

# iTHERM TrustSens TM372

## Self-calibrating temperature sensor

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



More information and current pricing:

[www.apsc.endress.com/TM372](http://www.apsc.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)
- **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)

### Max. process pressure (static)

at 20 °C: 40 bar (580 psi)

### Response time

t<sub>50</sub> = 2,5 s  
t<sub>90</sub> = 9,5s

### Integration head transmitter

no (4...20mA Signal)

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