

RAYOMATIC NET

Compact 8-14 µm process infrared sensor with RS485 Modbus interface

IRtec Rayomatic NET is a high quality, low cost, compact process infrared sensor which measures temperatures from -20°C to 500°C, accurately and consistently, with an outstanding response time of 240 ms.

A built-in RS485 RTU Modbus interface enables the user to configure the instrument.

- 8 to 14 µm
- Built-in RS485 Modbus RTU interface
- Touch screen terminal for configuration, indication, alarm generation and data logging
- Emissivity adjustable from 0.2 to 1.0
- MIN / MAX / AVG / instantaneous reading, pick and valley hold
- 2:1, 15:1, 30:1 and CF optics
- IP65 stainless steel housing

Description

IRtec Rayomatic NET is a range of high quality, low cost, compact sensors which measure the temperature of inaccessible or moving objects and materials. They measure temperatures from -20°C to 500°C, accurately and consistently, with an outstanding response time of 240 ms.

Two-way digital communications via a built-in RS485 Modbus RTU interface enables the user to adjust the emissivity setting; compensate for reflected energy; apply filtering; select maximum, minimum, average or instantaneous readings; and peak or valley hold processing.

Up to thirty two sensors can be installed on a single multidrop network.

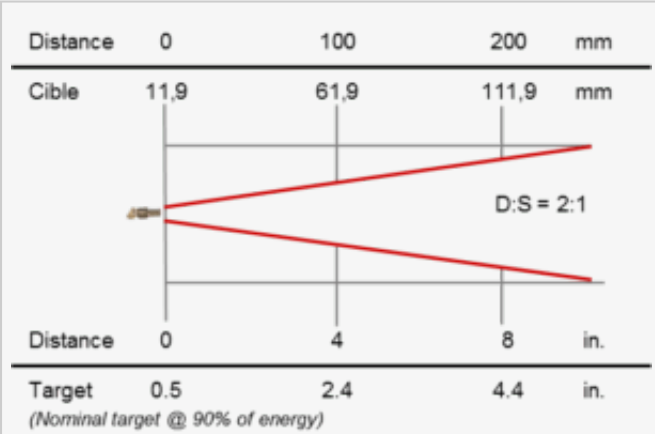
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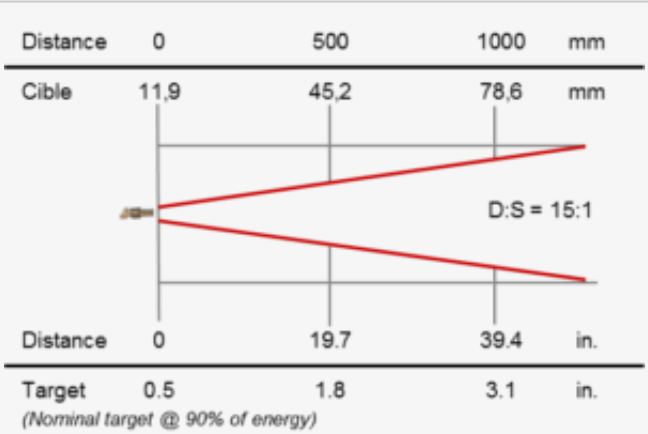
Specifications

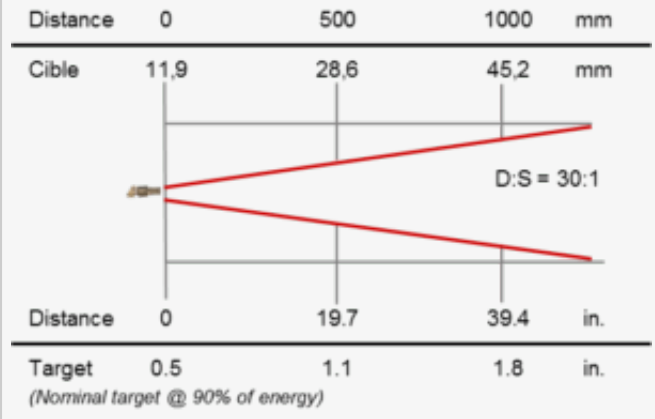
Infrared temperature measurement

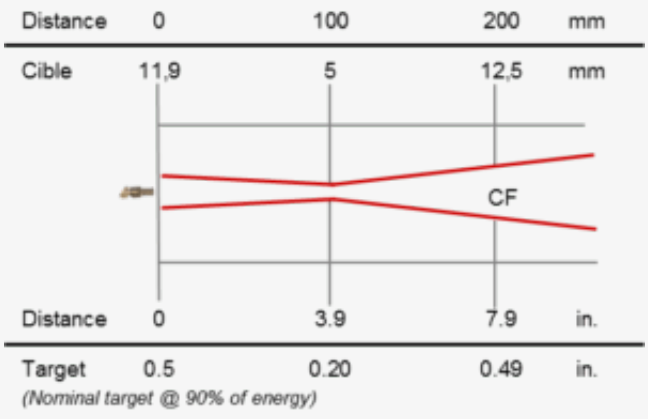
Model	LT	MT	HT
Temperature range	-20 to 100°C	0 to 250°C	0 to 500°C
Spectral response	8 - 14 µm		
Emissivity	Adjustable from 0.2 to 1.0		
Accuracy	±1% RDG or 1°C		
Repeatability	±0.5% RDG or 0.5°C		
Response time	240 ms (90%)		

Optics









Further features

Multisensor network	Up to 32 sensors on a single network
Modbus interface	Adjustment of emissivity setting,

	compensation for reflected energy, filtering application, selection of maximum, minimum, average or instantaneous readings and peak or valley hold processing

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	12 VDC (6-13 VDC), 50 mA max
Interface	RS485 Modbus RTU Baud rate: 9600° Format: 8 bits, no parity, 1 stop bit (further formats upon request)

Environmental specifications

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

Models and accessories

Instrument:

Ordering code structure: NET-AA-BB-C/MAN
Please select the required options from tables A, B... below to define the right device reference.
NET Rayomatic NET
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	**Accessories**
NO	None
WJ	Air / Water cooled jacket and air purge collar
Table C	**Calibration certificate**
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
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
PBCE	Extended cable for uncooled RAYOMATIC NET sensor, 1 m, up to 29 m extension
PBCEHT	Extended cable, high temperature, for cooled RAYOMATIC NET sensor, 1 m, up to 29 m extension
CALCERT A	Calibration certificate
CALCERT B	Re-calibration and certificate
MBAC	Change of Modbus address in factory (Sensors are supplied with Modbus address 1 as standard). Please specify the required Modbus address for each sensor at the time of ordering.
MSD	2 Gb MicroSD card for Digimax 180, with SD card adapter
Digimax 180	6-channel touch screen hub
Digimax 240	Panel-mount touch screen terminal for up to 8 NET sensors
Digimax 240E	Panel-mount touch screen terminal for up to 8 NET sensors. Includes four analogue outputs (0 to 10 V DC) and sixteen alarm outputs