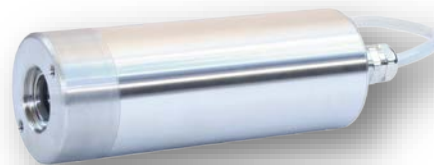


Technical Data Sheet

CT15.7

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 ... 400 °C
Spectral range:	7.93 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 0.40 °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

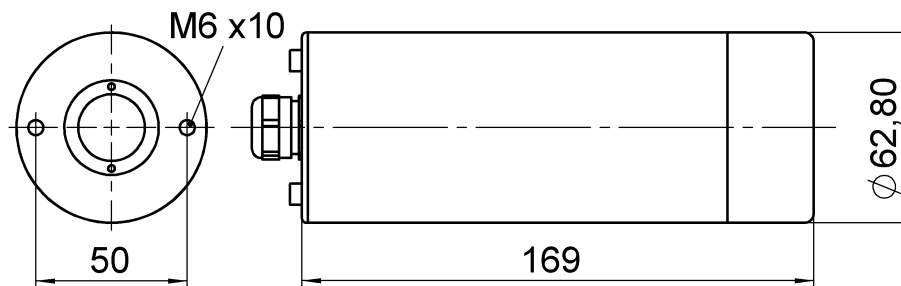
General specifications

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.