optris Xi 1M
TECHNICAL DATA

optris infrared measurements

Compact short wavelength spot finder IR camera for metal applications

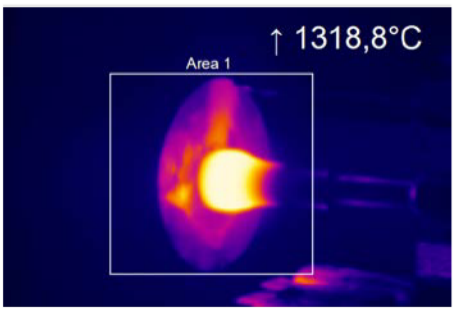
Features:

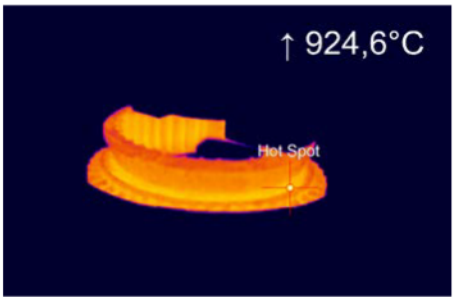
- Small sized rugged camera with motorized focus
- Wide measurement range from 450 °C to 1800 °C without sub-ranges
- Highly dynamic CMOS detector with 396 x 300 pixels resolution
- Fast line scanning mode with 500 Hz
- Autonomous operation with auto hot spot finder and direct analog or alarm output
- Software with extensive analysis features and web server capability included











Technical Specifications

Optical resolution	396 x 300 pixels
Detector	CMOS (15 µm pitch)
Spectral range	0.85 – 1.1 µm
Temperature ranges	**12 & 25mm - Optics:** 20Hz: 450 ... 1800°C 500Hz: 550 ... 1800°C **50mm - Optics:** 20Hz: 525 ... 1800°C 500Hz: 575 ... 1800°C
Optical resulotion / Frame rate	**Ethernet:** 396 x 300 pixels @ 20 Hz 396 x 8 pixels @ 500 Hz **USB:** 132 x 100 pixels @ 20Hz **autonomous operations:** 132 x 100 pixels @ 20 Hz 396 x 1 pixels @ 500 Hz
Optics (FOV)	28° x 21° (f = 12 mm) 14° x 10° (f = 25 mm) 7° x 5° (f = 50 mm)
Focus	Motorized focus
Thermal sensitivity (NETD) [1]	< 2 K (< 900 °C)/ < 4 K (< 1400 °C)
Accuracy (at T_{Amb} = 23 ±5°C)	For object temperature < 1400 °C: ±1 % of reading for 20 Hz, 500Hz For object temperature < 1600 °C: ±2 % of reading for 20 Hz, 500Hz
PC interface	Fast Ethernet / USB 2.0 / RS485
Direct Output / Input	1x analog output (0/4-20 mA) / 1x input (analog or digital); electrically isolated
Process interface (PIF), industrial	3x analog outputs (0/4–20 mA or 0–10 V) and 3x alarm outputs (relais) / 3x inputs (analog or digital) / fail-safe (LED and relay) stackable up to 3 PIFs; electrically isolated
Cable length	**Ethernet:** 1 m (standard), 5 m, 10 m, 20 m (up to 100 m) **USB:** 1 m, 3 m, 5 m
Ambient temperature	5 °C ... 50 °C
Enclosure (size / rating)	Ø 36 mm x 112 – 126.5 mm, depending on lens (M30x1 thread) / IP 67 (NEMA 4)
Weight (without mounting bracket)	270 g, depending on lens
Shock / Vibration	IEC 60068-2-27 (25G and 50G) / IEC 60068-2-6 (sinus shaped), IEC 60068-2-64 (broadband noise)
Power supply	8 - 30 V DC / PoE / USB
Scope of supply	• Process imager Xi 1M • Ethernet / PoE cable (1 m) / USB cable (1 m) • IN/ OUT cable incl. terminal block (1 m) • Mounting bracket with tripod thread, mounting nut • Software package optris PIX Connect

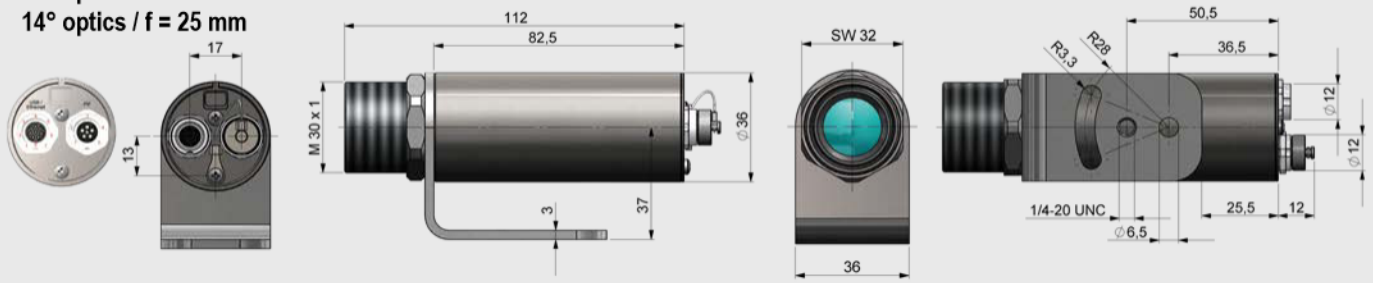
[1] Specified NETD value applies to all frequencies

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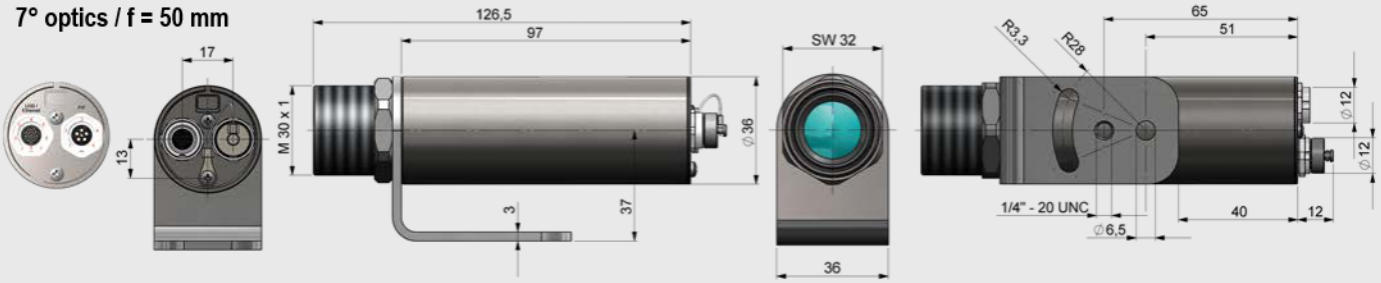
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Dimensions in mm

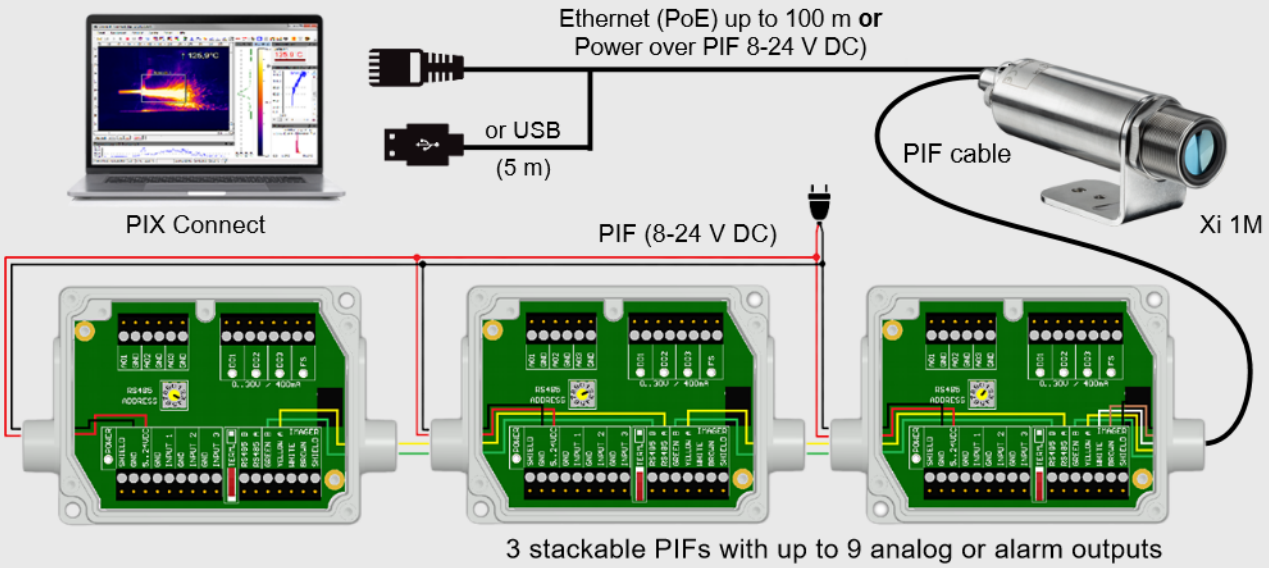
28° optics / f = 12 mm
14° optics / f = 25 mm



7° optics / f = 50 mm

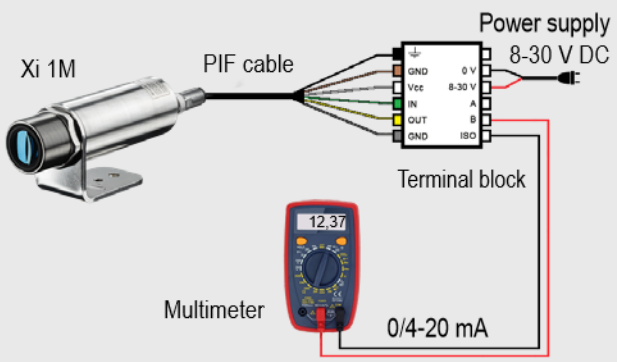


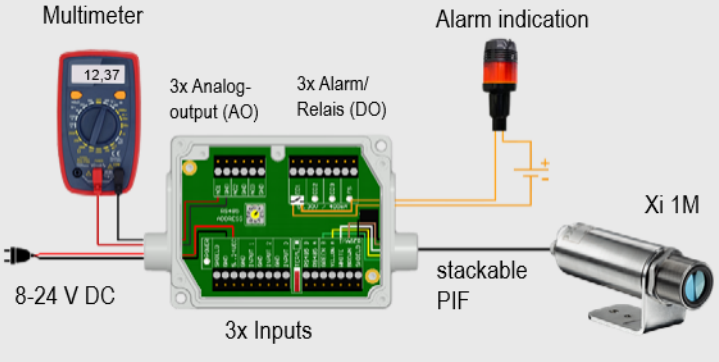
Operation with PIX Connect software and 3 stackable PIFs



3 stackable PIFs with up to 9 analog or alarm outputs

Autonomous operation (without PC) with up to 9 analog outputs/ alarm outputs and 3 stackable PIFs





Accessories

ACXI1MAPL
(Air purge unit) +
ACXIAPLAB
(Mounting bracket)



ACXIMW
(Water cooled housing)



ACXIS
(Shutter) +
ACXIAPLAB
(Mounting bracket)



Specifications are subject to change without notice · Xi 1M DS-EN2024-11-A