

Operating instructions
Betriebsanleitung
Mode d'emploi
Manual de instrucciones

**Bimetal thermometers
for heating, ventilation and air-conditioning**

GB

**Bimetall-Thermometer
für Heizungs-, Klima- und Lüftungstechnik**

D

**Thermomètres bimétalliques
pour le chauffage, ventilation et conditionnement d'air**

F

**Termómetros bimetálicos
para la calefacción, ventilación y climatización**

E



Model A46.20



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**Information**

This symbol provides you with information, notes and tips.

**Warning!**

This symbol warns you against actions that can cause injury to people or damage to the instrument.

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1. General information ... 3. Safety instructions

1. General information

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Please read these operating instructions before commissioning the thermometer.

These operating instructions contain information on mounting, commissioning and maintenance. Besides these operating instructions you should also observe existing standards, supplementary technical data and, if necessary, additional certificates.

Designated use: The bimetal thermometers are used mostly in the heating, ventilation and air-conditioning to monitor the temperature of the process.

2. Transport and storage

The thermometers must be kept dry and clean during storage and transportation. Avoid shocks and vibrations. Protect the thermometers from direct sunlight, dust, insects, humidity and other aggressive atmospheres. The packaging material is transparent in order to prevent any enclosed accessories getting lost. Permissible storage temperature: -20 ... +60 °C

3. Safety instructions



The appropriate national safety regulations (i.e. EN 60079-14 / 837-2) must be observed when installing, commissioning and operating these devices.

- Serious injury and/or damage can occur if the appropriate regulations are not observed.
- Only appropriately qualified personnel should work on these instruments.

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4. Installation conditions, installation / 5. Troubleshooting**4. Installation conditions and installation**

Before installation ensure that all the necessary accessories needed for the mounting method have been delivered. The accessories will be either on the instrument or supplied in a separate bag, which in most cases will be attached to the thermometer.

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- Before installing the probe or the pocket (protective sleeve), check whether the material used (specified in the delivery note) is chemically resistant/neutral to the medium being measured.
- Heat conduction errors occur when the size, volume or area of the medium to be measured is very small, so that the temperature probe becomes noticeable as a thermal mass. Heat conduction errors may also occur when the insertion length is not sufficient, or when the instrument mounting fittings are attached to a good heat conductor (e.g. metal plates) and the temperature difference between them and the medium to be measured is very high.

1) not for models E45.10, A46.11, A48.10 and edgewise panel design model TF-01-058KF-BI

5. Troubleshooting

Bimetal thermometers are maintenance-free instruments according to their basic design. As measuring instruments, their measuring accuracy should be checked at application-specific intervals. The wear condition of probes exposed to a permanent thermal stress (even if this stress is very low), exposed to vibratory stress, must be checked from time to time. If any visible damage is found, the instrument must be replaced.

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6. Indicator check / 7. Indicator correction

6. Indicator check

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The check of the indicator should only be carried out in comparison with a more accurate instrument or, if possible, with a calibrated instrument. The temperature during the check must remain constant. Fluctuating temperatures may lead to reading errors caused by the different response times of the probes.

For thermometers **without** protective sleeves, a minimum waiting time of 10 minutes, for temperature equalisation, should be observed, provided the appropriate immersion length is adhered to.

Attention: Only gaseous pressure-free media are admissible!

For thermometers **with** protective sleeves, a minimum waiting time of at least 15 minutes, for temperature equalisation, should be observed, provided the appropriate immersion length is adhered to.

Admissible working pressure at the pocket: max. 6 bar

7. Indicator correction



Any interference with or modification to the instrument will invalidate the warranty!

- The indicator correction built into the bottom of stem should only be operated using a screwdriver, and only if the thermometer has been damaged due to improper handling, severe shocks, during transport, etc.
- When correcting an indication error using the adjustment mechanism, a calibrated thermometer must be used for comparison. Subsequently, the thermometer must be checked at several temperature points.

1) not for clip-on thermometer model A46.11 and edgewise panel design model TF-01-058KF-BI

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8. Maintenance and servicing/Cleaning ... 10. Disposal**8. Maintenance and servicing/Cleaning**

The instruments require no maintenance or servicing.

The indicator should be checked once or twice every 12 months. For this the instrument must be disconnected from the process and checked using a temperature calibrator.

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The instruments should be cleaned with a damp cloth, moistened with soap solution.

9. Repairs

Repairs are only to be carried out by the manufacturer.

10. Disposal

Disposal of instrument components and packaging materials should be in accordance with the respective waste treatment and disposal regulations of the region or country to which the instrument is supplied.

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Applies to the following articles:

Bi-metallic thermometer for heating, Connection rear

Article No.

Type No.

102759 to 102770

4601 to 4616