Installation Instructions

iTHERM TM402, TM412

Imperial Hygienic Thermometer, US Style

RTD thermometer for hygienic and aseptic applications

Quick installation instructions and safety information.

Detailed technical information can be found in the additional documentation.

Available for all device versions via:
- Internet: www.endress.com/deviceviewer
- Smart phone/tablet: Endress+Hauser Operations App

Important Notice

Electrical shock could cause death or serious injury. If the sensor is installed in a high voltage environment and a fault or installation error occurs, high voltage may be present on the connection terminals or the probe itself. Safe and secure operation of the temperature sensor can only be guaranteed if the operating instructions of the used transmitters and all included safety notes are read, understood and followed. For Endress+Hauser temperature transmitters see www.endress.com

Correct use

The manufacturer cannot be held responsible for damage caused by misuse of the unit. The installation conditions and connection values indicated in the operating instructions must be followed.

Installation Guidelines and Safety instructions

1. Install the unit according to the relevant NEC Code and local regulations.
2. Avoid any spark due to impact, friction and installation. Anti-sparking wrenches should be utilized.
3. The temperature sensor should be connected to the power supply or other external circuit using the appropriate cable glands and wire entries.
4. For ambient temperature higher than 158 °F, suitable cables, conduit and conductors must be used. Only use approved wire entries.
5. When utilized in dust atmospheres, the connection between the housing, fittings and thermowell should provide a minimum degree of Ingress Protection. Liquid/gas sealants should be used. Local regulations need to be respected.
6. Do not disconnect equipment unless power has been switched off or the area is not hazardous.

Installation and operation

The unit is constructed using the most up to date production equipment and complies with the safety requirements of the local guidelines. However, if it is installed incorrectly or misused, certain application dangers can occur. Installation, wiring and maintenance of the unit must only be carried out by trained, skilled personnel who are authorized to do so by the plant operator. The plant operator must make sure that the measurement system has been correctly wired to the connection schematics. Procedures indicated in these instructions must be followed.

Returns

The measuring device must be returned if it is need of repair or a factory calibration, or if the wrong measuring device has been delivered or ordered. Legal specifications require Endress+Hauser, as an ISO-certified company, to follow certain procedures when handling products that are in contact with the medium.

To ensure safe and professional device returns, please refer to the procedure and conditions for returning devices provided on the Endress+Hauser website at www.endress.com/support/return-material
Installation
Installation locations

1, 2: Perpendicular to flow direction, installed at a minimum angle of 3° to ensure self-draining
3: On elbows
4: Inclined installation in pipes with a small nominal diameter
U: Immersion length

For installation proceed as follows:
1. Make sure that the hygienic process fitting and the clamp assembly match the maximum specified process pressure.
2. Install and tighten the RTD sensor before applying process pressure.

Electrical connection-wiring diagrams
Head mounted transmitter iTEMP TMT18x (single input)

Head mounted transmitter iTEMP TMT18x (dual input)

Head mounted field transmitter iTEMP TMT162 (dual input)

Technical Data
Dimensions
Performance Characteristics
See technical information: www.endress.com

Terminal block mounted

The blocks and transmitters are shown as they will sit inside the heads in reference to the conduit opening. ALWAYS terminate leads to the outside screw!