CT09 Series
Infrared Radiation Thermometer

- Temperature ranges for -30 to 900 °C (-22 to 1650 °F)
- ≥ 50 ms response time
- Optical resolution 25:1 or 36:1
- Target Size ≥ 1 mm (0.04 in.)
- Stainless steel housing, IP65
- Digital electronics with programmable features

GENERAL SPECIFICATION

Temperature range: -30 to 500 °C (-22 to 932 °F) or 0 to 900 °C (32 to 1650 °F) – field adjustable span
Temperature resolution (NETD): Depends on measured temperature, response time & emissivity setting, example; NETD = ±0.2 °C (±0.4 °F) for 100 °C (212 °F) target with 300ms & ε = 1.00 settings
Accuracy: 1.0 °C (1.8 °F) ± 0.6% of the difference between target and thermometer temperature
Long term stability: Better than 0.01% of the absolute measured value per month
Field of view diameter: Specify lens K6, L6, M6 or N6. K6 = 1.6 inch diameter @ 39 inches distance; L6 = 0.12 in. @ 4.3 in.; M6 = 0.04 in. @ 1 in.; N6 = 0.18 in. @ 6.5 in.
Spectral range: 8 to 14 μm (others available on special request)
Emissivity: 0.100 to 1.000 in 0.001-steps
Response time: 50 ms to 10 s (0.05; 0.1; 0.3; 1; 3; 10 s)
Temperature unit: °C, °F or K
Analog output: Linear 0 - 20 mA, or 4 - 20 mA, scalable span ≥ 50 °C (90 °F). Actual value, Max-value or Min-value. 12 bit resolution
Valley/peak picker, programmable: Reset: internal
- Reset: external input (note: cannot be combined with Alarm Output option)
Serial interface: RS232-interface, bi-directional, 9.6 to 57.6 kbps, for programming and data transfer
Alarm output: Programmable (open collector)
Operating voltage: 15 to 32 VDC
Power consumption: Approx. 1.6 W = 67mA @ 24V
Permissible ambient temperature: -25 to 70 °C (-13 to 158 °F)
- With protective and cooling housing WK11 up to 300 °C (572 °F)
Storage temperature: -40 to 85 °C (-40 to 185 °F)
Protective class: IP65 (IEC), (NEMA 4 equivalent)
Housing: 304 stainless steel
PC-based Software:
- EasyConfig: Software for parameter setting (supplied with each CT09)
- EasyMeasure: EasyConfig features plus data recording, storage & evaluation (option)
Programmable functions via RS232:
- Emissivity, background temperature compensation, analog output scaling, response time, temperature unit, valley/peak picker with decay function and optional alarm output (Alarm Output cannot be combined with External Reset option)
TARGET DIAMETER SHOWN USING 95% ENERGY DEFINITION FOR THE 8 TO 14 MICRON SPECTRAL RANGE

ACCESSORIES and OPTIONS for Housings and Mountings (partial listing of what is available)

Clockwise from top left: CT09 Housing & Mounting Bracket dimensions in mm; 2 – Emissivity Converter for rotating polished rolls; 24 – Laser Pointer; 4 & 3 Short Sight Tube and Air Purge; 5 – Right Angle Mirror; 6 – SW15 Portable Blackbody Calibration source;