



RAYOMATIC 60

Fiber optic process infrared
thermometer up to 2000°C

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It is equipped with a miniature optical head and separate electronics connected by a flexible fibre optic cable. The sensing head and the optic fiber resist ambient temperatures up to 200°C.

Description

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The emissivity can be adjusted from 0.30 to 1.00 either manually through a selector switch on the back panel of the electronics or digitally through the serial communication interface.

Five different interchangeable optical adapters are available to provide different target/distance vision cones. The sensing head can be connected and disconnected from the process using a fast connection system. It allows rapid installation and maintenance of the measuring system.

An optional built-in laser can be added to the electronic module and the spot is projected by the optical head for target alignment. The laser can be remotely activated or deactivated.

The instrument includes signal processing features: Emissivity, peak-picker, valley-picker, peak hold, valley hold and averaging. All of them are adjustable using IRSetup PC software.

Key features of RAYOMATIC 60:

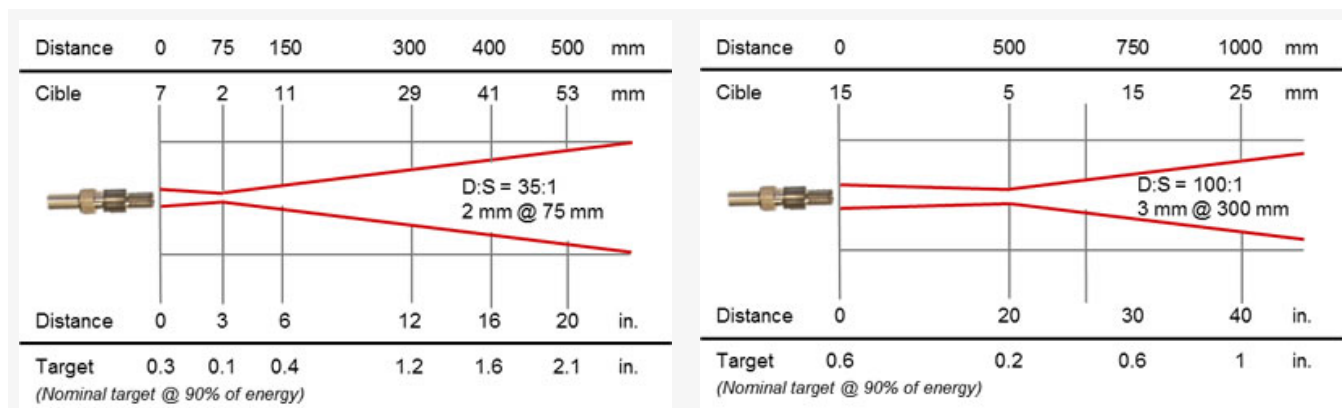
- Optical heads resist ambient temperatures up to 200°C
- Emissivity adjustable by PC or manually
- Advanced signal processing: Emissivity, peak-picker, valley-picker, peak hold, valley hold and averaging
- Optional laser pointing system

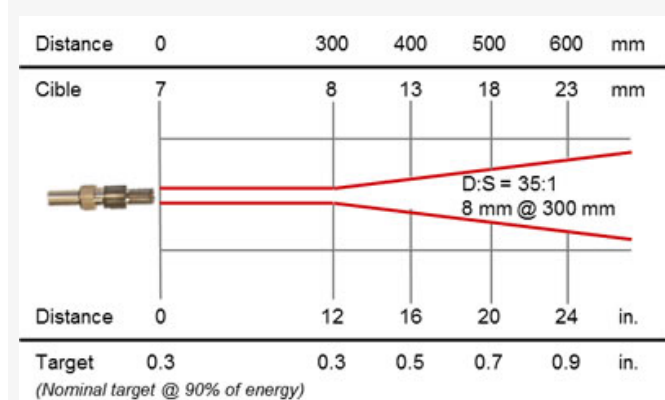
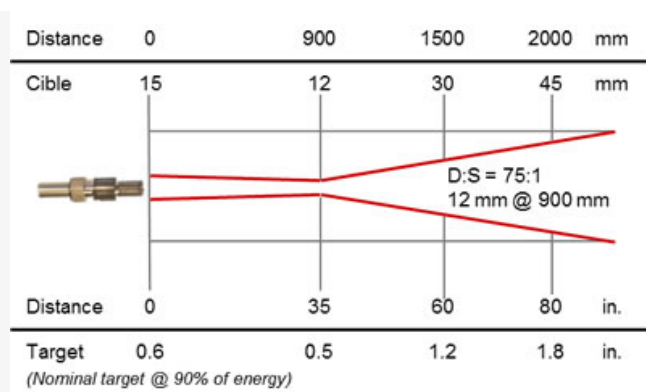
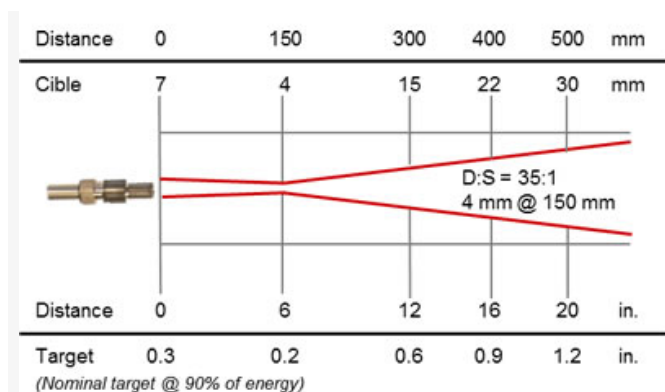
Specifications

Infrared temperature measurement

Models	100-1	100-2	160-1
Temperature range	600 to 1600°C	800 to 2000°C	300 to 1300°C
Spectral response	0.9 µm	0.9 µm	1.6 µm
Emissivity	Adjustable from 0.30 to 1.00 in 0.01 steps		
Accuracy	±0.5% RDG + 1°C		
Stability	< 0.05% RDG/°C beyond nominal range		
Repeatability	±0.25 % RDG		
Response time	Adjustable by PC from 28 ms to 10 s		
Ambient working temperature	Optical head and optic fiber: 200°C max Electronic module: From -20 to 60°C		

Optics





Further features

Calculation functions	Average, max, min, diff, ambient temperature compensation
Laser	Red pointing laser
Digital communication	Superimposed digital signal to 4-20 mA
Output	4-20 mA 2-wire current loop – max load 700 W

General specifications

Size	Electronic module: 45 mm diameter x 200 mm - Threaded M44x1.5 Optical head: 16 x 52 mm - Fast Lock 30 x 94 mm - Threaded M30x1
Weight of electronic module	0.8 kg
Display resolution	1°C / °F / K
Power supply	12 to 32 VDC
Interfaces	RS 232

Environmental specifications

Reference conditions	From 15°C to +35°C
Storage conditions	From -30°C to +70°C
IP protection	IP 65

Models and accessories

Instruments:

Ordering code structure: 1110 - A - B - C - D - E - F - G / X

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

1110 IRtec RAYOMATIC 60

Delivered in standard with:

- User manual
- Factory traceable calibration report

Table A - Range - Optics

100-1	+600 to +1600°C (1100 to 2900°F)
100-2	+800 to +2000°C (1470 to 3630°F)
160-1	+300 to +1300°C (570 to 2370°F)

Table B - Output signal

2	Linear 4-20 mA with smart digital communication
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Table C - Optic fibre length

1	1 m
2	3.5 m
3	6 m
4	8 m
9	Special length upon request

Table D - Target / Distance

1	f 2 mm at 75 mm - fast lock
2	f 4 mm at 150 mm - fast lock
3	f 8 mm at 300 mm - fast lock
4	f 5 mm at 500 mm - threaded
5	f 12 mm at 900 mm - threaded
9	Special optics upon request

Table E - Options

0	None
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1 Red laser built-in pointer

Table F - 4-20 mA connection cable

1 2 m long shielded cable

2 8 m long shielded cable

9 Special length upon request

Table G - Calibration report

1 Factory traceable calibration report

Table X - Personal settings

ENG English instruction manual

FRA French instruction manual

Accessories:

Air Purge and Miscellaneous

EE290011 Compact purge air device for screw type optics

EE290012 Air purge device for screw type optic

EE280315 DN100 1" 1/2 adapter flange for EE290075 M44x1.5 + Window holder

EE290046 Air purge as EE290012 for fast lock fibre optics

EE290049 Monoblock fibre optic fast lock + air purge

EE290052 Fast lock adaptor for screw type optic head w.f.

EE290059 Air purge dev. for fibre optic head f=500/900 M30

EE290060 Air purge as EE290011 device for fast lock optics

Flange

EE280115 AISI304 - from 1" 1/2 to 1" 1/2 flange without holes

EE280223 AISI304 - from 1" 1/2 to 3/4" flange

EE280282 AISI304 - from 1" 1/2 to 1" 1/2 flange BSPP

EE280292 AISI304 - from 1" 1/2 to 1 " 1/4 flange

EE280277 Flange adaptator ZK/TK

Sighting Tube

EE280059 AISI304 1" 1/2 L=450 mm sighting tube

EE280278 AISI304 1" 1/2 L=600 mm 1" 1/2 sighting tube

EE280280 AISI304 L=300 mm 3/4" sighting tube

EE280281 AISI304 L=150 mm 3/4" sighting tube

Other accessories

BB260195 IRsetup configuration software

BB530200 Bell202 / RS 232 adapter + 24 Vdc P.S.

EE280121 AISI 310 SG tube adapter

EE280219 Quick connection adaptor for screw type optic

EE280224 Flanged disk for quick connection system

EE280487 Electronics mounting support

EE290073 Optic head mounting support

BB260196 Configuration + data logging software IRLogMan

Packing information:

Size

Electronics 45 mm diameter x 200 mm

Fast lock optical head 16 x 52 mm

Threaded optical head 30 x 94 mm

Weight electronic module 0.8 kg