



**19 200**  
ACTIVE  
SENSORS

**RS 485**  
MODBUS  
3x DO  
RTP VIDEO

**2-LEVEL**  
FIRE ALARM

**9x/SEC**  
SCAN SPEED

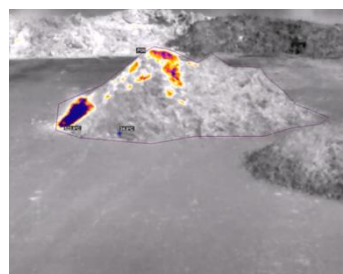
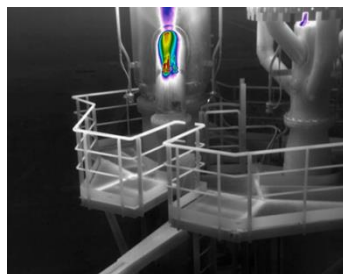
**400 °C**  
**752 °F**  
TEMPERATURE  
RANGE

 **Grafinta**  
Avda. Filipinas, 46  
28003 Madrid  
Tfo. 91 5537207  
E-mail [grafinta@grafinta.com](mailto:grafinta@grafinta.com)



# WORKSWELL SAFETIS EV-M

## SMART EARLY FIRE DETECTION THERMAL SENSOR



---

## Datasheet

---

**Release date:** 17<sup>th</sup> of March 2024

**Version:** 240317

# 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) Optional -10 °C to 400 °C (14 °F to 752 °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 or Webserver	
<b>Thermal sensor configuration</b>	SAFETIS EV can be configured via Desktop SW or Webserver.
<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>Thermal sensor configuration via SAFETIS EV webserver</b>	Free webserver for SAFETIS EV configuration. After the configuration, webserver can stay connected via IP for 24/7 operation or disconnected. The settings are saved into the camera for independent protection.
<b>Webserver 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>	-5 °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

WORKSWELL IN THE WORLD



## Find our partners worldwide

[www.workswell.eu/where-to-buy](http://www.workswell.eu/where-to-buy)



Avda. Filipinas, 46  
28003 Madrid

Tfo. 91 5537207

E-mail [grafinta@grafinta.com](mailto:grafinta@grafinta.com)

### SALES DEPARTMENT

Website: [www.workswell.eu](http://www.workswell.eu)

E-mail: [sales@workswell.eu](mailto:sales@workswell.eu)

Mobile: +420 737 547 622

### COMPANY CONTACT

Website: [www.workswell.eu](http://www.workswell.eu)

E-mail: [info@workswell.eu](mailto:info@workswell.eu)

Mobile: +420 725 877 063

### OFFICE LOCATIONS

Europe - Prague

United States of America

Global partner network

[www.workswell.eu](http://www.workswell.eu)

