

CT18.03

Infrared Radiation Thermometer CT18.03

for Non-Contact Temperature Measurement

- Rugged stainless steel housing, IP65
- Wide temperature ranges from **450 °C to 3000 °C**
- Very fast response times ≥ 1 ms (programmable)
- Focusable Lens provides Fields-of-View as small as **0.7 mm**
- Laser aims the size of the Field-of-View in focus



GENERAL SPECIFICATION

| | |
|---|--|
| Temperature ranges: | <ul style="list-style-type: none"> ■ <input type="checkbox"/> 450 °C to 1000 °C, <input type="checkbox"/> 500 °C to 1400 °C, <input checked="" type="checkbox"/> 550 °C to 1800 °C, <input type="checkbox"/> 650 °C to 2200 °C, <input type="checkbox"/> 700 °C to 2500 °C, <input type="checkbox"/> 750 °C to 3000 °C |
| Temperature resolution (NETD): | <ul style="list-style-type: none"> ■ Depends on measured temperature and response time, typical value 0.1 °C (at 100 ms, 350 °C, $\epsilon = 1$) |
| Accuracy: | <ul style="list-style-type: none"> ■ 0.1 °C \pm < 0.4% of the measured value in temperature units at an ambient temperature of 25 °C for the given temperature range |
| Temperature drift: | <ul style="list-style-type: none"> ■ 0.004% of the measured temperature where the internal temperature of the radiation thermometer deviates from 25 °C |
| Long term stability: | <ul style="list-style-type: none"> ■ Better than 0.01% of the absolute measured value per month |
| Spectral response: | <ul style="list-style-type: none"> ■ 0.95 μm |
| Programmable functions via serial interface: | <ul style="list-style-type: none"> ■ Emissivity, environmental temperature, analog output, function of analog output, response time, temperature unit, valley/peak picker with decay function, reset after time, laser function, alarm values and output |
| Emissivity: | <ul style="list-style-type: none"> ■ 0.050 to 1.000 in 0.001-steps |
| Response time: | <ul style="list-style-type: none"> ■ From 1 ms to 10 s (0.001, 0.003, 0.01, 0.03, 0.1, 0.3, 1, 3, 10 s) |
| Temperature unit: | <ul style="list-style-type: none"> ■ °C, K or °F |
| Analog output (Hardware): | <ul style="list-style-type: none"> ■ Linear 0 - 20 mA or 4 - 20 mA or 0 - 10 V scalable temperature span ≥ 200 °C |
| Analog output (Functions): | <ul style="list-style-type: none"> ■ Actual value, max-value or min-value |
| Analog output (Resolution): | <ul style="list-style-type: none"> ■ 16 bit |
| Valley/peak picker programmable: | <ul style="list-style-type: none"> ■ Reset: internal ■ Reset: external input ■ Reset: after time (programmable) |
| Serial interface: (switchable) | <ul style="list-style-type: none"> ■ RS232-interface, bi-directional, 9.6 kbps to 230 kbps and RS485 interface, Half-Duplex or Full-Duplex, 9.6 kbps to 230 kbps for programming and data transfer |
| Alarm output: | <ul style="list-style-type: none"> ■ Programmable dry contact (relay) |
| Operating voltage: | <ul style="list-style-type: none"> ■ 10.5 VDC to 30 VDC |
| Power consumption: | <ul style="list-style-type: none"> ■ ≤ 2.5 W |
| Permissible ambient temperature: | <ul style="list-style-type: none"> ■ -20 to 70 °C <input type="checkbox"/> With protective and cooling housing WK15 up to 300 °C |
| Storage temperature: | <ul style="list-style-type: none"> ■ -20 to 80 °C |
| Protective class: | <ul style="list-style-type: none"> ■ IP65 (IEC), (NEMA 4 equivalent) |
| Housing: | <ul style="list-style-type: none"> ■ Stainless steel |
| PC-based Software: | <ul style="list-style-type: none"> ■ EasyConfig: Software for parameter setting <input type="checkbox"/> EasyMeas: Software for parameter setting, data recording, data storage and data evaluation |

- | |
|--|
| <ul style="list-style-type: none"> ■ Standard function <input type="checkbox"/> Option |
|--|

CT18.03

OPTICS

- Objectives (Lenses):** ■ Focusable from 132 mm to infinite
- Field of view diameter:** ■ From \varnothing 0.7 mm, depends on lens
- Field of view marking:** □ Laser built-in: aims the center and the size of the field of view in focus
- Laser function:** ■ Time out or permanent operation, while flashing or continuous marking
- Through the lens view finder:** ■ displays the Field of View of the target

APPLICATION

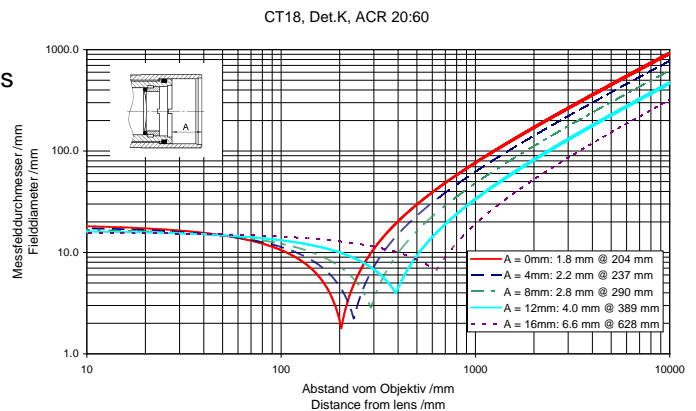
FIELD OF VIEW DIAGRAM (Example)

Temperature Measurement of:

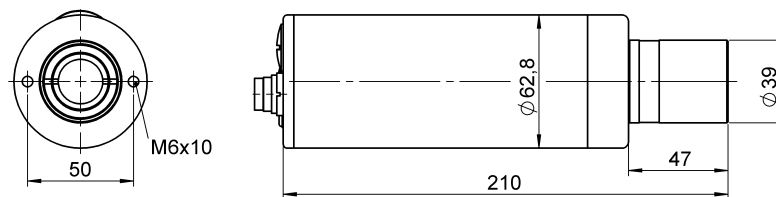
- Metals
- Metal oxid
- Semiconductors
- Glass
- Graphite
- Silicium
- ...

Prozess Temperatures in:

- Hardening
- Soldering
- Forging
- Induction heating
- Epitaxy
- Casting
- Annealing



DIMENSIONS



Dimensions in mm

ACCESSORIES



Protective and cooling housing WK15



Protective and cooling housing with air purge and extension tube