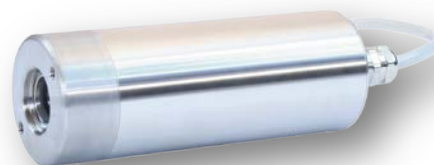


Technical Data Sheet

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 per month
Field of view:	from Ø 0.7 mm (± 5 %) on, depending on optic and detector
Response time (t_{90}):	Adjustable from 30 ms to 600 s, option: 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, (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:	<input checked="" type="checkbox"/> ² Manual CT15
	<input checked="" type="checkbox"/> Software EasyConfig
	<input type="checkbox"/> Software EasyMeas
	<input checked="" type="checkbox"/> Connecting cable, hardwired 5 m length, PVC, unterminated ends
	<input type="checkbox"/> Connecting cable, hardwired ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends
Calibration certificate:	<input type="checkbox"/> HEITRONICS certificate
Housing:	<input type="checkbox"/> Protective cooling jacket (water) WK15 up to 250 °C ambient temperature
	<input type="checkbox"/> Ex-proof housing stainless steel (II 2 G, Ex d e IIC T5 Gb Tamb: -50 °C ... 60 °C; IP66)
Adapter and flanges:	<input type="checkbox"/> See document Options and Accessories
Vacuum flange ISO-KF:	<input type="checkbox"/> DN25, DN40 (at 10 ⁻⁴ Pa (10 ⁻⁶ Torr)), the leakage is < 10 ⁻⁸ std cm ³ /s
Protective foil:	<input type="checkbox"/> For lenses for measuring objects < 200 °C, Resistant to aggressive cleaners
Bus interface:	<input type="checkbox"/> 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.