Technical Infrared Thermometer PCE-IR 10

solid infrared thermometer with LCD for continuous measurement of surface temperature of all solid materials, designed for fixed installation

The PCE-IR10 thermometer is made up of a small sensor head and a separate electrical component. The thermometer sensor is so small that it can fit in almost any space. Part from this, the device offers similar specifications as other devices. The electrical component of the PCE-IR10 facilitates the use of functions that are not normally found in a device of this quality. Among these are adjustable emissivity, minimum, maximum and average value, as well as software to programme the device via a computer or directly from the unit’s LCD. Due to its small size, this temperature tester is ideal for different systems in a production line. The device is accurate, easy to install and economical.

Measuring temperature with the PCE-IR10 non-contact temperature tester is an economical alternative to similar contact devices (additional information about the functioning principle of measuring temperature with thermometers). Also, look at this brief text about the practice of measuring temperature with infrared devices.

To get the highest precision from this device, the user can adjust the emissivity, which is different for each type of surface material being measured. If the user measures a material which is not in the table they can establish the emissivity value and adjust the temperature measured by the temperature reader.

- High temperature range of up to 600°C
- Small sensor head for use in tight spaces
- Analogue output
- USB/ RS-232/ RS-485/ relay outputs
- Operating temperature up to 180°C (sensor head); 65°C (device)
- Adjustable emissivity, minimum / maximum Hold, average value
- LCD
- Can function in a network of up to 32 sensors connected by optional RS-485
- Power of 8 to 36 VDC

Electronic parameters

Outputs analogue:
4 to 20mA, 0 to 20mA, 0 to 5V (adjustable), Type-J or K sensors

temperature sensor head 10 mV / °C
alarm relay (via software)
optional digital outputs
USB, RS-232, RS-485, relay

Inputs
emissivity, temperature compensation, trigger (by software)

Cable length
1m, other lengths can be ordered separately

Consumption
max. 100mA

Power
8 to 36 VDC

### General parameters

Ingress protection
IP65 (NEMA-4)

Operating temperature
- Sensor head -20 to 180°C

Storage conditions -40 to 85°C

Operating relative humidity 10 to 95% without condensation

EMI IEC 801-3, level 3 (maximum cable length of 3m)

Weight
Sensor head 40g
Electronic component 420g

### Technical parameters

Temperature range 40 to 600°C
Spectral range 8.0 to 14 µm

Optical resolution
15:1

Accuracy
±1% or ±1°C

Repeatability ±0.5% or ±0.5°C

Temperature coefficient ±0.05°C / °C or ±0.05% / °C

Temperature resolution 0.1°C

Response time 150ms (95%)

Emissivity 0.100 - 1.000 adjustable in digital mode, by units of 0.001

Functions maximum, minimum Hold and average value

1 90% of energy
2 at an operating temperature of 23°C ±5°C
3 shighest value is considered correct
4 ISO calibration certificate based on the / DKD measurement
5 for a temperature margin of 300K

### Delivery contents:

1 x Thermometer PCE-IR 10 with sensor