

**Non-contact temperature measurement of plastic materials from 0 °C to 710 °C (32 °F to 1310 °F)**

**Features:**

- Accurate temperature measurement of thin plastic film materials like PET, PU, PTFE, PA
- Rugged and usable up to 85 °C (176 °F) 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 (–4 °F ... 176 °F) (sensing head) 0 °C ... 85 °C (32 °F ... 176 °F) (electronics)
Storage temperature	–40 °C ... 85 °C (–40 °F ... 176 °F) (sensing head) –40 °C ... 85 °C (–40 °F ... 176 °F) (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 (7.1 oz) (head with massive housing) 420 g (14.8 oz) (electronics)

**Electrical Specifications**

Outputs / analog	0/4–20 mA, 0–5/10 V, thermocouple 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	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 (9.8 ft [standard], 26.2 ft, 49.2 ft)
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 (32 °F ... 1310 °F)
Spectral range	7.9 μm
Optical resolution (90 % energy)	10:1
System accuracy <sup>2)</sup> (at ambient temp. 23 ±5 °C) (73.4 ±41 °F)	±1 % or ±1.5 °C <sup>1)</sup> (±1 % or ±2.7 °F <sup>1)</sup> )
Repeatability (at ambient temp. 23 ±5 °C) (73.4 ±41 °F)	±0.5 % or ±0.5 °C <sup>1)</sup> (±0.5 % or ±0.9 °F <sup>1)</sup> )
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)	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 (77 °F)

