



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

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|--|--|
| | |
| | |

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 |