



8-14 µm compact infrared sensor with dual target T° & internal T° outputs



IRtec Rayomatic TC is a high quality, low cost, compact infrared sensor which measures the temperature of inaccessible or moving objects and materials. The temperature of targets from -20°C to 500°C is accurately and consistently measured, with an outstanding response time of 240 ms.

- 8 to 14 µm
- 2-wire 4-20 mA / 4-wire voltage / 4-wire Tc J, K or T outputs / 4-wire voltage low consumption
- Built-in temperature sensor for 4-wire models
- Emissivity fixed at 0.95
- 2:1, 15:1, 30:1 and CF optics
- IP65 stainless steel housing

Description

IRtec Rayomatic TC is a high quality, low cost, compact infrared sensor which measures the temperature of inaccessible or moving objects and materials. The temperature of targets from -20°C to 500°C is accurately and consistently measured, with an outstanding response time of 240 ms.

Two-wire models transmit the target temperature as a 4-20 mA output and offer a simple solution for most non-contact temperature measurement applications.

Four-wire models transmit the target temperature as a 0-50 mV or thermocouple output (type J, K or T) plus the internal sensor temperature as a 4-20 mA output. This 2nd output can be used to ensure that the sensor is being operated within the correct ambient temperature limits and prevent damage caused by overheating or overcooling. It can also be used to give an approximate indication of the air temperature surrounding the sensor.

The new 4-wire model with 0-50 mV output has an extremely low 3.2 mA current consumption, so it is ideal for maximum battery life in battery-powered applications.

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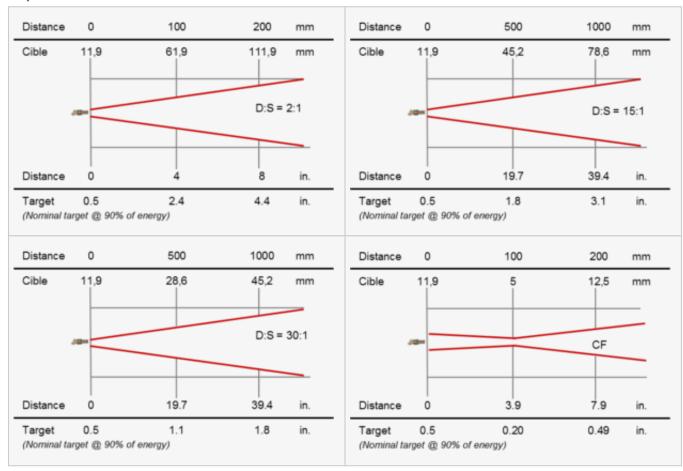


Specifications

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	Fixed at 0.95		
Accuracy	±1% RDG or 1°C		
Repeatability	±0.5% RDG or 0.5°C		
Response time	240 ms (90%)		

Optics



Further features

Outputs	2 wires, 4-20 mA
	4 wires, 0-50 mV (target T°), 4-20 mA (sensor T°)



4 wires, 10 K (target T), 4-20 find (sensor T) 4 wires, 0-50 mV (target T°), low consumption		4 wires, Tc T (target T°), 4-20 mA (sensor T°) 4 wires, Tc J (target T°), 4-20 mA (sensor T°) 4 wires, Tc K (target T°), 4-20 mA (sensor T°) 4 wires, 0-50 mV (target T°), low consumption
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General specifications

Size L x I 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 (mV / Tc OUT)

Environmental specifications

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



Models and accessories

Instrument:

Ordering code structure: TC-AA-BB-C-DD-E/MAN

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

TC Rayomatic TC Delivered in standard with:

• Instruction manual in English

 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 C Output signal

0 2 wires, 4-20 mA

1 4 wires, 0-50 mV (target T°), 4-20 mA (sensor T°)

2 4 wires, Tc T (target T°), 4-20 mA (sensor T°)

3 4 wires, Tc J (target T°), 4-20 mA (sensor T°)

4 4 wires, Tc K (target T°), 4-20 mA (sensor T°)

5 4 wires, 0-50 mV (target T°), low current consumption, for battery-powered

applications

Table DD Accessories

NO None

WJ Air / Water cooled jacket and air purge collar

Table E Certificat d'étalonnage

0 None

1 Factory traceable calibration certificate with data

Accessories:

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 (8-14 µm model only)

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 - Price for 1 m

PCCE Extended cable for uncooled RAYOMATIC TC sensor, option 0 - 1 m, up to 29 m

extension

PCCEV Extended cable for uncooled RAYOMATIC TC sensor, option 1 - 1 m, up to 29 m

extension

PCCET Extended cable for uncooled RAYOMATIC TC sensor, option 2 - 1 m, up to 29 m

extension

PCCEJK Extended cable for uncooled RAYOMATIC TC sensor, option 3 and 4 - 1 m, up to

29 m extension

PCCEHT Extended cable, high temperature, for cooled RAYOMATIC TC sensor, option 0 - 1

m, up to 29 m extension

PCCEHTJ Extended cable, high temperature, for cooled RAYOMATIC TC sensor, option 3 - 1

m, up to 29 m extension

PCCEHTK Extended cable, high temperature, for cooled RAYOMATIC TC sensor, option 4 - 1

m, up to 29 m extension

CALCERT A Calibration certificate

CALCERT B Re-calibration and certificate