Highlights

- Wide temperature range from -40 to 2250°C (-40 to 4082°F)
- Optical resolution up to 100:1
- Spot sizes down to 1.1 mm (0.04 in)
- Variable focus from 0.2 to 2.2 m (0.7 to 72 ft)
- Fast response time down to 20 ms
- Real time video monitoring and recording capability
- Through-the-lens sighting with video or laser aiming
- Digital RS485 communications (networkable)
- Real time ambient background radiation compensation
- Simultaneous analogue and digital outputs
- Programmable relay output
- Ambient temperatures up to 315°C (600°F) with ThermoJacket™
- Compact, rugged design, IP65 / NEMA-4 rated
- DataTemp® Multidrop software for remote configuration

MM LT, G7, G5, MT, 3M
Datasheet

Electrical Specifications

Outputs

mA	0/4-20 mA
Relay	48 V, 300 mA, response time < 2 ms
RS485	2-wire or 4-wire, networkable to 32 sensors
Video	analog, NTSC, 510x492 pixel, FOV 8°

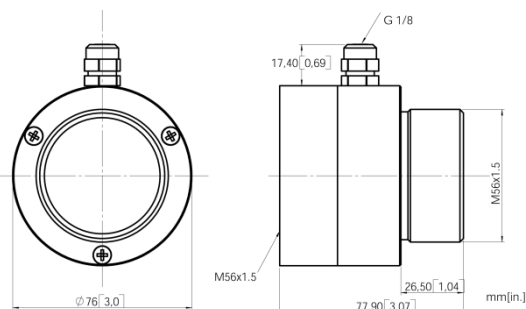|	
Inputs	Emissivity setting, background radiation compensation, trigger, laser on/off (software enabled)
Power Supply	24 VDC ±20%, 500 mA

General Specifications

Environmental Rating	IP65 (IEC529), NEMA-4

Ambient Temperature

without cooling	5 to 65°C / 41 to 149°F (video: 50°C/122°F)
with air cooling	10 to 120°C (50 to 250°F)
with water cooling	10 to 175°C (50 to 350°F)
with ThermoJacket	10 to 315°C (50 to 600°F)

Storage Temperature	-20 to 70°C (-4 to 158°F)
Relative Humidity	10 to 95%, non-condensing
Shock	IEC 68-2-27
Vibration	IEC 68-2-6
Weight	700 g (25 oz)

Options

Options must be specified at time of order.
- Laser sighting (…L) or Video sighting (…V)
- Variable focus (…VF1)
- Water-Cooled Housing, incl. Air Purge Collar (...W)
- Manufacturer's Calibration Certificate based on certified probes traced on national standards, e.g. DAkkS (XXXMMCERT)

Air Purge Collar (XXXMMACAP)

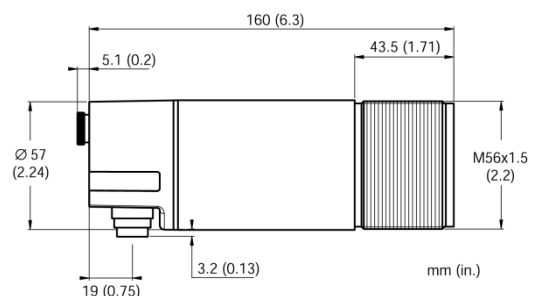## Measurement Specifications

Temperature Range

LT	-40 to 800°C (-40 to 1472°F)
G7	300 to 900°C (572 to 1652°F)
G5L	250 to 1650°C (482 to 3002°F)
G5H	450 to 2250°C (842 to 4082°F)
MT	250 to 1100°C (482 to 2012°F)
3M	100 to 600°C (212 to 1112°F)

Spectral Response

LT	8 to 14 μm
G7	7.9 μm
G5	5 μm
MT	3.9 μm
3M	2.1 – 2.5 μm

System Accuracy[1]

LT	± 1% of reading or ± 1°C for T_{meas} > 0°C (32°F)[2]
G5L, G5H, G7	± 1% of reading
MT	± 1% of reading for T_{meas} > 350°C (662°F) ± 2°C or ± 2% for T_{meas} < 350°C (662°F)[2]
3M	± 1% of reading for T_{meas} > 150°C (302°F) ± 5°C for T_{meas} < 150°C (302°F)

Repeatability[3]	± 0.5% of reading or ± 0.5°C [2]
Temperature Resolution (mA)	0.1 K

Response Time (95%)

LT, MT, G7	120 ms
G5	60 ms
3M	20 ms

Emissivity	0.100 to 1.150 in 0.001 increments
Signal Processing	Peak hold, valley hold, averaging, ambient background temperature compensation

[1] at 23°C ±5°C (73°F ±9°F), emissivity = 1.0, and time response 1.0 s
[2] whichever is greater
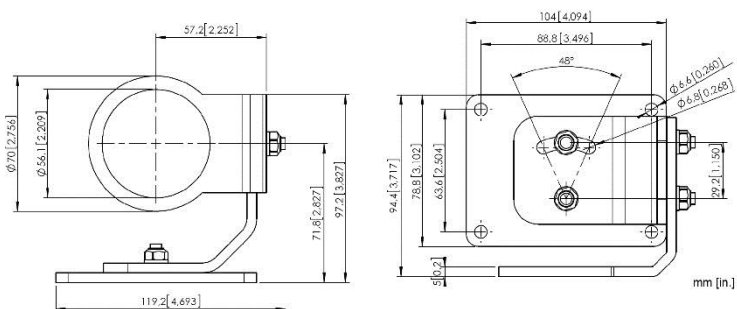[3] at 23°C ±5°C (73°F ±9°F)

Dimensions

Accessories

The models include through-the-lens sighting, mounting nut (stainless steel), fixed bracket (stainless steel), an operator's manual and DataTemp Multidrop Software.
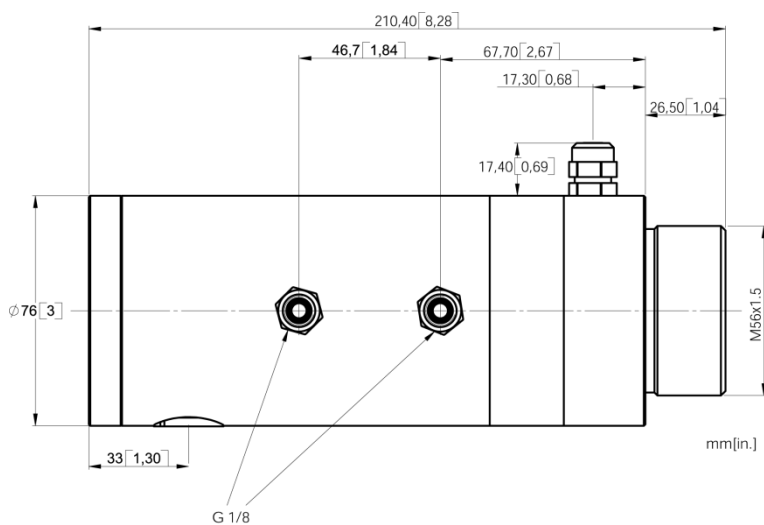Additional accessories are available:

- Sight Tube made from stainless steel up to 800°C/1472°F (XXXTST12)
- Sight Tube made from ceramic up to 1500°C/2732°F (XXXTSTC12)
- Pipe Thread Adapter made from stainless steel (XXXMMACPA)
- Protective Window for LT, MT, G5 (XXXMMACTWL)
- USB/RS485 Converter (XXXUSB485)
- Industrial Power Supply 100/240 VAC to 24 VDC, 1.25 A (XXXSYSPS)
- Low Temp Cable (XXX2CLTCB…)
- High Temp Cable (XXX2CCB…)
- Terminal Block (XXXMATB)
- Terminal Block including 24 VDC power supply (110/230 VAC input) and IP65/NEMA-4 rated housing (RAYMAPB)
- ThermoJacket enclosure for ambient temperatures to 315°C/600°F (RAYTXXTJ4), see also ThermoJacket datasheet

Adjustable Bracket (XXXMMACAB)
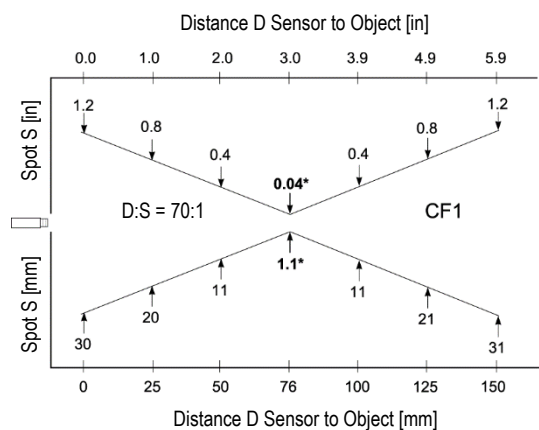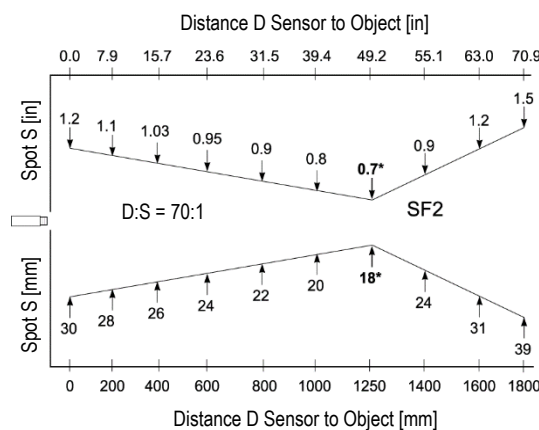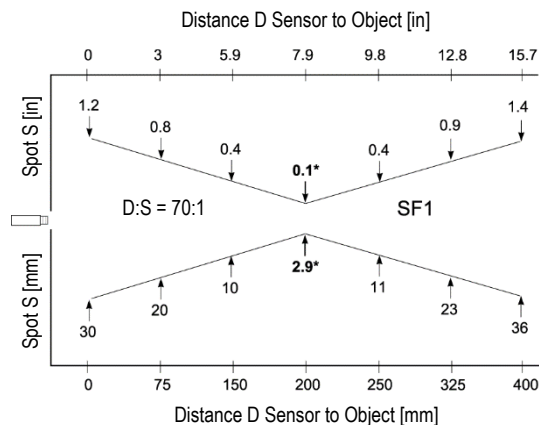

Air/Water-Cooled Housing (...W)

Optical Specifications

Optical Resolution (90% energy, for the focus point)

LT, MT, G5, 3M	70:1
G7	100:1

Optics

LT, MT, G5, G7	SF1, SF2, SF3
LT, 3M	CF1

Fluke Process Instruments