

- Real-time thermal imaging, scan speed up to 150 Hz
- Up to 1024 measurement points per line
- Wide choice of spectral and temperature ranges
- High-quality brushless motor (MTBF 40.000 h)
- Built-in Ethernet TCP/IP communications
- RS485 digital communications (up to 1000 m)
- Three user-configurable 4-20 mA outputs
- Internal Line Laser for accurate alignment
- PC independent alarm output
- Rugged, waterproof IP65 enclosure
- Air purge keeps window free of dirt and condensation
- Water cooling for ambient temperatures up to 180°C

MP150

Datasheet



Models

Model Number	Spectral Response	Temperature Range ⁴	Accuracy ²	Repeatability ²	Optical Resolution ⁵	Optical Resolution ⁶
RAYTMP150LT	3 – 5 µm	20 to 350°C	± 2°C	± 1°C	450:1 ³	150:1 ³
RAYTMP150MT	3,9 µm	100 to 800°C	± 3°C	± 2°C	450:1 ³	150:1 ³
RAYTMP150G5	5 µm	100 to 950°C	± 0,5% or ± 3°C ¹	± 1°C	450:1 ³	150:1 ³
RAYTMP150P30	3,43 µm	30 to 250°C	± 3°C	± 1°C	100:1	33:1
RAYTMP150P31	3,43 µm	100 to 350°C	± 3°C	± 1°C	180:1	60:1
RAYTMP1501M	1 µm	600 to 1200°C	± 0,5% or ± 3°C ¹	± 2°C	300:1 ³	100:1 ³
RAYTMP1502M	1,6 µm	400 to 950°C	± 0,5% or ± 3°C ¹	± 2°C	300:1 ³	100:1 ³

¹ Whichever is greater

² At mid-range of specified temperatures, for the whole ambient temperature range: 0 – 50°C

³ At focus distance for each spot

⁴ temperature limits: 0°C and 3000°C

⁵ 50% Energy

⁶ 90% Energy

Measurement Specifications

Optical Scan Rate	20 to 150 Hz (max. 48 Hz for P3 models)
Response Time	20 ms
Field of View	90° / 45°
Focus	1,52 m standard, custom focuses available
Emissivity	0,1 ... 1,0 digitally adjustable
Samples	256 per scan line up to 150 Hz 512 per scan line up to 80 Hz 1024 per scan line up to 40 Hz (option)
Signal Processing	Max, Min, AVG, Peak/Valley Hold, Alarm setpoints

Electrical Specifications

Analog Outputs	3 user-configurable 0/4 – 20 mA, current outputs, collectively isolated, max. resistance 500 Ω
Alarm Output	relay, contacts 30 V, 1 A
Inputs	trigger, laser switching
Ethernet Communication	TCP/IP protocol 10/100Mbit/s
Serial Communication	RS485 full duplex, non-addressable
Power	24 VDC ±25 %, 1 A
Warm-Up Time	20 min.
CE-Conformance	EN61010-1: 1993 /A2: 1995 EN61326-1, EN 60825-1

General Specifications

Environmental Rating	IP65 (IEC 529)
Ambient Operation Temperature	without water cooling 0 to 50°C with water cooling max. 180°C
Internal Operation Temperature	0 – 60°C
Storage Temperature	-25 to 65°C
Relative Humidity	10 ... 90%, non-condensing
Shock	IEC 60068-2-27, 3 axes, 11 ms, during operation: 5 G, non-operating: 25 G
Vibration	IEC 60068-2-6, 3 axes, 10 ... 150 Hz, during operation: 0.5 G, non-operating: 2 G
Scan Motor	MTBF: 40.000 h
Water Cooling, Air Purge	standard max. water pressure 5 bar max. air pressure 3 bar
Size	200 x 180 x 190 mm
Weight	7 kg, incl. air purge

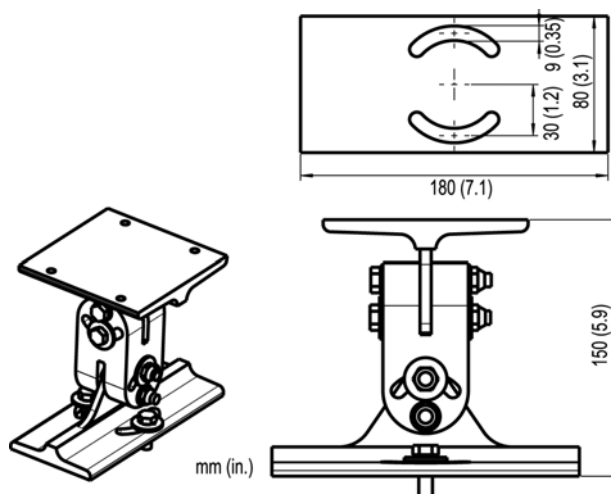
Accessories

XXXTMP50ACRMB	Rugged adjustable mounting base
XXXTMP50ACPS	Industrial power supply, 100 – 240 VAC / 24 VDC, 1 A
XXXTMP50ACPSCB	Power supply extension cable (max. 80°C)
XXXTMP50ETHCB10	Ethernet extension cable (max. 80°C)
XXXTMP50AC485CB	RS485 extension cable (max. 80°C)
XXXTMP50ACCC	Protective carrying case for linescanner
XXXTMP50THERM	Thermostat for linescanner
XXXHSFIKIT	Fiber-Optic Converter Kit

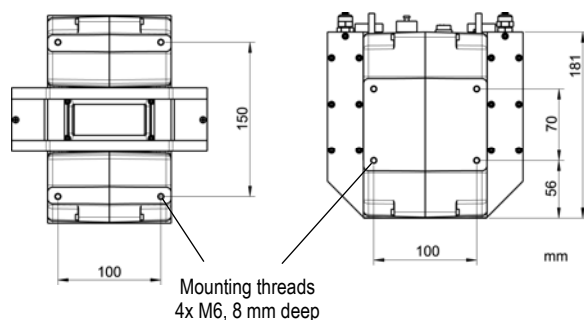
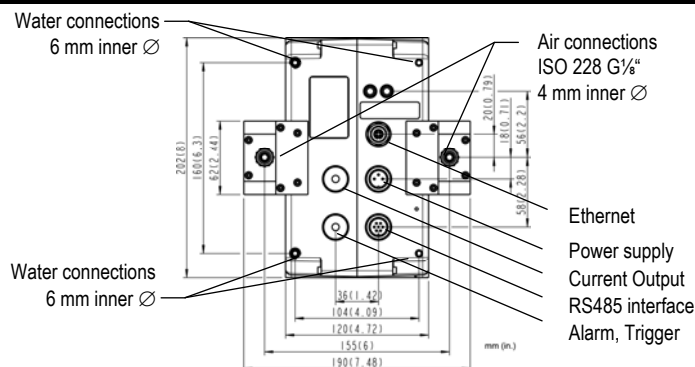
Options

...1	1024 samples per scan line
XXXTMP50CERT	ISO Calibration certificate based on NIST/DKD certified probes
XXXTMP50XX02	linescanner without air purge, (add -02 to model number)

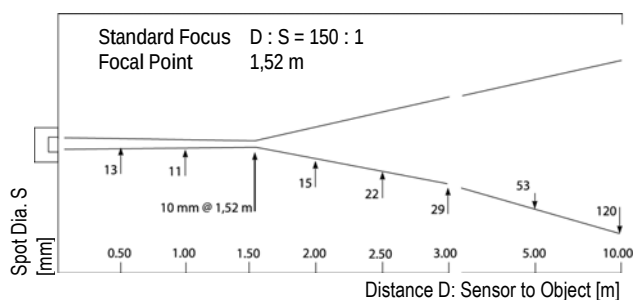
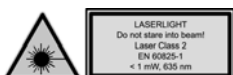
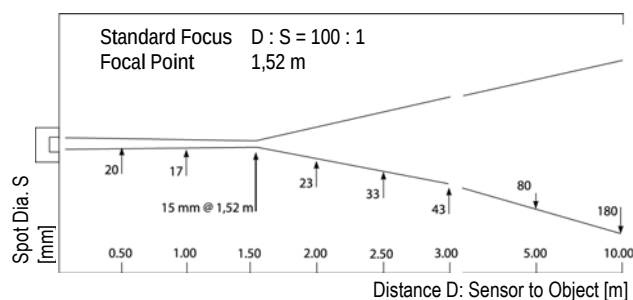
Rugged Adjustable Mounting Base



Mountings and Fittings



Optical Specifications



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