CT13 series

Infrared Radiation Thermometer CT13

- **Rugged stainless steel housing, IP68**
- **Wide temperature ranges from 0 °C to 900 °C / 500 °C to 2000 °C**
- **Very fast response times ≥ 30 ms (programmable)**
- **Fields-of-view as small as 1 mm**
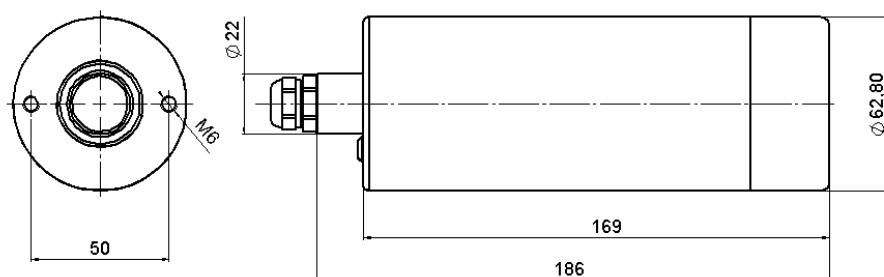- **Pilot laser aims the center of the field-of-view**

GENERAL SPECIFICATION

Temperature ranges:	■	0 to 900 °C; 200 to 1400 °C; 500 to 2000 °C (→ Table "Application / Model")
Temperature resolution (NETD):	■	Depends on measured temperature and response time, typical value 0.2 °C (at 300 ms, 100 °C, Ɛ= 1)
Accuracy (uncertainty):	■	± 0.8 °C plus 0.8% of the difference between target and sensor head temperature
Long term stability:	■	Better than 0.01% of the absolute measured value per month
Field of view diameter:	■	From Ø 1 mm, depends on lens
Field of view marking:	□	*Pilot laser*, built-in: aims the center of the field of view at any distance
	□	*Laser pointer* as accessory for non transparent lenses
Laser function:	■	Time out or permanent operation, while flashing or continuous marking (A)
Spectral response:	■	8 to 14 µm
Programmable functions via serial interface:	■	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)
Emissivity:	■	0.100 to 1.000 in 0.001-steps
Response time:	■	From 30 ms to 10 s (0.03, 0.1, 0.3, 1, 3, 10 s)
Temperature unit:	■	°C, K or °F
Analog output (Hardware):	■	Linear 0 - 20 mA, or 4 - 20 mA, scalable temperature span ≥ 50 °C
Analog output (Functions):	■	Actual value, max-value or min-value
Analog output (Resolution):	■	12 bit
Valley/peak picker programmable:	■	Reset: internal
	□	Reset: external input
Serial interface:	■	RS232-interface, bi-directional, 9.6 to 57.6 kbps, for programming and data transfer
Alarm output:	□	Programmable (open collector)
Operating voltage:	■	10.5 VDC to 30 VDC / 12 (-10 %) VAC to 24 (+10 %) VAC
Power consumption:	■	≤ 2.5 W
Permissible ambient temperature:	■	-25 to 60 °C
	□	With protective and cooling housing WK15 up to 300 °C
Storage temperature:	■	-40 to 85 °C
Protective class:	■	IP68 (IEC), (NEMA 4 equivalent)
Housing:	■	Stainless steel
PC-based Software:	■	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

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