E INSTRUMENTS GROUP, LLC

IR*tec* Rayomatic 4

Mini Infrared Temperature Sensor

INFRARED THERMOMETERS

- Low Cost
- Miniaturized Ø18 x 129 mm
- Temperature Range up to 500°C
- Linear mV or TC J/K Analog Output
- Powered by 12-24 Vdc @20 mA
- IP65 (NEMA 4)
- Easy Installation and Wiring

Eurotron Instruments ISO 9001 Certified Quality System

CE

All descriptions are related to a fully optioned instrument. See last page for the different configurations.

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INFRARED THERMOMETERS

IR*tec* Rayomatic 4

IR Compact Transmitter

Introduction

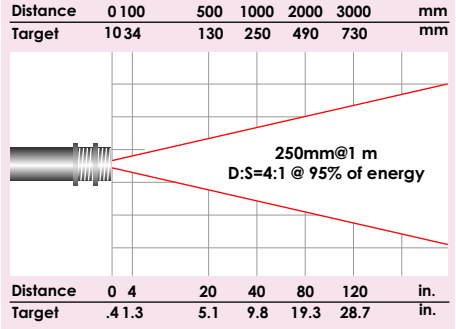
IR*tec* Rayomatic 4 low cost infrared temperature sensor represents the ideal solution to replace traditional J-type or K-type thermocouples with the advantage of non-contact measurement. It is available with your choice of thermocouple or millivolt signal outputs. The output impedance as a thermocouple does not create any problem of connection to any device (indicator, controller and recorder) also with "open TC" test active. Rayomatic 4 microcontroller allows very accurate and linear measurements. The sensor is automatically temperature compensated using a built-in Pt100 sensor. The sensor with 0-5V (mV/°) output can be used for easy PLC or control system connection and allows long distance cable minimizing noise and error. Standard integration with 4-wire connection.

Applications

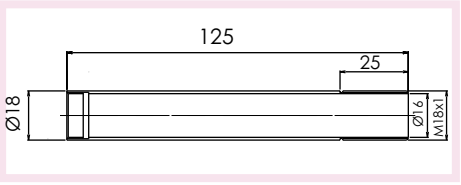
Infrared thermometers measure the object surface temperature without touching it. They calculate the surface temperature on the basis of the emitted infrared radiation from an object. The most important feature of infrared thermometers is that they enable the user to measure objects contact less. Consequently, these products help to measure the temperature of inaccessible or moving objects without difficulties.
Infrared **IR*tec* Rayomatic 4** temperature sensor can be used in multiple locations to detect hot spots on moving material. Product can be used on dryers, conveyor belts, webs, and in thermoforming operations to sense temperature variation.
The sensor is suited for plastics, rubber, wood, paper, textile, glass and ceramic, paint, varnish, asphalt, and food applications. Low Cost , High Performance, Non-contact Infrared Temperature Sensor Ideal for OEMs.

Report of Calibration

IR*tec* Rayomatic is delivered, on request, with a traceable to the International Standards, Report of Calibration stating the nominal and actual values and the deviation errors.



Body Scheme



Accessories

EE290109	Air cooling jacket with air purge system
EE290108	Water cooling jacket
EE290106	90° adjustable mounting adapter
EE290110	2 axis adjustable mounting adapter
EE290114	3 axis adjustable mounting adapter
EE290115	Standard air purge device
EE290105	Radial air purge device (does not cool the target)

Specifications

Spectral band:
8-14 mm

Optical resolution:
4:1 (250mm@1000mm)

Response time:
350 ms (t95)

Emissivity:
Pre-set to 0.95. Special on request

Working temperature:
-10 to +70°C / 10-95% RH non condensing
up to 90°C with air cooling

up to 200°C with water cooling

Environmental rating:
IP65 (NEMA-4) Aluminium housing (stailess steel on request)

Temperature Stability:
Zero = 300ppm/°C - Span =200ppm/°C

Accuracy:
±2% of rdg. or ±2°C
Relative accuracy data are stated with operative conditions +23°C ±5°C and emissivity = 1.0

Repeatability:
±1% of rdg. or ±1°C

Temperature resolution:
0.1°C/°F

Power supply:
12 ... 24 Vdc (<2.5% ripple @20mA)

Output impedance:
50Ω

Load impedance:
50kΩ

Storage temperature:
-30°C to +70°C / 10-95% RH non condensing

Dimensions and weight:
ϕ18 mm x 129 mm Thread M18x1 - 90 g net

Ordering Code

Code	Model
1155-810	**IR*tec* Rayomatic 4**, two mounting nuts, 1 mt of shielded cable and instruction manual.

Table A — Range

1	0 to 120°C
2	0 to 300°C
3	0 to 500°C
9	Special on request

Table B — Sensor Range - Available Signal Output

1	10 mV/°C or 0-5V (*scaling 0-500°C*)
2	J-type Thermocouple
3	K-type Thermocouple

Table C — Electrical Connection

1	1mt. long shielded cable (max. 105°C)
2	8mt. long shielded cable (max. 105°C)
3	8mt. long high temperature shielded cable (max. 200°C)
9	Special on request

Table D — Report of Calibration

0	none
1	NIST / EA traceable with

1155-810 - 1 - 2 - 1 - 0 *Typical ordering code*

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