



## Rayomatic NET

Compact 8-14  $\mu\text{m}$  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  $\mu\text{m}$
- 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.**

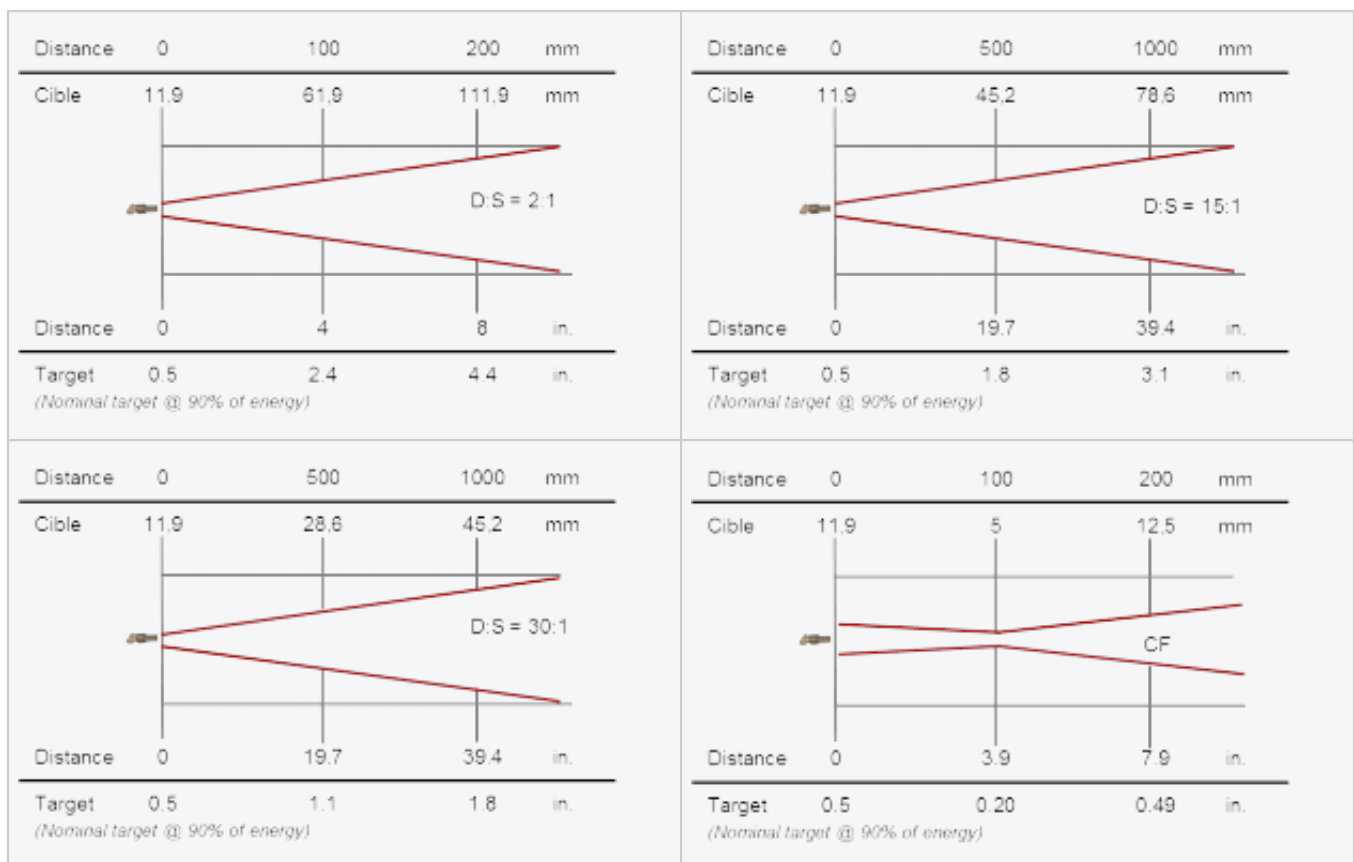
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# Specifications

## 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
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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
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## 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

<b>Table AA</b>	<b>Optics - Distance to target</b>	<b>2</b>	<b>Optics 2:1, 61.9 mm @</b>
<b>100 mm</b>	<b>15</b>	<b>Optics 15:1, 45.2 mm @</b>	<b>500 mm</b>
<b>30</b>	<b>Optics 30:1, 28.6 mm @</b>	<b>500 mm</b>	<b>CF</b>
<b>focus lens, 5 mm @</b>	<b>100 mm</b>	<b>Table BB</b>	<b>Accessories</b>
<b>WJ</b>	<b>Air / Water cooled jacket and air purge collar</b>	<b>NO</b>	<b>Close</b>
<b>Table C</b>	<b>Calibration certificate</b>	<b>0</b>	<b>None</b>
<b>Factory traceable calibration certificate with data</b>		<b>None</b>	<b>1</b>

## Accessories:

<b>FBS</b>	<b>Fixed mounting bracket for compact sensors</b>
<b>ABS</b>	<b>Adjustable mounting bracket for compact sensors</b>
<b>APSW</b>	<b>Air purge collar for compact 2:1 sensors</b>
<b>APSN</b>	<b>Air purge collar for compact 15:1, 30:1 and close-focus sensors</b>
<b>PWS</b>	<b>Protective plastic window in stainless steel holder</b>
<b>LSTS</b>	<b>Laser sighting tool for compact sensors</b>
<b>DLSBFS</b>	<b>Dual laser sighting bracket, fixed, for compact sensors</b>
<b>DLSBAS</b>	<b>Dual laser sighting bracket, adjustable, for compact sensors</b>
<b>DLSBCE</b>	<b>Extended cable for Dual Laser Sighting Bracket - Price for 1 m</b>
<b>PBCE</b>	<b>Extended cable for uncooled RAYOMATIC NET sensor, 1 m, up to 29 m extension</b>
<b>PBCEHT</b>	<b>Extended cable, high temperature, for cooled RAYOMATIC NET sensor, 1 m, up to 29 m extension</b>
<b>CALCERT A</b>	<b>Calibration certificate</b>
<b>CALCERT B</b>	<b>Re-calibration and certificate</b>
<b>MBAC</b>	<b>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.</b>
<b>MSD</b>	<b>2 Gb MicroSD card for Digimax 180, with SD card</b>

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