iTHERM TrustSens TM37x
World's first self-calibrating thermometer

Simple & affordable innovation

The world's first self-calibrating compact thermometer iTHERM TrustSens TM371 and TM372 is designed for applications in the life sciences and food & beverage industries that require seamless compliance to FDA regulations and/or GMP rules.

The device's award-winning sensor technology performs fully automated, fully traceable inline self-calibrations, eliminating the risk of undetected non-conformities. Maximize your product safety, process efficiency and plant availability while reducing effort and costs.

Heartbeat Technology

HERMES AWARD 2018

Winner of the 2018 HERMES AWARD

Your benefit

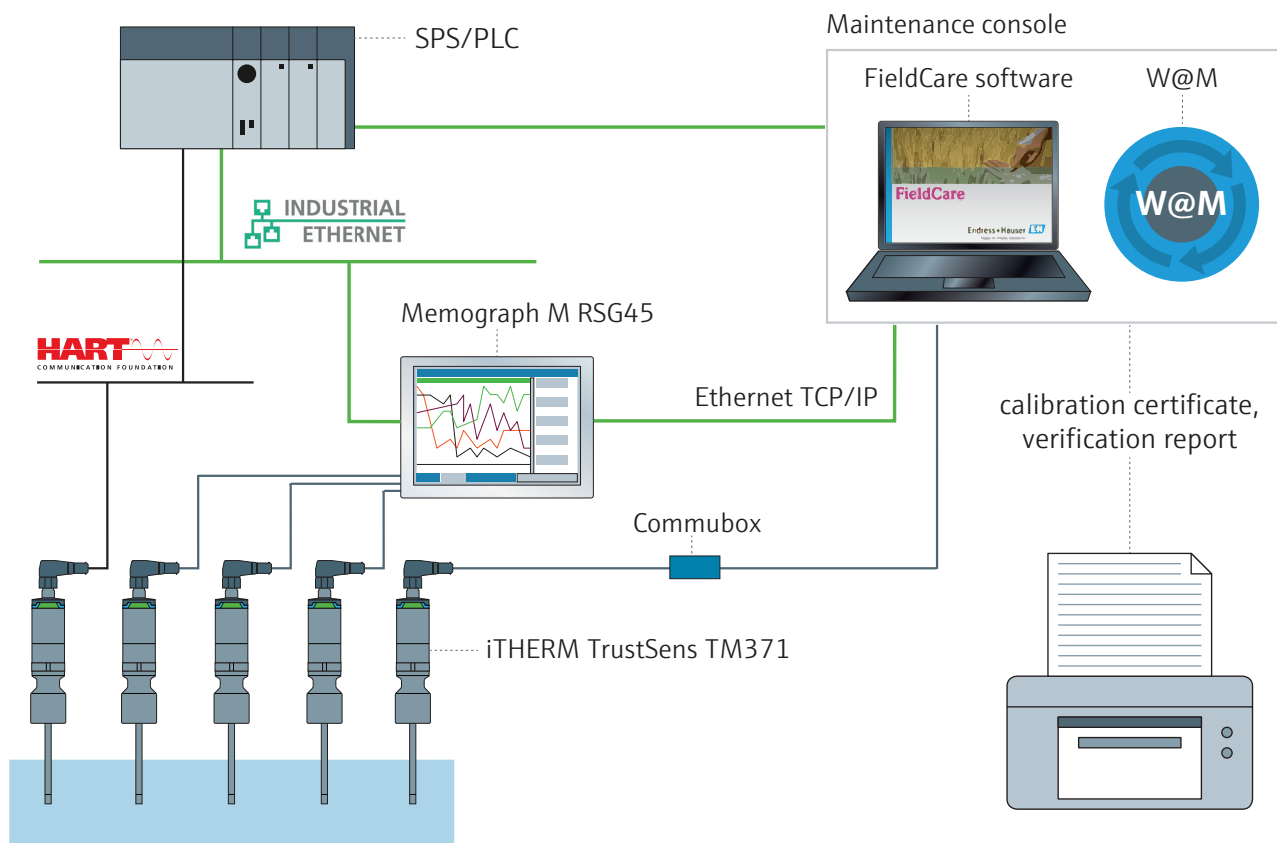| Value	Benefit	Feature	Supporting documents
Risk and cost reduction	■ Higher product safety ■ Reduced plant downtime	■ Fully automated inline self-calibration at 118 °C (244.4 °F) ■ Heartbeat Technology	TÜV certificates for long term stability, traceability, measurement uncertainty
100% compliance and audit-proof documentation	■ Fully traceable calibration ■ Fully automated documentation	■ Built-in, traceable fixed-point reference ■ Print/upload calibration certificate ■ Memory for 350 calibration points	Calibration certificate of the integrated reference for each thermometer
Elimination of undetected failures	■ Higher process safety ■ Higher process transparency	■ Heartbeat Technology ■ Drift monitoring ■ Programmable warning limit, failure limit, calibration counter	Technical documentation

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, TSE, CSA General Purpose, Explosion protection, e.g. ATEX/IECEx
- ■ Permanent automatic device verification without process interruption with Heartbeat Technology

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People for Process Automation

iTHERM TrustSens TM37x specifications

- Measuring range: −40 to 190 °C (−40 to 374 °F)
- Pressure range: up to 50 bar (725 psi)

- Protection class: IP67/68 or IP69K
- Signal output: analog 4 to 20 mA, HART®

System integration

SPS/PLC

Maintenance console

FieldCare software

W@M

INDUSTRIAL ETHERNET

HART COMMUNICATION FOUNDATION

Memograph M RSG45

Ethernet TCP/IP

calibration certificate, verification report

Commubox

iTHERM TrustSens TM371

Integrated product and service offering

System component	Feature
Data manager Memograph M RSG45	• Tamper-proof data storage, FDA 21 CFR part 11 compliant (via Field Data Manager Software) • iTHERM TrustSens calibration monitoring with time stamp (built-in real-time clock)
Display unit RIA15	• Display of 4 to 20 mA measured values or up to four HART® process variables • Loop-powered; Voltage drop ≤1 V (HART® ≤1.9 V) • Displays values such as: temperature, electronics temperature, calibration counter, calibration deviation
Field Data Manager Software MS20	• Archiving and real-time visualization of historical measured values, diagnostic events and protocols • Automatic service for report generation and printing, data read out, storing and export
Netilion cloud-based IIoT ecosystem	• For secure decentralized process & asset monitoring around the clock • Legally compliant documentation & reporting, including audit- and inspection-proof calibration certificates
FieldPort SWA50	• Communication via Bluetooth®/ Wireless HART®

For more information please visit
www.endress.com/trustsens

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