



IRtec Rayomatic 4



Mini Infrared Temperature Sensor

Bulletin 02-03.1 E



Low Cost

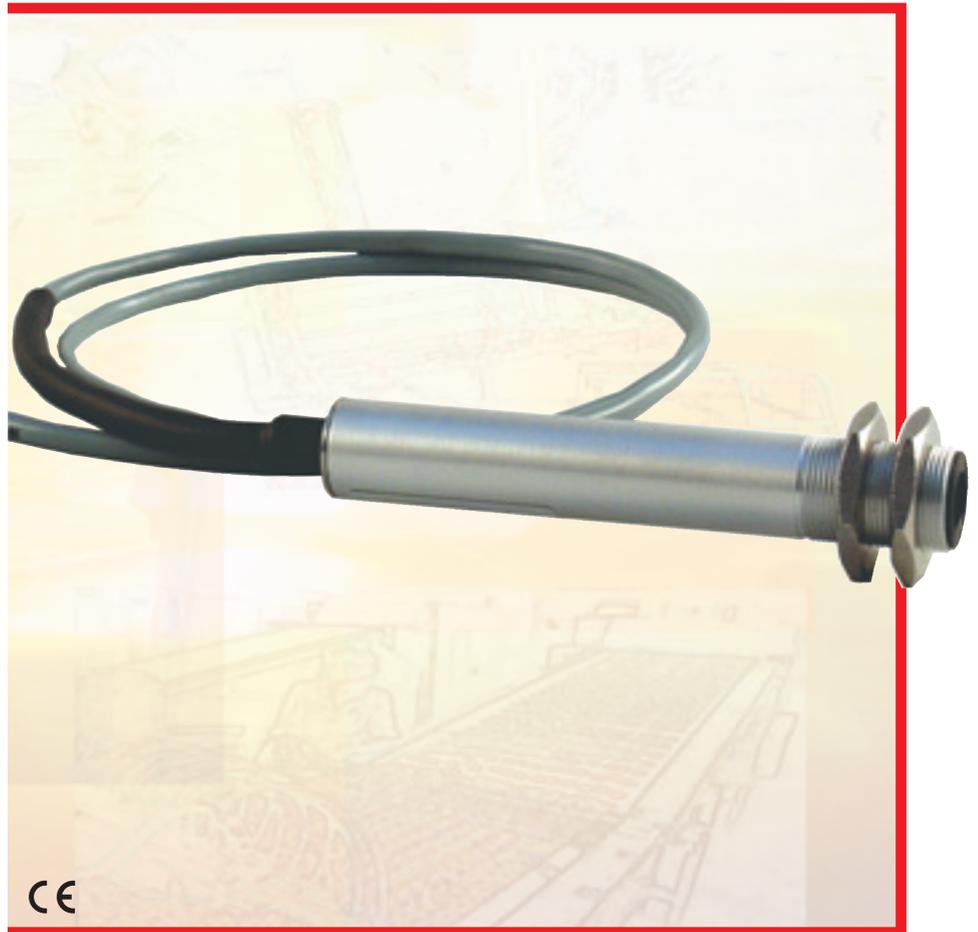
Temperature Range up to 500°C

Linear mV or TC J/K Analog Output

Powered by 12-24 Vdc @20 mA

IP65 (NEMA 4)

Easy Installation and Wiring



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

IRtec 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.



IRtec Rayomatic 4 IR Compact Transmitter

Specifications

Ordering Code

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 **IRtec 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.

New Low Cost , High Performance
Non-contact Infrared Temperature
Sensor Ideal for OEMs

Report of Calibration

IRtec 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.

- **Spectral band:** 8-14 μm
- **Optical resolution:** 4:1 (250mm@1000mm)
- **Response time:** 350 ms (t95)
- **Emissivity:** Pre-set to 0.95. Special on request at ordering.
- **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 (stainless steel on request)
- **Temperature Stability:** Zero = 300ppm/°C - Span =200ppm/°C
- **Accuracy:** $\pm 2\%$ of rdg. or $\pm 2^\circ\text{C}$
Relative accuracy data are stated with operative conditions +23°C $\pm 5^\circ\text{C}$ and emissivity = 1.0
- **Repeatability:** $\pm 1\%$ of rdg. or $\pm 1^\circ\text{C}$
- **Temperature resolution:** 0.1°C/°F
- **Power supply:** 12 or 24 Vdc (<2.5% ripple @20mA)
- **Output impedance:** 50 Ω
- **Load impedance:** > 50k Ω
- **Storage temperature:** -30°C to +70°C / 10-95% RH non condensing
- **Dimensions and weight:** $\phi 18$ mm x 129 mm Thread M18x1 - 90 g nett

Cat. 1155 - 810 - A - B - C - D

Each thermometer includes: two mounting nuts, 1 mt of shielded cable and instruction manual.

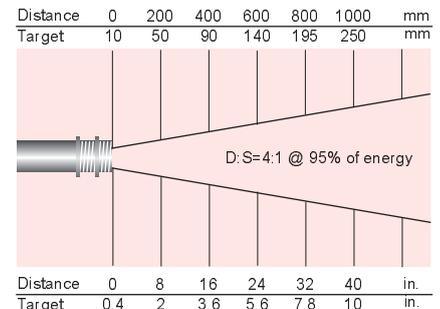
Table A	Range
1	0 to 120°C
2	0 to 300°C
3	0 to 500°C
9	Special on request

Table B	Signal Output
1	10 mV/°C or 0-5V*
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 data

* scaling 0-500°C



Specifications may change without notice.



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