



# Technical Specifications

## MOBOTIX M73 EN54 Bundle-V3

### EN 54-10-Certified MOBOTIX Thermal Technology

When it comes to building security, the EN 54-10-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



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## Order Information

<b>Order Code:</b>	<b>Bundle</b>
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Mx-M73TA-C320R100-EN54-V3	M73 EN54 Bundle-V3 CIF (50°)
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Mx-M73TA-C640R050-EN54-V3	M73 EN54 Bundle-V3 VGA (95°)
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Mx-M73TA-C640R100-EN54-V3	M73 EN54 Bundle-V3 VGA (50°)
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## Hardware

<b>Feature</b>	<b>Properties</b>
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Image sensor (color or B&W)	Up to 4K UHD 3840x2160, 16:9, 1/1,8"
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Light sensitivity	<ul style="list-style-type: none"><li>■ Color sensor (day): 0,1 lx @ 1/60s; 0,005 lx @ 1s</li><li>■ BW sensor (night): 0,02 lx @ 1/60s; 0,001 lx @ 1s</li></ul>
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<b>Feature</b>	<b>Properties</b>
Exposure control	Manual and automatic mode 1 s to 1/16,000 s
IK protection class	IK10 (housing)
IP / NEMA protection class	IP66 / NEMA 4X
Operating temperature range	-40 to 65 °C/-40 to 149 °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 <a href="#">Interface Boxes, p. 11</a>
Passive infrared sensor (PIR)	Integrated in Mx-F-MSA, max. 4.5 Watt (see <a href="#">Functional Modules, p. 10</a> )
Shock detector (tamper detection)	Yes
Max. power consumption	<ul style="list-style-type: none"> <li>▪ Max. 25 W/1042 mA at 24 VDC</li> </ul>
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"> <li>▪ Ethernet 1000BaseT</li> <li>▪ miniUSB / USB2.0 High-Speed (<math>V_{out} = 5.1V</math>, <math>I_{out} = 0.9A</math>, <math>P_{out} = 4.5W</math>)</li> </ul>
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"> <li>▪ 1 blind module (pre-installed, must be installed when using only two sensor modules)</li> <li>▪ 1 Thermal mounting plate with wall sealing (pre-installed), two standard plugs (pre-installed)</li> </ul>

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Feature	Properties
	<ul style="list-style-type: none"><li>▪ 1 Connector box RJ45 black with rubber plug black, rubber plug single-wire white, USB plug blue (installed)</li><li>▪ 1 Ethernet patch cable, 50 cm/19.7 in with sealing (RJ45 variant only)</li><li>▪ 1 USB cable for connecting camera to Mx-F-4IOA</li><li>▪ 1 Set of mounting supplies for Mx-F-4IOA</li><li>▪ 1 Set of mounting supplies for Mx-F-NPAA</li><li>▪ 1 SD card 8 GB (installed)</li><li>▪ 1 Important Safety Information</li><li>▪ 1 Sticker with EAN number of camera</li><li>▪ 1 Sticker with IP address of camera</li><li>▪ 1 Protective cover for connector box polystyrene white (installed, to be removed during installation)</li><li>▪ 1 Rubber plug black (installed)</li><li>▪ 1 Rubber plug single-wire white (installed)</li><li>▪ 1 Rubber plug cable dia. 3.5 mm white</li><li>▪ 1 USB plug connector box blue (installed)</li><li>▪ 1 Module wrench</li><li>▪ 1 Lens wrench</li><li>▪ 3 housing plugs silicone white</li><li>▪ 3 Security clips plastic red</li><li>▪ 2 Cable tie black</li><li>▪ 1 Allen wrench 5 mm</li><li>▪ 1 Allen wrench 2.5 mm</li><li>▪ 1 TORX wrench TX20</li><li>▪ 1 TORX wrench TX10</li><li>▪ 1 Screw driver yellow</li><li>▪ 4 Washers dia. 6.4 mm plastic white</li><li>▪ 4 Wood screws 4.5 x 60 mm</li><li>▪ 4 Dowels S8</li><li>▪ 3 Oval head screws with shank 2.5x6.5 mm, stainless steel black</li><li>▪ 2 Covers for screw plastic white</li></ul>
Tiltability of camera	Horizontal: 2 x 180 degrees Vertical: 110 degrees
Detailed technical documentation	<a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Services</a> > <a href="#">Download Center</a> > <a href="#">Marketing &amp; Documentation</a>
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,

Feature	Properties
Protocols	AS/NZS CISPR32, 47 CFR Part 15b, NRTL, EN 54-18, FM 3260 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

## Power Consumption

### CAUTION!

To comply with the requirements of EN 54-4, 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!

Search for "Standby supply" in the EN 54-4 standards document.

### M73 EN54 Bundle-V3

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

### M73 EN54 Bundle-V3 and D/N Image Module

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

## Image and Video Properties

Feature	Properties
Available video codecs	<ul style="list-style-type: none"> <li>■ H.264, H.265</li> <li>■ MxPEG+</li> <li>■ MJPEG</li> </ul>
Image resolutions	CIF 320x240, VGA 640x360, XGA 1024x576, HD 1280x720, FullHD 1920x1080, QHD 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"> <li>■ One sensor: 4K UHD 3840x2160 (8MP)</li> <li>■ Both sensors (dual image): 2x 4K UHD 7680x2160 (16MP)</li> </ul>
Max. image resolution H.264	<ul style="list-style-type: none"> <li>■ One thermal sensor: VGA 640x480/CIF 320x240</li> <li>■ One thermal sensor, one optical sensor: 1xVGA 640x480/CIF 320x240, 1x 4K UHD 3840x2160 (8MP)</li> </ul>
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"> <li>■ H.264, H.265 Multistreaming</li> <li>■ Multicast stream via RTSP</li> <li>■ Digital pan, tilt, zoom/vPTZ (up to 8x zoom)</li> <li>■ Genetec protocol integration</li> <li>■ Programmable exposure zones</li> <li>■ Snapshot recording (pre/post-alarm images)</li> <li>■ Continuous recording</li> <li>■ Event recording</li> </ul>

## Technical Specifications

### M73 EN54 Bundle-V3

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#### Feature

#### Properties

- 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
- 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

- 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)

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## Optional MOBOTIX Apps for EN 54 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 <a href="http://www.mobotix.com">www.mobotix.com</a> > Services > Download Center > Software Downloads
MxManagementCenter	Yes (latest version recommended) <a href="http://www.mobotix.com">www.mobotix.com</a> > 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/CIF 320x240
IR range	7.5 to 13.5µm

## Technical Specifications

### M73 EN54 Bundle-V3

Feature	Properties								
Temperature measurement range (adjustable)	High Sensitivity: -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)								
Max. image size	Can be scaled up to 4K UHD 3840x2160 (8MP), 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>320R100</td><td>50° x 40°; focal length 9.2 mm; f/1.0</td></tr><tr><td>640R050</td><td>95° x 76°; focal length 4.9 mm; f/1.1</td></tr><tr><td>640R100</td><td>50° x 40°; focal length 4.5 mm; f/1.2</td></tr></tbody></table>	Sensor Module	FoV (H x V)	320R100	50° x 40°; focal length 9.2 mm; f/1.0	640R050	95° x 76°; focal length 4.9 mm; f/1.1	640R100	50° x 40°; focal length 4.5 mm; f/1.2
Sensor Module	FoV (H x V)								
320R100	50° x 40°; focal length 9.2 mm; f/1.0								
640R050	95° x 76°; focal length 4.9 mm; f/1.1								
640R100	50° x 40°; focal length 4.5 mm; f/1.2								
Operating temperature range	-40 to 65 °C/-40 to 149 °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"> <li>▪ Input &gt;1.6V leads to a detected HIGH</li> <li>▪ Input &lt;0.9V leads to a detected LOW (after a high)</li> </ul> max. length for cables: 50m	
Outputs	4 Form A relay contacts (max 30 Vrms AC / max, 50V DC/ 60 W/ 2A DC)	
Wire specifications (terminals)	<i>Conductor cross section</i> AWG 20 - 26 Rigid 0.14mm <sup>2</sup> - 0.8mm <sup>2</sup> Flexible 0.14mm <sup>2</sup> - 0.5mm <sup>2</sup> Flexible with ferrule 0.25mm <sup>2</sup> - 0.34mm <sup>2</sup>	
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

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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

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## 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 <sup>2</sup> - 0.8mm <sup>2</sup> Flexible 0.14mm <sup>2</sup> - 0.5mm <sup>2</sup> Flexible with ferrule 0.25mm <sup>2</sup> - 0.34mm <sup>2</sup>
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

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## Dimensions

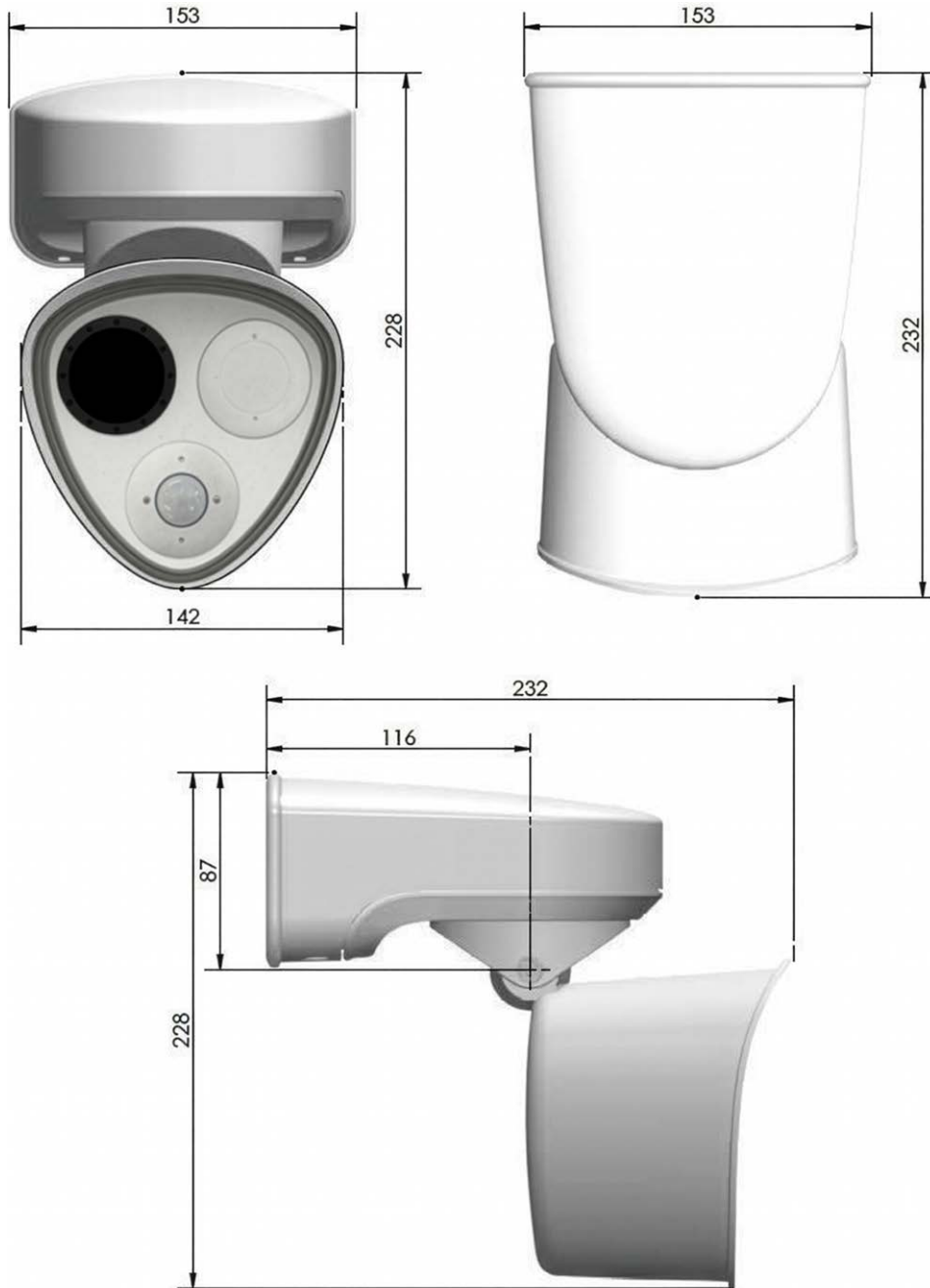


Fig. 1: MOBOTIX M73: All measurements in mm

**NOTE!** Drilling template: [www.mobotix.com](http://www.mobotix.com) > Services > Download Center > Marketing & Documentation > Drilling Templates.

## Dimensions of Interface Boxes

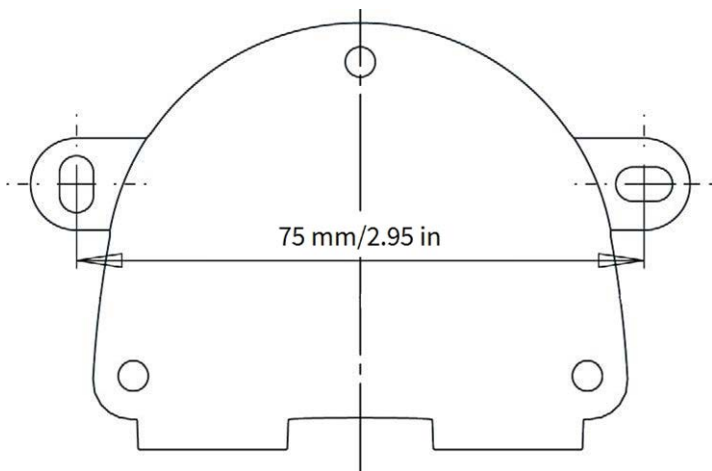


Fig. 2: All measurements in mm

**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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