

Technical Data Sheet

CT09

Infrared Radiation Thermometer

- Rugged stainless steel housing, IP65
- Long-term stability by chopped radiation method
- Wide temperature range from -30 ... 900 °C
- Field of view from 1 mm on



Measurement specifications

Temperature range:	-30 ... 500 °C or 0 ... 900 °C	
Spectral response:	8 ... 14 μm	
Measurement uncertainty:	± 1 °C + 0.6 % of the temperature difference between measured target and instrument or value of temperature resolution. The higher value shall prevail.	
Temperature resolution (NETD):	Depending on the measured temperature and the response time Typical value is 0.1 °C (2 Sigma, by t90: 1 s, 20 °C; ε = 1)	
Long-term stability:	Better than 0.01 % of the absolute measured temperature in Kelvin per month	
Field of view:	From 1 mm on. Depending on optic and measuring distance	
Response time (t₉₀):	Adjustable from 50 ms ... 10 s	
Temperature unit:	°C, K or °F	
Emissivity:	0.100 ... 1.000 in 0.001 steps	
Lens:	Ge	
Available lenses:	Non focused: K6	Field of view: 40 mm at 1000 mm measuring distance
	Focused: L6	Field of view: 3 mm at 110 mm measuring distance
	Focused: M6	Field of view: 1 mm at 25 mm measuring distance
	Focused: N6	Field of view: 4.5 mm at 165 mm measuring distance

Electrical specifications / Functions

Analog output:	0 ... 20 mA; 4 ... 20 mA; resolution: 12 bit	
Function:	Actual, maximum or minimum value (scalable (minimum span 50 K))	
Digital output option:	open-collector	
Function:	Threshold detection, temperature value	
Digital input option:	Dry contact swith, operating voltage, open-collector	
Function:	Reset of memory	
Serial interface:	RS232C interface, 9.6 ... 57.6 kBaud	
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:	CT09 as 24 V version: 16 ... 32 VDC	CT09 as 12 V version: 10 ... 15 VDC
Power consumption:	≤ 1.6 W	CT09 as 12 V version: approx. 1.9 W

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General specifications

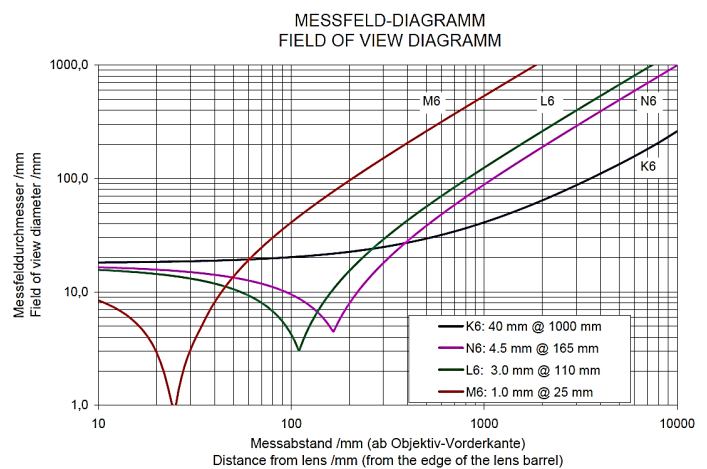
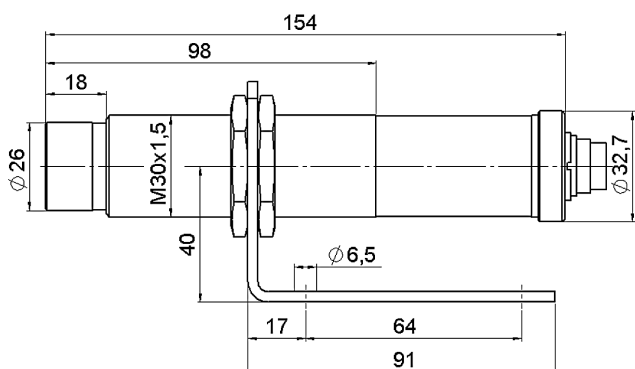
Storage temperature:	-40 ... 85 °C
Permissible ambient temperature:	-25 ... 70 °C (optional with protective cooling jacket up to 300 °C)
Protection class:	IP65 (IEC), (NEMA6)
Protection against oscillation:	EN 60068-2-6, Frequency range: 10 ... 500 Hz 10 ... 60 Hz, amplitude: ± 0.35 mm, 60 ... 500 Hz, acceleration: 100 m/s ² Resistance to vibrations: class B
Housing:	Stainless steel
Weight:	240 g

Scope of supply and options¹

■ Standard function; □ Option

Accessories:	<ul style="list-style-type: none"> ■² Manual CT09 ■ Software EasyConfig □ Software EasyMeas ■ Connecting cable with 7-pin plug, 2 m length, PVC, unterminated ends □ Connecting cable ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends or 7-pin female connector
Calibration certificate:	□ HEITRONICS certificate
Housing:	□ Protective cooling jacket (water) WK11 up to 250 °C ambient temperature
Adapter and flanges:	□ See document Options and Accessories
Bus interface:	□ with transducer

Dimensions



¹ Special model specification on request.

² ■ Standard function
□ Option