Bimetal thermometer
For heating technology, special versions
Model A46

Applications

- Heating systems
- Hot water tanks
- Solar power systems
- Heat transfer stations

Special features

- Reliable and cost-effective
- Nominal size 50, 63, 80 and 100
- Scale ranges from -30 ... +120 °C

Description

The bimetal thermometer model A46 is mainly used in the heating, air-conditioning and refrigeration equipment to monitor the process temperature.

The bimetal thermometers are screwed with thermowells in the respective application. On the one hand, this protects the instrument, on the other hand, the measuring instrument can be exchanged without prior emptying of the heating circuit.

Fig. top: Model A46.20, steel case, galvanised
Fig. centre: Model A46.11, surface thermometer, aluminium case
Fig. bottom: Model A46.30, plastic case, black
**Standard version**

**Measuring element**
Bimetal coil

**Nominal size in mm**
50, 63, 80, 100

**Scale ranges**

<table>
<thead>
<tr>
<th>Scale range in °C</th>
<th>Scale spacing in °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>-30 ... +50</td>
<td>1</td>
</tr>
<tr>
<td>-20 ... +60</td>
<td>1</td>
</tr>
<tr>
<td>0 ... 60</td>
<td>1</td>
</tr>
<tr>
<td>0 ... 80</td>
<td>1</td>
</tr>
<tr>
<td>0 ... 120</td>
<td>2</td>
</tr>
</tbody>
</table>

**Working range**
Full scale value

**Case**
Model A46.11: Aluminium  
Model A46.20: Steel, galvanised  
Model A46.30: Plastic, black

**Dial**
Model A46.11: Aluminium, white, black lettering  
Models A46.20, A46.30: Plastic, white, black lettering

**Pointer**
Models A46.20, A46.30: Plastic, black  
Model A46.11: Aluminium, black

**Window**
Clear non-splintering plastic

**Connection location**
Back mount

**Options**
- Other measuring ranges  
- Special scales  
- Window: Instrument glass  
- Designs for special applications on request

**Connection designs**

- **With thermowell (models A46.20, A46.30)**
  Thermowell is removable, friction fit  
  Copper alloy  
  Length \( l_1 = 40, 60, 100 \text{ mm} \)  
  Permissible working pressure at thermowell max. 6 bar

- **Connection**
  thermowell G ½ B

- **Zero adjustment**
  At bottom of stem

- **Stem**
  Ø 9 mm  
  Model A46.30: Aluminium  
  Model A46.20: Copper alloy

- **Clip-on design (model A46.11)**
  Clip-on plate with mounting clip  
  for pipe diameter of 1” ... 2”
**Dimensions in mm**

**Model A46.11, surface thermometer**

![Diagram of Model A46.11](image1)

**Model A46.20, with steel case**

**Back mount (BM)**

![Diagram of Model A46.20](image2)

**Model A46.30, with plastic case**

**Back mount (BM)**

![Diagram of Model A46.30](image3)

<table>
<thead>
<tr>
<th>Model</th>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>b₁</td>
<td>b₂</td>
</tr>
<tr>
<td>A46.11</td>
<td>63</td>
<td>-</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>-</td>
<td>22</td>
</tr>
<tr>
<td>A46.20</td>
<td>63</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>A46.30</td>
<td>50</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>24.5</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>24.5</td>
<td>-</td>
</tr>
</tbody>
</table>

1) Ø d = 11 mm for thermowell length > 100 mm
2) l₁ = 160 mm only for thermowell with retainer screw
### Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="EAC" /></td>
<td>EAC (option)</td>
<td>Eurasian Economic Community</td>
</tr>
<tr>
<td><img src="image" alt="GOST" /></td>
<td>GOST (option)</td>
<td>Russia</td>
</tr>
<tr>
<td><img src="image" alt="KazInMetr" /></td>
<td>KazInMetr (option)</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td><img src="image" alt="MTSCHS" /></td>
<td>MTSCHS (option)</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td><img src="image" alt="BelGIM" /></td>
<td>BelGIM (option)</td>
<td>Belarus</td>
</tr>
<tr>
<td><img src="image" alt="CRN" /></td>
<td>CRN (option)</td>
<td>Canada</td>
</tr>
</tbody>
</table>

### Certificates (option)

- 2.2 test report

Approvals and certificates, see website

### Ordering information

Model / Nominal size / Scale range / Connection / Length l₁ / Options