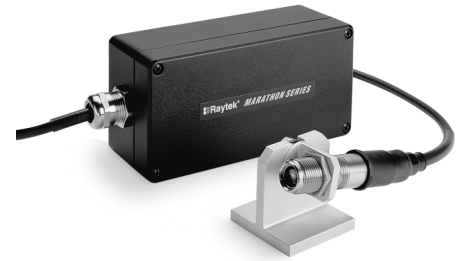


Highlights

- Low temperature limits: FA1: 475°C, FA2: 250°C
- High accuracy
- High optical resolution up to 100:1
- Focus distances down to 100 mm
- Fast response time down to 10 ms
- Fiber optic assembly withstands 200°C, IP65 rated, optional up to 315°C
- 0/4 - 20 mA analog output
- RS485 serial output; networkable (up to 32 sensors)
- Advanced signal processing
- Background radiation compensation
- Programmable relay output: dual temperature setpoints and failsafe alarm
- Marathon DataTemp® software for remote configuration and monitoring

FA Datasheet



Electrical Specifications

Outputs	0/4-20 mA; RS-485, 2-wire or 4-wire, networkable to 32 sensors Relay, 48 V, 300 mA, response time < 2 ms
Power Supply	24 VDC ±20%, 500 mA

General Specifications

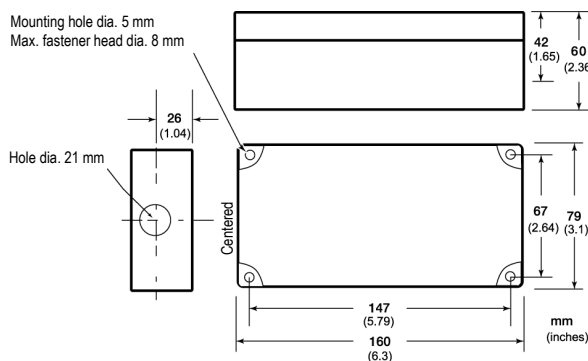
Environmental Rating	IP65 (IEC529)
Ambient Temperature	
Optical head	0 to 315°C
Fiber cable	0 to 200°C, optional up to 315°C
Electronics housing	0 to 60°C, with cooling platform up to 150°C
Storage Temperature	
Electronics housing	-20 to 70°C
Relative Humidity	10 to 95%, non-condensing
Shock	
Electronics housing	IEC 68-2-27
Vibration	
Electronics housing	IEC 68-2-6
Weight	
Optical head	100 g
Electronics housing	710 g
Fiber Cable Protection	rated to 200°C (optional up to 315°C), stainless steel armour, Viton coated, IP65, provision for conduit to protect fiber cable

Measurement Specifications

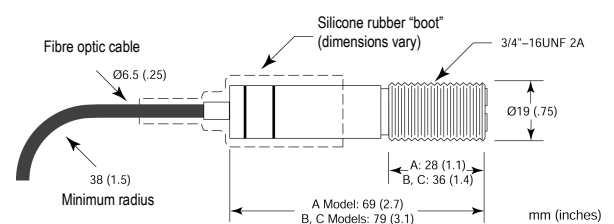
Temperature Range	
FA1A	475 to 900°C
FA1B	800 to 1900°C
FA1C	1200 to 3000°C
FA2A	250 to 800°C
FA2B	400 to 1700°C
Spectral Response	
FA1	1,0 µm (Si detector)
FA2	1,6 µm (InGaAs detector)
System Accuracy	±(0,3% T _{meas} + 2°C), T _{meas} in °C
Repeatability	±1°C
Temperature Resolution	
Current output	±0,05°C
Display and RS485	±1°C
Response Time	10 ms (95%), selectable to 10 s
Emissivity	0,10 to 1,00 in 0,01 increments
Signal Processing	Peak hold, valley hold, averaging

Dimensions

Electronics Housing



Optical Head

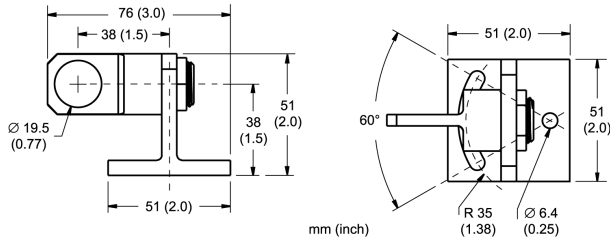


Accessories

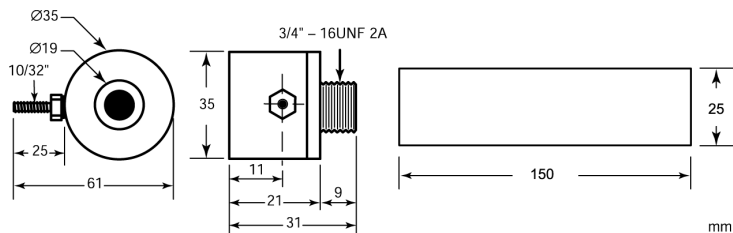
The models include a mounting nut, adjustable mounting bracket, an operator's manual and the Marathon DataTemp Software. Additional accessories are available:

- Furnace rooftop mounting/purging system available with either flange (XXXFORFMF) or gravity-held base (XXXFORFMC)
- Stainless steel air-purge collar for optical head with integrated stainless steel sighting tube (XXXFOHAPA), air flow 0,5 – 1,5 l per second
- Fiber-optic sighting tube conduit accessory, L 300 mm, Ø 32 mm, with connection to standard electrical conduit (XXXFOSTCA)
- 24 VDC / 1,1 A power supply with universal 110 / 220 VAC input (XXX2CDCPSS)
- Smart RS-485 to RS-232 interface converters with built-in smart switching allowing for use in either 2-wire or 4-wire mode, in either multi drop or stand-alone mode (XXX485CVT2)
- Aiming-light (battery powered) for fiber optic front end including adapter to FA fiber cable (XXXFAFAL)
- 4-conductor PVC coated cable (XXXLTCBL) for electronic box requiring only 24 VDC and 0/4 - 20mA output, temperature rating: -20°C to 60°C
- 12-conductor high temperature cable (XXXHTCBL), Teflon coated cable for all input/output connections of the electronic box, temperature rating: -80°C to 200°C
- Terminal block (XXX2CTB)
- Terminal block with 24 VDC power supply and IP 65 enclosure (RAYMAPB)

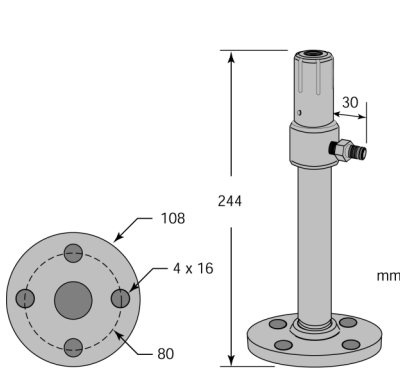
Adjustable Bracket (XXXFOMB)



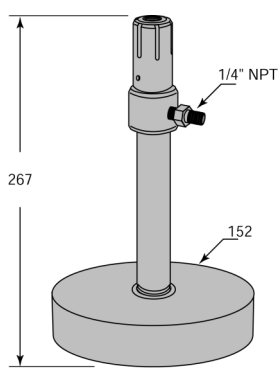
Air Purge Collar (XXXFOHAPA)



Furnace Wall Mount System with flange (XXXFORFMF)



Furnace Roof Mount System gravity-held (XXXFORFMC)



Optical Specifications

Optical Resolution D : S¹

FA1A ²	20 : 1
FA1B	100 : 1
FA1C	100 : 1
FA2A ²	20 : 1
FA2B	40 : 1

Focus Distances

Standard Focus	∞
Close Focus 1	100 mm
Close Focus 2	300 mm

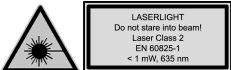
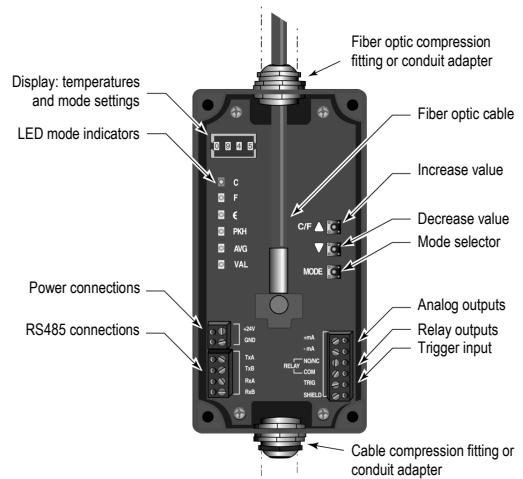
¹ at 95% energy, D: Distance between sensor and object, S: diameter of spot size
² available with laser sighting

Options

Options must be specified at time of order.

- Fiber optic cable lengths: 1, 3, 6, or 10 m
- ISO Calibration Certificate, based on NIST/DKD certified probes (XXXFACERT)
- Laser Sighting (...L), only for FA1A/FA2A
- Electronics Housing Cooling Platform (...W) water flow 2 l per minute, 16°C for efficient cooling
- High Temperature Fiber Cable (...H), rated to 315°C, not available on FA2, option excludes Viton coating and IP65 rating

User Interface



www.raytek.com
for up-to-the-minute features

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