FOTRIC
Sense the Digital Future

FOTRIC Thermal Security Monitoring Solution

FOTRIC 130S series

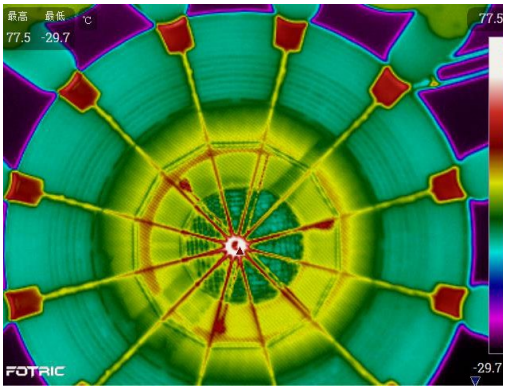
Single-Spectrum Temperature Measurement Bullet Camera

FOTRIC's single-spectrum temperature measurement bullet camera is an advanced monitoring device that integrates temperature measurement and imaging, and is widely used in industrial and security applications.

The FOTRIC 130S series offers robust protection for stable operation incomplex outdoor environments. With outstanding electromagneticinterference resistance, it delivers accurate temperature data and clear infrared images and videos in high-EMI environments such as UHV substations and electrolytic cells, giving users a comprehensive monitoring solution.

Its compact design enables quick installation, while low power consumption reduces energy use and cost and supports long-term stableoperation.

MoniTiR Digital IntegratedManagement Platform



35 kV Low-Voltage Reactor Monitoring

System Features

Quickly integrates with AnalyzIR and MoniTiR digital management platforms for both standalone operation and complex monitoring management.

- Large-scale cross-subnet networking beyond infrared streamlimitations.
- Rich API interfaces for data exchange with user-owned management systems.
- Integrated thermal, temperature, vibration, and other sensing for multidimensional analysis.
- AI training for scene-based algorithm optimization.

Accurate Temperature Measurement

- Systematic temperature calibration ensures environmental adaptability and accuracy.
- Temperature range up to -20 C to 550 C for most application scenarios.
- Multiple alarm functions based on temperature thresholds.

High-Definition Imaging

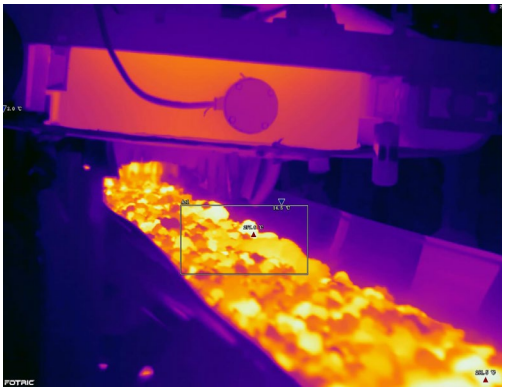
- Multiple FOV options to match different application scenarios.
- Clear thermal images and videos without focus adjustment.

Superior Protection

- IP66-rated enclosure for stable operation in complex environments.
- Excellent EMI resistance for reliable work in strong electromagnetic environments.

Compact Size

- Compact and lightweight design for convenient installation.



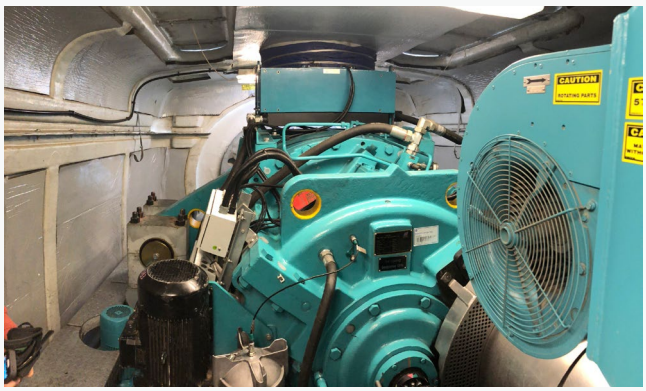
Coal Conveyor Belt Monitoring

Ultra-Low Power Consumption

- Typical power consumption is only 3 W, lowering user cost and improving stability.

Substation

Power Plant



Equipment Monitoring

Security Monitoring

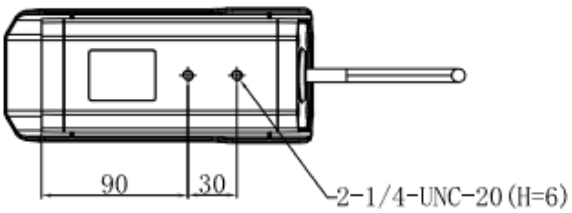
Technical Specifications

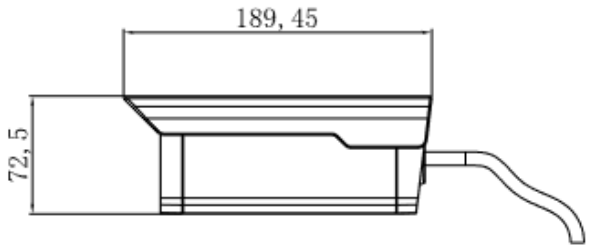
Functional Parameters	133S	135S	136S	138S
Thermal Imaging				
IR Resolution	160*120	320*240	384*288	640*480
Detector Type	FPA focal plane array, uncooled microbolometer			
Thermal Sensitivity (NETD)	< 60 mK	< 40 mK	< 40 mK	< 30 mK
Pixel Pitch	17 um			
Spectral Range	7.5 um - 14 um			
Field of View (FOV)	Refer to lens parameter configuration			
Spatial Resolution (IFOV)	Refer to lens parameter configuration			
Minimum Imaging Distance	Refer to lens parameter configuration			
Focal Length	Refer to lens parameter configuration			
Focus Mode	Focus-free			
Temperature Measurement Range	-20 C to 350 C		-20 C to 550 C	
Temperature Ranges	-20 to 150 C; 0 to 350 C		-20 to 150 C; 0 to 550 C	
Temperature Accuracy	±2 C or ±2%, whichever is greater			
Global Temperature Correction	Emissivity (0.01-1.0), reflected temp., atmospheric temp., relative humidity, target distance, external optical transmittance			
Regional Temperature Correction	Regional emissivity (0.01-1.0)			
Color Palettes	10 palettes incl. Iron Red, B&W, Rainbow, etc.; reversible			
Full Radiometric Stream	Supports 30 Hz full radiometric streaming			
Measurement Areas	5 points, 10 lines, 10 areas; Modbus output supported			
Video				
Image Processing	Non-uniformity correction, intelligent gain control			
Image Mirroring	Left-right, up-down, center			
Video Compression Standard	Thermal: H.264; Visible: H.265+			
Video Streams	Thermal Main: 320*240, 30 Hz, 1 Mb Sub: 192*144, 30 Hz, 100 Kb	Thermal Main: 320*240, 30 Hz, 1.6 Mb Sub: 192*144, 30 Hz, 100 Kb	Thermal Main: 384*288, 30 Hz, 1.8 Mb Sub: 384*288, 30 Hz, 100 Kb	Thermal Main: 640*480, 30 Hz, 2.5 Mb Sub: 320*240, 30 Hz, 100 Kb
Concurrent Access	Thermal: 10 channels of main/sub streams; 1 full-radiometric stream			
Interfaces				
Industry Application Software	MoniTiR			
Ethernet Type	10M / 100M / 1000M adaptive			
Network Protocols	IPv4, UDP, TCP, RTSP, RTCP, RTP			
Access Standard	ONVIF			
Power Interface	Terminal block			
Network Interface	RJ45, with status indicator			
Alarm Input / Output	Terminal block 1 relay output: 24 V, 1.5 A 1 optocoupler output: 3.3-24 V, max 35 mA 1 optocoupler input: 3.3-24 V, 5-15 mA			
Serial Port	Terminal block 1 x RS-485			

Technical Specifications

Physical Parameters				
Power Supply	12 V / 24 V DC, PoE			
Typical Power Consumption	3 W	3 W	3 W	4 W
Protection Rating	IP66			
Operating Temperature	-20 C to 65 C			
Storage Temperature	-40 C to 70 C			
Relative Humidity	< 90%			
Dimensions	189 mm * 83 mm * 73 mm (with sunshield)			
Weight	900 g			
Housing Material	Aluminum alloy			
Mounting	Tripod mounting: 2 standard 1/4-UNC-20 holes; bottom mounting supported			

Overall Dimensions





Lens Parameters

Model	IR Resolution	Lens Parameter	Standard Lens	Wide-Angle Lens
133S	160*120	Field of View (FOV)	25° * 19°	--
		Spatial Resolution (IFOV)	2.73 mrad	--
		Minimum Imaging Distance	1 m	--
		Focal Length	8 mm	--
		Temperature Ranges	-20 to 150 C, 0 to 350 C	--
135S	320*240	Field of View (FOV)	21° * 16°	42° * 32°
		Spatial Resolution (IFOV)	1.15 mrad	2.29 mrad
		Minimum Imaging Distance	2.5 m	1 m
		Focal Length	15 mm	8 mm
		Temperature Ranges	-20 to 150 C, 0 to 350 C	-20 to 150 C, 0 to 350 C
136S	384*288	Field of View (FOV)	25° * 19°	50° * 38°
		Spatial Resolution (IFOV)	1.14 mrad	2.27 mrad
		Minimum Imaging Distance	2.5 m	1 m
		Focal Length	15 mm	8 mm
		Temperature Ranges	-20 to 150 C, 0 to 550 C	-20 to 150 C, 0 to 550 C
138S	640*480	Field of View (FOV)	25° * 19°	50° * 38°
		Spatial Resolution (IFOV)	0.68 mrad	1.36 mrad
		Minimum Imaging Distance	5 m	2.5 m
		Focal Length	25 mm	12 mm
		Temperature Ranges	-20 to 150 C, 0 to 550 C	-20 to 150 C, 0 to 550 C