



Technical Specifications

MOBOTIX S74 EN54 Bundle-V2

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



Table of Contents

Order Information	2
Hardware	3
Image and Video Properties	5
General Software Features	6
Optional MOBOTIX Apps for EN 54 Fire Detection	7
Video Management Software	8
Sensor Modules	8
Functional Modules	9
Interface Boxes	10
Interface Slide-in Boards	11
Dimensions	14

Order Information

Order Code:

Bundle

Mx-S74TA-B336R100-EN54	S74 EN54 Bundle-V2 CIF (45°)
Mx-S74TA-B336R150-EN54	S74 EN54 Bundle-V2 CIF (25°)
Mx-S74TA-B336R280-EN54	S74 EN54 Bundle-V2 CIF (17°)
Mx-S74TA-B640R050-EN54	S74 EN54 Bundle-V2 VGA (90°)
Mx-S74TA-B640R080-EN54	S74 EN54 Bundle-V2 VGA (69°)
Mx-S74TA-B640R100-EN54	S74 EN54 Bundle-V2 VGA (45°)
Mx-S74TA-B640R150-EN54	S74 EN54 Bundle-V2 VGA (32°)

Hardware

Feature	Properties
Image sensor (color or B&W sensor)	Up to 4K UHD 3840x2160, 16:9, 1/1,8"
Light sensitivity	<ul style="list-style-type: none"> ■ 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)
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	S74 IO Slide in Board, p. 11 required
Microphone/Speaker	S74 IO Slide in Board, p. 11 required
Passive infra-red sensor (PIR)	Available with functional module, max. 4.5 Watt (see Functional Modules, p. 9)
Infra-red illumination	Three functional modules for wide-angle, standard, and tele lenses
Range of infra-red illumination	Up to 30 m/100 ft (may be more depending on scene)
Max. power consumption	<ul style="list-style-type: none"> ■ Max. 25 W/1042 mA at 24 VDC
Electrical surge protection	S74 Network Slide-in Board with LSA terminal, p. 11 or S74 Network Slide-in Board with RJ45 and VDC power supply - A (pre-installed), p. 13 required
Electrical surge protection	S74 Network Slide-in Board with RJ45 and VDC power supply - A (pre-installed), p. 13 required
PoE standard	PoE Plus (802.3at-2009)/Class 4 (Network Slide-in Board required. See Interface Slide-in Boards, p. 11)
Interfaces	4 sensor / functional modules

Technical Specifications

S74 EN54 Bundle-V2

Feature	Properties
	USB-C 2 Slots for slide in boards (Network, IOs etc.)
Mounting Options	Wall-mountable
Dimensions (height x width x depth)	36 x 232 x 110 mm
Weight without sensor modules	1.130g
Housing	Aluminum, PBT-30GF
Standard accessories	<ul style="list-style-type: none">1 SD card 8 GB (installed)1 Important Safety Information1 Sticker with EAN number of camera1 Sticker with IP address of camera1 Module wrench1 Lens wrench4 Wood screws 4.5 x 60 mm4 Dowels S82 Covers for screw plastic white
Standard accessories	See S74 EN54 Bundle-V2: Scope of Delivery
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
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

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.

S74 EN54 Bundle-V2

Components	Average Power Consumption	Max. Power Consumption
<ul style="list-style-type: none"> ■ Mx-S74A ■ M1: Thermal Image Sensor ■ M3: Multisense ■ Mx-F-4IOA 	<ul style="list-style-type: none"> ■ 11.1 W/462 mA at 24 VDC 	<ul style="list-style-type: none"> ■ Max. 25 W/1042 mA at 24 VDC

S74 EN54 Bundle-V2 and D/N Image Module

Components	Average Power Consumption	Max. Power Consumption
<ul style="list-style-type: none"> ■ Mx-S74A ■ M1: Thermal Image Sensor ■ M2: Day/Night sensor module ■ M3: Multisense ■ Mx-F-4IOA 	<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

Technical Specifications

S74 EN54 Bundle-V2

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/CIF 320x240■ Two thermal sensors: 2xVGA 640x480■ One thermal sensor, one optical sensor: 1xVGA 640x480/CIF 320x240, 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

Feature	Properties
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 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 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 – B-Models

Feature	Properties
Thermal sensitivity	Typ. 50 mK
Thermal image sensor	Uncooled microbolometer, CIF: 336 x 256 px / VGA: 640 x 480 px
IR range	7.5 to 13.5 μ m
Temperature measurement range (adjustable)	High Sensitivity: -40 to 170°C/-40 to 320°F Low Sensivity: -40 to 550°C/-40 to 1022°F Default: Automatic (switches between High and Low depending on highest temperatures in FoV)
Dimensions	PT mount Thermal 336/640 px: 98.5 mm x 106 mm diam; 620 g (including PT Mount) Sensor module alone: 73 mm (+4.4 mm front glass) x 57 mm diam (63 mm front glass); 310 g

Feature	Properties																
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module																
Max. frame rate	9 fps (fast version 25/30 fps on request)																
Pixel pitch	17 µm																
Field of view	<table border="1"> <thead> <tr> <th>Sensor Module</th> <th>FoV</th> </tr> </thead> <tbody> <tr> <td>336R/T100</td> <td>45° x 35°; 2.27 mrad; focal length 7.5 mm, f/1.25</td> </tr> <tr> <td>336R/T150</td> <td>25° x 19°; 1.31 mrad; focal length 13 mm, f/1.25</td> </tr> <tr> <td>336R/T280</td> <td>17° x 13°; 0.90 mrad, focal length 19 mm, f/1.25</td> </tr> <tr> <td>640R/T050</td> <td>90° x 69°; 2.27 mrad; focal length 7.5 mm, f/1.4</td> </tr> <tr> <td>640R/T080</td> <td>69° x 56°; 1.89 mrad; focal length 9 mm, f/1.4</td> </tr> <tr> <td>640R/T100</td> <td>45° x 37°; 1.31 mrad; focal length 13 mm, f/1.25</td> </tr> <tr> <td>640R/T150</td> <td>32° x 26°; 0.90 mrad; focal length 19 mm, f/1.25</td> </tr> </tbody> </table>	Sensor Module	FoV	336R/T100	45° x 35°; 2.27 mrad; focal length 7.5 mm, f/1.25	336R/T150	25° x 19°; 1.31 mrad; focal length 13 mm, f/1.25	336R/T280	17° x 13°; 0.90 mrad, focal length 19 mm, f/1.25	640R/T050	90° x 69°; 2.27 mrad; focal length 7.5 mm, f/1.4	640R/T080	69° x 56°; 1.89 mrad; focal length 9 mm, f/1.4	640R/T100	45° x 37°; 1.31 mrad; focal length 13 mm, f/1.25	640R/T150	32° x 26°; 0.90 mrad; focal length 19 mm, f/1.25
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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-S7A-INT01	Via S74 IO Slide in Board
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)								
Wire specifications (terminals)	<i>Conductor cross section</i> <table><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></table>	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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Rigid	0.14mm ² - 0.8mm ²								
Flexible	0.14mm ² - 0.5mm ²								
Flexible with ferrule	0.25mm ² - 0.34mm ²								
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)								

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

Interface Slide-in Boards

S74 Network Slide-in Board with RJ45 socket

Order Code	Mx-F-S7A-RJ45
Power Supply	PoE Plus (802.3at-2009)/Class 4
Network	RJ45 / Ethernet 1000Base-T

S74 Network Slide-in Board with LSA terminal

Order Code	Mx-F-S7A-LSA
Power Supply	PoE Plus (802.3at-2009)/Class 4
Network	LSA / Ethernet 1000Base-T
Overvoltage Protection	max. 4 kV on the PoE network cabling

S74 IO Slide in Board

Order Code	Mx-F-S7A-INT01
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Technical Specifications

S74 EN54 Bundle-V2

Terminal	Remark
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
Line In	Standard Line In: (0dB) Vrms=1V
SPK	0.9W at any 8 Ohm speaker. MOBOTIX Audio module: 0.9W at 8 Ohm
MIC	Passive microphone to connect (for best results). R_Bias for the microphone is 2.2 kOhm (included on the camera). Microphone impedance < 2.2 kOhm, Operating voltage of the microphone is 2V. Sensitivity of the MOBOTIX Audio Module: -35 +/-4dB (0dB = 1V/pa, 1kHz)
Allowed cable dimensions for cables connected to the PCB terminals	<i>Conductor cross section</i> AWG 20 - 26 Rigid 0.14mm ² - 0.5mm ² Flexible 0.14mm ² - 0.5mm ² Flexible with ferrule 0.25mm ² - 0.34mm ²
Input	M73-A requires pull-up resistor and external power supply (10mA / max 30 Vrms AC / max. 50V DC) Output may be loaded with max. 50mA max. length for cables: depends on loop impedance of the connected cable. M73-B Dry contact, form A (max 30 Vrms AC / max, 50V DC/ 60 W/ 2A DC)
Output	requires pull-up resistor and external power supply (10mA / max 30 Vrms AC / max. 50V DC) Output may be loaded with max. 50mA max. length for cables: depends on loop impedance of the connected cable.

S74 Network Slide-in Board with RJ45 and VDC power supply - A (pre-installed)

Order Code	Mx-F-S7A-RJ45-VDC
Power Supply	12-24 V DC only - recommended 2.5-1.5A 24Volt power supply unit required
Network	RJ45 / Ethernet 1000Base-T

Allowed cable dimensions for cables connected to the PCB terminals

AWG	26 - 20
Rigid	0.14mm ² - 0.5mm ²
Flexible	0.14mm ² - 0.5mm ²
Flexible with ferrule	0.25mm ² - 0.34mm ²

S74 Network Slide-in Board with RJ45 and VDC power supply - B (pre-installed)

Order Code	Mx-F-S7B-RJ45-VDC
Power Supply	12-24 V DC only - recommended 2.5-1.5A 24Volt power supply unit required
Network	RJ45 / Ethernet 1000Base-T

Allowed cable dimensions for cables connected to the PCB terminals

AWG	26 - 14
Rigid	0.14mm ² - 2.5mm ²
Flexible	0.14mm ² - 1.5mm ²
Flexible with ferrule	0.25mm ² - 1.5mm ²

Dimensions

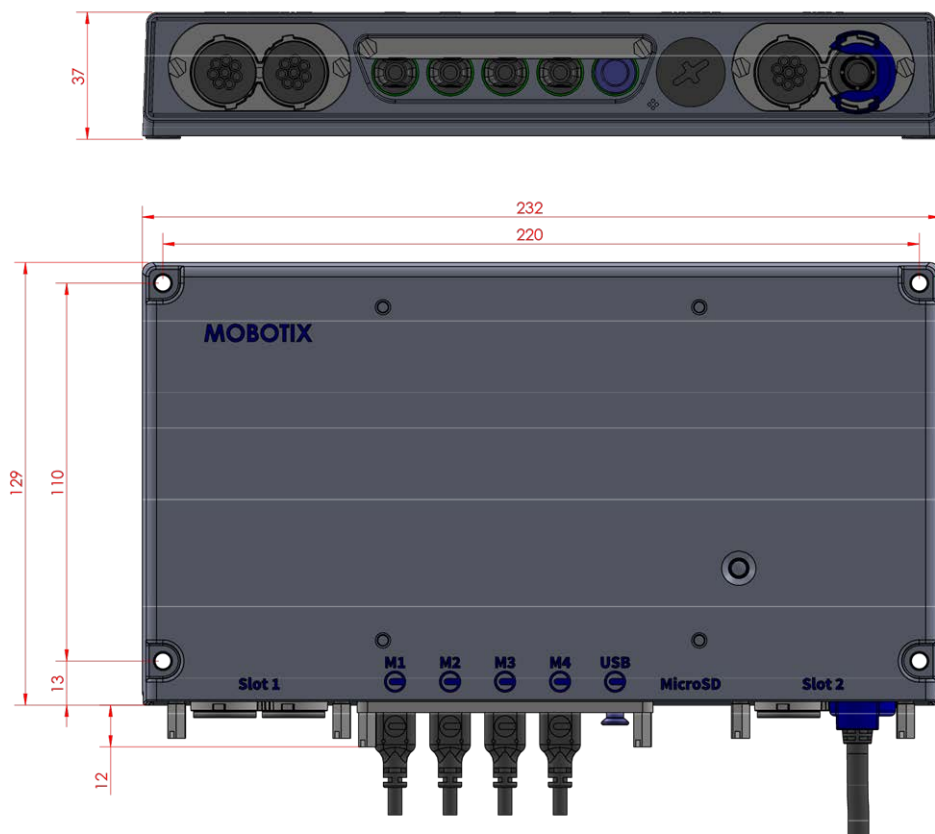


Fig. 1: MOBOTIX M73: All measurements in mm

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

Dimensions of Interface Boxes

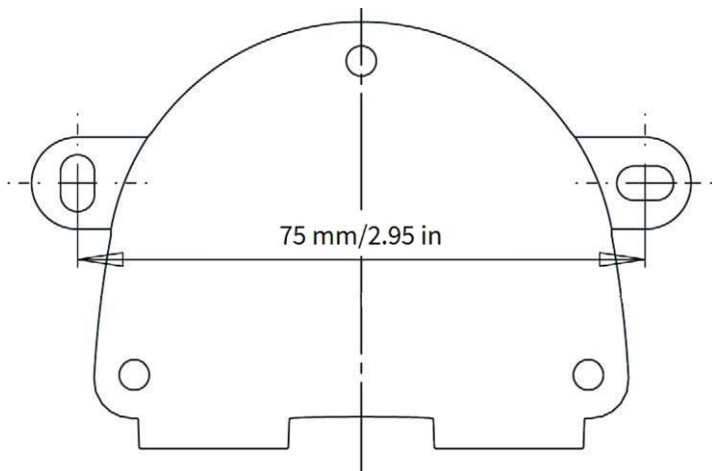


Fig. 2: All measurements in mm

NOTE!

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

MOBOTIX

BeyondHumanVision

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