



IRtec Rayomatic 14



Split Digital Infrared Temperature Sensor

Bulletin 02-08.1 E



Miniaturized head M12x1

Head working temperature up to 180°C without cooling

Temperature range up to 900°C

2:1 and 20:1 optics

LCD isplay with 3 colour backlite for easy alarm status ID

Configurable output mV, V, mA, Tc J/K

Adjustable emissivity, response time and signal processing with built-in programming keys

RS232, RS485, USB and IRSetup Windows™ software



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

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.

As the infrared sensor Eurotron **IRtec**

Rayomatic 14 consists of two pieces (miniature sensing head with separate electronics) it can easily be installed in a variety of applications, especially if industrial environment requires space-saving installation. The stainless steel sensing head as well as the teflon-coated cable are standard equipment for ambient temperatures up to 180 °C. The labeling of each sensing head with the according calibrating code allows the exchange of head or electronic

box without additional calibration. The electronic board of the **IRtec Rayomatic 14** is mounted inside a rugged die casting box. Various analogue outputs (0/4...20 mA, 0...10 V, J-type or K-type thermocouple) and optional digital interfaces (USB, RS232, RS485) are available. Easy accessible programming keys and a back-lit LCD display permits a Smart Panel-Operation to set and adjust essential parameters on-site.



IRtec Rayomatic 14 IR Compact Transmitter

Ordering Code

Specifications

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.

RS232 & Software

Optional RS232 PC internal adapter and **IRSetup** software allows to configure most important parameters: emissivity, measuring range, average, peak-hold, valley-hold. The **LogMan** data logger software can store measurements with programmable time intervals. Graphic trend is shown on real time and the data can be printed and saved on hard-disk with Excel™ file format.

Cat. 1158 - A - B - C - D

Each thermometer includes: head mounting nut and instruction manual.

Table A	Optics / Ranges
814-1	2:1 / -40+600°C
814-2	20:1 / -40-+900°C
814-9	Special on request

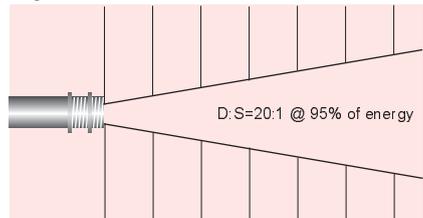
Table B	Head cable
1	with lenght 1 mt
2	with lenght 3 mt
5	with lenght 15 mt
9	Special on request

Table C	Option
0	None
1	RS232 interface + IRSetup software
2	RS485 interface + IRSetup software
3	USB interface + IRSetup software
5	Relais interface
9	Special on request

Table D	Report of Calibration
0	None
1	Eurotron NIST or EA traceable certificate with data

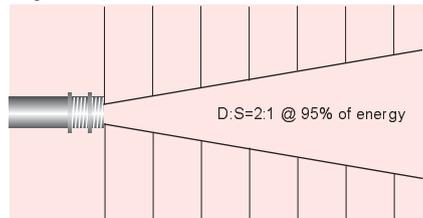
Spectral range: 8 to 14 μ m
 Response time: 150 ms (95 %)
 Accuracy: ± 1 % or ± 1 °C whichever is greater (T > -20 °C; ambient temperature +23 °C ± 5 °C)
 Repeatability: $\pm 0,5$ % or $\pm 0,5$ °C whichever is greater
 Temperature Coefficient: $\pm 0,05$ %/ K or $\pm 0,05$ K/ K whichever is greater
 Signal processing: peak hold, valley hold, average
 Emissivity: 0.100 to 1.100 (manual or digital adjustable)
 Transmission: 0.100 to 1.100 (manual or digital adjustable)
 Power supply: 8 VDC to 36 VDC
 Current draw: max. 100 mA
 Outputs/ analog:
Object temperature: 0 to 20 mA or 4 to 20 mA or 0 to 5 V or 0 to 10 V or thermocouple type J or K
Head temperature: 0 to 5 V or 0 to 10 V; 10 mV/ K or alarm output
Relais: 2 x 60 VDC/AC, 0,4 A; optically isolated (optional module)
 Output impedances:
mA max. loop resistance 500 Ω (at 8 -36 VDC),
mV min. 100 K Ω load impedance
Thermocouple 20 Ω
 Functional inputs F1 F3; software programmable for the following functions: external emissivity adjustment, ambient temperature compensation, trigger
 Digital interface: USB, RS232, RS485 (optional modules)
 Environmental rating: IP65 (NEMA-4)
 Ambient temperature:
Sensing head: 0 to 180 °C (20:1 head)
Sensing head: 0 to 130 °C (2:1 head)
Electronic box: 0 to 65 °C
 Storage temperature:
Sensing head: -40 to 85 °C
Electronic box: -40 to 85 °C
 Relative humidity: 10 to 95 %, non condensing
 Dimensions:
Sensing head: $\phi 28$ mm x 14 mm (M12x1)
Electronic box: 89 mm x 70 mm x 30 mm
 Weights:
Sensing head: 40 g
Electronic box: 420 g

Distance	0	200	400	600	800	1000	mm
Target	5	10	20	30	40	50	mm



Distance	0	8	16	24	32	40	in
Target	0.2	0.4	0.8	1.2	1.6	2	in

Distance	0	200	400	600	800	1000	mm
Target	5	100	200	300	400	500	mm



Distance	0	8	16	24	32	40	in
Target	0.2	4	8	12	16	20	in

ACCESSORIES

EE290148	Standard air purge
EE290151	Laminar flow air purge (for severe applications)
EE290147	90° square mounting bracket
EE290149	2D adjustable mounting bracket
EE290150	3D adjustable mounting bracket
EE360124	Close Focus lens
EE290154	Laminar flow air purge with Close Focus lens

BB260196 Rayomatic 14 LogMan software

