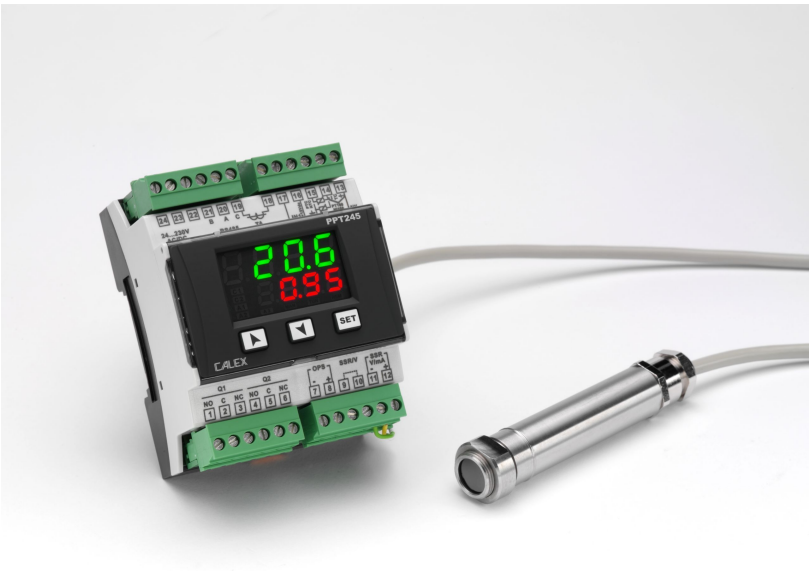

RAYOMATIC PE

8-14 µm infrared process sensor with controllable emissivity accross 4-20 mA input

IRtec Rayomatic PE infrared process sensor measures temperatures from -20°C to 500°C. It provides a 4-20 mA input for emissivity setting and a linear 4-20 mA output.

- 8 to 14 µm
- 2-wire 4-20 mA output
- 4-20 mA input to control emissivity setting from 0.2 to 1.0
- 2:1, 15:1, 30:1 and CF optics
- IP65 stainless steel housing

Description

IRtec Rayomatic PE infrared process sensor measures temperatures from -20°C to 500°C. It provides a 4-20 mA input for emissivity setting and a linear 4-20 mA output. This output signal is compatible with almost any indicator, controller, recorder, data logger etc., without the need for special interfacing or signal conditioning.

The sensor’s emissivity setting can be adjusted from 0.2 to 1.0 to cope with different target materials and is controlled by a 4-20 mA input. This gives the opportunity to adjust the emissivity setting automatically from a programmable logic controller (PLC).

Alternatively the emissivity setting can be adjusted manually using the optional DigiMax module. If the 4-20 mA input is left open or shortcircuited, the emissivity setting defaults to 0.95.

- 8 to 14 µm
- 2-wire 4-20 mA output
- 4-20 mA input to control emissivity setting from 0.2 to 1.0
- 2:1, 15:1, 30:1 and CF optics
- IP65 stainless steel housing

Specifications

Temperature measurement

Model	LT	MT	HT
Temperature range	-20 to 100°C	0 to 250°C	0 to 500°C
Spectral response	8 - 14 µm		
Emissivity	Adjustable from 0.2 to 1.0 accross 4-20 mA input		
Accuracy	±1% RDG or 1°C		
Repeatability	±0.5% RDG or 0.5°C		
Response time	240 ms (90%)		

Optics

Further features

Manual adjustment of emissivity setting	Option DigiMax: Manual emissivity adjuster
Output	2 wires, 4-20 mA

General specifications

Size L x l x h	Electronic module: Ø 18 x 103 mm Thread mounting: M16 x 1 mm
Weight	95 g with cable
Construction	Stainless steel
Power supply	24 VDC (Max 28 VDC)
Sensor voltage	6 VDC Min
Loop impedance	900 Ω Max (4-20 mA OUT)
Output impedance	56 Ω

Environmental specifications

Reference conditions	0°C to +70°C (95% non-condensing)
Environmental rating	IP65

Models and accessories

Instrument:

Ordering code structure: PE-AA-BB-CC-D/MAN

Please select the required options from tables A, B... below to define the right device reference.

PE	**Rayomatic PE**

Delivered in standard with:

- Instruction manual

Table AA	**Optics - Distance to target**
2	Optics 2:1, 61.9 mm @ 100 mm
15	Optics 15:1, 45.2 mm @ 500 mm
30	Optics 30:1, 28.6 mm @ 500 mm
CF	Close focus lens, 5 mm @ 100 mm

Table BB	**Temperature range**
LT	-20°C to 100°C
MT	0 to 250°C
HT	0 to 500°C (not for 2:1 optics)

Table CC	**Accessories**
NO	None
WJ	Air / Water cooled jacket and air purge collar

Table D	**Certificat d'étalonnage**
0	None
1	Factory traceable calibration certificate with data

Accessories:

DIGIMAX PE	Emissivity adjuster, 24 V DC input, 4-20 mA output
FBS	Fixed mounting bracket for compact sensors
ABS	Adjustable mounting bracket for compact sensors
APSW	Air purge collar for compact 2:1 sensors
APSN	Air purge collar for compact 15:1, 30:1 and close-focus sensors
PWS	Protective plastic window in stainless steel holder

LSTS	Laser sighting tool for compact sensors
DLSBFS	Dual laser sighting bracket, fixed, for compact sensors
DLSBAS	Dual laser sighting bracket, adjustable, for compact sensors
DLSBCE	Extended cable for Dual Laser Sighting Bracket - 1 m
LSTS	Laser sighting tool for compact sensors
PECE	Extended cable for uncooled RAYOMATIC PE sensor, 1 m, up to 29 m extension
PECEHT	Extended cable, high temperature, for cooled RAYOMATIC PE sensor, 1 m, up to 29 m extension
CALCERT A	Calibration certificate
CALCERT B	Re-calibration and certificate