iTHERM TrustSens TM371
Self-calibrating temperature sensor

100% compliance, 0% effort Hygienic compact RTD thermometer

More information and current pricing:
www.in.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
- Automatized 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** t50 = 2,5 s t90 =9,5s
- **Max. process pressure (static)** at 20 °C: 40 bar (580 psi)
- **Operating temperature range** PT 100: -40 °C ...160 °C (-40 °F ... 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

hygienic process connection

Thermowell / protection tube
without

incl. thermowell

incl. T-/ellbow thermowell

Insert / probe
pipe version, isolated wires, not flexible

Outer diameter protection tube / Insert
6,0 mm (0,24")

9,0 mm (0,35")

12,7 mm (0,5")

Thermometer

Max. immersion length on request
up to 900,00 mm (35,4")

Material protection tube/ thermowell
1.4435 Delta-Ferrit < 1%

316L

Process connection
compression fitting

weld in adapter

clamp connections acc. to ISO2852

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

T- and corner pieces

Thermometer

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 ...160 °C

(-40 °F ...320 °F)

Max. process pressure (static)
at 20 °C: 40 bar (580 psi)

Response time
t50 = 2,5 s

t90 =9,5s

Integration head transmitter
no (4...20mA Signal, HART)

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