

Highlights

- Multiple temperature and spectral ranges
- Local user-interface for sensor programming
- User-selectable 0/4-20 mA, 0-5 V, J or K thermocouple output
- User-scalable 0/4-20 mA or 0-5 V output
- Simultaneous analog and digital RS485 outputs
- Choice of terminal wiring or DIN connector wiring
- Laser sighting for high resolution optics (LTHSF, LTCF2)
- Optional stainless steel housing
- Field Calibration software

XR

Datasheet



Electrical Specifications

Outputs	
Analog	4-20 mA, 0-20 mA, 0-5V, J or K thermocouple (with terminal connector)
Digital	RS485 (bidirectional)
Alarm	opto-coupled contact closure
Inputs	
	Emissivity setting, background radiation compensation, trigger, laser control
Power Supply	24 VDC \pm 20%, 100 mA

General Specifications

Environmental Rating	IP65 (IEC529), with DIN connector only
Ambient Temperature	
without cooling	0 to 70°C
with air cooling	120°C
with water cooling	175°C
with ThermoJacket	315°C
with laser	40°C
Storage Temperature	-20 to 70°C
Relative Humidity	10 to 95%, non-condensing
Shock	IEC 68-2-27, 50 G, 11 ms, 3 axis
Vibration	IEC 68-2-6, 3 G, 11 – 200 Hz, 3 axis
Dimension	
with cooling jacket	192 mm L x 42 mm diameter
	192 mm L x 63 mm diameter
Weight	
	585 g
with cooling jacket	675 g

Measurement Specifications

Temperature/Spectral Ranges		
LT/LTHSF (Low Temp.)	-40 to 600°C	8 to 14 μ m
MT (Medium Temp.)	250 to 1200°C	3,9 μ m
G5 (Glass)	250 to 1650°C	5,0 μ m
P7 (Plastic)	10 to 350°C	7,9 μ m
Optical Resolution¹		
LTHSF	50 : 1	
LT, G5	33 : 1	
MT, P7	30 : 1	
System Accuracy		
	\pm 1% or \pm 1,0°C ^{2,3}	
Repeatability		
	\pm 0,5% or \pm 0,5°C ^{3,4}	
Temperature Resolution		
P7	1,0°C	
all other models	0,5°C	
Response Time (95%)		
all models	150 ms	
Emissivity		
	adjustable: 0,100 to 1,100	
Signal Processing		
	°C/°F, Min, Max, Average, advanced hold, ambient background temperature compensation	

¹ 90% energy, standard focus optics

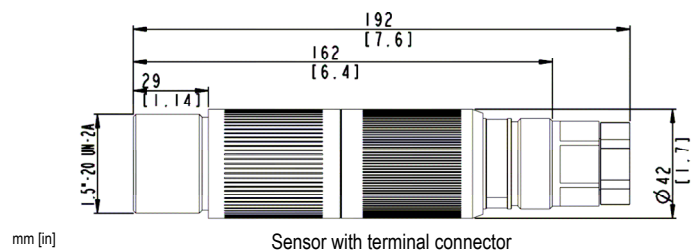
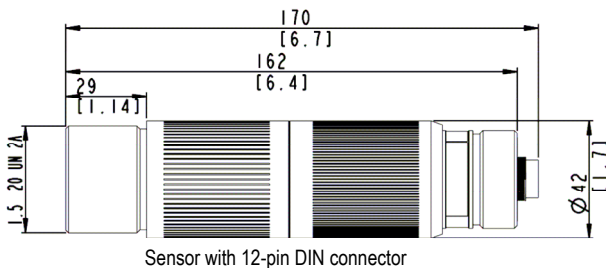
² at ambient temperature 23°C \pm 5°C

³ whichever is greater

⁴ LT: for target temperature > 25°C @ ambient temperature of 23°C; P7: for target temperature > 95°C

Sensor and Fixed Bracket

Each sensor comes with a fixed bracket, a mounting nut, a software CD and an operator's manual.



Options

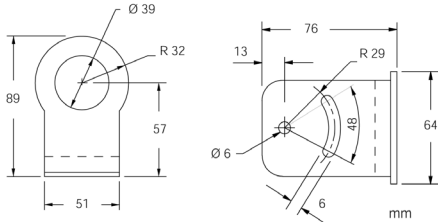
Options must be specified at time of order.

- ISO Calibration Certificate, based on NIST/DKD certified probes (XXXXRCERT)

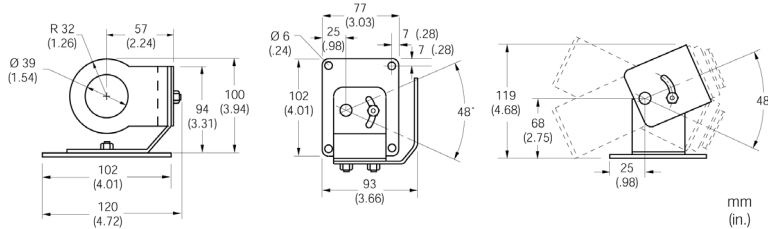
Accessories

- RS232/485 converter serving for stand-alone or multiple sensors (RAYMINCONV2)
- Protective Window according to spectral range (XXXTXACTW...)
- Cable extensions in lengths of 4, 8, 15, 30 m - high (200°C) or low (85°C) temperature
- Water/Air Cooled Housing for field retrofit as stainless steel (XXXXRACWCS) or aluminium (XXXXRACWCA)
- ThermoJacket: extra rugged cast metal housing for thermal/mechanical environmental protection (RAYTXXTJ5), see also ThermoJacket datasheet

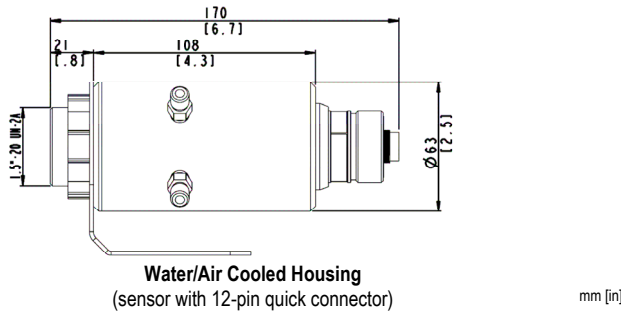
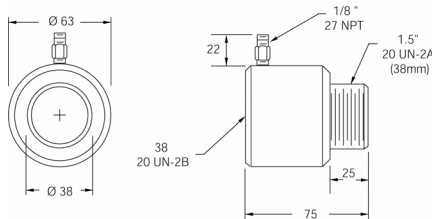
Fixed Bracket (XXXTXXACFB)



Adjustable Bracket (XXXTXXACAB)

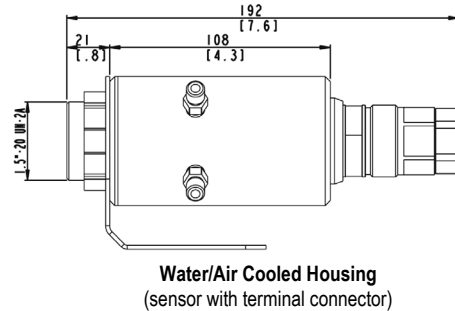
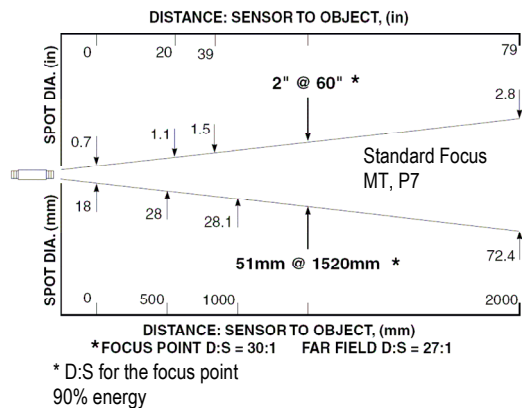
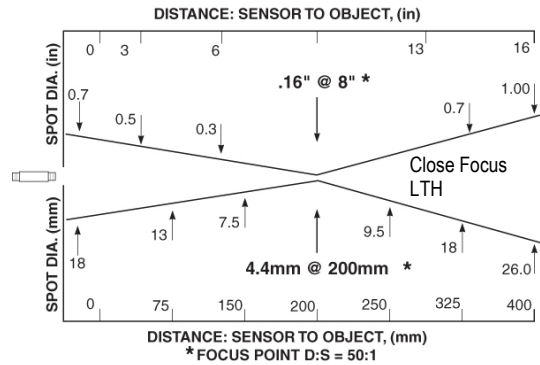
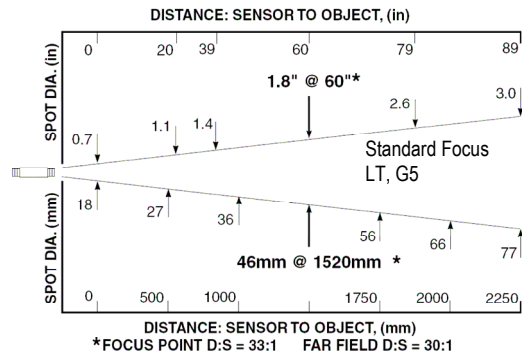


Air Purge Collar (XXXTXXACAP)



Water/Air Cooled Housing
(sensor with 12-pin quick connector)

Optical Specifications



Water/Air Cooled Housing
(sensor with terminal connector)

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