

## CT09 Series

### Infrared Radiation Thermometer CT09

- Rugged stainless steel housing, IP65
- Wide temperature range from -30 to 900 °C
- Very fast response times  $\geq 50$  ms (programmable)
- Fields-of-view as small as 1 mm
- Compatible to Infrared Radiation Thermometer KT12



### GENERAL SPECIFICATION

<b>Temperature range:</b>	<ul style="list-style-type: none"> <li>■ -30 to 500 °C; □ 0 to 900 °C</li> </ul>
<b>Temperature resolution (NETD):</b>	<ul style="list-style-type: none"> <li>■ Depends on measured temperature and response time, typical value 0.2 °C (at 300 ms, 100 °C, <math>\epsilon=1</math>)</li> </ul>
<b>Accuracy (uncertainty):</b>	<ul style="list-style-type: none"> <li>■ <math>\pm 1.0</math> °C plus 0.6 % of the difference between target and sensor head temperature as a function of housing temperature: 0.01 % / °C for housing temp. others than 25 °C</li> </ul>
<b>Long term stability:</b>	<ul style="list-style-type: none"> <li>■ Better than 0.01% of the absolute measured value per month</li> </ul>
<b>Field of view diameter:</b>	<ul style="list-style-type: none"> <li>■ From <math>\varnothing</math> 1 mm, depends on lens</li> </ul>
<b>Spectral response:</b>	<ul style="list-style-type: none"> <li>■ 8 to 14 <math>\mu</math>m</li> </ul>
<b>Programmable functions via serial interface:</b>	<ul style="list-style-type: none"> <li>■ Emissivity, environmental temperature, analog output, function of analog output, response time, temperature unit, valley/peak picker with decay function, alarm values and output (B)</li> </ul>
<b>Emissivity:</b>	<ul style="list-style-type: none"> <li>■ 0.100 to 1.000 in 0.001-steps</li> </ul>
<b>Response time:</b>	<ul style="list-style-type: none"> <li>■ From 50 ms to 10 s (0.05; 0.1; 0.3; 1; 3; 10 s)</li> </ul>
<b>Temperature unit:</b>	<ul style="list-style-type: none"> <li>■ °C, K or °F</li> </ul>
<b>Analog output (Hardware):</b>	<ul style="list-style-type: none"> <li>■ Linear 0 - 20 mA, or 4 - 20 mA, scalable temperature span <math>\geq 50</math> °C</li> </ul>
<b>Analog output (Functions):</b>	<ul style="list-style-type: none"> <li>■ Actual value, max-value or min-value</li> </ul>
<b>Analog output (Resolution):</b>	<ul style="list-style-type: none"> <li>■ 12 bit</li> </ul>
<b>Valley/peak picker programmable:</b>	<ul style="list-style-type: none"> <li>■ Reset: internal</li> <li>□ Reset: external input</li> </ul>
<b>Serial interface:</b>	<ul style="list-style-type: none"> <li>■ RS232-interface, bi-directional, 9.6 to 57.6 kbps, for programming and data transfer</li> </ul>
<b>Alarm output:</b>	<ul style="list-style-type: none"> <li>□ Programmable (open collector)</li> </ul>
<b>Operating voltage:</b>	<ul style="list-style-type: none"> <li>■ 16 VDC to 32 VDC</li> <li>□ 10 VDC to 15 VDC</li> </ul>
<b>Power consumption:</b>	<ul style="list-style-type: none"> <li>■ Approx. 1.6 W</li> </ul>
<b>Permissible ambient temperature:</b>	<ul style="list-style-type: none"> <li>■ -25 to 70 °C</li> <li>□ With protective and cooling housing WK11 up to 300 °C</li> </ul>
<b>Storage temperature:</b>	<ul style="list-style-type: none"> <li>■ -40 to 85 °C</li> </ul>
<b>Protective class:</b>	<ul style="list-style-type: none"> <li>■ IP65 (IEC), (NEMA 4 equivalent)</li> </ul>
<b>Housing:</b>	<ul style="list-style-type: none"> <li>■ Stainless steel</li> </ul>
<b>PC-based Software:</b>	<ul style="list-style-type: none"> <li>■ EasyConfig: Software for parameter setting</li> <li>□ EasyMeas: Software for parameter setting, data recording, data storage and data evaluation</li> </ul>

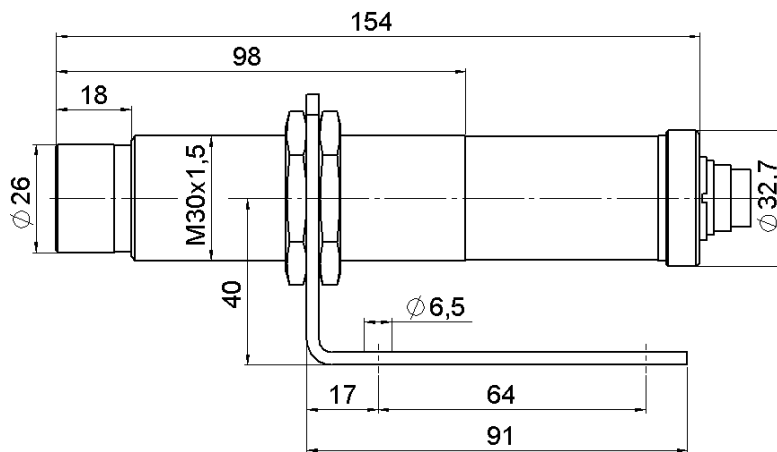
Standard function  
 Option

(B) with option „Alarm output“

**SELECTION GUIDE**  
FOR CT09-Series

<u>CT09 Lens type</u>	<u>Field of view @ mm distance</u>
CT09.K	40 mm @ 1 m
CT09.L	3 mm @ 110 mm
CT09.M	1 mm @ 25 mm
CT09.N	4.5 mm @ 165 mm

**DIMENSIONS**



CT09 Dimensions in mm

**ACCESSORIES**



Protective and cooling housing WK11