



19 200
ACTIVE
SENSORS

RS 485
MODBUS
3x DIO
RTP VIDEO

2-LEVEL
FIRE ALARM

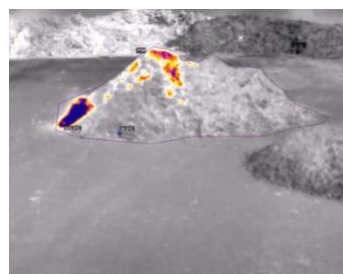
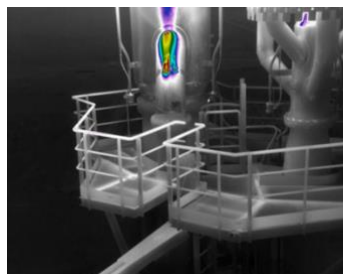
9x/SEC
SCAN SPEED

120°C
TEMPERATURE
RANGE



WORKSWELL SAFETIS EV

SMART FIRE DETECTION THERMAL SENSOR



Datasheet

Release date: 4th of December 2023

Version: 231204

SAFETIS EV technical specification

SAFETIS EV key features description	
Detection capabilities (real-time)	19 200 active temperature sensors for rapid detection
Onboard SMART evaluation	SAFETIS EV operating system does not require any additional PC or HW
Dual alarm detection	Two-level alarm rapid temperature detection user defined including digital/relay outputs for each ROI (warning alarm/critical alarm)
Control Protocol	Modbus RTU available via RS485 and Ethernet
Automatic area scanning	Automatic real-time area scanning up to 9 times per second
Thermal sensor specification	
Temperature pixel sensors	19 200 active temperature sensors
Sensor resolution	160 x 120 px
Sensor pixel size	12 μm
Spatial resolution (iFOV)	6.2 mrad
Temperature range	0 °C to +120 °C (32 °F to 248 °F)
Temperature sensitivity	0.1 °C (100 mK)
Internal NUC shutter	Yes
Detection speed (in seconds)	< 9 times per second rapid area scan speed (< 9 Hz, worldwide shipping)
Spectral range / detector	8 – 14 μm / Uncooled VOx microbolometer
Emissivity adjustment	Yes
Lens FOV and focus	FOV - horizontal 57° x vertical 43° f/1.1, fixed focus Visit the FOV calculator tool for area calculation (visit FOV calculator)
Digital outputs, control and network	
Digital outputs	1 x Open collector potential signal (max. 24 VDC / 100 mA) 1 x Heartbeat pulse signal (max. 24 VDC / 100 mA) 1 x Alarm relay (max. 30 VDC / 1,5 A)
Control protocol	Modbus RTU available via RS485 and Ethernet
Industrial interface	RS485 (EIA/TIA-485-A), M12 connector
Network interface	Ethernet, video streaming and control, 100Mb/sec, 8pin M12 connector
Network protocols	Ethernet/IP, static IP address, subnet mask configuration, DHCP
Network video streaming	RTP color/monochromatic uncompressed video format in RGB format RTP radiometric uncompressed video format in temperature values
Onboard SMART evaluation	Built-in SMART functions, no external HW or SW needed for evaluation



Camera functions	
Threshold alarm detection	Automatic temperature alarm threshold detection based on temperature values set by the user (warning alarm/critical alarm)
Dual alarm detection	2 thresholds definable by user, configurable with digital/relay output
ROI configuration	Up to 64 regions of interest (ROIs) in the image
ROI alarm output	In each ROI, 2 independent thresholds can be set (warning temperature/critical temperature) and connected to digital/relay output
Image rotation	Yes, 180° rotation
LED signalization	1x RGB status LED, 1x power supply LED
FW update	Remote FW update from server or local application
Reset	1x button (camera reset and factory reset to default values)
Software & SDK	
Desktop software	Yes, desktop software for configuration via Ethernet (RJ-45 to 8pin M12)
Environmental data, connectors and power supply	
IP protection (Encapsulation)	IP64
Operating temperature	0°C to +50°C (32 °F to 122 °F)
Storage temperature	-30°C to +60°C (-22 °F to 140 °F)
Humidity	5% to 95% non-condensing
Dimensions and weight	61 x 67 x 156 mm (180mm including the wall mounting) 2.4 x 2.63 x 6.14 in (7.08 in including the wall mounting)
Weight	< 300 grams (0.66 lb)
Connectors	1 x 8pin (Ethernet) and 1 x 12 pin (Outputs, power supply, heartbeat)
Housing material	Durable aluminum body
Supply input	12 to 24 VDC, < 2,5 W (max. peak 5 W), M12 circular connector

SAFETIS EV standard package: SAFETIS EV camera, Desktop software FREE license, My.Workswell card, paper box



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