

iTHERM TM4xx

Innovative modular temperature assemblies

Advanced, modular RTD temperature probes for hygienic and aseptic applications

Our new line of modular hygienic thermometers TM4xx is for users in the Life Sciences and Food & Beverage industries who seek conformity to hygienic standards and efficient process optimization.

Our innovative offering is highly modular and with best-in-class hygienic design. Its outstanding sensor technology and unique calibration features guarantee highest plant availability and measurement reliability.



Your benefit

Value	Benefit	Feature
Risk and cost reduction	<ul style="list-style-type: none">▪ Quick, easy and safe recalibration▪ Increased process efficiency	iTHERM QuickNeck: Tool-free mounting and dismantling of the sensor insert
Increased process safety	<ul style="list-style-type: none">▪ Quicker detection of temperature changes▪ Increased plant availability	<ul style="list-style-type: none">▪ iTHERM QuickSens: Fastest response times▪ iTHERM StrongSens: High vibration resistance
100% compliance	<ul style="list-style-type: none">▪ Best-in-class hygienic design▪ Fit for all hygienic and aseptic applications	International certifications and approvals
Increased product quality	Extremely accurate temperature measurement	Sensor-transmitter matching, better than Class AA sensors

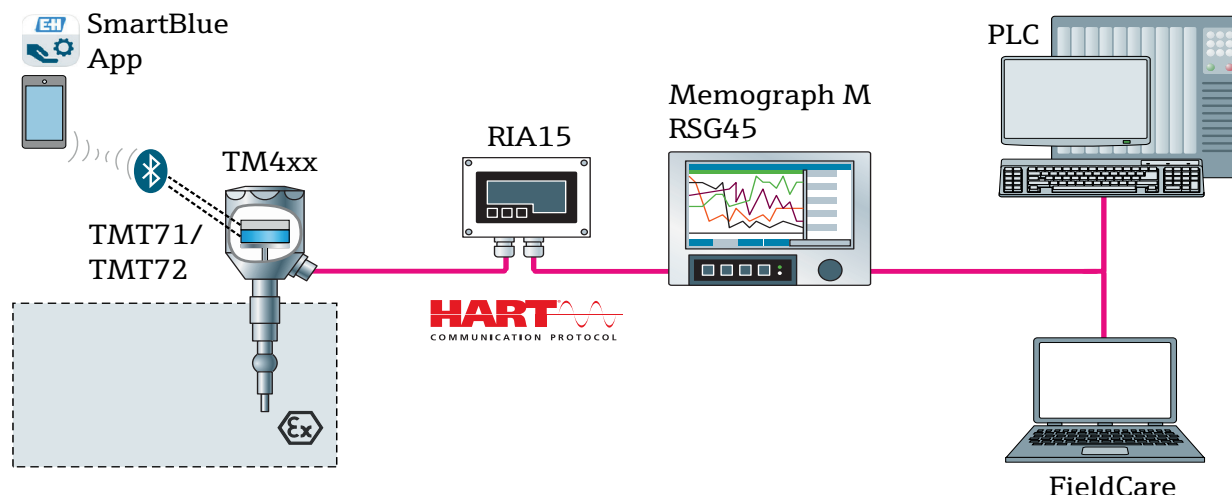
Application

- Specially designed for use in hygienic and aseptic applications in the Food & Beverage and Life Sciences industries
- International certifications and approvals: EHEDG, ASME BPE, FDA, 3-A, 1935/2004, 2023/2006 (GMP), 10/2011, CE, CRN, CSA General Purpose, Ex-approvals
- More than 50 sterile and hygienic process connections as standard
- Outputs and communication protocols: 4 to 20 mA, HART®, PROFIBUS PA, FOUNDATION Fieldbus

iTHERM TM4xx specifications

- Measuring range: -200 to +600 °C (-328 to +1112 °F)
- Pressure range: Up to 50 bar (725 psi)
- Protection class: Up to IP69K
- Communication: Analog output 4 to 20 mA, HART®, PROFIBUS PA, FOUNDATION Fieldbus
- Accuracy: Transmitter-sensor matching
- Response time: $t_{90} = 0.75$ s

System integration and related offering



System component	Feature
Data Management Memograph M RSG45	<ul style="list-style-type: none"> ■ Tamper-proof data storage and access (FDA 21 CFR 11) ■ HART® gateway functionality; Up to 40 HART® devices connected at a time ■ Communication capabilities: Modbus, Profibus DP, PROFINET, EtherNet/IP
Display unit RIA15	<ul style="list-style-type: none"> ■ Display of 4 to 20 mA measured values or HART® process variables ■ Loop-powered; Voltage drop ≤ 1 V (HART® ≤ 1.9 V)
Field Data Manager Software MS20	<ul style="list-style-type: none"> ■ Archiving and visualization of historical measured values, diagnostic events and protocols ■ Automatic service for report generation and printing, data read out, storing and export ■ Online visualization of instantaneous values (live data)
Endress+Hauser Service	<ul style="list-style-type: none"> ■ Commissioning service ensures optimal startup ■ Technical experts are always on call to support with product queries ■ Calibration service