C maximum
   Storage: -20 ... +60 °C
Temperature effect:
   Deviation from reference temperature (+20°C):
   ±0.04%/1K of the span
Accuracy class:
   cl. 2.5, cl. 1.6 on request
Degree of protection:
   IP 43 per EN 60 529 / IEC 529
Individual Weight: 0.248 kg

<table>
<thead>
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<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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</thead>
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</tr>
<tr>
<td>M3F-80</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>1/18</td>
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</tr>
<tr>
<td>M3F-80</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-80</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3F-80</td>
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<td>1/18</td>
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</tr>
<tr>
<td>M3F-80</td>
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<td>G1/4B</td>
<td>1/18</td>
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</tr>
<tr>
<td>M3F-80</td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>1/18</td>
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</tr>
<tr>
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<td>0-16 bar</td>
<td>G1/4B</td>
<td>1/18</td>
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<tr>
<td>M3F-80</td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-80</td>
<td>0-40 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 76

FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS
FOR PANEL MOUNTING IN GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3F-100

Dry Steel Case DN100 Centre Back Entry with Panel Mounting Brackets

Materials
Case and brackets: Zinc-plated steel
Triangular ring: Chrome-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
cl. 2.5, cl. 1.6 on request
Degree of protection:
IP 43 per EN 60 529 / IEC 529
Individual Weight:
0.181 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3F-100</td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-6 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-16 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
<tr>
<td>M3F-100</td>
<td>0-40 bar</td>
<td>G1/4B</td>
<td>1/18</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 76
### OPTIONAL EXTRAS

#### M3F-40/50/63/80/100

**Options subject to minimum quantity**

- **Z** - Restrictor 0.5mm

#### M3F-40/50/63/80/100

**High temperature version c.l. 2.5 only**

**Options subject to minimum quantity**

- **T2** - 40°C/+90°C - Aluminium dial + aluminium pointer (QA+I)
- **T1** - 40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+VV)

#### M3F-40/50/63/80/100

**Options subject to minimum quantity**

- **AT** - PTFE sealing ring on parallel threads only

#### M3F-40/50/63/80/100

**Options subject to minimum quantity**

- **Customized dials, other scale ranges or connections on request**
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-40 INOX
Dry Stainless Steel DN40 Bottom Entry

Materials
Case: Stainless steel 1.4301
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 12 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.065 kg

Type | Part No. | Pressure Range | Connection | Packaging
--- | --- | --- | --- | ---
M1-40 INOX | 0-1.6 bar | G1/8B | 240/240
M1-40 INOX | 0-2.5 bar | G1/8B | 240/240
M1-40 INOX | 0-4 bar | G1/8B | 240/240
M1-40 INOX | 0-6 bar | G1/8B | 240/240
M1-40 INOX | 0-10 bar | G1/8B | 240/240
M1-40 INOX | 0-16 bar | G1/8B | 240/240
M1-40 INOX | 0-25 bar | G1/8B | 240/240
M1-40 INOX | 0-40 bar | G1/8B | 240/240
M1-40 INOX | 0-60 bar | G1/8B | 240/240
M1-40 INOX | 0-100 bar | G1/8B | 240/240
M1-40 INOX | 0-160 bar | G1/8B | 240/240
M1-40 INOX | 0-250 bar | G1/8B | 240/240
M1-40 INOX | 0-315 bar | G1/8B | 240/240
M1-40 INOX | 0-400 bar | G1/8B | 240/240

Options: see page 79
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M1-50 INOX
Dry Stainless Steel DN50 Bottom Entry

Materials
Case: Stainless steel 1.4301
Window: Clear plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Operating temperature: Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 2.5, cl. 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.105 kg

Type | Part No. | Pressure Range | Connection | Packaging
--- | --- | --- | --- | ---
M1-50 INOX | -1/0 bar | G1/4B | 100/100
M1-50 INOX | 0-1 bar | G1/4B | 100/100
M1-50 INOX | 0-1.6 bar | G1/4B | 100/100
M1-50 INOX | 0-2.5 bar | G1/4B | 100/100
M1-50 INOX | 0-4 bar | G1/4B | 100/100
M1-50 INOX | 0-6 bar | G1/4B | 100/100
M1-50 INOX | 0-10 bar | G1/4B | 100/100
M1-50 INOX | 0-16 bar | G1/4B | 100/100
M1-50 INOX | 0-25 bar | G1/4B | 100/100
M1-50 INOX | 0-40 bar | G1/4B | 100/100
M1-50 INOX | 0-60 bar | G1/4B | 100/100
M1-50 INOX | 0-100 bar | G1/4B | 100/100
M1-50 INOX | 0-160 bar | G1/4B | 100/100
M1-50 INOX | 0-250 bar | G1/4B | 100/100
M1-50 INOX | 0-315 bar | G1/4B | 100/100
M1-50 INOX | 0-400 bar | G1/4B | 100/100

Options : see page 79
M1- 50 INOX

Options subject to minimum quantity
R - adjustable red mark pointer

M1- 40/50 INOX

Options subject to minimum quantity
Z - Restrictor 0.5mm

M1- 40/50 INOX

High temperature version c.l. 2.5 only

Options subject to minimum quantity
T2 - 40°C/+90°C - Aluminium dial + aluminium pointer (QA+I)
T1 - 40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+AX+VV)

M1- 40/50 INOX

Options subject to minimum quantity
AX+VV - Bezel ring + instrument glass

M1- 40/50 INOX

Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M1- 40/50 INOX

Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-40 INOX
Dry Stainless Steel DN40 Centre Back Entry

Materials
Case: Stainless steel 1.4301
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 12 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type,
> 60 bar helical type

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 2.5, class 1.6 on request
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.069 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M3A-40 INOX | -1/0 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-1 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-1.6 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-2.5 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-4 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-6 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-10 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-16 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-25 bar | G1/8B | 240/240 |
M3A-40 INOX | PK1825B100 0-25 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-40 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-60 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-100 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-160 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-250 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-315 bar | G1/8B | 240/240 |
M3A-40 INOX | 0-400 bar | G1/8B | 240/240 |

Options: see page 82
FOR GENERAL INDUSTRIAL APPLICATIONS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**M3A-50 INOX**

**Dry Stainless Steel DN50 Centre Back Entry**

**Materials**
- Case: Stainless steel 1.4301
- Window: Clear plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered
- Movement: Cu-alloy

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 2.5, cl. 1.6 on request
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.119 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>-1/0 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-1 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-1.6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-2.5 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-4 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>M3A-50 INOX</td>
<td>PK2506BB00</td>
<td>0-6 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-10 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-16 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-25 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-40 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
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<td>0-60 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-100 bar</td>
<td>G1/4B</td>
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<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-160 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-250 bar</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>M3A-50 INOX</td>
<td></td>
<td>0-315 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>M3A-50 INOX</td>
<td></td>
<td>0-400 bar</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

**Options**: see page 82
OPTIONAL EXTRAS

M3A-50 INOX

Options subject to minimum quantity
R - adjustable red mark pointer

M3A-40/50 INOX
High temperature version c.l. 2.5 only

Options subject to minimum quantity
T2 - 40°C/+50°C - Aluminium dial + aluminium pointer (QA+I)
T1 - 40°C/+120°C - Aluminium dial + aluminium pointer + bezel ring + instrument glass (QA+I+AX+VV)

M3A-40/50 INOX

Options subject to minimum quantity
Z - Restrictor 0.5mm

M3A- 40/50 INOX

Options subject to minimum quantity
AX+VV - Bezel ring + instrument glass

M3A-40/50 INOX

Options subject to minimum quantity
AT - PTFE sealing ring on parallel threads only

M3A-40/50 INOX

Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
M1-ABS 63/QG

Dry Plastic Case DN63 Bottom Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 1.6
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight:
0.089 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>0-12 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options: see page 86
FOR TYRE INFLATING

M3A-ABS 63/QG
Dry Plastic Case DN63 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75% of full scale value
Fluctuating: 60% of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60°C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C): ±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.109 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3A-ABS 63/QG</td>
<td></td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options: see page 86
M3A-ABS 80/QG
Dry Plastic Case DN80 Centre Back Entry

Materials
Case: Black plastic
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60°C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.109 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M3A-ABS 80/QG | | 0-10 bar/psi | G1/4B | 1/50

Options: see page 86
### Optional Extras

**M1-ABS 63/QG**

**M3A-ABS 63/QG**

![Pressure Gauge Image]

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP M1-63</td>
<td>PCUSGOM001</td>
<td>Protective rubber cap</td>
</tr>
<tr>
<td>CP M3A-63</td>
<td>PCUSGOM002</td>
<td>Protective rubber cap</td>
</tr>
</tbody>
</table>

**M1-ABS 63/QG**

**M3A-ABS 63/80/QG**

Options subject to minimum quantity

Customized dials, other connections on request
M1-ABS 63/CEE

Dry Plastic Case DN63 Bottom Entry

Materials
Case: Black plastic
Window: Clear plastic, Ultra-Sonic welded
Dial: White plastic, without pointer stopper
Pointer: Black aluminium, knife-edge type
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EEC No. 83/575
Approval: No.00,04,01,002
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -10 ... +40 °C
Medium: +40 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class:
class 0.08 < 4 bar, > 4bar class 1.6
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.089 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-ABS 63/CEE</td>
<td></td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options: see page 89
M3A-ABS 63/CEE

Dry Plastic Case DN63 Centre Back Entry

Materials
- Case: Black plastic
- Window: Clear plastic, Ultra-Sonic welded
- Dial: White plastic, without pointer stopper
- Pointer: Black aluminium, knife-edge type
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered C-type
- Movement: Cu-alloy

Technical Specifications
- Design: EEC No. 83/575
- Approval: No.00.04.01.002
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -10 ... +40 °C
  - Medium: +40 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  ±0.04%/1K of the span
- Accuracy class: cl. 0.08
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.094 kg

Options: see page 89
M3A-80/CEE

Dry Steel Case DN80 Centre Back Entry

Materials
Case + bezel ring: Black steel, powder coated, sealed by rivets
Window: Clear plastic
Dial: White plastic, without pointer stopper
Pointer: Black aluminium, knife edge type
Pressure connection: Cu-alloy, 14 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered C-type
Movement: Cu-alloy

Technical Specifications
Design: EEC No. 83/575
Approval: No.00,04,01,002
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -10 ... +40 °C
Medium: +40 °C maximum
Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 0.08
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.156 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M3A-80/CEE | 0-10 bar | G1/4B | 1/50 |

Options subject to minimum quantity
Company logo on the dial, other connections on request
FOR PNEUMATIC APPLICATIONS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

M3A-OTT 23
Dry Brass Case DN23 Centre Back Entry

Materials
Case/connection: Cu-alloy, in one-piece
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 22 mm flats
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy/polyester combination

Technical Specifications
Design: According to EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 4.0
Degree of protection: IP 54 per EN 60 529 / IEC 529
Individual Weight: 0.020 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
M3A-OTT 23 | 004231234317 | 0-4 bar | G1/8B | 500/500 |
M3A-OTT 23 | 006231234318 | 0-6 bar | G1/8B | 500/500 |
M3A-OTT 23 | 010231234319 | 0-10 bar | G1/8B | 500/500 |
M3A-OTT 23 | 016231234507 | 0-16 bar | G1/8B | 500/500 |

Options : see page 92
M3A-ABS 23
Dry Plastic Case DN23 Centre Back Entry

Materials
- Case/connection: Black plastic, in one-piece
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Plastic, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy/polyester combination

Technical Specifications
- Design: According to EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C):
  ±0.04%/1K of the span
- Accuracy class: cl. 4.0
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.010 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tr>
<td>M3A-ABS 23</td>
<td>006234235662</td>
<td>0-6 bar</td>
<td>G1/8B</td>
<td>500/500</td>
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<tr>
<td>M3A-ABS 23</td>
<td>010234235642</td>
<td>0-10 bar</td>
<td>G1/8B</td>
<td>500/500</td>
</tr>
<tr>
<td>M3A-ABS 23</td>
<td>016234235498</td>
<td>0-16 bar</td>
<td>G1/8B</td>
<td>500/500</td>
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Options: see page 92
<table>
<thead>
<tr>
<th>OPTIONAL EXTRAS</th>
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### M3A-OTT 23/NIC

Options subject to minimum quantity
- Brass nickel-plated

### M3A-OTT 23

Options subject to minimum quantity
- Z3 = Restrictor 0.35mm

### M3A-ABS 23

Options subject to minimum quantity
- Customized dials, other scale ranges or connections on request

### M3A-ABS 23

Options subject to minimum quantity
- Customized dials, other scale ranges on request
BOURDON TUBE PRESSURE GAUGE

FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS.
SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

MG1-ABS 63  EX F+R 204 DN63

Glycerine Filled Plastic Case DN63 Bottom Entry

Materials
Case:  ABS black with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
Window:  PMMA, Ultra-Sonic welded
Dial:  White plastic
Pointer:  Black plastic
Pressure connection:  Cu-alloy, 14 mm flats, > 40 bar restrictor 0.5mm
Pressure element:  Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement:  Cu-alloy
Liquid filling:  Glycerine 86.5%

Technical Specifications
Design:  EN 837-1
Working pressure:  Steady:  75 % of full scale value
Fluctuating:  60 % of full scale value
Short time:  full scale value
Operating temperature:  Ambient:  -10 ... +60 °C
Medium:  +60 °C maximum
Storage:  -10 ... +60 °C
Temperature effect:  Deviation from reference temperature (+20°C): ±0.04%/1K of the span
Accuracy class:  cl. 1.6
Degree of protection:  IP 65 per EN 60 529 / IEC 529
Individual Weight:  0.154 kg

<table>
<thead>
<tr>
<th>Type</th>
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<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<td>G1/4B</td>
<td>100/100</td>
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<td>bar/psi</td>
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<td>PE3206DJ00</td>
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<td>bar/psi</td>
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<td>0-25</td>
<td>bar/psi</td>
<td>G1/4B</td>
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<tr>
<td>MG1-ABS 63</td>
<td>0-40</td>
<td>bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-ABS 63</td>
<td>0-60</td>
<td>bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
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<td>MG1-ABS 63</td>
<td>0-100</td>
<td>bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>MG1-ABS 63</td>
<td>PE3354DJ00</td>
<td>0-160 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-ABS 63</td>
<td>PE3362DJ00</td>
<td>0-250 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-ABS 63</td>
<td>0-315</td>
<td>bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-ABS 63</td>
<td>PE336614</td>
<td>0-400 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>MG1-ABS 63</td>
<td>0-600</td>
<td>bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
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</tbody>
</table>

Options: see page 94
### MG1-ABS 63

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
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<tbody>
<tr>
<td>Z  - Restrictor 0.5mm for ranges &lt; 40 bar</td>
</tr>
<tr>
<td>Z0 - Without restrictor for ranges ≥ 40 bar</td>
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</tbody>
</table>

### MG1-ABS 63

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
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</thead>
<tbody>
<tr>
<td>Customized dials, other scale ranges or connections on request</td>
</tr>
</tbody>
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BOURDON TUBE PRESSURE GAUGE

FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS.

SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

MG3A-ABS 40

Glycerine Filled Plastic Case DN40 Centre Back Entry

Materials

Case: ABS black with blow out/ranges ≤ 16bar to be vented by piercing a hole on the rear side
Window: PMMA, Ultra-Sonic welded
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats, ≥ 40 bar restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications

Design: EN 837-1
Working pressure:
- Steady: 75 % of full scale value
- Fluctuating: 60 % of full scale value
- Short time: full scale value
Operating temperature:
- Ambient: -10 ... +60 °C
- Medium: +60 °C maximum
- Storage: -10 ... +60 °C
Temperature effect:
- Deviation from reference temperature (+20°C): ±0.04%/1K of the span
Accuracy class: cl. 2.5
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.075 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>MG3A-ABS 40</td>
<td>0-4 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>MG3A-ABS 40</td>
<td>0-6 bar/psi</td>
<td>G1/8B</td>
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<tr>
<td>MG3A-ABS 40</td>
<td>0-10 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>MG3A-ABS 40</td>
<td>0-16 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
<td></td>
</tr>
<tr>
<td>MG3A-ABS 40</td>
<td>0-25 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>MG3A-ABS 40</td>
<td>0-100 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>MG3A-ABS 40</td>
<td>0-160 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
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</tr>
<tr>
<td>MG3A-ABS 40</td>
<td>PF1360DA00</td>
<td>0-250 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
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<tr>
<td>MG3A-ABS 40</td>
<td>0-315 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
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</tr>
<tr>
<td>MG3A-ABS 40</td>
<td>0-400 bar/psi</td>
<td>G1/8B</td>
<td>240/240</td>
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</tbody>
</table>

Options: see page 98
FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS.
SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE
AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

MG3A-ABS 50
Glycerine Filled Plastic Case DN50 Centre Back Entry

Materials
Case: ABS black with blow out/ranges ≤ 16bar to be vented
by cutting the rubber nipple at the top
Window: PMMA, Ultra-Sonic welded
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats, > 40 bar restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered < 60 bar C-type,
> 60 bar helical type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -10 ... +60 °C
Medium: +60 °C maximum
Storage: -10 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.126 kg

Options: see page 98

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>MG3A-ABS 50</td>
<td>-1/0 bar/inHg</td>
<td>G1/4B</td>
<td>50/50</td>
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<tr>
<td>MG3A-ABS 50</td>
<td>0-1 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>MG3A-ABS 50</td>
<td>0-1.6 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>MG3A-ABS 50</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
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<tr>
<td>MG3A-ABS 50</td>
<td>PF2204DJ00</td>
<td>0-4 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-ABS 50</td>
<td>0-6 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
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<tr>
<td>MG3A-ABS 50</td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
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<tr>
<td>MG3A-ABS 50</td>
<td>0-16 bar/psi</td>
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<td>MG3A-ABS 50</td>
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<td>0-40 bar/psi</td>
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<td>0-60 bar/psi</td>
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<td>0-100 bar/psi</td>
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<tr>
<td>MG3A-ABS 50</td>
<td>0-160 bar/psi</td>
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<td>PF2366DB00</td>
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<tr>
<td>MG3A-ABS 50</td>
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</table>
BOURDON TUBE PRESSURE GAUGE
FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS.
SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

MG3A-ABS 63 EX F+R 104 DN63
Glycerine Filled Plastic Case DN63 Centre Back Entry

Materials
Case: ABS black with blow out/ranges ≤ 16bar to be vented
by cutting the rubber nipple at the top
Window: PMMA, Ultra-Sonic welded
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats, > 40 bar restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type,
> 60 bar helical type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -10 ... +60 °C
Medium: +60 °C maximum
Storage: -10 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.166 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tbody>
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<td>-1/0 bar/mHg.</td>
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<tr>
<td>MG3A-ABS 63</td>
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<td>G1/4B</td>
<td>50/50</td>
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</tr>
<tr>
<td>MG3A-ABS 63</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
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<td>MG3A-ABS 63</td>
<td>PF3204DJ01</td>
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<td>G1/4B</td>
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<tr>
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<td>G1/4B</td>
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<tr>
<td>MG3A-ABS 63</td>
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Options: see page 98
MG3A-ABS 50
MG3A-ABS 63

<table>
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<th>Part No.</th>
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<tbody>
<tr>
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<td>PMINACC048</td>
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<td>S ABS 63</td>
<td>PMINACC046</td>
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MG3A-ABS 63

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F ABS 63</td>
<td>PMINABS048</td>
<td>3-hole flange supplied separately</td>
</tr>
<tr>
<td>FM</td>
<td></td>
<td>3-hole flange supplied mounted</td>
</tr>
</tbody>
</table>

MG3A-ABS 40/50/63

Options subject to minimum quantity

- Z: Restrictor 0.5mm for ranges < 40 bar
- Z0: Without restrictor for ranges ≥ 40 bar

MG3A-ABS 40/50/63

Options subject to minimum quantity

Customized dials, other scale ranges or connections on request
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

**MG1-INOX 63**
EX F+R 214 DN63
Glycerine Filled Stainless Steel Case DN63 Bottom Entry

**Materials**
Case + roll on bezel: Stainless Steel 1.4301 with blow outranges ≤ 16 bar to be vented by cutting the rubber nipple at the top
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats, ≥ 40 bar restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

**Technical Specifications**
Design: EN 837-1
Working pressure:
- Steady: 75 % of full scale value
- Fluctuating: 60 % of full scale value
- Short time: full scale value
Operating temperature:
- Ambient: -10 ... +60 °C
- Medium: +60 °C maximum
- Storage: -10 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0,04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.206 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG1-INOX 63</td>
<td>PE3401DJ03</td>
<td>-1/0 bar/inHg</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE340214</td>
<td>0-1.6 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
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<td>MG1-INOX 63</td>
<td>PE3504DJ03</td>
<td>0-4 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE3510DJ07</td>
<td>0-10 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
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<tr>
<td>MG1-INOX 63</td>
<td>PE3516DJ06</td>
<td>0-16 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE3525DJ03</td>
<td>0-25 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE354014</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE364414</td>
<td>0-60 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE364814</td>
<td>0-100 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE365414</td>
<td>0-160 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE366014</td>
<td>0-250 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE366214</td>
<td>0-315 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE366614</td>
<td>0-400 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
<tr>
<td>MG1-INOX 63</td>
<td>PE367014</td>
<td>0-600 bar/psi</td>
<td>G1/4B</td>
<td>100/100</td>
</tr>
</tbody>
</table>

Options : see page 101
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**MG1-INOX 100**

**EX F+R 214 DN100**

**Glycerine Filled Stainless Steel Case DN100 Bottom Entry**

**Materials**
- Case + roll on bezel: Stainless Steel 1.4301 with blow out/ranges ≤ 16 bar to be vented by cutting the rubber nipple at the top
- Window: White plastic
- Dial: Clear plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 21 mm flats, > 40 bar restrictor 0.5mm
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy
- Liquid filling: Glycerine 86.5%

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -10 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -10 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 1.6
- Degree of protection: IP 65 per EN 60 529 / IEC 529
- Individual Weight: 0.526 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG1-INOX 100</td>
<td>PE509916</td>
<td>-1/0 bar/inHg</td>
<td>G1/2B</td>
<td>1/30</td>
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<td>MG1-INOX 100</td>
<td>PE540116</td>
<td>0-1 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE540216</td>
<td>0-1.6 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
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<tr>
<td>MG1-INOX 100</td>
<td>PE550316</td>
<td>0-2.5 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE550416</td>
<td>0-4 bar/psi</td>
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<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE5510DJ01</td>
<td>0-10 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE554016</td>
<td>0-25 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE554416</td>
<td>0-40 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE556416</td>
<td>0-60 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE556616</td>
<td>0-100 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE556616</td>
<td>0-160 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE560116</td>
<td>0-250 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE566216</td>
<td>0-315 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE566616</td>
<td>0-400 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
<tr>
<td>MG1-INOX 100</td>
<td>PE567016</td>
<td>0-600 bar/psi</td>
<td>G1/2B</td>
<td>1/30</td>
</tr>
</tbody>
</table>

Options: see page 101
### MG1-INOX 63/100

**Options subject to minimum quantity**
- Z - Restrictor 0.5mm for ranges < 40 bar
- Z0 - Without restrictor for ranges ≥ 40 bar

### MG1-INOX 63/100

**Options subject to minimum quantity**
- Silicone Oil filling for temperatures -40+90°C (Aluminium dial + Aluminium pointer)

### MG1-INOX 63/100

**Options subject to minimum quantity**
- Customized dials, other scale ranges or connections on request
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

**MG3A-INOX 63**

**Glycerine Filled Stainless Steel Case DN63 Centre Back Entry**

**Materials**
- Case + roll on bezel: Stainless Steel 1.4301 with blow out/ranges ≤ 16 bar to be vented by cutting the rubber nipple at the top
- Window: White plastic
- Dial: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats, > 40 bar restrictor 0.5mm
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy
- Liquid filling: Glycerine 86.5%

**Technical Specifications**
- Design: EN 837-1
- Working pressure: Steady: 75 % of full scale value
- Fluid pressure: 60 % of full scale value
- Short time: full scale value
- Operating temperature: Ambient: -10 ... +60 °C
- Medium: +60 °C maximum
- Storage: -10 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 1.6
- Degree of protection: IP 65 per EN 60 529 / IEC 529
- Individual Weight: 0.209 kg

**Type & Part No.**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG3A-INOX 63</td>
<td>PF340114</td>
<td>0-1 bar/Hg</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF350114</td>
<td>0-1.6 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF3503DJ00</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF3504DJ00</td>
<td>0-4 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
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<td>MG3A-INOX 63</td>
<td>PF3516DJ03</td>
<td>0-16 bar/psi</td>
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<td>MG3A-INOX 63</td>
<td>PF352514</td>
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<td>MG3A-INOX 63</td>
<td>PF354014</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
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<td>MG3A-INOX 63</td>
<td>PF364414</td>
<td>0-60 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF364814</td>
<td>0-100 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF365414</td>
<td>0-160 bar/psi</td>
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<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF366014</td>
<td>0-250 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF366214</td>
<td>0-315 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF366614</td>
<td>0-400 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3A-INOX 63</td>
<td>PF367014</td>
<td>0-600 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
</tbody>
</table>

Options : see page 104
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

MG3A-INOX 100
Glycerine Filled Stainless Steel Case DN100 Centre Back Entry

**Materials**
- Case + roll on bezel: Stainless Steel 1.4301 with blow out/ranges to be vented by cutting the rubber nipple at the top
- Window: White plastic
- Dial: Clear plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 21 mm flats, > 40 bar restrictor 0.5mm
- Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- Movement: Cu-alloy
- Liquid filling: Glycerine 86.5%

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -10 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -10 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
- Accuracy class: cl. 1.6
- Degree of protection: IP 65 per EN 60 529 / IEC 529
- Individual Weight: 0.506 kg

**Type** | **Part No.** | **Pressure Range** | **Connection** | **Packaging**
--- | --- | --- | --- | ---
MG3A-INOX 100 | PF509916 | -1/0 bar/mHg | G1/2B | 1/12
MG3A-INOX 100 | PF540116 | 0-1 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF5402DL00 | 0-1.6 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF5402DL00 | 0-2.5 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF5402DL00 | 0-4 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF551016 | 0-10 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF551516 | 0-16 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF551616 | 0-25 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF551616 | 0-40 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF564416 | 0-60 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF564816 | 0-100 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF565416 | 0-160 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF566016 | 0-250 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF566216 | 0-315 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF566616 | 0-400 bar/psi | G1/2B | 1/12
MG3A-INOX 100 | PF567016 | 0-600 bar/psi | G1/2B | 1/12

Options: see page 104
MG3A-INOX 63

Options subject to minimum quantity

Silicone Oil filling for temperatures -40+90°C (Aluminium dial + Aluminium pointer)

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S INOX 63</td>
<td>PMINACC047</td>
<td>Mounting bracket - Supplied separately</td>
</tr>
</tbody>
</table>

MG3A-INOX 63/100

Options subject to minimum quantity

Z - Restrictor 0.5mm for ranges < 40 bar
Z0 - Without restrictor for ranges ≥ 40 bar

MG3A-INOX 63/100

Options subject to minimum quantity

Z - Restrictor 0.5mm for ranges < 40 bar
Z0 - Without restrictor for ranges ≥ 40 bar

MG3A-INOX 63/100

Options subject to minimum quantity

Customized dials, other scale ranges or connections on request
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

MG3B-INOX 63
Glycerine Filled Stainless Steel Case DN63 Centre Back Entry with 3-Hole Panel Mounting Flange

Materials
Case + 3-hole flange: Stainless Steel 1.4301 with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 14 mm flats, > 40 bar restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -10 ... +60 °C
Medium: +60 °C maximum
Storage: -10 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C): ±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.224 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG3B-INOX 63</td>
<td>PG309914</td>
<td>-1/0 bar/inHg</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG340114</td>
<td>0-1 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG350314</td>
<td>0-2.5 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG350414</td>
<td>0-4 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG350614</td>
<td>0-6 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG350814</td>
<td>0-16 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG350914</td>
<td>0-25 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
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<tr>
<td>MG3B-INOX 63</td>
<td>PG340914</td>
<td>0-40 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG364414</td>
<td>0-60 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
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<td>MG3B-INOX 63</td>
<td>PG365414</td>
<td>0-160 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG366014</td>
<td>0-250 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
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<tr>
<td>MG3B-INOX 63</td>
<td>PG36614</td>
<td>0-315 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG366614</td>
<td>0-400 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
<tr>
<td>MG3B-INOX 63</td>
<td>PG367014</td>
<td>0-600 bar/psi</td>
<td>G1/4B</td>
<td>50/50</td>
</tr>
</tbody>
</table>

Options: see page 107
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS.

**MG3B-INOX 100**

Glycerine Filled Stainless Steel Case DN100 Centre Back Entry with 3-Hole Panel Mounting Flange

**Materials**
- **Case + 3-hole flange:** Stainless Steel 1.4301 with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
- **Window:** Clear plastic
- **Dial:** White plastic
- **Pointer:** Black plastic
- **Pressure connection:** Cu-alloy, 21 mm flats, > 40 bar restrictor 0.5mm
- **Pressure element:** Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
- **Movement:** Cu-alloy
- **Liquid filling:** Glycerine 86.5%

**Technical Specifications**
- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -10 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -10 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.04%/1K of the span
- **Accuracy class:** cl. 1.6
- **Degree of protection:** IP 65 per EN 60 529 / IEC 529
- **Individual Weight:** 0.585 kg

**Options : see page 107**

---

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range Connection</th>
<th>Packaging</th>
</tr>
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<tr>
<td>MG3B-INOX 100</td>
<td>PG509916</td>
<td>-10 bar/InHg G1/2B</td>
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<td>PG510016</td>
<td>0-1 bar/psi G1/2B</td>
<td>1/12</td>
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<td>MG3B-INOX 100</td>
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<td>0-1.6 bar/psi G1/2B</td>
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<tr>
<td>MG3B-INOX 100</td>
<td>PG51025</td>
<td>0-2.5 bar/psi G1/2B</td>
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<td>PG51040</td>
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<tr>
<td>MG3B-INOX 100</td>
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<td>MG3B-INOX 100</td>
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<td>PG554016</td>
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<td>PG564416</td>
<td>0-60 bar/psi G1/2B</td>
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<td>MG3B-INOX 100</td>
<td>PG564816</td>
<td>0-100 bar/psi G1/2B</td>
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<td>MG3B-INOX 100</td>
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<td>MG3B-INOX 100</td>
<td>PG566016</td>
<td>0-250 bar/psi G1/2B</td>
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<td>MG3B-INOX 100</td>
<td>PG566216</td>
<td>0-315 bar/psi G1/2B</td>
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</tr>
<tr>
<td>MG3B-INOX 100</td>
<td>PG566616</td>
<td>0-400 bar/psi G1/2B</td>
<td>1/12</td>
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<tr>
<td>MG3B-INOX 100</td>
<td>PG567016</td>
<td>0-600 bar/psi G1/2B</td>
<td>1/12</td>
</tr>
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</table>
### MG3B-INOX 63/100

**Options subject to minimum quantity**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
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<tbody>
<tr>
<td>Z</td>
<td>Restrictor 0.5mm for ranges &lt; 40 bar</td>
</tr>
<tr>
<td>Z0</td>
<td>Without restrictor for ranges ≥ 40 bar</td>
</tr>
</tbody>
</table>

**Silicone Oil filling for temperatures -40+90°C (Aluminium dial + Aluminium pointer)**

**MG3B-INOX 63/100**

**Options subject to minimum quantity**

**Customized dials, other scale ranges or connections on request**
HIGHLY DURABLE, FOR APPLICATIONS SUBJECT TO VIBRATIONS, PULSATIONS AND HIGH DYNAMIC PRESSURE LOADS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOYS

MG3F-INOX 100
Glycerine Filled Stainless Steel Case DN100 Centre Back Entry with Panel Mounting Brackets

Materials
Case + roll on bezel: Stainless Steel 1.4301 with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
Mounting brackets: Zinc-plated steel
Window: Clear plastic
Dial: White plastic
Pointer: Black plastic
Pressure connection: Cu-alloy, 21 mm flats, > 40 bar restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered ≤ 60 bar C-type, > 60 bar helical type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature: Ambient: -10 ... +60 °C
Medium: +60 °C maximum
Storage: -10 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
±0,04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.535 kg

<table>
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<tr>
<th>Type</th>
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<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tr>
<td>MG3F-INOX 100</td>
<td>-10 bar/inHg</td>
<td>G1/2B</td>
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<tr>
<td>MG3F-INOX 100</td>
<td>0-1 bar/psi</td>
<td>G1/2B</td>
<td>1/12</td>
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</tr>
<tr>
<td>MG3F-INOX 100</td>
<td>0-1.6 bar/psi</td>
<td>G1/2B</td>
<td>1/12</td>
<td></td>
</tr>
<tr>
<td>MG3F-INOX 100</td>
<td>0-2.5 bar/psi</td>
<td>G1/2B</td>
<td>1/12</td>
<td></td>
</tr>
<tr>
<td>MG3F-INOX 100</td>
<td>0-4 bar/psi</td>
<td>G1/2B</td>
<td>1/12</td>
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<tr>
<td>MG3F-INOX 100</td>
<td>PH550616 0-6 bar/psi</td>
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<tr>
<td>MG3F-INOX 100</td>
<td>PH551016 0-10 bar/psi</td>
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<td>1/12</td>
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<tr>
<td>MG3F-INOX 100</td>
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<tr>
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<td>G1/2B</td>
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<td>MG3F-INOX 100</td>
<td>PH565416 0-160 bar/psi</td>
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<td>1/12</td>
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<tr>
<td>MG3F-INOX 100</td>
<td>PH566016 0-250 bar/psi</td>
<td>G1/2B</td>
<td>1/12</td>
<td></td>
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<tr>
<td>MG3F-INOX 100</td>
<td>PH566216 0-315 bar/psi</td>
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<td>1/12</td>
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</tr>
<tr>
<td>MG3F-INOX 100</td>
<td>PH566616 0-400 bar/psi</td>
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<td>1/12</td>
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<tr>
<td>MG3F-INOX 100</td>
<td>PH567016 0-600 bar/psi</td>
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</table>

Options: see page 109
### MG3F-INOX 100

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
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<tbody>
<tr>
<td><strong>Z</strong> - Restrictor 0.5mm for ranges &lt; 40 bar</td>
</tr>
<tr>
<td><strong>Z0</strong> - Without restrictor for ranges ≥ 40 bar</td>
</tr>
</tbody>
</table>

### MG3F-INOX 100

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
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</thead>
<tbody>
<tr>
<td>Silicone Oil filling for temperatures -40+90°C (Aluminium dial + Aluminium pointer)</td>
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### MG3F-INOX 100

<table>
<thead>
<tr>
<th>Options subject to minimum quantity</th>
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</thead>
<tbody>
<tr>
<td>Customized dials, other scale ranges or connections on request</td>
</tr>
</tbody>
</table>
FOR REFRIGERATION TECHNOLOGY (FREON GASES). ABSORPTION OF HEAVY VIBRATIONS AND PULSATIONS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION

**MG1-ABS 63/QF**

**EX F+R 204 DN63**

**Glycerine Filled Plastic Case DN63 Bottom Entry**

**Materials**

- **Case:** ABS black with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
- **Window:** PMMA, Ultra-Sonic welded
- **Dial:** White plastic
- **Pointer:** Black aluminium, knife edge type
- **Pressure connection:** Cu-alloy, 14 mm flats, with restrictor 0.5mm
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, C-type
- **Movement:** Cu-alloy
- **Liquid filling:** Glycerine 86.5%

**Technical Specifications**

- **Design:** EN 837-1
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: full scale value
- **Operating temperature:**
  - Ambient: -10 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -10 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  \[ ±0.04%/1K \] of the span
- **Accuracy class:** cl. 1.6
- **Degree of protection:** IP 65 per EN 60 529 / IEC 529
- **Individual Weight:** 0.154 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG1-ABS 63/QF</td>
<td>-1 + 15 bar</td>
<td>1/4 SAE</td>
<td>100/100</td>
<td></td>
</tr>
<tr>
<td>MG1-ABS 63/QF</td>
<td>-1 + 30 bar</td>
<td>1/4 SAE</td>
<td>100/100</td>
<td></td>
</tr>
</tbody>
</table>

*Options: see page 112*
FOR REFRIGERATION TECHNOLOGY (FREON GASES), ABSORPTION OF HEAVY VIBRATIONS AND PULSATIONS, PROTECTS AGAINST AMBIENT CORROSIVES AND CONDENSATION

MG3A-ABS 63/QF

Glycerine Filled Plastic Case DN63 Centre Back Entry

Materials
Case: ABS black with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
Window: PMMA, Ultra-Sonic welded
Dial: White plastic
Pointer: Black aluminium, knife edge type
Pressure connection: Cu-alloy, 14 mm flats, with restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -10 ... +60 °C
Medium: +60 °C maximum
Storage: -10 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.166 kg

Type | Part No. | Pressure Range | Connection | Packaging |
--- | --- | --- | --- | --- |
MG3A-ABS 63/QF | -1 to 15 bar | 1/4 SAE | 50/50 |
MG3A-ABS 63/QF | -1 to 30 bar | 1/4 SAE | 50/50 |

Options: see page 112
### MG1-ABS 63/QF

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>ABS 63</td>
<td>PMINACC046 Mounting bracket - Supplied separately</td>
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### MG1-ABS 63/QF

<table>
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<th>Type</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
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<td>PMINABS048</td>
<td>3-hole flange supplied separately</td>
</tr>
<tr>
<td>FM</td>
<td></td>
<td>3-hole flange supplied mounted</td>
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</table>

### Customized dials, other scale ranges or connections on request

Options subject to minimum quantity.
MG1-INOX 63/QF  EX  F+R 215 DN63
Glycerine Filled Stainless Steel Case DN63 Bottom Entry

Materials
Case + roll on bezel: Stainless Steel 1.4301 with blow out/ranges ≤ 16bar
Window: Clear plastic
Dial: White aluminium
Pointer: Black aluminium, knife edge type
Pressure connection: Cu-alloy, 14 mm flats, with restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: full scale value
Operating temperature:
Ambient: -10 ... +60 °C
Medium: +60 °C maximum
Storage: -10 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
± 0,04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.206 kg

<table>
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<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>MG1-INOX 63/QF</td>
<td>-1+15 bar</td>
<td>1/4 SAE</td>
<td>100/100</td>
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<tr>
<td>MG1-INOX 63/QF</td>
<td>-1+30 bar</td>
<td>1/4 SAE</td>
<td>100/100</td>
<td></td>
</tr>
</tbody>
</table>

Options: see page 115
MG3A-INOX 63/QF EX F+R 115 DN63
Glycerine Filled Stainless Steel Case DN63 Centre Back Entry

**Materials**
- Case + roll on bezel: Stainless Steel 1.4301 with blow out/ranges ≤ 16bar to be vented by cutting the rubber nipple at the top
- Window: Clear plastic
- Dial: White aluminium
- Pointer: Black aluminium, knife edge type
- Pressure connection: Cu-alloy, 14 mm flats, with restrictor 0.5mm
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy
- Liquid filling: Glycerine 86.5%

**Technical Specifications**
- Design: EN 837-1
- Working pressure:
  - Steady: 75% of full scale value
  - Fluctuating: 60% of full scale value
  - Short time: full scale value
- Operating temperature:
  - Ambient: -10 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -10 ... +60 °C
- Temperature effect: Deviation from reference temperature (+20°C): ± 0.04%/1K of the span
- Accuracy class: cl. 1.6
- Degree of protection: IP 65 per EN 60 529 / IEC 529
- Individual Weight: 0.209 kg

**Options:** see page 115
### Optional Extras

**MG3A-INOX 63/QF**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S INOX 63</td>
<td>PINACC047</td>
<td>Mounting bracket - Supplied separately</td>
</tr>
</tbody>
</table>

**MG1-INOX 63/QF, MG3A-INOX 63/QF**

- Options subject to minimum quantity
- Silicone Oil filling for temperatures -40+90°C

**MG1-INOX 63/QF, MG3A-INOX 63/QF**

- Options subject to minimum quantity
- Customized dials, other scale ranges or connections on request
MG3B-INOX 63/QF

Glycerine Filled Stainless Steel Case DN63 Centre Back Entry with 3-Hole Panel Mounting Flange

Materials
Case + 3-hole flange: Stainless Steel 1.4301 with blow out/ranges ≤ 16 bar to be vented by cutting the rubber nipple at the top
Window: Clear plastic
Dial: White aluminium
Pointer: Black aluminium, knife edge type
Pressure connection: Cu-alloy, 14 mm flats, with restrictor 0.5mm
Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
Movement: Cu-alloy
Liquid filling: Glycerine 86.5%

Technical Specifications
Design: EN 837-1
Working pressure: Steady: 75 % of full scale value
               Fluctuating: 60 % of full scale value
               Short time: full scale value
Operating temperature: Ambient: -10 ... +60 °C
                       Medium: +60 °C maximum
                       Storage: -10 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C): ± 0.04%/1K of the span
Accuracy class: cl. 1.6
Degree of protection: IP 65 per EN 60 529 / IEC 529
Individual Weight: 0.224 kg

<table>
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<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG3B-INOX 63/QF</td>
<td>-1+15 bar</td>
<td>1/4 SAE</td>
<td>50/50</td>
<td></td>
</tr>
<tr>
<td>MG3B-INOX 63/QF</td>
<td>-1+30 bar</td>
<td>1/4 SAE</td>
<td>50/50</td>
<td></td>
</tr>
</tbody>
</table>

Options: see below

MG3B-INOX 63/QF

Options subject to minimum quantity
Silicone Oil filling for temperatures -40+90°C

MG3B-INOX 63/QF

Options subject to minimum quantity
Customized dials, other scale ranges or connections on request
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR DRY AND CLEAN GASEOUS MEDIA WHICH ARE NOT AGGRESSIVE TO COPPER ALLOYS

### MP1-63

**Dry Steel Case DN63 Bottom Entry**

**Materials**
- **Case:** Chrome-plated steel
- **Window:** Clear plastic
- **Dial:** Aluminium white
- **Pointer:** Aluminium black
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Capsule Cu-alloy, O-ring Perbunan
- **Movement:** Cu-alloy

**Technical Specifications**
- **Design:** EN 837-3
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: 60 % of full scale value
  - Short time: 125% of full scale value
- **Operating temperature:**
  - Ambient: -20 ... +60 °C
  - Medium: +60 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** Deviation from reference temperature (+20°C):
  - ±0.06%/1K of the span
- **Accuracy class:** cl. 2.5 with zero point adjustment
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.175 kg

### Type Part No. Pressure Range Connection Packaging

<table>
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<th>Type</th>
<th>Part No.</th>
<th>Pressure Range</th>
<th>Connection</th>
<th>Packaging</th>
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<tbody>
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<td>PP35441003</td>
<td>0-60 mbar/mmH₂O</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>MP1-63</td>
<td>PP35481001</td>
<td>0-100 mbar/mmH₂O</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
<tr>
<td>MP1-63</td>
<td>PP35601000</td>
<td>0-250 mbar/mmH₂O</td>
<td>G1/4B</td>
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<tr>
<td>MP1-63</td>
<td>PP35661000</td>
<td>0-400 mbar/mmH₂O</td>
<td>G1/4B</td>
<td>1/50</td>
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<tr>
<td>MP1-63</td>
<td>PP35701000</td>
<td>0-600 mbar/mmH₂O</td>
<td>G1/4B</td>
<td>1/50</td>
</tr>
</tbody>
</table>

**Options:** see page 119
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR DRY AND CLEAN GASEOUS MEDIA WHICH ARE NOT AGGRESSIVE TO COPPER ALLOYS

MP1-80
Dry Steel Case DN63 Bottom Entry

Materials
Case: Chrome-plated steel
Window: Clear plastic
Pointer: Aluminium black
Pressure connection: Cu-alloy, 18 mm flats
Pressure element: Capsule Cu-alloy, O-ring Perbunan
Movement: Cu-alloy

Technical Specifications
Design: EN 837-3
Working pressure:
   Steady: 75% of full scale value
   Fluctuating: 60% of full scale value
   Short time: 125% of full scale value
Operating temperature:
   Ambient: -20 ... +60 °C
   Medium: +60 °C maximum
   Storage: -20 ... +60 °C
Temperature effect: Deviation from reference temperature (+20°C):
   ±0.06%/1K of the span
Accuracy class: cl. 2.5 with zero point adjustment
Degree of protection: IP 31 per EN 60 529 / IEC 529
Individual Weight: 0.265 kg

Options : see page 119
FOR GENERAL INDUSTRIAL APPLICATIONS. SUITABLE FOR DRY AND CLEAN GASEOUS MEDIA WHICH ARE NOT AGGRESSIVE TO COPPER ALLOYS

MP1-100

Dry Steel Case DN100 Bottom Entry

Materials
Case+ Bezel ring: Chrome-plated steel
Window: Clear plastic
Dial: Aluminium white
Pointer: Aluminium black
Pressure connection: Cu-alloy, 21 mm flats
Pressure element: Capsule Cu-alloy, O-ring Perbunan
Movement: Cu-alloy

Technical Specifications
Design: EN 837-3
Working pressure:
Steady: 75 % of full scale value
Fluctuating: 60 % of full scale value
Short time: 125% of full scale value
Operating temperature:
Ambient: -20 ... +60 °C
Medium: +60 °C maximum
Storage: -20 ... +60 °C
Temperature effect:
Deviation from reference temperature (+20°C):
±0,06%/1K of the span
Accuracy class:
cl. 2.5
Degree of protection:
IP 31 per EN 60 529 / IEC 529
Individual Weight:
0.440 kg

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Options : see below

MP1-63/80/100

Options subject to minimum quantity
Customized dials, other connections on request
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**CAUTION !** The EN 837 standard specifies: “BAR is the preferred unit of pressure.”
Combined temperature and pressure gauges
FOR WATER HEATING SYSTEMS, BOILERS, POOLS AND SPAS

**TIRM-ABS 80**

**Plastic Case DN80 bottom entry**

**Materials**
- **Case:** Black plastic
- **Window:** Clear plastic with adjustable red mark pointer
- **Dial:** Aluminium white
- **Pointers:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, C-type
- **Movement:** Cu-alloy
- **Temperature element:** Bimetal spiralled
- **Automatic valve:** Cu-alloy / Polypropylene combination, 21 mm flats

**Technical Specifications**
- **Design:** According to EN 837-1 & EN 13190
- **Working pressure:**
  - Steady: 75% of full scale value
  - Fluctuating: not applicable
  - Short time: not applicable
- **Operating temperature:**
  - Ambient: +5 ... +60 °C
  - Medium: +120 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** For pressure only; Deviation from reference temperature (+20°C): ± 0.04%/1K of the span
- **Accuracy class:** cl. 2.5 (Pressure), cl. 2 (Temperature)
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.135 kg

<table>
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<tr>
<th>Type</th>
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<th>Scale Range</th>
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<td>PL4204BD00</td>
<td>0-4 bar / 0-120° C</td>
<td>G1/2B</td>
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<td>TIRM-ABS 80</td>
<td>PL4206BD00</td>
<td>0-6 bar / 0-120° C</td>
<td>G1/2B</td>
<td>1/50</td>
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</tbody>
</table>

Options: see page 124
**TIM-ABS 63**

**Plastic Case DN63 Centre Back Entry**

**Materials**
- Case: Black plastic
- Window: Clear plastic with adjustable red mark pointer
- Dial: Aluminium white
- Pointers: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube Cu-alloy soft soldered, C-type
- Movement: Cu-alloy
- Temperature element: Bimetal spiralled
- Automatic valve: Cu-alloy / Polypropylene combination, 21 mm flats

**Technical Specifications**
- Design: According to EN 837-1 & EN 13190
- Working pressure:
  - Steady: 75 % of full scale value
  - Fluctuating: not applicable
  - Short time: not applicable
- Operating temperature:
  - Ambient: +5 ... +60 °C
  - Medium: +120 °C maximum
  - Storage: -20 ... +60 °C
- Temperature effect: For pressure only: Deviation from reference temperature (+20°C): ± 0.04%/1K of the span
- Accuracy class: cl. 2.5 (Pressure), cl. 2 (Temperature)
- Degree of protection: IP 31 per EN 60 529 / IEC 529
- Individual Weight: 0.125 kg

**Type** | **Part No.** | **Scale Range** | **Connection** | **Packaging**
---|---|---|---|---
TIM-ABS 63 | 0-2.5 bar / 0-120° C | G1/2B | 1/50
TIM-ABS 63 | PN3204BD00 | 0-4 bar / 0-120° C | G1/2B | 1/50
TIM-ABS 63 | 0-6 bar / 0-120° C | G1/2B | 1/50

Options: see page 124
**FOR WATER HEATING SYSTEMS, BOILERS, POOLS AND SPAS**

**TIM-ABS 80**

**EX F+R 818 DN80**

**Plastic Case DN80 Centre Back Entry**

**Materials**
- **Case:** Black plastic
- **Window:** Clear plastic with adjustable red mark pointer
- **Dial:** Aluminium white
- **Pointers:** Black plastic
- **Pressure connection:** Cu-alloy, 14 mm flats
- **Pressure element:** Bourdon tube Cu-alloy soft soldered, C-type
- **Movement:** Cu-alloy
- **Temperature element:** Bimetal spiralled
- **Automatic valve:** Cu-alloy / Polypropylene combination, 21 mm flats

**Technical Specifications**
- **Design:** According to EN 837-1 & EN 13190
- **Working pressure:**
  - Steady: 75 % of full scale value
  - Fluctuating: not applicable
  - Short time: not applicable
- **Operating temperature:**
  - Ambient: +5 ... +60 °C
  - Medium: +120 °C maximum
  - Storage: -20 ... +60 °C
- **Temperature effect:** For pressure only: Deviation from reference temperature (+20°C): ± 0.04%/1K of the span
- **Accuracy class:** cl. 2.5 (Pressure), cl. 2 (Temperature)
- **Degree of protection:** IP 31 per EN 60 529 / IEC 529
- **Individual Weight:** 0.165 kg

**Type** | **Part No.** | **Scale Range** | **Connection** | **Packaging**
---|---|---|---|---
TIM-ABS 80 | PN4203BD01 | 0-2.5 bar / 0-120° C | G1/2B | 1/50
TIM-ABS 80 | PN4204BD01 | 0-4 bar / 0-120° C | G1/2B | 1/50
TIM-ABS 80 | PN4206BD01 | 0-6 bar / 0-120° C | G1/2B | 1/50

Options: see below

**Optional Extras**

**TIRM-ABS 80**

**TIRM-ABS 63/80**

Options subject to minimum quantity

Customized dials, other scale ranges on request
Thermometers
FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

**TBR-80/VE**

**Chrome-Plated Steel Case DN80 Bottom Entry**

**Materials**
- Case: Chrome-plated steel
- Window: Clear plastic
- Dial: White aluminium
- Pointer: Black plastic
- Stem: Cu-alloy Ø 9mm with O-Ring for clamping
- Temperature element: Bimetal, spiralled
- Movement: Cu-alloy / Polyester combination
- Pocket: Cu-alloy, 19 mm flats

**Technical Specifications**
- Design: EN 13190
- Temperature limits:
  - Ambient: -20 ... +60 °C
  - Medium: as per scale indication
  - Storage: -20 ... +60 °C
- Operating temperature: As per scale indication
- Temperature effect: Not applicable
- Accuracy class: cl. 2
- Degree of protection: IP 31 per EN 60 529/IEC 529
- Individual Weight: 0.202 kg

**Options: see below**

**TBR-80/VE**

Options subject to minimum quantity

Customized dials, other scale ranges on request
BIMETAL THERMOMETER FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY.

**TB-40/VE**

**Zinc-Plated Steel Case DN40 Centre Back Entry**

**Materials**
- Case: Zinc-plated steel
- Window: Clear plastic
- Dial: White aluminium
- Pointer: Black plastic
- Stem: Zinc-plated steel Ø 9mm
- Temperature element: Bimetal, spiralled
- Pocket: Cu-alloy, 19mm flats with fixing screw

**Technical Specifications**
- Design: EN 13190
- Temperature limits: Ambient: -20 ... +60 °C
- Medium: as per scale indication
- Storage: -20 ... +60 °C
- Operating temperature: As per scale indication
- Temperature effect: Not applicable
- Accuracy class: cl. 2
- Degree of protection: IP 41 per EN 60 529/IEC 529
- Individual Weight: 0.059 kg

**Type** | **Part No.** | **L (mm)** | **Scale Range** | **Connection** | **Packaging**
--- | --- | --- | --- | --- | ---
TB-40/VE | PT1A457002 | 30 | 0-80 °C | G3/8B | 240/240
TB-40/VE | PT1A507001 | 30 | 0-120 °C | G3/8B | 240/240
TB-40/VE | PT1A447000 | 50 | 0-60 °C | G1/2B | 240/240
TB-40/VE | PT1A447000 | 50 | 0-80 °C | G1/2B | 240/240
TB-40/VE | 50 | 0-120 °C | G1/2B | 240/240

Options: see page 131
FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

**TB-63/VE**

**Zinc-Plated Steel Case DN63 Centre Back Entry**

**Materials**
- **Case:** Zinc-plated steel
- **Window:** Clear plastic
- **Dial:** White aluminium
- **Pointer:** Black plastic
- **Stem:** Zinc-plated steel Ø 9mm
- **Temperature element:** Bimetal, spiralled
- **Pocket:** Cu-alloy up to length 100mm, above cu-alloy-copper, 19mm flats with fixing screw

**Technical Specifications**
- **Design:** EN 13190
- **Temperature limits:**
  - Ambient: -20 ... +60 °C
  - Medium: as per scale indication
  - Storage: -20 ... +60 °C
- **Operating temperature:** As per scale indication
- **Temperature effect:** Not applicable
- **Accuracy class:** cl. 2
- **Degree of protection:** IP 41 per EN 60 529/IEC 529
- **Individual Weight:** 0.112 kg

**Type** | **Part No.** | **L (mm)** | **Scale Range** | **Connection** | **Packaging**
--- | --- | --- | --- | --- | ---
TB-63/VE | PT3A447001 | 50 | -30+50 °C | G1/2B | 50/50
TB-63/VE | PT3A507001 | 50 | 0-80 °C | G1/2B | 50/50
TB-63/VE | 100 | 0-120 °C | G1/2B | 50/50
TB-63/VE | 100 | -30+50 °C | G1/2B | 50/50
TB-63/VE | 100 | 0-60 °C | G1/2B | 50/50
TB-63/VE | 100 | 0-80 °C | G1/2B | 50/50
TB-63/VE | 100 | 0-60 °C | G1/2B | 50/50
TB-63/VE | 150 | -30+50 °C | G1/2B | 50/50
TB-63/VE | 150 | 0-80 °C | G1/2B | 50/50
TB-63/VE | 150 | 0-60 °C | G1/2B | 50/50
TB-63/VE | 150 | 0-80 °C | G1/2B | 50/50
TB-63/VE | 200 | -30+50 °C | G1/2B | 50/50
TB-63/VE | 200 | 0-80 °C | G1/2B | 50/50
TB-63/VE | 200 | 0-60 °C | G1/2B | 50/50
TB-63/VE | 200 | 0-120 °C | G1/2B | 50/50
TB-63/VE | 300 | -30+50 °C | G1/2B | 50/50
TB-63/VE | 300 | 0-80 °C | G1/2B | 50/50
TB-63/VE | 300 | 0-60 °C | G1/2B | 50/50
TB-63/VE | 300 | 0-120 °C | G1/2B | 50/50

**Options:** see page 131
BIMETAL THERMOMETER
FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

Options : see page 131

Zinc-Plated Steel Case DN80 Centre Back Entry

Materials
Case: Zinc-plated steel
Window: Clear plastic
Dial: White aluminium
Pointer: Black plastic
Stem: Zinc-plated steel Ø 9mm
Temperature element: Bimetal, spiralled
Pocket: Cu-alloy up to length 100mm, above cu-alloy-copper, 19mm flats with fixing screw

Technical Specifications
Design: EN 13190
Temperature limits: Ambient: -20 ... +60 °C
Medium: as per scale indication
Storage: -20 ... +60 °C
Operating temperature: As per scale indication
Temperature effect: Not applicable
Accuracy class: cl. 2
Degree of protection: IP 41 per EN 60 529/IEC 529
Individual Weight: 0.130 kg

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<td>TB-80/VE</td>
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<td>50/50</td>
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FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

**BIMETAL THERMOMETERS**

Options: see page 131

**Zinc-Plated Steel Case DN100 Centre Back Entry**

<table>
<thead>
<tr>
<th>Case:</th>
<th>Zinc-plated steel</th>
</tr>
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<tbody>
<tr>
<td>Window:</td>
<td>Clear plastic</td>
</tr>
<tr>
<td>Dial:</td>
<td>White aluminium</td>
</tr>
<tr>
<td>Pointer:</td>
<td>Black plastic</td>
</tr>
<tr>
<td>Stem:</td>
<td>Zinc-plated steel Ø 9mm</td>
</tr>
<tr>
<td>Temperature element:</td>
<td>Bimetal, spiralled</td>
</tr>
<tr>
<td>Pocket:</td>
<td>Cu-alloy up to length 100mm, above cu-alloy-copper, 19mm flats with fixing screw</td>
</tr>
</tbody>
</table>

**Technical Specifications**

- **Design:** EN 13190
- **Temperature limits:** Ambient: -20 ... +60 °C
- **Medium:** as per scale indication
- **Storage:** -20 ... +60 °C
- **Operating temperature:** As per scale indication
- **Temperature effect:** Not applicable
- **Accuracy class:** cl. 2
- **Degree of protection:** IP 41 per EN 60 529/IEC 529
- **Individual Weight:** 0.175 kg

**Type Part No. L (mm) Scale Range Connection Packaging**

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<th>Scale Range</th>
<th>Connection</th>
<th>Packaging</th>
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<td>G1/2B</td>
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</tr>
<tr>
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<td>G1/2B</td>
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<td>G1/2B</td>
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<td>G1/2B</td>
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**Options : see page 131**
### TB-40-63-80-100/VE

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### TB-40-63-80-100/VE

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<td>Customized dials, other scale ranges on request</td>
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FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

**TB-33 EX F+R 801 DN33**
Zinc-Plated Steel Case DN33 With Chrome-Plated Bezel Centre Back Entry

**Materials**
- Case: Zinc-plated steel
- Bezel ring: Chrome-plated steel
- Window: Clear plastic
- Dial: White aluminium
- Pointer: Black plastic
- Stem: Zinc-plated steel Ø 9mm
- Temperature element: Bimetal, spiralled
- Pocket: Cu-alloy, 19mm flats with fixing screw

**Technical Specifications**
- Design: EN 13190
- Temperature limits: Ambient: -20 ... +60 °C
- Medium: as per scale indication
- Storage: -20 ... +60 °C
- Operating temperature: As per scale indication
- Temperature effect: Not applicable
- Accuracy class: cl. 2
- Degree of protection: IP 41 per EN 60 529/IEC 529
- Individual Weight: 0.046 kg

<table>
<thead>
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<th>Connection</th>
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<td>0-80 °C</td>
<td>G3/8B</td>
<td>240/240</td>
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<td>TB-33</td>
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<td>50</td>
<td>-30+50 °C</td>
<td>G1/2B</td>
<td>240/240</td>
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<td>TB-33</td>
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<td>50</td>
<td>0-60 °C</td>
<td>G1/2B</td>
<td>240/240</td>
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<td>TB-33</td>
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<td>G1/2B</td>
<td>240/240</td>
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<td>TB-33</td>
<td>50</td>
<td>50</td>
<td>0-120 °C</td>
<td>G1/2B</td>
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Options: see page 138
FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

TB-40

Zinc-Plated Steel Case DN40 With Chrome-Plated Bezel Centre Back Entry

Materials
Case: Zinc-plated steel
Bezel ring: Chrome-plated steel
Window: Clear plastic
Dial: White aluminium
Pointer: Black plastic
Stem: Zinc-plated steel Ø 9mm
Temperature element: Bimetal, spiralled
Pocket: Cu-alloy, 19mm flats with fixing screw

Technical Specifications
Design: EN 13190
Temperature limits: Ambient: -20 ... +60 °C
Medium: as per scale indication
Storage: -20 ... +60 °C
Operating temperature: As per scale indication
Temperature effect: Not applicable
Accuracy class: cl. 2
Degree of protection: IP 41 per EN 60 529/IEC 529
Individual Weight: 0.060 kg

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<th>L (mm)</th>
<th>Scale Range</th>
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<td>G1/2B</td>
<td>240/240</td>
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<td>TB-40</td>
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<td>G1/2B</td>
<td>240/240</td>
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<td></td>
<td>50</td>
<td>0-120 °C</td>
<td>G1/2B</td>
<td>240/240</td>
</tr>
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</table>

Options: see page 138
TB-52  EX F+R 801 DN52
Zinc-Plated Steel Case DN52 With Chrome-Plated Bezel Centre Back Entry

Materials
- Case: Zinc-plated steel
- Bezel ring: Chrome-plated steel
- Window: Clear plastic, 120°C instrument glass
- Dial: White aluminium
- Pointer: Black plastic, 120°C black aluminium
- Stem: Zinc-plated steel Ø 9mm
- Temperature element: Bimetal, spiralled
- Pocket: Cu-alloy, 19mm flats with fixing screw

Technical Specifications
- Design: EN 13190
- Temperature limits: Ambient: -20 ... +60 °C
- Medium: As per scale indication
- Storage: -20 ... +60 °C
- Operating temperature: As per scale indication
- Temperature effect: Not applicable
- Accuracy class: cl. 2
- Degree of protection: IP 41 per EN 60 529/IEC 529
- Individual Weight: 0.100 kg

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<th>Connection</th>
<th>Packaging</th>
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<td>TB-52</td>
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<td>0-60 °C</td>
<td>G1/2B 100/100</td>
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<td>0-200 °C</td>
<td>G1/2B 100/100</td>
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<td>TB-52</td>
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<td>0-250 °C</td>
<td>G1/2B 100/100</td>
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<td>TB-52</td>
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<td>0-350 °C</td>
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<td>-30+50 °C</td>
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Options: see page 138
FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

---

**TB-63 Zinc-Plated Steel Case DN63 With Chrome-Plated Bezel Centre Back Entry**

**Materials**
- **Case:** Zinc-plated steel
- **Bezel ring:** Chrome-plated steel
- **Window:** Clear plastic, 120°C instrument glass
- **Dial:** White plastic, 120°C aluminium
- **Pointer:** Black plastic, 120°C black aluminium
- **Stem:** Zinc-plated steel Ø 9mm
- **Temperature element:** Bimetal, spiralled
- **Pocket:** Cu-alloy, up to length 19 mm flats with fixing screw

**Technical Specifications**
- **Design:** EN 13190
- **Temperature limits:** Ambient: -20 ... +60 °C
- **Medium:** As per scale indication
- **Storage:** -20 ... +60 °C
- **Operating temperature:** As per scale indication
- **Temperature effect:** Not applicable
- **Accuracy class:** cl. 2
- **Degree of protection:** IP 41 per EN 60 529/IEC 529
- **Individual Weight:** 0.110 kg

<table>
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<th>Part No.</th>
<th>L (mm)</th>
<th>Scale Range</th>
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Options : see page 138
FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS, SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCIOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

**BIMETAL THERMOMETERS**

Options: see page 138

**TB-80**

**EX F+R 801 DN80**

**Zinc-Plated Steel Case DN80 With Chrome-Plated Bezel Centre Back Entry**

**Materials**

- **Case:** Zinc-plated steel
- **Bezel ring:** Chrome-plated steel
- **Window:** Clear plastic, \([-30 \text{ to } +50 ^\circ C]\)
- **Dial:** White plastic, \([-30 \text{ to } +50 ^\circ C]\)
- **Pointer:** Black plastic, \([-30 \text{ to } +50 ^\circ C]\)
- **Stem:** Zinc-plated steel \(\phi 9\ mm\)
- **Temperature element:** Bimetal, spiralled
- **Pocket:** Cu-alloy, up to length 100 mm, above Cu-alloy-copper 19 mm flats with fixing screw

**Technical Specifications**

- **Design:** EN 13190
- **Temperature limits:** Ambient: \(-20 \ldots +60 ^\circ C\)
- **Medium:** as per scale indication
- **Storage:** \(-20 \ldots +60 ^\circ C\)
- **Operating temperature:** As per scale indication
- **Temperature effect:** Not applicable
- **Accuracy class:** cl. 2
- **Degree of protection:** IP 41 per EN 60 529/IEC 529
- **Individual Weight:** 0.150 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>L (mm)</th>
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<th>Connection</th>
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FOR DOMESTIC AND INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY

**TB-100**

**Zinc-Plated Steel Case DN100 With Chrome-Plated Bezel Centre Back Entry**

### Materials
- **Case:** Zinc-plated steel
- **Bezel ring:** Chrome-plated steel
- **Window:** Clear plastic, > 120°C instrument glass
- **Dial:** White plastic, > 120°C aluminium
- **Pointer:** Black plastic, > 120°C black aluminium
- **Stem:** Zinc-plated steel Ø 9mm
- **Temperature element:** Bimetal, spiralled
- **Pocket:** Cu-alloy, up to length 100mm, above Cu-alloy-copper 19 mm flats with fixing screw

### Technical Specifications
- **Design:** EN 13190
- **Temperature limits:**
  - **Ambient:** -20 ... +60 °C
  - **Medium:** as per scale indication
  - **Storage:** -20 ... +60 °C
- **Operating temperature:** As per scale indication
- **Temperature effect:** Not applicable
- **Accuracy class:** cl. 2
- **Degree of protection:** IP 41 per EN 60 529/IEC 529
- **Individual Weight:** 0.220 kg

### Type Part No. L (mm) Scale Range Connection Packaging

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**Options:** see page 138
**TB-33-40-52-63-80-100**

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**TB-33-40-52-63-80-100**

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<tbody>
<tr>
<td>Customized dials, other scale ranges on request</td>
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</tbody>
</table>
TCM-63

Black Steel Case DN63
With Chrome-Plated Bezel and Fixing Spring

Materials
Case: Black steel, powder coated
Bezel ring: Chrome-plated steel
Window: Clear plastic
Dial: White aluminium
Pointer: Black plastic
Fixing spring: Spring steel, for pipe connections from Ø 30 to 65 mm
Temperature element: Bimetal, spiralled
Temperature connection: By contact on the rear surface

Technical Specifications
Design: According EN 13190
Temperature limits: Ambient: -20 ... +60 °C
Medium: as per scale indication
Storage: -20 ... +60 °C
Operating temperature: As per scale indication
Temperature effect: Not applicable
Accuracy class: cl. 2
Degree of protection: IP 31 per EN 60 529/IEC 529
Individual Weight: 0.065 kg

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</table>

Options: see page 140
FOR SURFACE MOUNTING ON PIPES IN DOMESTIC AND INDUSTRIAL HEATING SYSTEMS

TCF-63

Black Steel Case DN63 With Chrome-Plated Bezel and Fixing Strip

Materials
- Case: Black steel, powder coated
- Bezel ring: Chrome-plated steel
- Dial: White aluminium
- Pointer: Black plastic
- Fixing strip: Copper, for pipe connections from Ø 30 to 76 mm
- Temperature element: Bimetal, spiralled
- Temperature connection: By contact on the rear surface

Technical Specifications
- Design: According EN 13190
- Temperature limits: Ambient: -20 ... +60 °C
- Medium: as per scale indication
- Storage: -20 ... +60 °C
- Operating temperature: As per scale indication
- Temperature effect: Not applicable
- Accuracy class: cl. 2
- Degree of protection: IP 31 per EN 60 529/IEC 529
- Individual Weight: 0.065 kg

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<td>PT065070</td>
<td>0-120 °C</td>
<td>50/50</td>
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</table>

Options: see below

TCM-63

TCF-63

Options subject to minimum quantity
Customized dials on request
**Materials**
- **Case**: Zinc-plated steel
- **Bezel ring**: Chrome-plated steel
- **Window**: Instrument glass
- **Dial**: White aluminium
- **Pointer**: Black aluminium
- **Stem**: Zinc-plated steel Ø 9mm, without pocket
- **Temperature element**: Bimetal, spiralled

**Technical Specifications**
- **Design**: EN 13190
- **Temperature limits**: Ambient: -20 ... +60 °C
- **Medium**: as per scale indication
- **Storage**: -20 ... +60 °C
- **Operating temperature**: As per scale indication
- **Temperature effect**: Not applicable
- **Accuracy class**: cl. 2
- **Degree of protection**: IP 41 per EN 60 529/IEC 529
- **Individual Weight**: 0.095 kg

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**Options : see below**

**TB-63/FUMI**

Options subject to minimum quantity

Customized dials on request
FOR APPLICATIONS SUBJECT TO VIBRATIONS IN INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY.

**TV**

**Straight Glass Thermometer**

**Materials**
- Case: Glass tube with stem
- Dial: White plastic
- Temperature element: Xylen-filled bulb

**Technical Specifications**
- Temperature limits: Ambient: -20 ... +60 °C
- Medium: as per scale indication
- Storage: -20 ... +60 °C
- Operating temperature: As per scale indication
- Temperature effect: Not applicable
- Accuracy class: cl. 2
- Degree of protection: IP 41 per EN 60 529/IEC 529
- Individual Weight: 0.020 kg

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<td>TV</td>
<td>PZ225070</td>
<td>300</td>
<td>-10+120 °C</td>
<td>20/20</td>
</tr>
</tbody>
</table>

**C**

**Straight Case with pocket for Glass Thermometer TV**

**Materials**
- Case + cap: Cu-alloy
- Pocket: Cu-alloy, 50 mm
- Connection: Cu-alloy 25 mm flats

**Technical Specifications**
- Individual Weight: 0.120 kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Length (mm)</th>
<th>Scale range</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>PZ050000</td>
<td>200</td>
<td>-10+120 °C</td>
<td>50/50</td>
</tr>
<tr>
<td>C</td>
<td>PZ060000</td>
<td>250</td>
<td>-10+120 °C</td>
<td>50/50</td>
</tr>
<tr>
<td>C</td>
<td>PZ070000</td>
<td>300</td>
<td>-10+120 °C</td>
<td>50/50</td>
</tr>
</tbody>
</table>
**GLASS THERMOMETER**

FOR APPLICATIONS SUBJECT TO VIBRATIONS IN INDUSTRIAL HEATING SYSTEMS. SUITABLE FOR GASEOUS AND LIQUID MEDIA WHICH ARE NOT HIGHLY VISCOUS, DO NOT CRYSTALLIZE AND ARE NOT AGGRESSIVE TO COPPER ALLOY.

---

**TVA**

**Bent Glass Thermometer**

**Materials**
- **Case:** Glass tube with stem at 90° angle
- **Dial:** White plastic
- **Temperature element:** Xylen-filled bulb

**Technical Specifications**
- **Temperature limits:** Ambient: -20 ... +60 °C
- **Medium:** as per scale indication
- **Storage:** -20 ... +60 °C
- **Operating temperature:** As per scale indication
- **Temperature effect:** Not applicable
- **Accuracy class:** cl. 2
- **Degree of protection:** IP 41 per EN 60 529/IEC 529
- **Individual Weight:** 0.023 kg

---

**CA**

**Bent Case with pocket for Glass Thermometer TVA**

**Materials**
- **Case + cap:** Cu-alloy
- **Pocket:** Cu-alloy, 50 mm
- **Connection:** Cu-alloy 25 mm flats at 90° angle

**Technical Specifications**
- **Individual Weight:** 0.220 kg
### AM Pressure Dampener

**Materials**
- Body: Cu-alloy
- Thread Connection: Cu-alloy, male-female

**Technical Specifications**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>PZ010000</td>
<td>G1/4B</td>
<td>0.060</td>
<td>20/20</td>
</tr>
<tr>
<td>AM</td>
<td>PZ020000</td>
<td>G3/8B</td>
<td>0.060</td>
<td>20/20</td>
</tr>
<tr>
<td>AM</td>
<td>PZ030000</td>
<td>G1/2B</td>
<td>0.060</td>
<td>20/20</td>
</tr>
</tbody>
</table>

### RF Ball Valve With Test Flange

**Materials**
- Body: Cu-alloy, three-way
- Thread Connection: Cu-alloy, male-female
- Test flange: Cu-alloy, DN40

**Technical Specifications**
- Temperature limits: Max. 80°C
- Working pressure: PN 16 max.

**EX F+R 998**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF</td>
<td>PZ110000</td>
<td>G1/4B</td>
<td>0.200</td>
<td>20/20</td>
</tr>
<tr>
<td>RF</td>
<td>PZ120000</td>
<td>G3/8B</td>
<td>0.200</td>
<td>20/20</td>
</tr>
<tr>
<td>RF</td>
<td>PZ130000</td>
<td>G1/2B</td>
<td>0.200</td>
<td>20/20</td>
</tr>
</tbody>
</table>
RS
Ball Valve

Materials
Body: Cu-alloy, two-way
Thread Connection: Cu-alloy, male-female

Technical Specifications
Temperature limits: Max. 80°C
Working pressure: PN 16 max

---

RFX
Manual Shut Off Valve With Stainless Steel Test Flange

Materials
Body: Stainless steel AISI 316, three-way
Thread Connection: Stainless steel, male-female
Test flange: Stainless steel, DN40

Technical Specifications
Temperature limits: Max. 220°C
Working pressure: PN 210 max.

---

Type | Part No. | Connection | Weight (kg) | Packaging |
--- | --- | --- | --- | --- |
RS | PZ112000 | G1/4B | 0.130 | 20/20 |
RS | PZ122000 | G3/8B | 0.130 | 20/20 |
RS | PZ132000 | G1/2B | 0.130 | 20/20 |
RFX | PZ11010000 | G1/4B | 1.120 | 20/20 |
RFX | PZ12010000 | G3/8B | 1.120 | 20/20 |
RFX | PZ13010000 | G1/2B | 1.120 | 20/20 |
FOR PRESSURE GAUGES AND THERMOMETERS

SRN

Copper Nickel-plated Syphon (Trumpet form)

**Materials**
- Tube: Copper, nickel-plated
- Thread Connection: Copper, nickel-plated, male-female

**Technical Specifications**
- Temperature limits: Max. 120°C
- Working pressure: PN 25 max

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg.)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRN</td>
<td>407D14</td>
<td>G1/4B</td>
<td>0.090</td>
<td>20/20</td>
</tr>
<tr>
<td>SRN</td>
<td>407D38</td>
<td>G3/8B</td>
<td>0.090</td>
<td>20/20</td>
</tr>
<tr>
<td>SRN</td>
<td>407D12</td>
<td>G1/2B</td>
<td>0.090</td>
<td>20/20</td>
</tr>
</tbody>
</table>

SRX

Stainless Steel Syphon (Trumpet form)

**Materials**
- Tube: Stainless steel AISI 316
- Thread Connection: Stainless steel AISI 316, male-female

**Technical Specifications**
- Temperature limits: Max. 200°C
- Working pressure: PN 100 max

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg.)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRX</td>
<td>PZ16100000</td>
<td>G1/2B</td>
<td>0.011</td>
<td>20/20</td>
</tr>
</tbody>
</table>
**RP**

**Push Button Valve**

**Materials**
- Body: Cu-alloy, nickel-plated with button for pressure release
- Thread Connection: Cu-alloy, nickel-plated, male-male

**Technical Specifications**
- Temperature limits: Max. 80°C
- Working pressure: PN 4 max.

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP</td>
<td>PZ111000</td>
<td>G1/4B</td>
<td>0.220</td>
<td>20/20</td>
</tr>
<tr>
<td>RP</td>
<td>PZ121000</td>
<td>G3/8B</td>
<td>0.220</td>
<td>20/20</td>
</tr>
<tr>
<td>RP</td>
<td>PZ131000</td>
<td>G1/2B</td>
<td>0.220</td>
<td>20/20</td>
</tr>
</tbody>
</table>

**VR**

**Automatic Valve**

**Materials**
- Body: Cu-alloy
- Thread Connection: Cu-alloy, with O-Ring, male-female

**Technical Specifications**
- Temperature limits: Max. 120°C
- Working pressure: PN 10 max.

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>VR</td>
<td>PZ04000K00</td>
<td>G3/8B x G3/8B</td>
<td>0.100</td>
<td>20/20</td>
</tr>
<tr>
<td>VR</td>
<td>PZ04000D00</td>
<td>G1/2B x G1/4B</td>
<td>0.100</td>
<td>20/20</td>
</tr>
</tbody>
</table>
FOR PRESSURE GAUGES AND THERMOMETERS

**G**

**Pocket For Thermometers**

**Materials**

Body: Cu-alloy up to length 100mm, above cu-alloy-copper, 19 mm flats with fixing screw (TBR with O-Ring)

Connection: Brass

**Technical Specifications**

Temperature limits: Max. 500°C

Working pressure: PN 10 max.

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>L (mm)</th>
<th>Connection</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-30 for TB</td>
<td>PGUAOTT011</td>
<td>30</td>
<td>G3/8B</td>
<td>0.029</td>
<td>20/20</td>
</tr>
<tr>
<td>G-50 for TB</td>
<td>PGUAOTT002</td>
<td>50</td>
<td>G1/2B</td>
<td>0.042</td>
<td>20/20</td>
</tr>
<tr>
<td>G-100 for TB</td>
<td>PGUAOTT005</td>
<td>100</td>
<td>G1/2B</td>
<td>0.051</td>
<td>20/20</td>
</tr>
<tr>
<td>G-150 for TB</td>
<td>PGUAOTT006</td>
<td>150</td>
<td>G1/2B</td>
<td>0.057</td>
<td>20/20</td>
</tr>
<tr>
<td>G-200 for TB</td>
<td>PGUAOTT007</td>
<td>200</td>
<td>G1/2B</td>
<td>0.080</td>
<td>20/20</td>
</tr>
<tr>
<td>G-300 for TB</td>
<td>PGUAOTT008</td>
<td>300</td>
<td>G1/2B</td>
<td>0.091</td>
<td>20/20</td>
</tr>
<tr>
<td>G-50 push type for TBR</td>
<td>PGUAOTT019</td>
<td>50</td>
<td>G1/2B</td>
<td>0.035</td>
<td>20/20</td>
</tr>
<tr>
<td>G-75 push type for TBR</td>
<td>PGUAOTT023</td>
<td>75</td>
<td>G1/2B</td>
<td>0.040</td>
<td>20/20</td>
</tr>
<tr>
<td>G-100 push type for TBR</td>
<td>PGUAOTT020</td>
<td>100</td>
<td>G1/2B</td>
<td>0.050</td>
<td>20/20</td>
</tr>
</tbody>
</table>

EX F+R 998
Stainless Steel Pocket For Thermometers

**Materials**
- **Body:** Stainless steel AISI 304, 10mm hole for stem Ø 9 mm
- **Connection:** Stainless steel AISI 304

**Technical Specifications**
- **Temperature limits:** Max. 500°C
- **Working pressure:** PN 25 max.

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No</th>
<th>Length</th>
<th>Connection</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-INOX-50</td>
<td>PGUAINX006</td>
<td>50</td>
<td>G1/2B</td>
<td>20/20</td>
</tr>
<tr>
<td>G-INOX-100</td>
<td>PGUAINX004</td>
<td>100</td>
<td>G1/2B</td>
<td>20/20</td>
</tr>
<tr>
<td>G-INOX-150</td>
<td>PGUAINX013</td>
<td>150</td>
<td>G1/2B</td>
<td>20/20</td>
</tr>
<tr>
<td>G-INOX-200</td>
<td>PGUAINX011</td>
<td>200</td>
<td>G1/2B</td>
<td>20/20</td>
</tr>
</tbody>
</table>
FOR PRESSURE GAUGES AND THERMOMETERS

**SC**

Bracket For Thermometer Stem  
(for Ventilation Ducts)

**Materials**

Case and fixing screw: Zinc-plated steel

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>PMINACC034</td>
<td>0.025</td>
<td>20/20</td>
</tr>
</tbody>
</table>

**EX F+R 998**

---

**MC**

Spring For Thermometer Stem

**Materials**

Spring: Bluish zinc-plated steel for stem > 50 mm

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC</td>
<td>PMINACC037</td>
<td>0.010</td>
<td>20/20</td>
</tr>
</tbody>
</table>
## MCL

**Spring Clips For Thermometer Stem**

**Materials**
- Spring: Zinc-plated steel for stem 30 mm

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCL</td>
<td>PMINACC049</td>
<td>0.003</td>
<td>20/20</td>
</tr>
</tbody>
</table>

## S INOX 63

**Mounting Bracket For MG3A-INOX 63**

**Materials**
- U-clamp and fixing screws: Zinc-plated steel

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>S INOX 63</td>
<td>PMINACC047</td>
<td>0.040</td>
<td>20/20</td>
</tr>
</tbody>
</table>
FOR PRESSURE GAUGES AND THERMOMETERS

### S ABS 50

**Mounting Bracket For MG3A-ABS 50**

**Materials**
- U-clamp and fixing screws: Zinc-plated steel

**EX F+R 998**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>S ABS 50</td>
<td>PMINACC048</td>
<td>0.040</td>
<td>20/20</td>
</tr>
</tbody>
</table>

---

### S ABS 63

**Mounting Bracket For MG3A-ABS 63**

**Materials**
- U-clamp and fixing screws: Zinc-plated steel

**EX F+R 998**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>S ABS 63</td>
<td>PMINACC046</td>
<td>0.040</td>
<td>20/20</td>
</tr>
</tbody>
</table>
**F ABS 63**

3-Hole Front Flange For MG3A-ABS 63

**Materials**
- Flange: Black plastic

```
<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>F ABS 63</td>
<td>PMINABS048</td>
<td>0.003</td>
<td>20/20</td>
</tr>
</tbody>
</table>
```

**EX F+R 998**

**CP**

Protective rubber cap for Gauges DN63

**Materials**
- Black rubber

```
<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Connection</th>
<th>Weight (kg)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP M1-63</td>
<td>PCUSGOM001</td>
<td>Bottom Entry</td>
<td>0.060</td>
<td>20/20</td>
</tr>
<tr>
<td>CP M3A-63</td>
<td>PCUSGOM002</td>
<td>Back entry</td>
<td>0.060</td>
<td>20/20</td>
</tr>
</tbody>
</table>
```

**EX F+R 998**