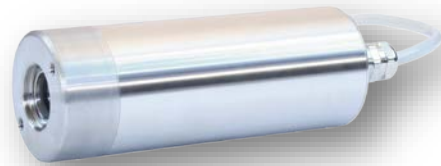


Technical Data Sheet

CT15.5

Infrared Radiation Thermometer

- Highest accuracy and long-term stability
- Pilot laser or focus laser
- Very fast response time from 5 ms on
- Robust stainless steel housing IP67
- Very high temperature resolution



Measurement specifications

| | |
|---|---|
| Temperature range: | 0 ... 1400 °C |
| Spectral range: | 5.2 µm (4.9 ... 5.6 µm) |
| Measurement uncertainty: | ± 0.5 °C plus 0.7 % of the difference between the measured object and the instrument temperature |
| Temperature resolution (NETD): | Depending on the measured temperature and the response time Typical value is 0.45 °C (2 Sigma, by t_{90} : 3 s, 100 °C; $\epsilon = 1$) |
| Long-term stability: | Better than 0.01 % of the absolute measured temperature in Kelvin per month |
| Field of view: | from Ø 0.7 mm (± 5 %) on, depending on optic and detector |
| Response time (t_{90}): | selectable from 30 ms ... 600 s, optional: 5 ms, 10 ms |
| Temperature unit: | °C, K or °F |
| Emissivity: | 0.100 ... 1.000 in 0.001 steps |
| Lens: | CaF ₂ , ZnSe |

Electrical specifications / Functions

| | | |
|---|---|---------------------------------------|
| Analog output: | 0 ... 1 V; 0 ... 10 V; 0 ... 20 mA; 4 ... 20 mA; resolution: 16 bit | |
| Function: | Actual, maximum or minimum value (scalable (minimum span 50 K)) | |
| Analog input option: | 0 ... 10 V | |
| Function: | Compensation of ambient temperature influence, transmittance, reflection and emissivity | |
| Digital output option: | 2x open-collector-output | |
| Function: | Threshold detection Min, Max temperature value, alarm status | |
| Digital input option: | Dry contact switch or voltage or open-collector | |
| Function: | Reset of memory function, (de-)activate digital outputs or laser | |
| Thermal switch option: | Switching temperature > 70 °C, maximum load ≤ 48 V, ≤ 0.5 A | |
| Function: | Internal temperature alarm | |
| Serial interface: | RS232 interface, bi-directional 9.6 ... 115.2 kBaud, optional: RS485 | |
| Laser aiming options: | Integrated pilot laser or focus laser | |
| Programmable via serial interface: | Emissivity, analog output, analog output function, response time, temperature unit, Min and Max value memory adjustable with decay rate, reset by contact or temperature threshold, alarm switching point, time period etc. | |
| Operating voltage: | DC: 10.5 ... 30 V | AC: 12 ... 24 V ± 10 %, 48 ... 400 Hz |
| Power consumption: | < 150 mA at 24 VDC | ≤ 3.5 W |

Technical Data Sheet

General specifications

| | |
|---|---|
| Storage temperature: | -20 ... 70 °C |
| Permissible ambient temperature: | -20 ... 60 °C (optional with protective cooling jacket WK15 up to 250 °C) |
| Protection class: | IP67 (IEC), (NEMA6) |
| Protection against oscillation: | DIN 40046 BL.8, test: FC, vibration resistance: A B1 E |
| Housing: | Stainless steel |
| Weight: | Appr. 1.5 kg |

Scope of supply and options¹

| | |
|---------------------------------|---|
| Accessories: | <ul style="list-style-type: none"> ■² Manual CT15 ■ Software EasyConfig □ Software EasyMeas ■ Connecting cable, hardwired, 5 m length, PVC, unterminated ends □ Connecting cable, hardwired, ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends |
| Calibration certificate: | □ HEITRONICS certificate |
| Housing: | □ Protective cooling jacket (water) WK15 up to 250 °C ambient temperature |
| Adapter and flanges: | □ See document Options and Accessories |
| Vacuum flange ISO-KF: | □ DN25, DN40 (at 10 ⁻⁴ Pa (10 ⁻⁶ Torr)), the leakage is < 10 ⁻⁸ std cm ³ /s |
| Protective foil: | □ For lenses for measuring objects < 200 °C, Resistant to aggressive cleaners |
| Bus interface: | □ With transducer |

Dimensions³



Unit: mm

¹ Special model specification on request.

² ■ Standard function
□ Option

³ The dimensions given within this document will be valid for the drawing shown.