

# More Precision.

## optris<sup>®</sup> CT P7

Precise non-contact temperature measurement of plastic materials from 0°C to 500°C



### FEATURES

- Accurate temperature measurement of thin plastic film materials like PE, 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        | sensing head: -20 - 85°C<br>electronics: 0 - 85°C   |
| Storage temperature        | sensing head: -40 - 85°C<br>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 200 g (with massive housing)<br>electronics 420 g  |
| Electrical specifications  |   |
| Outputs/analog             | channel 1: 0/4 - 20 mA, 0 - 5/10 V, thermocouple J, K<br>channel 2: sensing head temperature (-20 - 180°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 <sub>eff</sub> ; 0.4 A; optically isolated   |
| Outputs/digital (optional) | USB, RS232, RS485, CAN, Profibus DP   |
| Output impedances          | mA max. 500 Ω (with 5 - 36 V DC)<br>mV min. 100 kΩ load impedance<br>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   |
| Current draw               | max. 100 mA   |
| Power supply               | 8 - 36 V DC   |

| Measurement specifications  |   |
|---|---|
| Temperature range (scalable via programming keys or software)                           | 0 - 500°C   |
| Spectral range  | 7,9 μm  |
| Optical resolution  | 10:1  |
| System accuracy <sup>2</sup><br>(at ambient temperature 23 ± 5°C)                       | ± 1 % or ± 1,5°C <sup>1</sup>   |
| Repeatability <sup>2</sup><br>(at ambient temperature 23 ± 5°C)                         | ± 0.5 % or ± 0.5°C <sup>1</sup>   |
| Temperature resolution (NETD)   | 0,5°C   |
| Response time   | 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 |

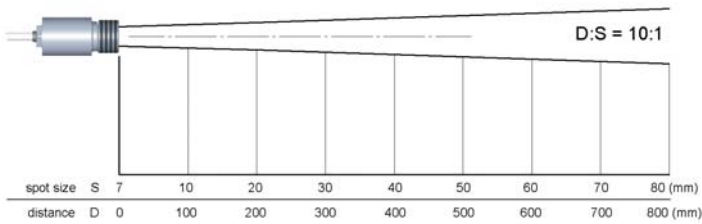
<sup>1</sup> whichever is greater

<sup>2</sup> at objekt temperatures  $\geq 25^\circ\text{C}$

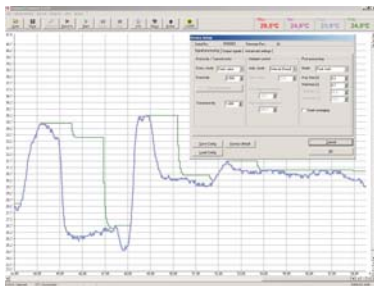
# optris® CT P7

## Optical specifications

10:1 optics



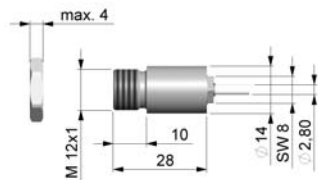
## CompactConnect Software



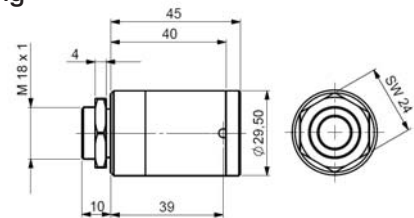
- Software for easy sensor setup and remote controlling, supports multi tasking
- Graphic display for temperature trends and automatic data logging for analysis and documentation with 1 ms response time
- Adjustment of signal processing functions and programming of outputs and functional inputs of the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

## Dimensions

### Sensing head



### Massive housing



### Electronics

