

# CT13.10

## Infrared Radiation Pyrometer CT13.10

- Rugged stainless steel housing, IP68
- Wide temperature range from 0 to 900 °C
- Very fast response times  $\geq 30$  ms (programmable)
- Fields-of-view as small as 1 mm
- Pilot laser aims the center of the field-of-view



### GENERAL SPECIFICATION

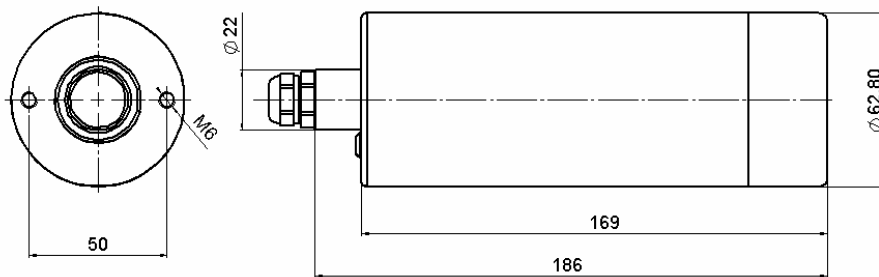
<b>Temperature range:</b>	■ 0 to 500 °C; □ 0 to 900 °C
<b>Temperature resolution (NETD):</b>	■ Depends on measured temperature and response time, typical value 0.2 °C (at 300 ms, 100 °C, $\epsilon=1$ )
<b>Accuracy (uncertainty):</b>	■ $\pm 0.8$ °C plus 0.8% of the difference between target and sensor head temperature
<b>Long term stability:</b>	■ Better than 0.01% of the absolute measured value per month
<b>Field of view diameter:</b>	■ From $\varnothing$ 1 mm, depends on lens
<b>Field of view marking:</b>	□ <i>Pilot laser</i> , built-in: aims the center of the field of view at any distance □ <i>Laser pointer</i> as accessory for non transparent lenses
<b>Laser function:</b>	■ Time out or permanent operation, while flashing or continuous marking (A)
<b>Spectral response:</b>	■ 8 to 14 $\mu$ m
<b>Programmable functions via serial interface:</b>	■ Emissivity, environmental temperature, analog output, function of analog output, response time, temperature unit, valley/peak picker with decay function, laser function (A), alarm values and output (B)
<b>Emissivity:</b>	■ 0.100 to 1.000 in 0.001-steps
<b>Response time:</b>	■ From 30 ms to 10 s (0.03, 0.1, 0.3, 1, 3, 10 s)
<b>Temperature unit:</b>	■ °C, K or °F
<b>Analog output (Hardware):</b>	■ Linear 0 - 20 mA, or 4 - 20 mA, scalable temperature span $\geq 50$ °C
<b>Analog output (Functions):</b>	■ Actual value, max-value or min-value
<b>Analog output (Resolution):</b>	■ 12 bit
<b>Valley/peak picker programmable:</b>	■ Reset: internal □ Reset: external input
<b>Serial interface:</b>	■ RS232-interface, bi-directional, 9.6 to 57.6 kbps, for programming and data transfer
<b>Alarm output:</b>	□ Programmable (open collector)
<b>Operating voltage:</b>	■ 10.5 VDC to 30 VDC / 12 (-10 %) VAC to 24 (+10 %) VAC
<b>Power consumption:</b>	■ $\leq 2.5$ W
<b>Permissible ambient temperature:</b>	■ -25 to 60 °C □ With protective and cooling housing WK15 up to 300 °C
<b>Storage temperature:</b>	■ -40 to 85 °C
<b>Protective class:</b>	■ IP68 (IEC), (NEMA 4 equivalent)
<b>Housing:</b>	■ Stainless steel
<b>PC-based Software:</b>	■ EasyConfig: Software for parameter setting □ EasyMeas: Software for parameter setting, data recording, data storage and data evaluation

■ Standard function	(A) with option "Pilot laser"
□ Option	(B) with option "Alarm output"

**SELECTION GUIDE**  
**FOR CT13-Series**

<u>Application / Material</u>	<u>Model / Type</u>	<u>Temperature Range / °C</u>
<b>Natural Material, Paint, Chemicals, Rubber</b> Paper, textiles, ceramics, asphalt, wood, electronic components, building materials, food, ...	CT13.10	0 ... 900
<b>Thin Plastic Film</b> Thin plastic film / oil / paint ... PET, PA, ...	CT13.3i CT13.7	50 ... 300 0 ... 400
<b>Glass / Quartz</b> Glass volume Glass and Quartz surface Glass surface	CT13.4 CT13.5 CT13.8	200 ... 1000 200 ... 1400 0 ... 1000
<b>Metal / Metal Oxide / Ceramic</b> Metal / metal oxide / ceramic	CT13.2	500 ... 2000

**DIMENSIONS**



CT13 Dimensions in mm



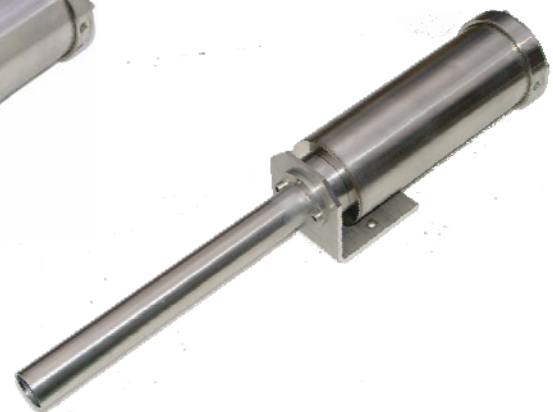
**ACCESSORIES**



Airpurge



Protective and cooling housing WK15



Protective and cooling housing with airpurge and extension tube