

Highlights

- Choice of through-the-lens sighting or laser aiming
- Simple, two-wire installation
- Simultaneous 4-20 mA and digital output
- Compact, rugged sensor with IP 65 rating
- Wide temperature range from -18 to 2000°C
- Advanced signal processing
- Point-to-point or multidrop installation
- Install up to 15 sensors on a single multidrop network
- Windows software for remote configuration and monitoring
- Wide choice of focus distances
- Special models for glass and plastics applications

SX Datasheet



Electrical Specifications

Outputs	
Analog	4-20 mA, max. loop resistance 700 Ω
Digital	HART® to RS-232 (with optional adapter)
Alarm	24 V / 150 mA; adjustable setpoints, deadband, normally open/closed settings
Power Supply	
Laser-equipped units	24 VDC ±10% (4 – 20 mA loop power) 24 VDC ±10% (additional power supply or separate parallel connection to loop power for laser-equipped units)

Sensor Specifications

Environmental Rating	IP65 (IEC529)
Ambient Temperature	
with laser	0 to 50°C
without laser	0 to 70°C
with air cooling	up to 120°C
with water cooling	up to 175°C
with ThermoJacket™	up to 315°C
Storage Temperature	-18 to 85°C
Relative Humidity	10 to 95%, non-condensing
Shock	IEC 68-2-27, 50 G, 11 ms, any axis
Vibration	IEC 68-2-27, 3 G, any axis, 11 – 200 Hz
Dimension	
with cooling jacket	181 mm L x 57 mm diameter
	181 mm L x 76 mm diameter
Weight	
with cooling jacket	580 g
	780 g

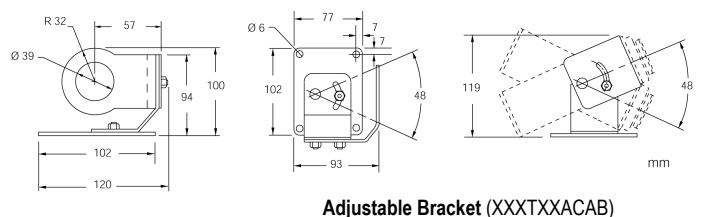
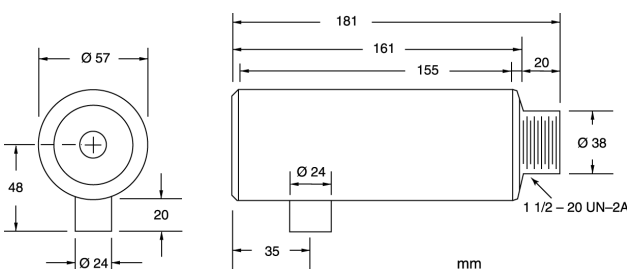
Measurement Specifications

Temperature/Spectral Ranges		
LT (Low Temp.)	-18 to 500°C	8 to 14 μm
MT (Medium Temp.)	200 to 1000°C	3,9 μm
HT (High Temp.)	500 to 2000°C	2,2 μm
G5 (Glass)	250 to 1650°C	5,0 μm
Optical Resolution¹		
LT, MT, G5	33 : 1	
LTCF4	50 : 1	
HT	60 : 1	
System Accuracy²		
	±1% or ±1,4°C ³	
Repeatability		
	±0,5% or ±0,7°C ³	
Temperature Resolution		
LT	0,1°C	
all other models	1°C	
System Response Time (95%)		
G5	65 ms	
HT	100 ms	
LT, MT	165 ms	
Emissivity		
	adjustable: 0,10 to 1,00	
Signal Processing		
	emissivity, °C/°F, advanced peak / valley hold, averaging, background radiation compensation	

¹ 90% energy, standard focus optics
² Ambient temperature: 23°C ± 5°C
³ whichever is greater

Sensor and Adjustable Bracket

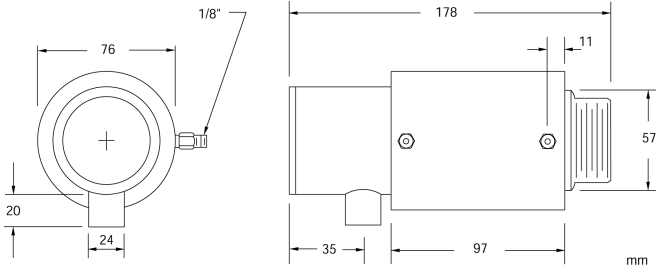
Each sensor comes with an adjustable bracket, a mounting nut, and an operator's manual. All models have 4 to 20 mA output.



Options

Options must be specified at time of order.

- ISO Calibration Certificate, based on NIST/DKD certified probes (XXXSXCERT)
- Through the lens sighting (...OS)
- Laser sighting (...L2)
- Water/Air Cooled Housing incl. Air Purge Collar (...W)



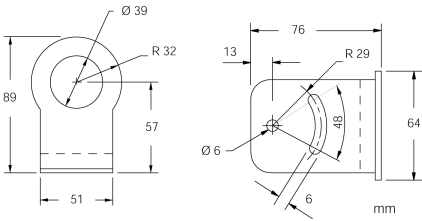
Optical Specifications

Note: Spot size based on 90% energy

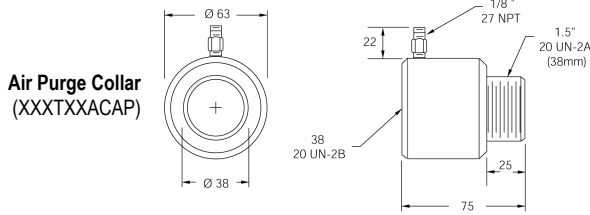
Models	Spot Diameter [mm]	Focus Distance [mm]
LT, MT versions		
...SF	45	1520
...CF1	2,5	76
...CF2	6,4	200
...CF3	13	406
...CF4 (LT only)	28	1520
HT versions		
...SF	27	2400
...CF1	2	100
...CF2	6,4	510
...CF3	13	1000
G5 versions		
...SF	28	1520
...CF1	2,5	76
...CF2	4,5	200

Accessories

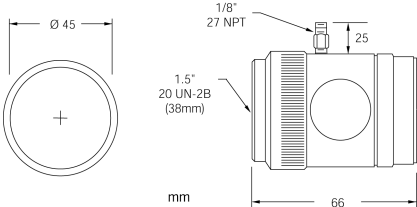
- Sighting Viewer Tool (XXXTXXACSV)
- ThermoJacket: extra rugged cast metal housing for thermal/mechanical environmental protection (RAYTXXTJ1M), see also ThermoJacket datasheet



Fixed Bracket
(XXXTXXACFB)



Air Purge Collar
(XXXTXXACAP)



Right Angle Mirror for measuring targets at right angles to sensor axis
(XXXTXXACRA)

Remote Communication Kit

The remote communication kit (RAYTXSCAL) includes the HART/RS232 adapter and the Windows DataTemp Multidrop software package. One kit serves multiple sensors. Requires RS232 serial port voltage and Windows 95/98, or Windows NT/2000.



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