PEDAK meettechniek

optris® CT hot

Precise non-contact temperature measurement from -40°C to 975°C under rough environmental conditions

FEATURES

- **The new infrared thermometer for hot environmental temperatures up to 250°C without any need of cooling**
- A varity of applications in dryers, ovens, heat treatment lines in the metal and glass industry, paper, plastic and textile manufacturing and semiconductor processing in the temperature range of -40°C to 975°C and a response time up from 100 ms
- Selectable 10:1 or 2:1 optics, compact sensor head size
- Narrow beam optics allows oblique aiming to avoid material thickness dependent temperature readings
- Monitor box for programming and temperature display
- Analog outputs 0/4 - 20 mA, 0 - 5/10 V , thermocouple type K or J and integrated digital interfaces (optional) Profibus DP, USB, RS232, RS485 or CAN

General specifications	
Environmental rating	IP 65 (NEMA-4)
Ambient temperature	sensing head: -20 - 250°C electronics: 0 - 85°C
Storage temperature	sensing head: -40 - 250°C electronics: -40 - 85°C
Relative humidity	10 - 95%, non condensing
Vibration (sensor)	IEC 68-2-6: 3 G, 11 - 200 Hz, any axis
Shock (sensor)	IEC 68-2-27: 50 G, 11 ms, any axis
Weight	sensing head 40 g (without massive housing) electronics 420 g
Electrical specifications	
Outputs/analog	channel 1: 0/4 - 20 mA, 0 - 5/10 V, thermocouple J, K
	channel 2: sensing head temperature (-40 - 250°C as 0 - 5 V or 0 - 10 V), alarm output
Alarm output	Open - collector (24V / 50mA)
Optional	relay: 2 x 60 V DC/42 V AC_{eff}; 0.4 A; optically isolated
Outputs/digital (optional)	USB, RS232, RS485, CAN, Profibus DP
Output impedances	mA max. 500Ω (with 5 - 36 V DC) mV min. 100 kΩ load impedance thermocouple 20Ω
Inputs	programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions)
Cable length	3 m (standard), 8 m, 15 m
Current draw	max. 100 mA
Power supply	8 - 36 V DC

Measurement specifications	
Temperature range (scalable via programming keys or software)	-40 - 975°C
Spectral range	8 - 14 µm
Optical resolution (90% energy)	10:1, 2:1
System accuracy[2] (at ambient temperature 23 ±5°C)	±1% or ±1,5°C[1]
Repeatability[2] (at ambient temperature 23 ±5°C)	±0.5% or ±0.5°C[1]
Temperature resolution (NETD)	0.25°C
Response time	100 ms
Emissivity/Gain (adjustable via programming keys or software)	0.100 - 1.100
Transmissivity/Gain (adjustable via programming keys or software)	0.100 - 1.100
Signal processing (parameter adjustable via programming keys or software, respectively)	peak hold, valley hold, average; extended hold function with threshold and hysteresis

[1] whichever is greater
[2] at objekt temperatures ≥ 20°C

Roorveld 1 | 6093 PL Heythuysen (NL)
T +31 (0)475 497424
E info@pedak.nl | W www.pedak.nl

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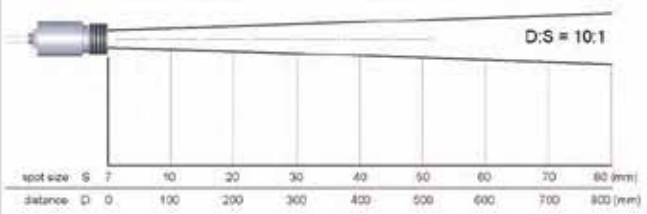
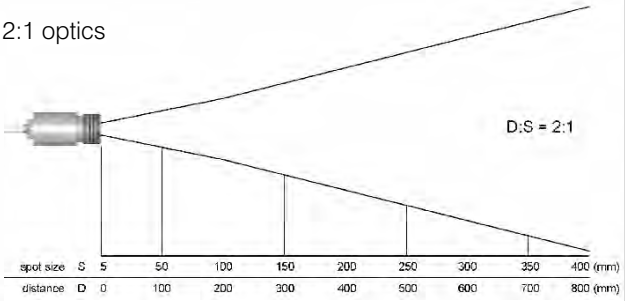
Optical specifications

10:1 optics

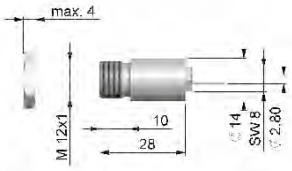


2:1 optics

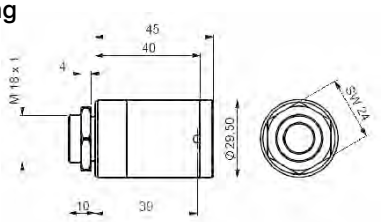


Dimensions

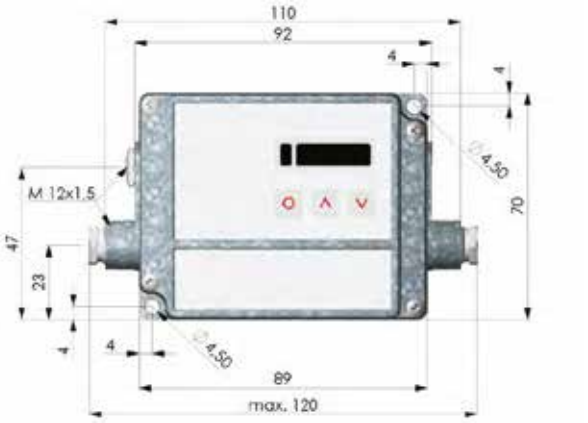
Sensing head



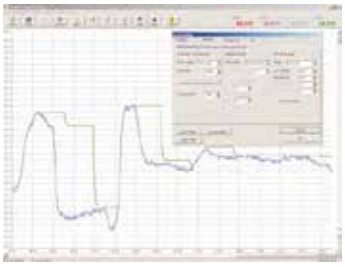
Massive housing



Electronics



CompactConnect Software



- Software for easy sensor setup and remote controlling, supports multi tasking
- Graphic display for temperature trends and automatic data logging for analysis and documentation with 1 ms response time
- Adjustment of signal processing functions and programming of outputs and functional inputs of the sensor
- Automatic emissivity adjustment
- The software CompactConnect allows to customize the sensor to application needs of the user

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