

## optris® CT P7

Non-contact temperature measurement  
of plastic materials from 0 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 to 85°C (sensing head) 0°C to 85 (electronics)
Storage temperature	-40 to 85°C (sensing head) -40°C to 85°C (electronics)
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	200 g (head with massive housing) 420 g (electronics)

#### Electrical Specifications

Outputs/analog	0/4 - 20 mA, 0-5/10 V, thermo- couple J, K, alarm
Output/alarm	24 V/50 mA (open collector)
Optional	relay: 2 x 60 V DC/42 V AC <sub>eff</sub> ; 0.4 A; optically isolated
Outputs/digital (optional)	USB, RS232, RS485, CAN, Profibus DP, Ethernet
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	3m (standard), 8 m, 15 m
Current draw	max. 100 mA
Power Supply	8-36 V DC

#### Measurement Specifications

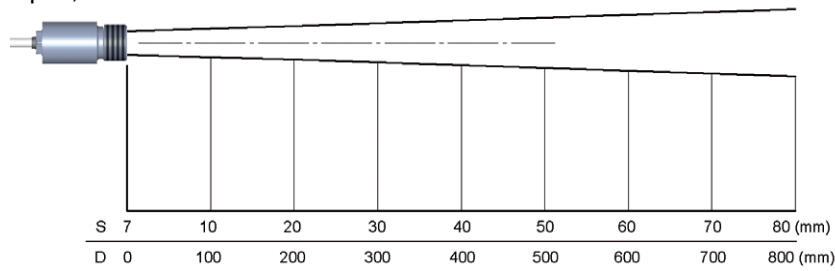
Temperature range (scalable via programming keys or software)	0°C to 710°C
Spectral ranges	7.9 μm
Optical resolution (90% energy)	10:1
System accuracy <sup>2)</sup> (at ambient temp. 23 ±5°C)	± 1% or ± 1.5°C <sup>1)</sup>
Repeatability (at ambient temp. 23 ±5°C)	± 0.5% or ± 0.5°C <sup>1)</sup>
Temperature resolution	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)	peak hold, valley hold, average; extended hold function with threshold and hysteresis
Software	optris Compact Connect

<sup>1)</sup> whichever is greater

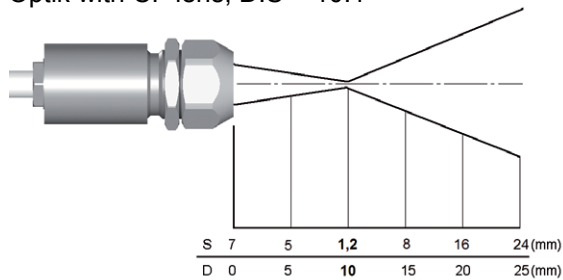
<sup>2)</sup> at object temperatures ≥ 25°C

## Optical Specifications

Optik, D:S = 10:1

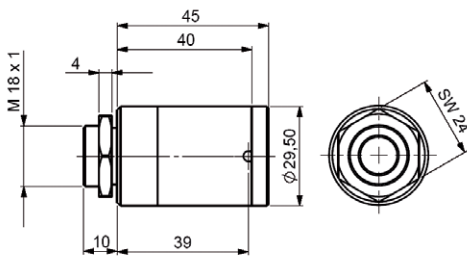


Optik with CF lens, D:S = 10:1

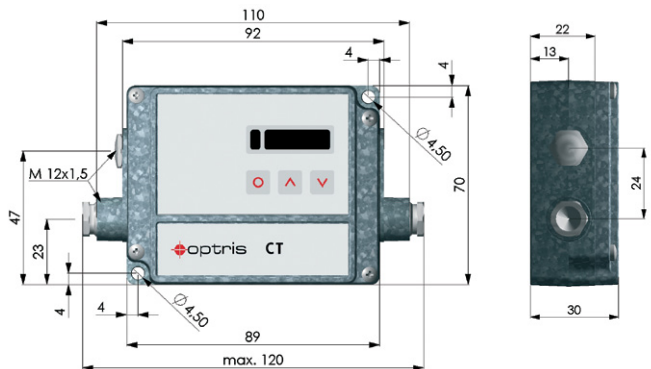


## Dimensions

Dimensions massive housing incl. sensing head

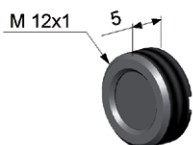


Electronics

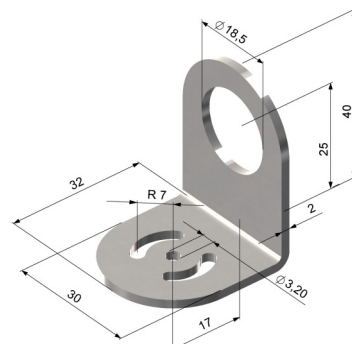


## Accessories (examples)

CF-lens with external thread (ACCTCFE)



Mounting bracket, adjustable in one axis (ACCTFBMH)



Air purge collar (ACCTAPMH)

