



Technical Specifications

MOBOTIX M73 FM Bundle

FM-Certified MOBOTIX Thermal Technology

When it comes to building security, the FM-certified MOBOTIX Thermal TR cameras are the first choice. As stand-alone detectors or integrated into fire alarm systems, the certified systems meet the building safety regulations in accordance with the EU Construction Products Regulation.

- Complies with the EU Construction Products Regulation
- Early fire detection, even before flames arise
- Universally applicable, even outdoors
- Connection to control center/fire alarm systems
- Use of additional optical sensor possible
- Highly flexible: up to 20 measuring windows simultaneously



BeyondHumanVision

MOBOTIX

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Order Information

Order Code:**Bundle**

Mx-M73TA-C640R050-FM

M73 FM Bundle VGA (95°)

Hardware

Feature**Properties**Image sensor
(color or B&W)

Up to 4K UHD 3840x2160, 16:9, 1/1,8"

Light sensitivity

- Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s
- BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s

Exposure control

Manual and automatic mode
1 s to 1/16,000 s

IK protection class

IK10 (housing)

Feature	Properties
IP / NEMA protection class	IP66 / NEMA 4X
Operating temperature range	-30 to 60 °C/-22 to 140 °F
Min. cold start temperature	-30 °C/-22 °F
Relative Humidity	95 % non-condensing
Internal DVR Storage	Internal microSD card (SDHC/SDXC), 8 GB out-of-the-box, max. 2 TB.
I/Os	Via Mx-F-4IOA; see Interface Boxes, p. 11
Passive infrared sensor (PIR)	Integrated in Mx-F-MSA, max. 4.5 Watt (see Functional Modules, p. 10)
Shock detector (tamper detection)	Yes
Max. power consumption	<ul style="list-style-type: none"> ■ Max. 25 W/1042 mA at 24 VDC
Electrical surge protection	Optional with MOBOTIX MX-Overvoltage-Protection-Box-LSA (not part of the scope of delivery)
PoE standard	PoE Plus (802.3at-2009)/Class 4
Interfaces	<ul style="list-style-type: none"> ■ Ethernet 1000BaseT ■ miniUSB / USB2.0 High-Speed ($V_{out} = 5.1V$, $I_{out} = 0.9A$, $P_{out} = 4.5W$)
Mounting Options	Wall- or pole-mountable (with Pole Mount accessory)
Dimensions (height x width x depth)	228 x 153 x 232 mm
Weight with sensor modules	Approx. 2.7 kg/6 lb
Housing	Aluminum, PBT-30GF
Standard accessories	<ul style="list-style-type: none"> ■ 1 blind module (pre-installed, must be installed when using only two sensor modules) ■ 1 Thermal mounting plate with wall sealing (pre-installed), two standard plugs (pre-installed) ■ 1 Connector box RJ45 black with rubber plug black, rubber plug single-wire white, USB plug blue (installed) ■ 1 Ethernet patch cable, 50 cm/19.7 in with sealing (RJ45 variant only) ■ 1 USB cable for connecting camera to Mx-F-4IOA ■ 1 Set of mounting supplies for Mx-F-4IOA

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Feature	Properties
	<ul style="list-style-type: none">▪ 1 Set of mounting supplies for Mx-F-NPAA▪ 1 SD card 8 GB (installed)▪ 1 Important Safety Information▪ 1 Sticker with EAN number of camera▪ 1 Sticker with IP address of camera▪ 1 Protective cover for connector box polystyrene white (installed, to be removed during installation)▪ 1 Rubber plug black (installed)▪ 1 Rubber plug single-wire white (installed)▪ 1 Rubber plug cable dia. 3.5 mm white▪ 1 USB plug connector box blue (installed)▪ 1 Module wrench▪ 1 Lens wrench▪ 3 housing plugs silicone white▪ 3 Security clips plastic red▪ 2 Cable tie black▪ 1 Allen wrench 5 mm▪ 1 Allen wrench 2.5 mm▪ 1 TORX wrench TX20▪ 1 TORX wrench TX10▪ 1 Screw driver yellow▪ 4 Washers dia. 6.4 mm plastic white▪ 4 Wood screws 4.5 x 60 mm▪ 4 Dowels S8▪ 3 Oval head screws with shank 2.5x6.5 mm, stainless steel black▪ 2 Covers for screw plastic white
Tiltability of camera	Horizontal: 2 x 180 degrees Vertical: 110 degrees
Detailed technical documentation	www.mobotix.com > Services > Download Center > Marketing & Documentation
MTBF	80,000 hours
Certificates	EN 50121-4, EN 55032, EN 55035, EN54-10:2002, EN54-10:2002/A1:2005, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62368-1, EN 63000, AS/NZS CISPR32, 47 CFR Part 15b, NRTL, EN 54-18, FM 3260

Feature	Properties
Protocols	DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, MQTT, NFS, NTP (client and server), RTP, RTCP, RTSP, SFTP, SIP (client and server), SMB/CIFS, SNMP, SMTP, SSL/TLS 1.3, TCP, UDP, VLAN, VPN, Zero-conf/mDNS
Manufacturer warranty	5 years

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Power Consumption

CAUTION!

To comply with the requirements of FM 3260, the entire fire detection system (cameras, alarm systems, etc.) must be protected by uninterruptible power supplies (UPS) or batteries that can bridge power outages of up to 72 hours!

M73 FM Bundle

Components	Average Power Consumption	Max. Power Consumption
<ul style="list-style-type: none">■ Mx-M73A■ M1: Thermal Image Sensor■ M3: Multisense■ Mx-F-4IOA■ Mx-F-NPAA	<ul style="list-style-type: none">■ 12.5 W/520 mA at 24 VDC	<ul style="list-style-type: none">■ Max. 25 W/1042 mA at 24 VDC

M73 FM Bundle and D/N Image Module

Components	Average Power Consumption	Max. Power Consumption
<ul style="list-style-type: none">■ Mx-M73A■ M1: Thermal Image Sensor■ M2: Day/Night sensor module■ M3: Multisense■ Mx-F-4IOA■ Mx-F-NPAA	<ul style="list-style-type: none">■ 13.5 W/562 mA at 24 VDC	<ul style="list-style-type: none">■ Max. 25 W/1042 mA at 24 VDC

Image and Video Properties

Feature	Properties
Available video codecs	<ul style="list-style-type: none">■ H.264, H.265■ MxPEG+■ MJPEG
Image resolutions	CIF 320x240, VGA 640x360, XGA 1024x576, HD 1280x720, FullHD 1920x1080, QHD

Feature	Properties
	2560x1440, 4K UHD 3840x2160
Multi streaming	H.264, H.265 with triple streaming
Multicast stream via RTSP	Yes
Max. image resolution H.264	<ul style="list-style-type: none"> ■ One sensor: 4K UHD 3840x2160 (8MP) ■ Both sensors (dual image): 2x 4K UHD 7680x2160 (16MP)
Max. image resolution H.264	<ul style="list-style-type: none"> ■ One thermal sensor: VGA 640x480 ■ One thermal sensor, one optical sensor: 1xVGA 640x480, 1x 4K UHD 3840x2160 (8MP)
Max. frame rate	MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K

General Software Features

Feature	Properties
WDR	Up to 120 dB
Software features	<ul style="list-style-type: none"> ■ H.264, H.265 Multistreaming ■ Multicast stream via RTSP ■ Digital pan, tilt, zoom/vPTZ (up to 8x zoom) ■ Genetec protocol integration ■ Programmable exposure zones ■ Snapshot recording (pre/post-alarm images) ■ Continuous recording ■ Event recording ■ Time-controlled flexible event logic ■ Weekly schedules for recordings and actions ■ Event video and image transfer via FTP and email ■ Playback and QuadView via web browser ■ Animated logos on the image ■ Master/Slave functionality ■ Privacy zone scheduling

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Feature	Properties
	<ul style="list-style-type: none">▪ Remote alarm notification (network message)▪ Programming interface (HTTP API)▪ MxMessageSystem
ONVIF compatibility	Profile G, S, T
Master/Slave functionality	Yes
Remote alarm notification	Email, network message (HTTP/HTTPS), SNMP, MxMessageSystem, MQTT ModBus TCP* *In combination with MxThermalValidation or MxAdvancedRadiometry apps (optional, requires additional license)
DVR/image storage management	<ul style="list-style-type: none">▪ On internal microSD card▪ On external USB and NAS devices▪ Different streams for live image and recording▪ MxPEG+ only▪ MxFFS with buffered archive, pre- and post-alarm images, storage monitoring with error reporting
Camera and data security	User and group management, SSL connections, IP-based access control, IEEE 802.1X, intrusion detection, digital image signature
Digitally signed firmware	Yes (to prevent firmware file tampering)

Optional MOBOTIX Apps for FM 3260 Fire Detection

- MxAdvancedRadiometry (see [Technical Specifications](#)).
- MxThermalValidation (see [Technical Specifications](#)).

NOTE!

- Use of these optional apps is based on the specified use cases and subject to acceptance testing by the independent auditor.
- These MOBOTIX apps require additional licensing (30 days free trial included).

Video Management Software

Feature	Properties
MOBOTIX HUB	Yes www.mobotix.com > Services > Download Center > Software Downloads
MxManagementCenter	Yes (latest version recommended) www.mobotix.com > Services > Download Center > Software Downloads
MOBOTIX LIVE App	Yes (available in Google Play Store (Android) and Apple App Store (iOS)).
3rd Party VMS Software	See ONVIF Profile S, T and G specification

Sensor Modules

Features Thermal Image Sensors – C Models

Feature	Properties
Thermal sensitivity	Typ. 30 mK
Thermal image sensor	Uncooled microbolometer, VGA 640x480
IR range	7.5 to 13.5µm
Temperature measurement range (adjustable)	High Sensivity: -40 to 150°C/-40 to 302°F Low Sensivity: -40 to 350°C/-40 to 662°F Default: Automatic (switches between High and Low depending on highest temperatures in FoV)
Adjustable time delay	Via software (Setup Menu > Action Group Overview > Edit > Action Dead-time)
Sources of false stimuli	Avoided through setting up measurement areas (=detection zones) and exclu-

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Feature	Properties				
	sion zones in thermal radiometry mode as per instruction manual				
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module				
Max. frame rate	30 fps				
Pixel pitch	12 μm				
Field of view	<table><thead><tr><th>Sensor Module</th><th>FoV (H x V)</th></tr></thead><tbody><tr><td>640R050</td><td>95° x 76°; focal length 4.9 mm; f/1.1</td></tr></tbody></table>	Sensor Module	FoV (H x V)	640R050	95° x 76°; focal length 4.9 mm; f/1.1
Sensor Module	FoV (H x V)				
640R050	95° x 76°; focal length 4.9 mm; f/1.1				
Operating temperature range	-30 to 60 °C/-22 to 140 °F				
Relative Humidity	95 % non-condensing				
MTBF	80,000 hours				
IP rating	IP67				
IK rating	IK04				
Material	PBT-30GF (housing)				

Functional Modules

Functional Module	Order Code	Remark
Audio module (optional)	Mx-F-AUDA	Audio module with microphone and speaker
MultiSense module (included)	Mx-F-MSA	With PIR sensor, temperature sensor, illumination sensor

Interface Boxes

Mx-F-4IOA

Inputs	4 galvanically separated inputs, self powered, up to 30 Vrms AC / 50V DC Switching thresholds: <ul style="list-style-type: none"> ▪ Input >1.6V leads to a detected HIGH ▪ Input <0.9V leads to a detected LOW (after a high) max. length for cables: 50m											
Outputs	4 Form A relay contacts (max 30 Vrms AC / max, 50V DC/ 60 W/ 2A DC) 4–20 mA Alarm & Fault Relay (SPDT), Trouble Relay (SPST) SPDT: 1 A at 30 VDC or 1 A at 30VAC LEDs: via included Mx-F-MSA											
Wire specifications (terminals)	<table border="1"> <thead> <tr> <th colspan="2"><i>Conductor cross section</i></th> </tr> </thead> <tbody> <tr> <td>AWG</td> <td>20 - 26</td> </tr> <tr> <td>Rigid</td> <td>0.14mm² - 0.8mm²</td> </tr> <tr> <td>Flexible</td> <td>0.14mm² - 0.5mm²</td> </tr> <tr> <td>Flexible with ferrule</td> <td>0.25mm² - 0.34mm²</td> </tr> </tbody> </table>		<i>Conductor cross section</i>		AWG	20 - 26	Rigid	0.14mm ² - 0.8mm ²	Flexible	0.14mm ² - 0.5mm ²	Flexible with ferrule	0.25mm ² - 0.34mm ²
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Status indicators	Multi-color LEDs (Green, Red); refer to Mx-F-4IOA Quick Installation											
Mounting	Mx-M-OW-M73 (wall mount) Mx-M-CM-M73 (ceiling mount)											

Mx-F-NPAA

Input voltage	12 to 24 V (tolerance range 10.71 to 26.4 V)
Output voltage	PoE Class 1 to 4 (up to 25 W)

General Hardware Specifications

Power consumption	Typ. 1 W/200 mA
Protection class	IP66
Operating temperature	-30 to 60 °C/-22 to 140 °F
Certificates	CE, EMC, ROHS, AS/NZS CISPR 32, 47 CFR FCC Part 15, Subpart B, Class A, ICES-003 Class A, EN 54-18
Dimensions (width x height x depth)	86 x 56 x 31 mm/3.39 x 2.20 x 1.22 in (without rubber plugs)
Weight	70 g

Connector Box RJ45

Interface	Properties
Network	100/1000 Mbps
Allowed cable dimensions for cables connected to the PCB terminals	<i>Conductor cross section</i> AWG 20 - 26 Rigid 0.14mm ² - 0.8mm ² Flexible 0.14mm ² - 0.5mm ² Flexible with ferrule 0.25mm ² - 0.34mm ²
Line In	Standard Line In: (0dB) Vrms=1V
Line Out	Headphones with 20mW @ 16 Ohm or 32 Ohm. Audio inputs as a Line Out function to 10k Ohm impedance of receiver. Audio level while connected to 10k Ohm equals -10dBV

Dimensions

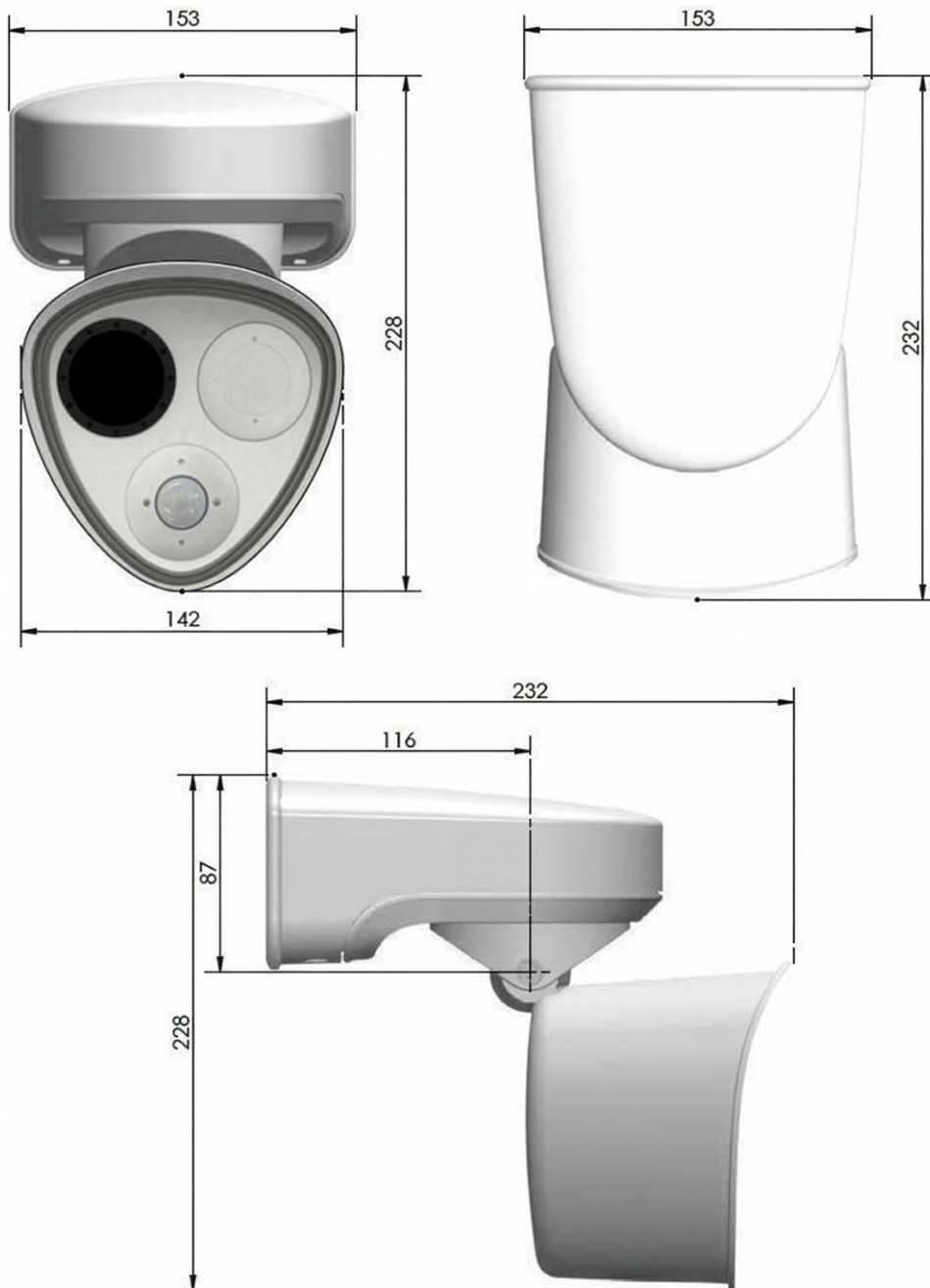


Fig. 1: MOBOTIX M73: All measurements in mm

NOTE! Drilling template: www.mobotix.com > Services > Download Center > Marketing & Documentation > Drilling Templates.

Dimensions of Interface Boxes

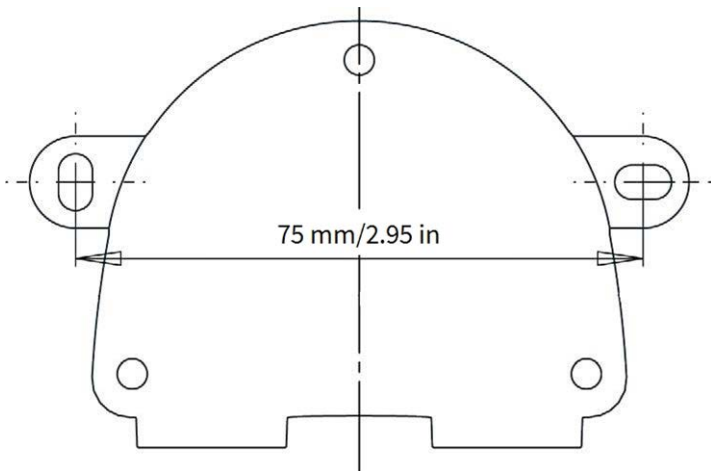


Fig. 2: All measurements in mm

NOTE!

When printing this page at 100% of the original size (no scaling) you can use this page as drilling template.

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MOBOTIX AG • Kaiserstrasse • D-67722 Langmeil • Tel.: +49 6302 9816-103 • sales@mobotix.com • www.mobotix.com

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