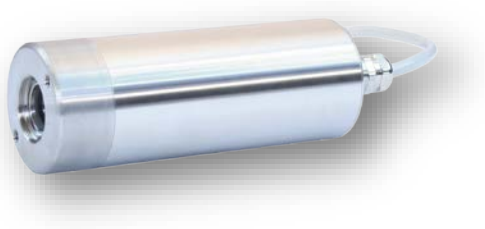
HEITRONICS
Infrarot Messtechnik

Technical Data Sheet

CT15.10

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:	-25 ... 900 °C	
Spectral range:	8 ... 14 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 0.05 °C (2 Sigma, by t_{90}: 3 s, 20 °C; Ɛ = 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:	Ge, ZnSe	

Electrical specifications / Functions		
Analog output: **Function:**	0 … 1 V; 0 … 10 V; 0 … 20 mA; 4 … 20 mA; resolution: 16 bit Actual, maximum or minimum value (scalable (minimum span 50 K))	
Analog input option: **Function:**	0 … 10 V Compensation of ambient temperature influence, transmittance, reflection and emissivity	
Digital output option: **Function:**	2x open-collector-output Threshold detection Min, Max temperature value, alarm status	
Digital input option: **Function:**	Dry contact switch or voltage or open-collector Reset of memory function, (de-)activate digital outputs or laser	
Thermal switch option: **Function:**	Switching temperature > 70 °C, maximum load ≤ 48 V, ≤ 0.5 A 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

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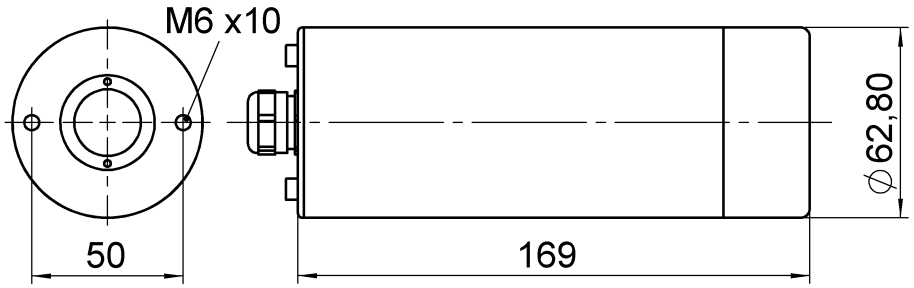
General specifications	
Storage temperature:	-20 … 70 °C
Permissible ambient temperature:	-20 … 60 °C (optional with protective cooling jacket WK15 up to 250 °C)
Protection class:	IP67 (IEC), (NEMA6)
Protection against oscillation:	DIN 40046 BL.8, test: FC, vibration resistance: A B1 E
Housing:	Stainless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

Scope of supply and options[1]		
Accessories:	■[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 cm³/s
Protective foil:	□	For lenses for measuring objects < 200 °C, Resistant to aggressive cleaners
Bus interface:	□	With transducer

Dimensions [3]



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.

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Technische Änderungen und redaktionelle Irrtümer vorbehalten. Specifications are subject to change without notice.