



# Technical Specifications

## MOBOTIX M73 EN54

### 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 standalone 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>Camera Type / Bundle</b>
20.102.712- 01	Mx-M73TA-B336R100-EN54	M73A TR Camera (B) CIF (45°)
20.102.713- 01	Mx-M73TA-B336R150-EN54	M73A TR Camera (B) CIF (25°)
20.102.714- 01	Mx-M73TA-B336R280-EN54	M73A TR Camera (B) CIF (17°)
20.102.715- 01	Mx-M73TA-B640R050-EN54	M73A TR Camera (B) VGA (90°)
20.102.716- 01	Mx-M73TA-B640R080-EN54	M73A TR Camera (B) VGA (69°)
20.102.717- 01	Mx-M73TA-B640R100-EN54	M73A TR Camera (B) VGA (45°)
20.102.718- 01	Mx-M73TA-B640R150-EN54	M73A TR Camera (B) VGA (32°)

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# 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"> <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>
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. 1 TB.
I/Os	see <a href="#">Connector Box RJ45, p. 15</a>
Microphone/Speaker	<ul style="list-style-type: none"> <li>▪ Functional audio module, max. 4.5 Watt (see <a href="#">Functional Modules</a>)</li> <li>▪ Microphone Sensitivity: -35 +/-4 dB (0 dB = 1 V/pa, 1 kHz)</li> <li>▪ Speaker: 0.9 W at 8 Ohm</li> </ul>
Passive infrared sensor (PIR)	Available with functional module, max. 4.5 Watt (see <a href="#">Functional Modules</a> )
Infrared illumination	Three functional modules for wide-angle, standard, and tele lenses
Range of infrared illumination	Up to 30 m/100 ft (may be more depending on scene)
Shock detector (tamper detection)	Yes
Max. power consumption	max. 25 W
Electrical surge protection	integrated with MOBOTIX integrated with Connector Box LSA (not part of the scope of delivery)
PoE standard	PoE Plus (802.3at-2009)/Class 4

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Feature	Properties
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 without sensor modules	Approx. 2.5 kg/5.5 lb
Housing	Aluminum, PBT-30GF

Feature	Properties
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> <li>1 connector box (pre-installed)</li> <li>1 Ethernet patch cable, 50 cm/19.7 in with sealing (RJ45 variant only)</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 Connector box RJ45 with rubber plug black, rubber plug single-wire white, USB plug blue (installed)</li> <li>1 Protective cover for connector box polystyrene white (installed)</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 (to replace C.5)</li> <li>1 USB plug connector box blue (installed)</li> <li>1 Module wrench (gray)</li> <li>1 Lens wrench blue</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	<p>Horizontal: 2 x 180 degrees</p> <p>Vertical: 110 degrees</p>

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Feature	Properties
Detailed technical documentation	<a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</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, AS/NZS CISPR32, 47 CFR Part 15b
Protocols	DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, 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, Zeroconf/mDNS S
Manufacturer warranty	5 years

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## Average Power Consumption

### M73 - Body

Average power consumption: 8.5 W

### M73 - D/N, IR, Audio

Modules:

M1: IR 850nm wide

M2: ULL Day/Night DN280

M3: Audio

Average power consumption: 15.4 W

### M73 - D/N, IR, Multisense

Modules:

M1: IR 850nm wide

M2: ULL Day/Night DN280

M3: Multisense

Average power consumption: 14.1 W

## M73 - D/N, Thermal, Audio

Modules:

M1: Thermografic Sensor 336R100

M2: ULL Day/Night DN280

M3: Audio

**NOTE!** Thermal overlay used as Live view.

Average power consumption: 12.2 W

## M73 - D/N, Thermal, Multisense

Modules:

M1: Thermografic Sensor 336R100

M2: ULL Day/Night DN280

M3: Multisense

**NOTE!** Thermal overlay used as Live view.

Average power consumption: 11.5 W

## M73 - D/N, Thermal, IR

Modules:

M1: Thermografic Sensor 336R100

M2: ULL Day/Night DN280

M3: IR 850nm wide

**NOTE!** Thermal overlay used as Live view.

Average power consumption: 16.5 W

# 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	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 H.264 resolution	<ul style="list-style-type: none"><li>▪ One thermal sensor: VGA, 640x480</li><li>▪ One thermal sensor, one optical sensor: 1xVGA, 640x480, 1x 4K UHD, 3840x2160 (8MP)</li></ul>
Max. frame rate	MxPEG: 20@4K, H.264: 30@4K, H.265: 30@4K

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# General Software Features

Feature	Properties
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> <li>▪ Time-controlled flexible event logic</li> <li>▪ Weekly schedules for recordings and actions</li> <li>▪ Event video and image transfer via FTP and email</li> <li>▪ Playback and QuadView via web browser</li> <li>▪ Animated logos on the image</li> <li>▪ Master/Slave functionality</li> <li>▪ Privacy zone scheduling</li> <li>▪ Remote alarm notification (network message)</li> <li>▪ Programming interface (HTTP-API)</li> <li>▪ MxMessageSystem</li> </ul>
ONVIF compatibility	Profile G, S, T, (M with later firmware release)
Master/Slave functionality	Yes
Remote alarm notification	email, network message (HTTP/HTTPS), SNMP, MxMessageSystem, MQTT
DVR/image storage management	<ul style="list-style-type: none"> <li>▪ On internal microSD card</li> <li>▪ On external USB and NAS devices</li> <li>▪ Different streams for live image and recording</li> <li>▪ MxPEG+ only</li> <li>▪ MxFFS with buffered archive, pre- and post-alarm images, storage monitoring with error reporting</li> </ul>

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Feature	Properties
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)

## Video Analysis

Feature	Properties
Video motion detection	Yes
MxActivitySensor	Version 1.0, 2.1, 3.0
MxAnalytics	Yes with a later FW release
MOBOTIX App support	Yes with a later FW release

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## Video Management Software

Feature	Properties
MOBOTIX HUB	Yes <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MxManagementCenter	Yes (latest version recommended) <a href="http://www.mobotix.com">www.mobotix.com</a> > <a href="#">Support</a> > <a href="#">Download Center</a> > <a href="#">Software Downloads</a>
MOBOTIX Cloud	Streaming & Events supported
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

### Dimensions of Sensor Modules

Dimensions (height x width)	58 x 42,5 (50 mm)
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### Weight of Sensor Modules

Sensor Module	Weight
Standard Sensor Modules	max. 150g
Functional Modules	max. 150g
Thermal Sensor Module	380g
PTMount Thermal	890g

### Supported Image Sensor Modules

Sensor Module	Order Code
Sensor module with standard 45° lens	Mx-O-M7SA-8DN100*
	Mx-O-M7SA-8D100
	Mx-O-M7SA-8N100*
	Mx-O-M7SA-4DN100
Sensor module with tele lens 30°	Mx-O-M7SA-8DN150*
	Mx-O-M7SA-8D150
	Mx-O-M7SA-8N150*
	Mx-O-M7SA-4DN150
	Mx-O-M7SA-8L150

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Sensor Module	Order Code
Sensor module with tele lens 15°	Mx-O-M7SA-8DN280*
	Mx-O-M7SA-8D280
	Mx-O-M7SA-8N280*
	Mx-O-M7SA-4DN280
	Mx-O-M7SA-8L280
Sensor module with tele lens 8°	Mx-O-M7SA-8D500
	Mx-O-M7SA-8N500
	Mx-O-M7SA-8L500
Sensor module with wide angle lens 60°	Mx-O-M7SA-8DN080*
	Mx-O-M7SA-8D080
	Mx-O-M7SA-8N080*
	Mx-O-M7SA-4DN080
Sensor module with super wide angle lens 95°	Mx-O-M7SA-8DN050*
	Mx-O-M7SA-8D050
	Mx-O-M7SA-8N050*
	Mx-O-M7SA-4DN050
Sensor module with ultra wide angle lens 120° 4K	Mx-O-M7SA-8DN040*
	Mx-O-M7SA-8D040
	Mx-O-M7SA-8N040*
	Mx-O-M7SA-4DN040
	Mx-O-M7SA-8L040
Sensor module with hemispheric lens 180° 12MP	Mx-O-M7SA-12DN016*

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\*also available in black.

**NOTE!** Please consider any lens-related restrictions. For example, license plate recognition is not possible with a hemispheric lens.

For a complete list of lenses for MOBOTIX cameras, please see the Lens Table document for MOBOTIX 7 models on [www.mobotix.com](http://www.mobotix.com) > [Support](#) > [Download Center](#) > [Marketing & Documentation](#) > [Lens Table](#).

## Supported Thermal Sensor Modules (Pre-mounted on Thermal Front Plate)

**CAUTION!** Do not remove or replace the pre-installed thermal sensor module included in the scope of delivery. Otherwise, the camera will lose the EN54 certification.

Sensor Module	Order Code
CIF Thermal Radiometry 45° x 35°	Mx-O-M73TB-336R100
CIF Thermal Radiometry 25° x 19°	Mx-O-M73TB-336R150
CIF Thermal Radiometry 17° x 13°	Mx-O-M73TB-336R280
VGA Thermal Radiometry 90° x 69°	Mx-O-M73TB-640R050
VGA Thermal Radiometry 69° x 56°	Mx-O-M73TB-640R080
VGA Thermal Radiometry 45° x 37°	Mx-O-M73TB-640R100
VGA Thermal Radiometry 32° x 26°	Mx-OM73TB-640R150

The **Thermal Radiometry (TR)** variants automatically alarm when the temperature exceeds or falls below defined limits. This is crucial for the detection of fire or heat sources. Up to 20 different temperature events can be configured simultaneously in so-called TR windows or over the complete sensor image over a temperature range of High Sensitivity: -40 to 170 °C/-40 to 320 °F -- Low Sensivity: -40 to 550 °C/-40 to 1022 °F .

## Features Thermal Image Sensors

Feature	Properties
Thermal sensitivity	Typ. 50 mK, IR range 7.5 to 13.5 µm
Temperature measurement range (adjustable)	High Sensitivity: -40 to 170 °C/-40 to 320 °F -- Low Sensivity: -40 to 550 °C/-40 to 1022 °F

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Feature	Properties																
Thermal image sensor	Uncooled microbolometer, CIF: 336 x 256 pixels / VGA: 640 x 480																
Dimensions	336/640: 48,5x48,5x70 170g without front plate / 265g with front plate																
Max. image size	Can be scaled up to 3072 x 2048 (6MP), automatically scaled to size of MX sensor module																
Max. frame rate	9fps																
Pixel pitch	17µm																
Field of view	<table><thead><tr><th>Sensor Module</th><th>FoV</th></tr></thead><tbody><tr><td>336 xx 100</td><td>45° x 35°; 2.27mr, focal 7.5mm, f/1.25</td></tr><tr><td>336 xx 150</td><td>25° x 19°; 1.31mr, focal 13mm, f/1.25</td></tr><tr><td>336 xx 280</td><td>17° x 13°; 0.90mr, focal 19mm, f/1.25</td></tr><tr><td>640 xx 050</td><td>90° x 69°; 2.27mr, focal 7.5mm, f/1.4</td></tr><tr><td>640 xx 080</td><td>69° x 56°; 1.89mr, focal 9mm, f/1.4</td></tr><tr><td>640 xx 100</td><td>45° x 37°; 1.31mr, focal 13mm, f/1.25</td></tr><tr><td>640 xx 150</td><td>32° x 26°; 0.90mr, focal 19mm, f/1.25</td></tr></tbody></table>	Sensor Module	FoV	336 xx 100	45° x 35°; 2.27mr, focal 7.5mm, f/1.25	336 xx 150	25° x 19°; 1.31mr, focal 13mm, f/1.25	336 xx 280	17° x 13°; 0.90mr, focal 19mm, f/1.25	640 xx 050	90° x 69°; 2.27mr, focal 7.5mm, f/1.4	640 xx 080	69° x 56°; 1.89mr, focal 9mm, f/1.4	640 xx 100	45° x 37°; 1.31mr, focal 13mm, f/1.25	640 xx 150	32° x 26°; 0.90mr, focal 19mm, f/1.25
Sensor Module	FoV																
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640 xx 150	32° x 26°; 0.90mr, focal 19mm, f/1.25																
Operating temperature	-40° to +65°C / 40° to 149°F; 5% to 95% non-condensing																
Power consumption	CIF: 1W VGA: 1.2W																
MTBF	80,000 hours																
IP rating	IP67																
IK rating	IK04																
Material	PBT-30GF (housing); Germanium (lens)																
Software (included)	Video management software MxManagementCenter																

## Supported Functional Modules (Pre-mounted on Front Plate)

Functional Module	Order Code	Remark
Functional MultiSense module (pre installed)	Mx-F-MSA	with PIR sensor, temperature sensor, illumination sensor and status LED

## Connector Box RJ45

Interface	Properties	
Network	100/1000 Mbps	
Overvoltage Protection	max. 4 kV on the PoE network cabling	
Allowed cable dimensions for cables connected to the PCB terminals	<i>Conductor cross section</i>	
	AWG	20 - 26
	Rigid	0.14mm <sup>2</sup> - 0.5mm <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) V <sub>rms</sub> =1V	

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#### Interface

#### Properties

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

IN / OUT

INPUT

- Contact Closure (no galvanic isolation necessary) or up to 50V AC/DC
- max. length for cables: 50m

OUTPUT

- requires pull-up resistor and external power supply (10mA / max. 50V DC - no AC)
  - Output may be loaded with max. 50mA
  - max. length for cables: depends on loop impedance of the connected cable.
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## Dimensions

**NOTE!** Download the drilling template from the section or on the MOBOTIX website: [www.mobotix.com](http://www.mobotix.com) > [Support > Download Center > Marketing & Documentation > Drilling Templates.](#)

**CAUTION!** Always print or copy the drilling template at 100% of the original size!

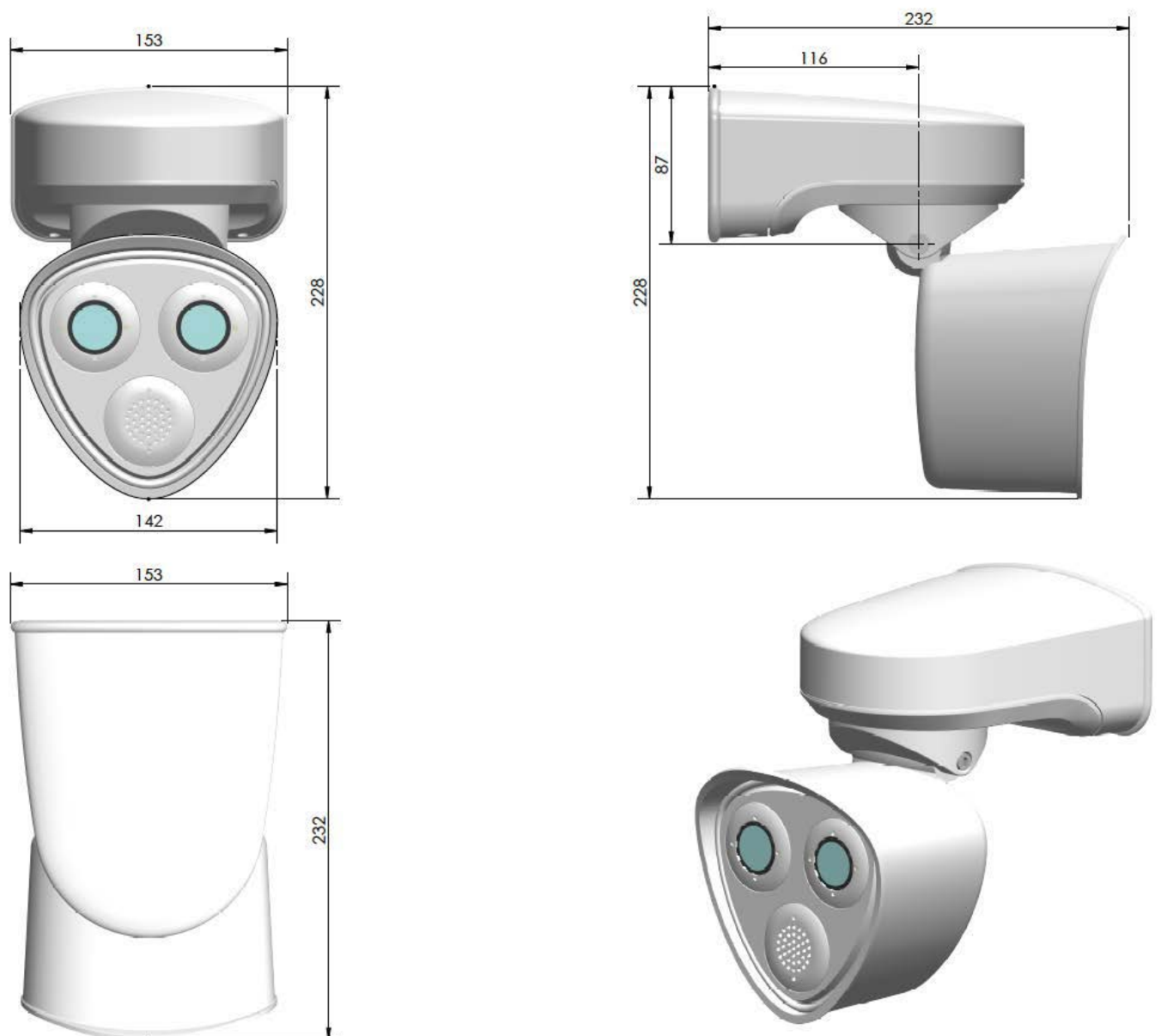


Fig. 1: MOBOTIX M73 EN54: All measurements in mm

# MOBOTIX

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