



**19 200**  
ACTIVE  
SENSORS

RS 485  
MODBUS  
3x DO  
RTP VIDEO

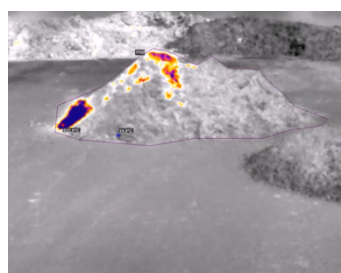
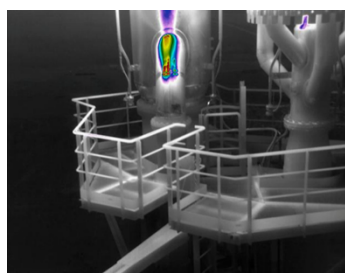
**2-LEVEL**  
FIRE ALARM

**9x/SEC**  
SCAN SPEED



# WORKSWELL SAFETIS EV-M

## SMART EARLY FIRE DETECTION THERMAL SENSOR



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## Datasheet

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**Release date:** 20<sup>th</sup> of October 2024

**Version:** 241020

# SAFETIS EV-M technical specification

SAFETIS EV-M 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 ranges	Standard -10 °C to 140 °C (14 °F to 284 °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. FOV calculator tool is available online ( <a href="#">visit FOV calculator</a> )
Alarm outputs, control and network	
Alarm 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)
Network interface	Ethernet, video streaming and control, 100 Mb/sec
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	SAFETIS EV operating system does not require any additional PC or HW



## Thermal sensor configuration via Desktop SW

<b>Thermal sensor configuration</b>	SAFETIS EV can be configured via Desktop SW.
<b>Thermal sensor configuration via Desktop SAFETIS EV software</b>	Free desktop SW for SAFETIS EV configuration. After the configuration, the desktop software is not needed. The evaluation is processed in the camera (no IP connection needed, industrial espionage protection)
<b>Functions</b>	Authentication and login Full camera configuration - Alarms, thresholds, digital outputs, video Maximum and minimum cross visualization for all ROIs Real-time image visualization ROI placement and configuration
<b>Threshold alarm detection</b>	Automatic temperature alarm threshold detection based on temperature values set by the user (warning alarm and critical alarm value)
<b>Dual alarm detection</b>	2 thresholds definable by user, configurable with digital/relay output
<b>Temperature units</b>	Celsius and Fahrenheit
<b>ROI configuration</b>	Up to 32 regions of interest (ROIs) in the image
<b>ROI alarm output</b>	In each ROI 2 independent threshold alarms can be set and connected to digital/relay output (warning alarm and critical alarm value)
<b>Image rotation</b>	Yes, 180° rotation
<b>LED signalization</b>	1x RGB status LED
<b>FW update</b>	Remote FW update from server or local application
<b>Reset</b>	1x button (camera reset and factory reset to default values)

## Environmental data, connection and power supply

<b>IP protection (Encapsulation)</b>	IP65
<b>Operating temperature</b>	-20 °C to 50 °C (23 °F to 122 °F)
<b>Storage temperature</b>	-35 °C to 80 °C (-31 °F to 176 °F)
<b>Humidity</b>	5 % to 95 % non-condensing
<b>Dimensions and weight</b>	80 x 63.3 x 102 mm (178 mm including the wall mounting) 3.15 x 2.49 x 4.01 in (7.00 in including the wall mounting)
<b>Weight</b>	< 300 grams (0.66 lb)
<b>Connection</b>	1 x 8pin (Ethernet) and 1 x 12 pin (Outputs, power supply, heartbeat)
<b>Housing material</b>	Durable aluminum body
<b>Supply input</b>	12 to 24 VDC, < 2.5 W (max. peak 5 W), M12 circular connector



# Contact information

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