



19 200
ACTIVE
SENSORS

RS 485
MODBUS
3x DO
RTP VIDEO

2-LEVEL
FIRE ALARM

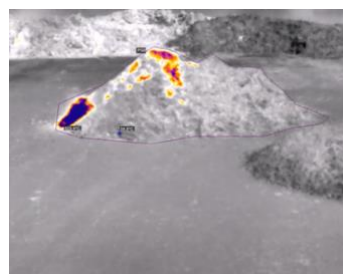
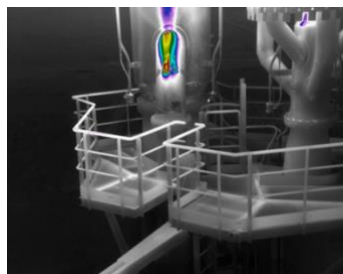
9x/SEC
SCAN SPEED

400 °C
752 °F
TEMPERATURE
RANGE



WORKSWELL SAFETIS EV-C

SMART EARLY FIRE DETECTION THERMAL SENSOR



Datasheet

Release date: 20th of October 2024

Version: 241020

SAFETIS EV-C technical specification

| SAFETIS EV-C 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 (visit FOV calculator) |
| 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 | |
|--|--|
| Thermal sensor configuration | SAFETIS EV can be configured via Desktop SW or Webserver. |
| Thermal sensor configuration via Desktop SAFETIS EV software | 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) |
| Thermal sensor configuration via SAFETIS EV webserver | 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. |
| Webserver functions | 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 |
| Threshold alarm detection | Automatic temperature alarm threshold detection based on temperature values set by the user (warning alarm and critical alarm value) |
| Dual alarm detection | 2 thresholds definable by user, configurable with digital/relay output |
| Temperature units | Celsius and Fahrenheit |
| ROI configuration | Up to 32 regions of interest (ROIs) in the image |
| ROI alarm output | In each ROI 2 independent threshold alarms can be set and connected to digital/relay output (warning alarm and critical alarm value) |
| Image rotation | Yes, 180° rotation |
| LED signalization | 1x RGB status LED |
| FW update | Remote FW update from server or local application |
| Reset | 1x button (camera reset and factory reset to default values) |
| Environmental data, connection and power supply | |
| IP protection (Encapsulation) | IP65 |
| Operating temperature | -20 °C to 50 °C (23 °F to 122 °F) |
| Storage temperature | -35 °C to 80 °C (-31 °F to 176 °F) |
| Humidity | 5 % to 95 % non-condensing |
| Dimensions and weight | 65 x 63.3 x 102 mm (178 mm including the wall mounting) 2.56 x 2.49 x 4.01 in (7.00 in including the wall mounting) |
| Weight | < 300 grams (0.66 lb) |
| Connection | Pigtail cable from camera for power supply, digital outputs and Ethernet |
| Housing material | Durable aluminum body |
| Supply input | 12 to 24 VDC, < 2.5 W (max. peak 5 W) via pigtail cable |



Contact information

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SALES DEPARTMENT

Website: www.workswell.eu

E-mail: sales@workswell.eu

Mobile: +420 737 547 622

COMPANY CONTACT

Website: www.workswell.eu

E-mail: info@workswell.eu

Mobile: +420 725 877 063

OFFICE LOCATIONS

Europe - Prague

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