

iTHERM TrustSens TM371

Self-calibrating temperature sensor

100% compliance, 0% effort Hygienic compact RTD thermometer



More information and current pricing:

www.endress.com/TM371

Benefits:

- Risk and cost reduction thanks to self-calibration and **Heartbeat Technology**
- No production downtime due to an automated and fully traceable inline self-calibration
- Automated documentation, memory for 350 calibration points. Printable calibration certificate - audit proof.
- Automated 4 to 20 mA loop check for saving time and increasing safety in your process. **See how iTHERM TrustSens can perform a fully automated loop check in five easy steps. The video shows the device set up and benefits for your process.**
- Elimination of non-conformities or undetected failures
- International certifications and approvals:
 - EHEDG, ASME BPE, FDA, 3-A, 1935/2004, 2023/2006, 10/2011, CE CRN, CSA General Purpose
- Highest accuracy of measuring point through sensor-transmitter matching

Specs at a glance

- **Response time** $t_{50} = 2.5 \text{ s}$ $t_{90} = 5.4 \text{ s}$
- **Max. process pressure (static)** at 20 °C: 40 bar (580 psi)
- **Operating temperature range** Pt 100: -40 °C to 160 °C (-40 °F to 320 °F)
- **Max. immersion length on request** up to 900.00 mm (35.4")

Field of application: The award-winning smart temperature probe with integrated HART® transmitter and Heartbeat Technology features the world's first RTD sensor unit capable of fully automated in-situ self-calibration. It effectively eliminates the risk of undetected non-

conformities, reduces production downtime and increases product safety and process efficiency in applications of the food & beverage and life sciences industries. The device is fully compliant to FDA 21 CFR Part 11 regulations and GMP rules.

Features and specifications

Thermometer

Measuring principle

Resistance Temperature Detector

Characteristic / Application

self-calibrating

metric style

compact temperature probe

hygienic design

life sciences, food & beverage

Thermowell / protection tube

without

incl. thermowell

incl. elbow thermowell

Insert / probe

without exchangeable insert

Outer diameter protection tube / Insert

6.0 mm (0.24")

9.0 mm (0.35")

12.7 mm (0.5")

Max. immersion length on request

up to 900.00 mm (35.4")

Material protection tube/ thermowell

1.4435 Delta Ferrite < 1%

316L

Thermometer

Process connection

compression fitting
weld in adapter
clamp connections acc. to ISO 2852
screwed pipe joint acc. to DIN 11851
aseptic screwed pipe joint acc. to DIN 11864-1
metallic sealing system
thread acc. to ISO 228 for Liquiphant adaptor
APV Inline
Varivent
Ingold
SMS 1147
Neumo Biocontrol
TT411 elbow pieces DIN 11865

Tip shape

straight
reduced

Surface roughness Ra

0.76 μm (29.92 μin)
0.38 μm (14.96 μin)
0.38 μm (14.96 μin) electropolished

Operating temperature range

Pt 100:
-40 °C to 160 °C
(-40 °F to 320 °F)

Max. process pressure (static)

at 20 °C: 40 bar (580 psi)

Response time

t₅₀ = 2.5 s
t₉₀ = 5.4 s

Thermometer

Integration head transmitter

no (4 to 20 mA signal, HART)

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