SX1CH-G-VXT Series

Explosion Proof Fixed Thermal Camera Housing

Integrated with Ventionex Thermal Camera Module

SX1CH-G

Main Features

AISI316L

Marine grade AISI316L Stainless Steel material

IECEx Ex INMETRO

Ex II 2 G Ex db op pr IIC T6 Gb / Ex II 2 D Ex tb op pr IIIC T80°C Db

IK 10

Vandal-proof IK10 ratings

PoE+

Option for IEEE 802.3at PoE+

IP

IP 66 / 68

Option for thermal camera available

Technical Data

General	
Certification	Ex II 2 G Ex db op pr IIC T6 Gb / Ex II 2 D Ex tb op pr IIIC T80°C Db
Protection Level	IP 66 / 68, TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Operating Temperature	-40°C to 60°C
Relative Humidity	≤95%
Mechanical	
Body Material	AISI316L Stainless Steel
Sight Glass Material	Window with Germanium glass
Overall Dimension (WxHxD)	*Please refer to overall dimension drawings of each model.*
Internal Usable Size for Camera Module	G Series: Ø80 x 282 mm; GL Series: Ø95 x 282 mm
Cable Entry	2 x M25
Weight	Approximate 25KG
Electrical	
Operating Voltage	AC110-240V (0.5A – 1.10A), 50/60Hz Optional: IEEE 802.3at PoE+
Power Consumption	Max 110W (110V), Max 120W (240V)
Thermostatically Controlled Heater	T°C on: <10°C, T°C off: >10°C
Optional	
Built in Fiber Optic Module	Single Mode or Multi Mode (-SM or –MM model, please refer to below ordering info)
Accessories	
Standard	Sunshield, Swivel Joints
Optional	Wall Bracket

Thermal Camera/Lens

	384	640
Type	Uncooled FPA	
Resolution	384x288	640x480
Pixel pitch	17μm	
NETD	≤80mK@F1, 300K, 50Hz	
Field Frequency	50Hz	
Spectral range	8 – 14 μm	
Lens Options	Fixed lens: 9mm, 18mm, 37mm	Fixed lens: 9mm, 25mm, 37mm
	Motorized lens: 7.5mm, 15mm, 30mm	Motorized lens: 13mm, 25mm, 42mm
Brightness/Gain Adjustment	Yes	
Polarity Inversion	Reverse color	
Digital Zoom	Up to 4x Zoom	
Image Enhancement	Yes	
Calibration	Manually calibrate, Automatically calibrate during power on	
Rolling-over/mirror	On/Off	

Display	Varieties of pseudo color labels (firefighting color, iron hot, red hot, amber, white hot, black hot, etc.)
Focus	Manual/Auto
Pan & Tilt Control	Yes
Storage	Support Micro SD, up to 64G, local storage, NAS (NFS, SMB support) / FTP protocol
OSD	Time, date, channel number, channel name and custom text, temperature measurement information
Recording Mode	Mobile Surveillance, Alarm Recording (Gray, highest temperature, areas, alarming cross the lines, etc.), network disconnect recording, timing recorded
Raw Thermal Image Output	25fps, in the back end manually capture the signal frame raw image and data, the raw image can be analyzed and measured temperature
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, Motion JPEG
Resolution	640x480 / 384x288
Max Frame Rate	H.264: 30fps MJPEG: 640x480: 15fps
Video Quality Modulation	H.264: Compression degree, target bite rate degree control
Bit Rate Control Way	H.264: CBR or VBR
IP	IPv4
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL, DHCP, FTP, ICMP, IGMP, ARP, DNS, DDNS
Safety	HTTPS(SSL) Login Verification, Class Login Verification, IP address filter, user access log, 802.1x ID Verification
On-board Storage	Micro SD: Download the moving recorded image from SD card NAS: Support to record to NAS
Applied Program Interface	ONVIF Profile S
Web Browser	Microsoft Internet Explorer (Version 9~11)
Temperature Detection Range	Normal temperature range: -20°C ~ 180 °C High temperature range: 100°C ~ 600 °C (-H Model, Please specify upon order)
Accuracy	±2°C or ±2%
Mode	Supports 3 movable points, 3 movable areas (highest temperature, lowest temperature, average temperature measurement)
Emissivity Correction	0.01 ~ 1.0 adjustable
Alarm Output	Switch output
Protocol Output	SDK alarm protocol output, ONVIF alarm information output

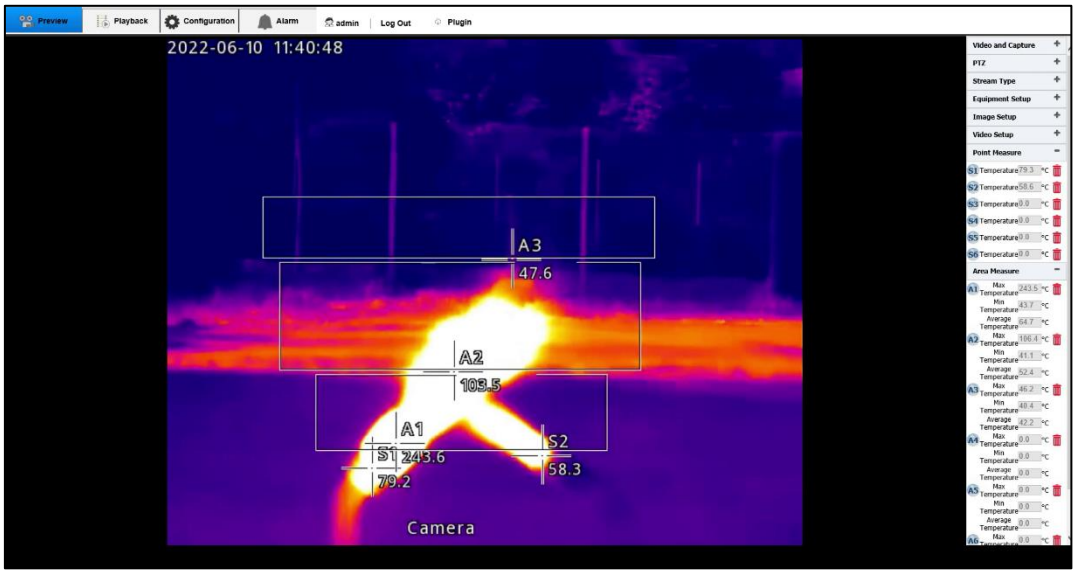
Resolution	Lens (mm)	FOV	Detection (m)	Recognition (m)
640×480	Fixed			
	9	62.3° x 48.8°	291	146
	25	24.6° x 18.5°	809	404
	37	16.7° x 12.6°	1197	599
	Motorized			
	13	45.4° x 34.8°	421	210
	25	24.6° x 18.5°	809	404
	42	14.8° x 11.1°	1359	679
384×288	Fixed			
	9	39.9° x 30.4°	291	146
	18	20.6° x 15.5°	582	291
	37	10.1° x 7.6°	1197	599
	Motorized			
	7.5	47.0° x 36.2°	243	121
	15	24.6° x 18.5°	485	243
	30	12.4° x 9.3°	971	485

Lens Comparison Table

Our Technology

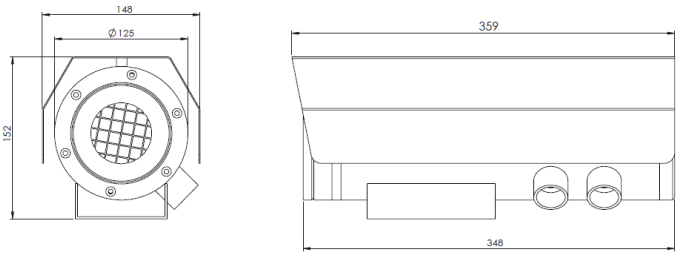
✓ RADIOMETRIC FUNCTIONS FOR MEASURING TEMPERATURE

The integrated thermal camera can have up to a maximum of 6 Area Measures, 6 Point Measures and 3 Line Measures. The different type of measures can accommodate different type of thermal monitoring. Area Measures and Line Measures monitor the maximum, minimum and average temperature with precise temperature detection. Point Measures monitor the temperature on its exact location. The device can be configured so that it independently generates a Radiometric Alarm and/or Warning. This function is particularly useful when Monitoring Industrial Processes.

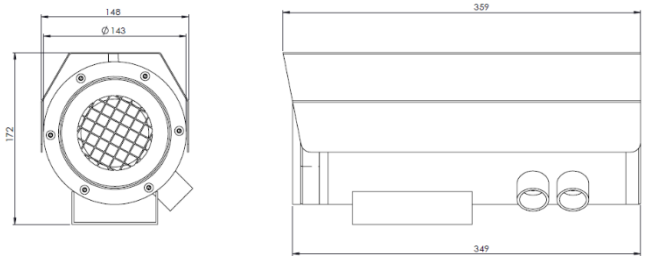


Configurations for Radiometric Temperature Measurement

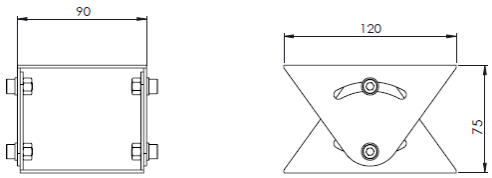
Outline Dimensions (mm)



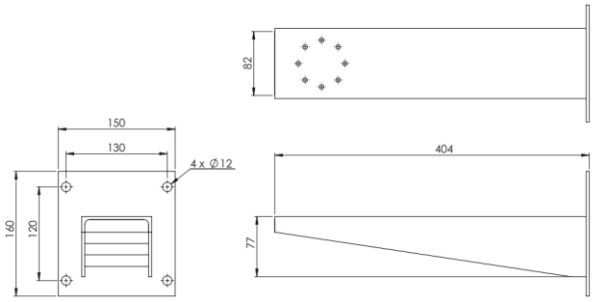
SX1CH-G Outline Dimensions



SX1CH-GL Outline Dimensions



SJ-SX1CH – Swivel Joints Outline Dimensions



WB-SX1CH – Wall Bracket Outline Dimensions

Model & Ordering Code

SX1CH - X - X - X - X - X - X

POE Options
Blank : No additional option
POE : POE+

Built-in Fiber Optic Module Options
Blank : No additional option
SM : Single Mode
MM : Multi Mode

Detection Mode Options
Blank : Normal Temperature
H : High Temperature

Thermal Camera Focal Length Options
M7.5 : 7.5 mm motorized lens
M13 : 13 mm motorized lens
M15 : 15 mm motorized lens
M25 : 25 mm motorized lens
M30 : 30 mm motorized lens
M42 : 42 mm motorized lens
F9 : 9 mm fixed lens
F18 : 18 mm fixed lens
F25 : 25 mm fixed lens
F37 : 37 mm fixed lens

**Please refer lens comparison table above.*

Thermal Camera Module Options
384 : 384x288 resolution
640 : 640x480 resolution

Camera Station Options
G : With Germanium Window and Front Guard
GL : Large Diameter (143 mm) with Germanium Window and Front Guard

Standard Accessories

SCH-SX1CH : Sunshield for Camera Housing (for SX1 series without LED illuminator)
SJ-SX1CH : Swivel Joints

Optional Accessories

WB-SX1CH : Wall Bracket