

TEMPERIX S Clamp



1 General Information

These operating instructions contain information necessary for the proper installation and use of this device. In addition to these instructions, be sure to observe all statutory requirements, applicable standards, the additional technical specifications on the accompanying data sheet as well as the specifications indicated on the type plate.

1.1 Intended Use

TEMPERIX S Clamp resistance thermometers are intended for measuring surface temperatures. For a correct function the permissible temperature ranges indicated on the type plate must not be exceeded.

1.2 General Safety Notes

The installation, set up, service or removal of this device must only be done by trained, qualified personnel using suitable equipment and authorized to do so by the plant operator.



Improper installation or use of these devices or the use of damaged or defective devices may result in severe injury or property damage!

1.3 CE Marking

The CE marking on these devices certifies their compliance with the applicable EU Directives for placing products on the market within the European Union.

2 Transportation and Storage

Store and transport these devices only under clean, dry conditions. Avoid exposure to shocks and excessive vibrations.

Permissible storage temperature: -40 °C...+100 °C

3 Installation and Commissioning

The device is adapted to a certain pipe diameter as specified in the order. Before installing the device, be sure that the device is suitable for the intended process application with respect to pipe diameter, ambient and medium temperature.

Complete the mechanical installation before making the electrical connections.

After the mechanical installation and the electrical connection are both complete, the device is ready for use as soon as the voltage supply to it is switched on.

3.1 Mechanical Installation

Mount the device on a clean, straight and round pipe section free of imperfections like nicks or burrs.

Mount the measuring insert at the bottom side of the pipe, if it is not completely filled with medium.

First mount the clamping element, then install the measuring insert and finally make the electrical connections.

3.1.1 Mounting the clamping element

There are three options how to connect the device to the process:

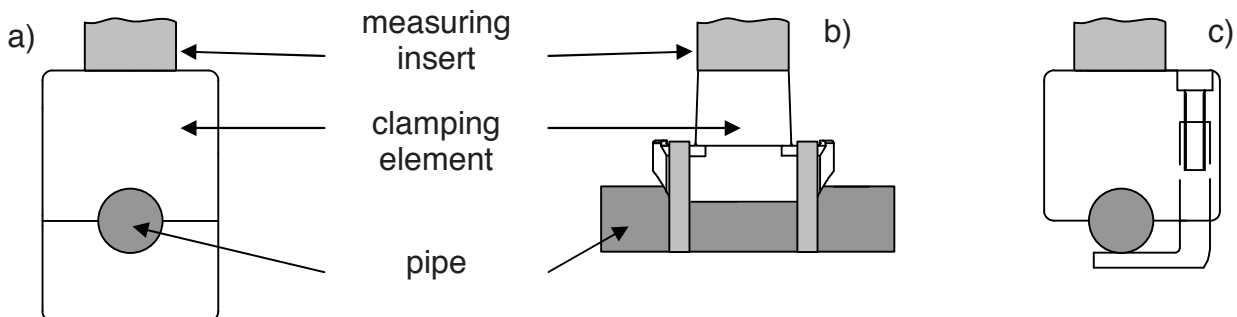
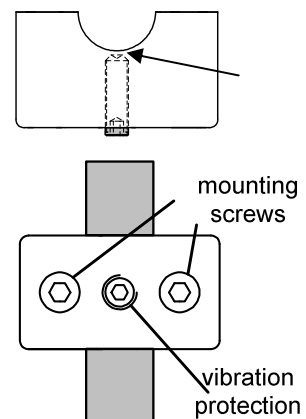


Figure 1 mounting options: a) clamping block, b) clamping shoe and c) clamping bracket

Mounting the clamping block

Required tools: Hexagon socket wrench 3 mm (mounting screws) and 2 mm (vibration protection)

- Turn back the vibration protection, so that it does not exceed the semi-cycle groove for the pipe (see picture to the right).
- Mount the clamping block with the included screws at the intended position on the pipe.
Do not exceed the allowed tightening torque of 2 Nm for pipe diameters up to 17,2 mm and 4 Nm for bigger pipes.
- Hand-tighten the vibration protection.
Do not tighten the vibration protection screw too hard.
You might damage the clamping block or the pipe.



Clamping block from below

Mounting the clamping shoe

Required tools: depends on the used hose clamps

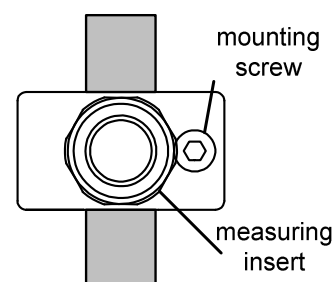
- Mount the clamping shoe with two appropriate hose clamps or tightening straps. The maximum width for a safe fit is 5 mm.
- Tighten the clamps so that the clamping shoe cannot be moved by hand applying a usual hand force.

Mounting the clamping bracket

In an environment with space constraints you can use the mounting bracket.

Required tools: Hexagon socket wrench 3 mm

- Loosen the clamping bracket by unscrewing the mounting screw so that you can easily move it over the pipe.
- Position the clamping bracket and tighten the mounting screw. Do not exceed a tightening torque of 1 Nm.



mounting bracket from above

3.1.2 Mounting the measuring insert

The mounting procedure for the measuring insert is identical for all clamping elements.

First apply heat conductive paste to the tip of the measuring insert. Heat conductive paste is mandatory for this type series for a good measuring accuracy.

Now insert the measuring insert into the bore in the clamping element. You can position the insert in two ways. Choose the position that simplifies the later cable routing.

Finally tighten the connection by turning the screw connection (see picture). No tools are required for this step. Never try to turn the housing, if you have a device with field housing or integrated transmitter. You might destroy the device by this.

Do not turn or move the clamping element with a mounted measuring insert. You might damage or destroy the insert.

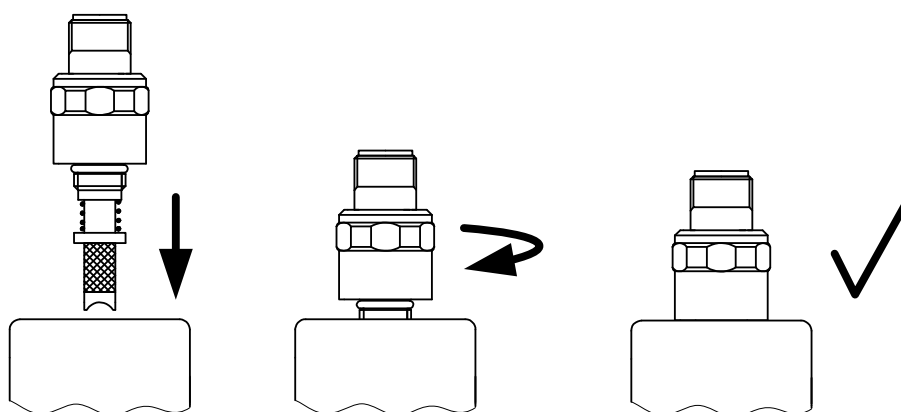


Figure 2 Mounting steps for the measuring insert

After mounting the measuring insert the mechanical installation is complete.

3.2 Electrical Connection

Make all electrical connections with the voltage supply switched off.

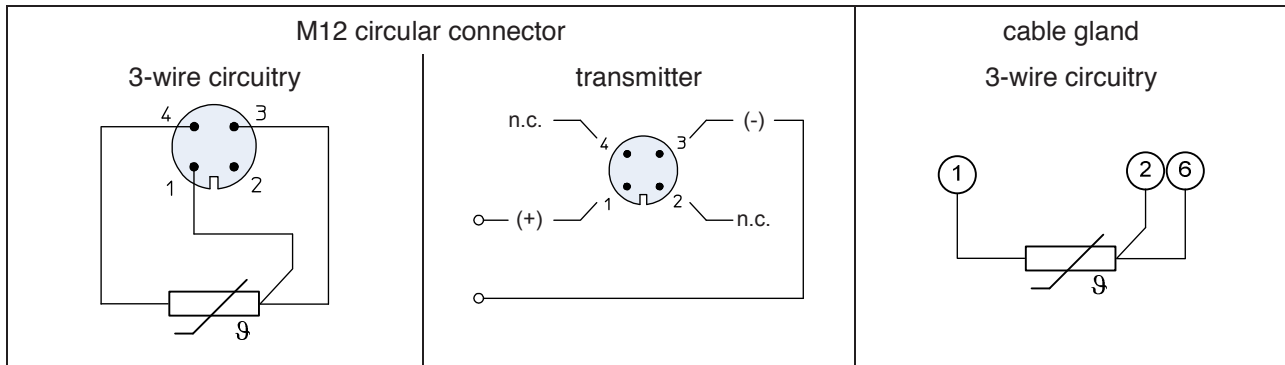


Figure 3: Pin assignment

Route the cable so that it does not apply force or torque to the measuring insert.

For devices with field housing, fix the housing with the other hand when you screw or unscrew the field housing cap.

4 Operation

During device operation, take care that the device remains within its intended temperature range. No other monitoring is necessary.

Permissible process temperature: $-20\dots+150\text{ }^{\circ}\text{C}$

Permissible ambient temperature: $-40\dots+85\text{ }^{\circ}\text{C}$

When used in explosive areas, observe the reduced temperature ranges as described in section 1.4.

4.1 Maintenance

When properly installed in accordance with applicable specifications, this device is maintenance-free.

In the event of a device malfunction, you can only replace the complete measuring insert resp. the clamping element.

4.2 Calibration

We recommend an annual recalibration.

Uninstall only the measuring insert. This way the measuring position remains unchanged as it is defined by the clamping element.

During calibration you must not exceed 100 °C at the connector due to inside gaskets. If your device is equipped with an integrated temperature transmitter you must not exceed 85 °C at the housing.

Apply new heat conductive paste when you reinstall the measuring insert after the calibration. This ensures a good and constant thermal coupling between insert and pipe.

5 Removal

Make sure that the pipe and the device has cooled down before you attempt to remove it or wear appropriate protection clothing to avoid burns.

De-energize the power supply to the device before you disconnect the electrical connections. Once this is done, the device may be mechanically removed.

De-mount the device in the reverse order as described in the installation chapter.



**EU-Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de Conformité**

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erklärt als Hersteller in alleiniger Verantwortung, dass das Produkt
declares as manufacturer under sole responsibility that the product
déclare sous sa seule responsabilité en qualité de fabricant que le produit

**Widerstandsthermometer
Resistance Thermometer
Thermomètre à résistance**

TEMPERIX ...

den Vorschriften der europäischen Richtlinien
complies with the regulations of the European directives
est conforme aux réglementations des directives européennes suivantes

2011/65/EU	Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten	RoHS
2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	RoHS
2011/65/UE	Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques	RoHS
2014/30/EU	Elektromagnetische Verträglichkeit	EMV
2014/30/EU	Electromagnetic compatibility	EMC
2014/30/UE	Compatibilité électromagnétique	CEM

durch die Anwendung folgender harmonisierter Normen entspricht
by applying the harmonised standards
par l'application des normes

**RoHS / RoHS / RoHS
EMV / EMC / CEM**

**EN 50581:2012
EN 61326-1:2013**

Das Produkt ist bestimmt als Elektro- und Elektronikgerät der RoHS-
The product is determined as electrical and electronic equipment of RoHS
Le produit est déterminés comme des équipements électriques et électroniques de RoHS

Kategorie / Category / Catégorie

**Überwachungs- und Kontrollinstrumenten in der Industrie /
Industrial Monitoring and Control Instruments /
Instruments de contrôle et de surveillance industriels**

Das Produkt entspricht den EMV-Anforderungen
The product complies with the EMC requirements
Le produit est conforme aux exigences CEM

**Störaussendung / Emission / Émission
Störfestigkeit / Immunity / D'immunité**

**Klasse A / Class A / Classe A
Industrielle elektromagnetische Umgebung /
Industrial electromagnetic environment /
Environnement électromagnétique industriel**

Hamburg, 20.04.2016
Ort, Datum / Place, Date / Lieu, Date

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