

Non-contact temperature measurement of plastic materials from 0 °C to 710 °C

Features:

- Accurate temperature measurement of thin plastic film materials like PET, PU, PTFE, PA
- Rugged and usable up to 85 °C ambient temperature without cooling
- Separate electronics with easy accessible programming keys and LCD backlit display
- Selectable analog output: 0/4–20 mA, 0–5 V, 0–10 V, thermocouple type K or J
- Optional USB, RS485, RS232 interface, relay outputs (2x optically isolated), CAN-Bus, Profibus DP, Ethernet



General specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	–20 °C ... 85 °C (sensing head) 0 °C ... 85 °C (electronics)
Storage temperature	–40 °C ... 85 °C (sensing head) –40 °C ... 85 °C (electronics)
Relative humidity	10–95 %, non condensing
Vibration (sensor)	IEC 60068-2-6 (sinus shaped) IEC 60068-2-64 (broadband noise)
Shock (sensor)	IEC 60068-2-27 (25G and 50G)
Weight	200 g (head with massive housing) 420 g (electronics)

Electrical Specifications

Outputs / analog	0/4–20 mA, 0–5/ 10 V, thermocouple J, K, alarm output
Output / alarm	24 V / 50 mA (open collector)
Optional	Relay: 2 x 60 V DC/ 42 V AC _{eff} : 0.4 A; optically isolated
Outputs / digital	USB, RS232, RS485, CAN, Profibus DP, Ethernet (optional)
Output impedances	mA max. 500 Ω (with 8–36 V DC) mV min. 100 kΩ load impedance thermocouple 20 Ω
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
Power Supply	8–36 V DC
Current draw	Max. 100 mA

Measurement specifications

Temperature range (scalable via programming keys or software)	0 °C ... 710 °C
Spectral range	7.9 μm
Optical resolution (90 % energy)	10:1
System accuracy ²⁾ (at ambient temp. 23 ±5 °C)	±1 % or ±1.5 °C ¹⁾
Repeatability (at ambient temp. 23 ±5 °C)	±0.5 % or ±0.5 °C ¹⁾
Temperature resolution (digital)	0.5 K
Exposure time (90 % signal)	150 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)	Maximal-, Minimalwerthaltung, Mittelwert, erweiterte Haltefunktionen mit Threshold und Hysterese
Software	optris Compact Connect

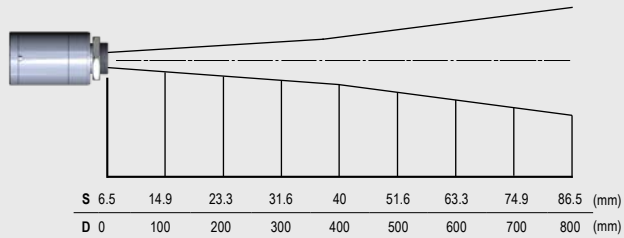
¹⁾ Whichever is greater

²⁾ At object temperatures ≥25 °C

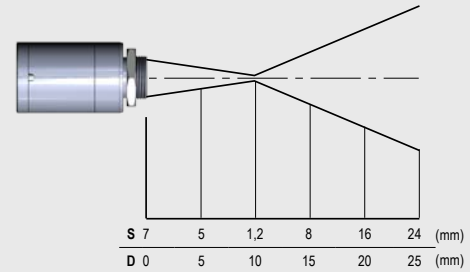
optris CT P7

Optical Specifications

Optics, D:S = 10:1

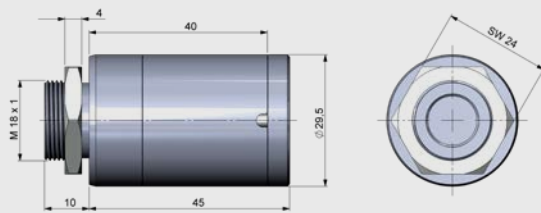


Optics with CF lens, D:S = 10:1

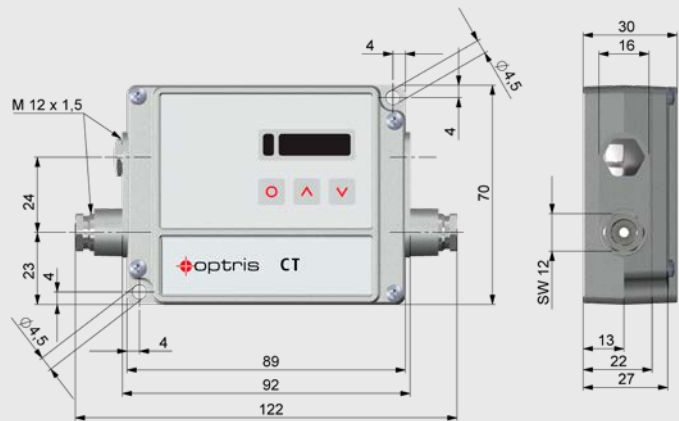


Dimensions

Dimensions massive housing incl. sensing head

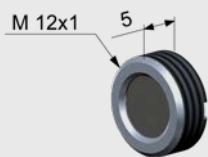


Electronics

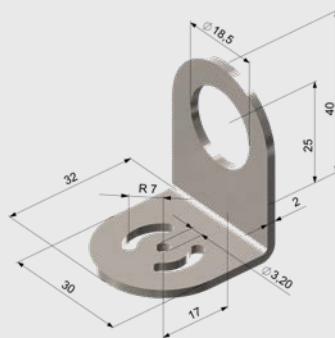


Accessories (examples)

CF-lens with external thread (ACCTCFE)



Mounting bracket, adjustable in one axis (ACCTFBMH)



Air purge collar (ACCTAPMH)

