

iTHERM TrustSens TM372

Self-calibrating temperature sensor

100% compliance, 0% effort Hygienic compact RTD thermometer, US style



More information and current pricing:

www.cz.endress.com/TM372

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, Explosion protection, e.g. ATEX/IECEx
- Highest accuracy of measuring point through sensor-transmitter matching

Specs at a glance

- **Response time** $t_{50} = 2,5\text{ s}$ $t_{90} = 9,5\text{ s}$
- **Max. process pressure (static)** at 20 °C: 40 bar (580 psi)
- **Operating temperature range** PT 100: -40 °C ...160 °C (-40 °F ... 320 °F), optional up to 190 °C (374 °F)
- **Max. immersion length on request** up to 28" (711 mm) others on request

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
imperial 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

1/4" (6,35 mm)
3/8" (9,53 mm)
1/2" (12,7 mm)

Max. immersion length on request

up to 28" (711 mm)
others on request

Material protection tube/ thermowell

316L

Thermometer

Process connection

Weld-in adapter
Tri-clamp
Clamp-connections according to
ISO2852
G3/4" Liquiphant
G1" Liquiphant
Varivent
T- and corner pieces

Tip shape

straight
reduced

Surface roughness Ra

30 µin (0,76 µm)
15 µin (0,38 µm)
15 µin (0,38 µm) electropolished

Operating temperature range

PT 100:
-40 °C ...160 °C (-40 °F ...320 °F),
optional up to 190 °C (374 °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)

More information www.cz.endress.com/TM372