



Technical Specifications

MOBOTIX MOVE 2MP IR Vandal Turret

The MOBOTIX MOVE 2MP IR Vandal Turret is designed to bring clarity and vigilance to your surveillance needs. This state-of-the-art turret camera with DNN-based video analytics combines advanced features with a compact and sleek design, making it an ideal choice for various indoor and outdoor applications. The camera's weather-resistant design IP67 and IK10 ensures reliable operation even in challenging environmental conditions. Its compact turret form factor, combined with easy installation options, makes it a hassle-free choice.

- High Low-Light sensitivity
- 1/2.8" Progressive CMOS
- Fixed Lens 2.8mm
- WDR up to 120 dB
- Integrated IR Illumination, working distance up to 30 m/98 ft
- Triple Streaming H.264/H.265/MJPEG
- 2D & 3D Motion Compensated Noise Reduction (MCTF)
- ONVIF Profile S/G/T/M support
- Micro SD Card supports up to 512 GB.
- Integrated Microphone
- NDAA compliant
- DNN-based object detection with filtering (people/vehicles, etc.)
- Dual power Supply IEEE802.3af Class 3 / DC 12 V
- Temp. Range -30°C to 60°C/-22°F to 140 °F with integrated heater ON
- Protection Rate IP67 / IK10
- Intelligent Encoding, Smart Low Bitrate Control is same as Smart compression offering optimally useable bandwidth and storage.



BeyondHumanVision

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Product Information

Product Name	2MP IR Vandal Turret
Order Code	Mx-VT1A-2-IR

Hardware Design

Processor	Novatec NT98560 (Single-core ARM® Cortex®-A9, 960 MHz)
Memory	RAM: 512 MB
	FLASH: 256 MB
Image Sensor	2MP, 1/2.8" Progressive CMOS
Effective (Used) Pixels	1920x1080 (2MP)

Lens

Minimum Illumination	Color: 0.03 lux
	B/W: 0.01 lux, (0 lux, IR on)
	F1.6, AGC=on, 30 IRE, 1/1 s
Lens Characteristics	Fixed Lens
	Focal Length: 2.8mm
	Aperture: F1.6
	H x V FOV: 105°x 56°

Camera

Day/Night	Automatically switchable IR-cut filter
Shutter Speed	Auto / Manual / WDR: 1 to 1/10000 s
Shutter Priority Mode	Up to 1/7.5 s
Frame Rate (maximum)	WDR on/off:
	H.265/H.264: 2MP@30 fps
	MJPEG: 2MP@30 fps
Auto Gain	Min. gain: 0 dB, max. gain: 36 dB, step size: 3
WDR	Up to 120 dB

Zoom	Fixed
Image Settings	Color, Brightness, Sharpness, Contrast, White Balance, Gain Control, 2DNR, 3DNR, BLC, EV, Gamma corection, Saturation, Hue
Image Rotation	90°, 180°, 270°
Camera Body Adjust	Pan/Tilt/Rotation

Video Codec

Compression/Encoding	H.265/H.264/MJPEG
Streaming	Up to 3 individually configurable streams in H.264/H.265/MJPEG. Configurable resolution, frame rate, bandwidth CVBR/CBR/istream in H.265/H.264

Audio Codec

Compression/Encoding	G.711a/u
Streaming	One-way
Audio Input	Integrated Microphone

Cyber Security Features

Password Protection	Yes (including “forced” password change during initial setup)
IP address filtering	Yes (to restrict unauthorized access based on IP addresses)
IEEE 802.1X network access control	Yes (for advanced network security and authentication)
Digest authentication	Yes (for secure user authentication)
Secure Boot	Yes (support of fixed IP setting and automatic DHCP IP configuration according to individual MAC address)
AES encryption for password protection	Yes (to ensure strong encryption for password storage)
HTTPS/SSL (using TLS)	Yes (TLS 1.2 default, TLS 1.0/1.1 optional selectable)
User and Group Management	Yes (for fine-grained access control)

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Advanced Security	Yes (Active/Passive: Active protection controls the enabling and disabling of various network communications. Passive protection limits the number of operations and the duration of the ban. If the limit is reached, the user will be banned)
RTSP Authentication	Yes (for restricting unauthorized access to RTSP streams)
SFTP	Yes (network protocol that securely transfers files between a client and a server using SSH)

Network

Interface	10/100 Mbps Ethernet
Supported Protocols	ARP, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv4/6, NTP, RTSP/RTCP/RTP, RTMP, QoS, SMTP, SNMP v1/2c/3, TCP, TLS/TTLS, UDP, UPnP, 802.1X, Bonjour, DDNS, PPPoE
ONVIF conformance	Supports profiles S/G/T/M
Supported Browsers	Microsoft Edge, Firefox, Google Chrome

System Integration

Event Actions	■ Schedule Recording (JPG/MP4) ■ DNN-based video analytics (line counting, border line, object classification/filtering for people, vehicles, etc.) ■ Video and audio recording to edge storage ■ File upload: FTP and email ■ Notification: Email (JPG) ■ OSD indication ■ SD Card recording (*JPG/MP4)
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General

Housing Material	Metal
Housing Color	RAL 9003
IR Illumination	850 nm; up to 30 m/98 ft distance depending on reflection of scenery
Video Storage	Micro SD card support up to 512 GB. Support for recording to MOVE NVR, MOBOTIX Cloud (via MOBOTIX Bridge), MOBOTIX HUB, MxMC (via MOBOTIX NAS)
Remotely Upgradable	Yes
Power Requirements	IEEE802.3af, class 3, max 10 watt DC12V, max 10 watt
Connectors	■ RJ45 ■ 1 x DC 12V Jack Socket ■ 1 x Reset / Default Button
Environmental Protection Class	IP67/IK10
Operating Temperature	-30°C to 60°C/-22°F to 140 °F with integrated heater ON
Relative Humidity	95 % non-condensing
Storage Conditions	-40 to 60 °C/-4 to 158 °F
Approvals	EMC: CE, FCC, BIS Safety: LVD
Warranty	5 years; mechanically wearable parts (motor, gears, belts, etc.) excluded
Dimensions	ø 120 x 95 mm
Weight	680 g

NOTE! Observe the [MOBOTIX MOVE Installation Hints](#) document to ensure optimum performance of the camera features.

DORI Specifications

In the video surveillance context, “DORI” stands for Detection, Observation, Recognition and Identification and is based on IEC EN62676-4: 2015. These levels define the minimum pixels that a face of a person must have to provide proper identification, for example.

DORI Levels According to IEC EN62676-4: 2015

These levels define the minimum pixels that a face of a person must have to provide proper identification, for example.

- **Detection:** Up to this distance, you can reliably determine if a person or vehicle is present.
- **Observation:** Up to this distance, you can see characteristic details of an individual, such as distinctive clothing.
- **Recognition:** Up to this distance, you can determine with a high degree of certainty whether an individual is the same as someone that has been seen before.
- **Identification:** Up to this distance, you can determine the identity of an individual beyond reasonable doubt.

DORI Distances

DORI Level	Detection	Observation	Recognition	Identification
Mx-VT1A-2-IR	18.5 m/ 60.86 ft	12 m/ 39.47 ft	8.13 m/ 26.74 ft	3.89 m/ 12.8 ft

Dimensions

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

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

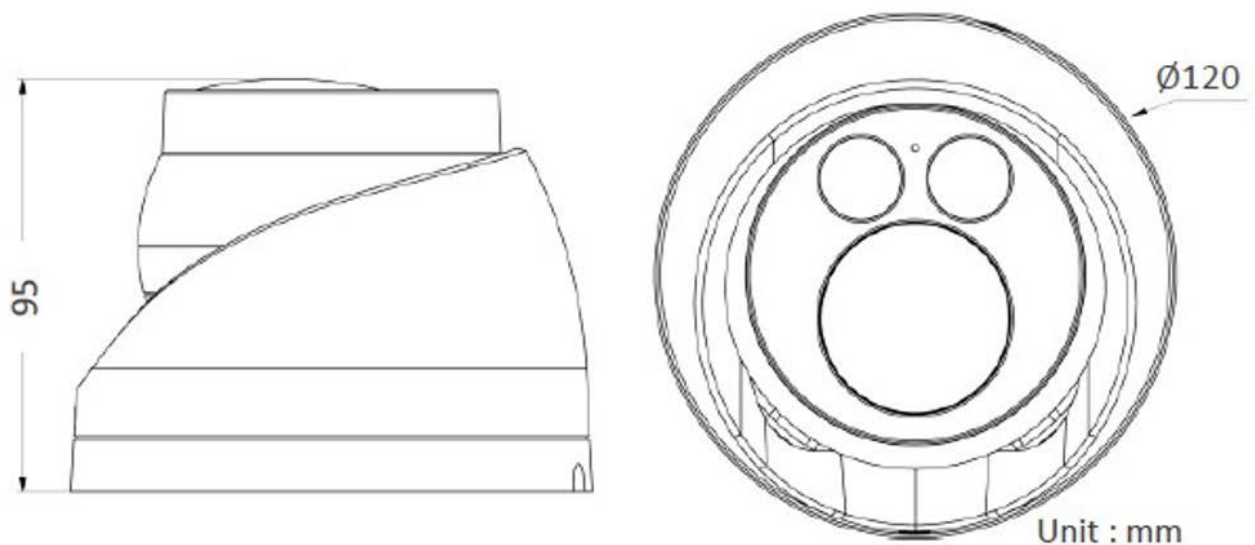


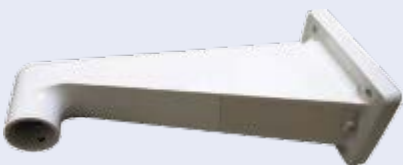
Fig. 1: Mx-VT1A-2-IR: All measurements in mm

Accessories for Vandal Turret Cameras

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 Mx-M-SD-C	Weatherproof corner mount.	Mx-M-SD-W or Mx-M-SD-WL. CAUTION! Cannot be used with MX-M-SD-WM or Mx-M-SD-WMJB!	SPCC steel, hammer-blow painted RAL9003	2.17 kg
 Mx-M-SD-P	Weatherproof pole mount.	Mx-M-SD-W or Mx-M-SD-WL. CAUTION! Cannot be used with MX-M-SD-WM or Mx-M-SD-WMJB!	Zinc-galvanized SECC steel, powder-coated RAL9003	1.58 kg

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 MX-MH-SecureFlex-ESWS	Weatherproof pole mount for extreme conditions.	Mx-M-SD-W or Mx-M-SD-WL. CAUTION! Cannot be used with MX-M-SD-WM or Mx-M-SD-WMJB!	Stainless steel 3 mm, white	1.23 kg
 Mx-M-SD-W	Weatherproof wall mount for MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with Mx-M-SD-C or Mx-M-SD-P and camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).	Die-cast ADC12 aluminium alloy, hammer-blow painted RAL9003	0.84 kg
 Mx-M-SD-WL	Extended weatherproof wall mount for MOVE Speed Dome/Vandal Multisensor/Vandal Turret cameras.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with Mx-M-SD-C or Mx-M-SD-P and camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).	Die-cast ADC12 aluminium alloy, hammer-blow painted RAL9003	1.5 kg

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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 MX-M-SD-WM	Weatherproof wall mount for MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can also be mounted on top of wall mount junction box MX-M-SD-WMJB.	AP). All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).	Die-cast ADC12 aluminium alloy, RAL9003	1.3 kg
 MX-M-SD-WMJB	Weatherproof wall mount junction box (IP67) for Mx-M-SD-WM. Allows for comfortable cabling and installation of additional HW equipment such as PoE Injectors, lightning protection, etc.	All MOVE Speed Dome/Vandal Turret cameras. CAUTION! Only to be used as base for Mx-M-SD-WM (wall mount is mounted on top of junction box).	Bracket: Steel, powder-coated RAL9003 Junction box: Die-cast ADC12 aluminium alloy, RAL9003	4.8 kg

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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
	Pendant mount kit incl. base mount, 25 cm/10 in pendant pipe, installation materials and safety wires 50 cm/20 in & 1 m/39 in.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VM-SD-AP).	Die-cast ADC10 aluminium alloy, powder-coated RAL9003	1.58 kg

MX-M-SD-PM

	Extension pipe 25 cm/10 in for MX-M-SD-PM.	Extends MX-M-SD-PM; max. extended total length is 1 m/39 in (3 extensions).	Die-cast ADC10 aluminium alloy, powder-coated RAL9003	0.8 kg
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MX-M-SD-PMEXT

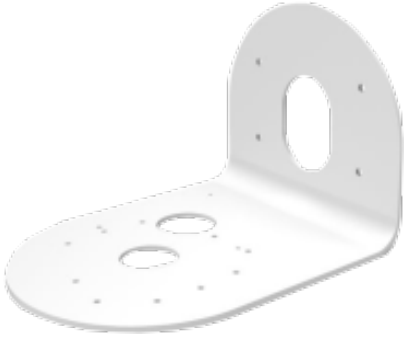
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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 MX-M-SD-GN	Weatherproof parapet mount (goose neck; IP67) with integrated junction box. Integrated junction box allows for comfortable cabling and installation of additional hardware equipment such as PoE Injectors, lightning protection, etc.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).	Bracket and goose neck: Steel, powder-coated RAL9003 Junction box: Die-cast ADC12 aluminium alloy, RAL9003	14.8 kg
 Mx-M-VT-AP	Adapter mounting plate for MOVE Vandal Turret cameras.	All MOVE Vandal Turret (VT) cameras. Can be combined with MX-M-SD-GN, MX-M-SD-PM, MX-M-SD-PMEXT, Mx-M-SD-W, Mx-M-SD-WL, Mx-M-SD-WM.	Bracket: Die-cast ADC12 aluminium alloy, stove-enamel finish RAL9003 Mounting plate: A1050P aluminium alloy, stove-enamel finish RAL9003	0.3 kg

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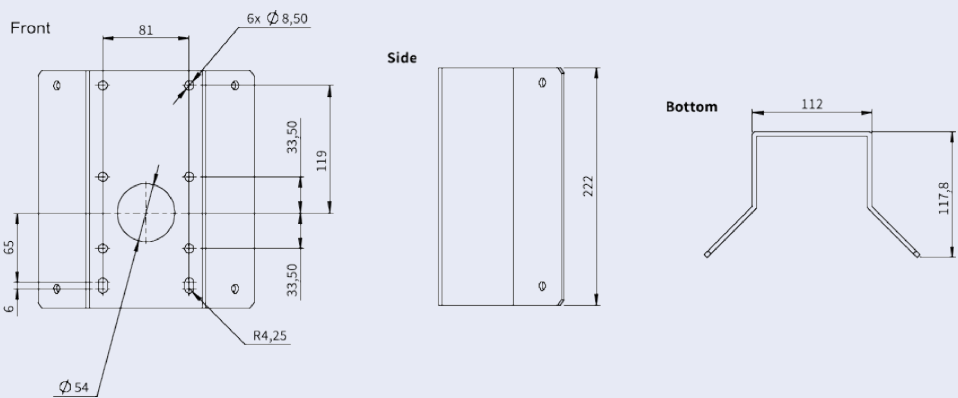
Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 Mx-M-VT-WM	Wall mount for MOVE Vandal Turret cameras.	All MOVE Vandal Turret (VT) cameras. Can be combined with Mx-M-VT-JB.	A1050P aluminium alloy, stove-enamel finish RAL9003	0.3 kg
 Mx-M-VT-JB	Junction box for MOVE Vandal Turret cameras.	All MOVE Vandal Turret (VT) cameras. Can be combined with Mx-M-VT-WM.	Top/bottom covers: Die-cast ADC12 aluminium alloy, stove-enamel finish RAL9003	0.85 kg

Dimensions

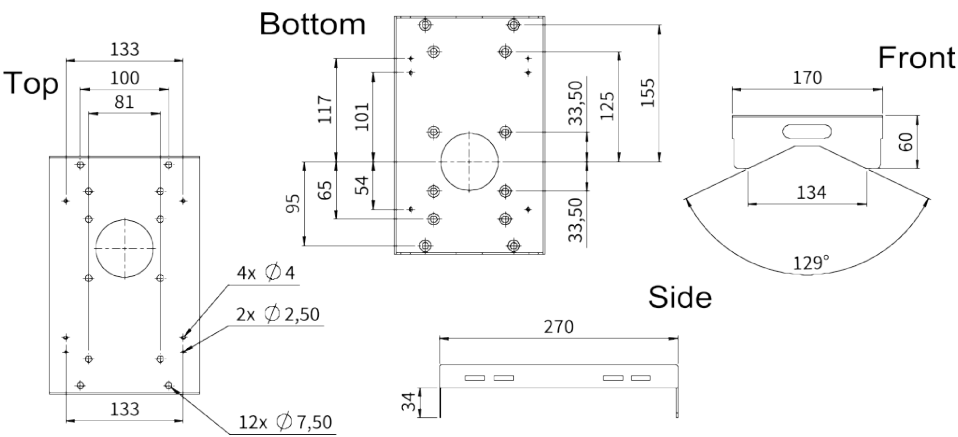
Order Code

Dimensions

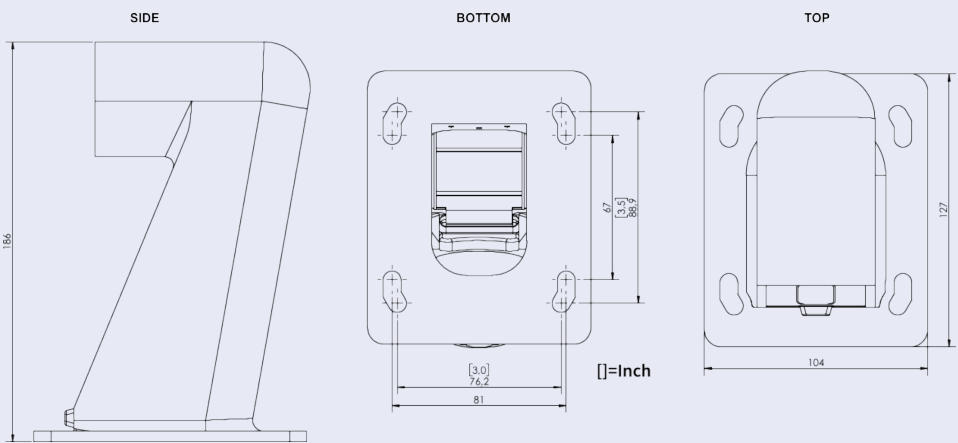
Mx-M-SD-C



Mx-M-SD-P



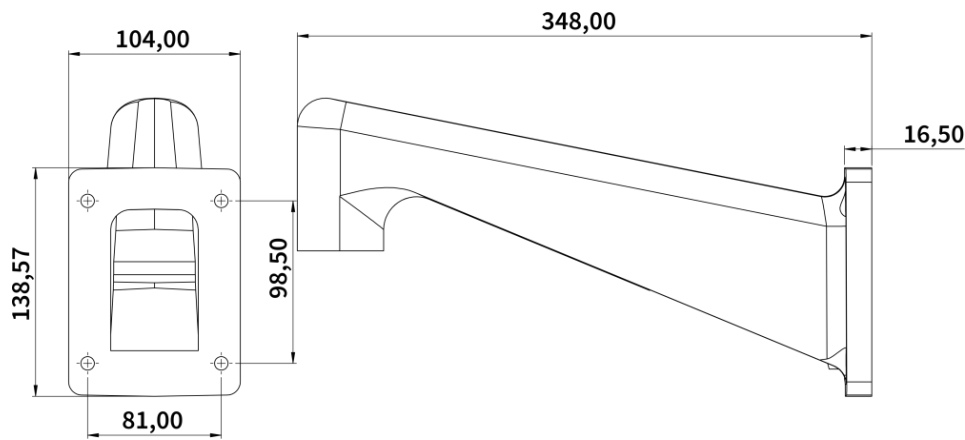
Mx-M-SD-W



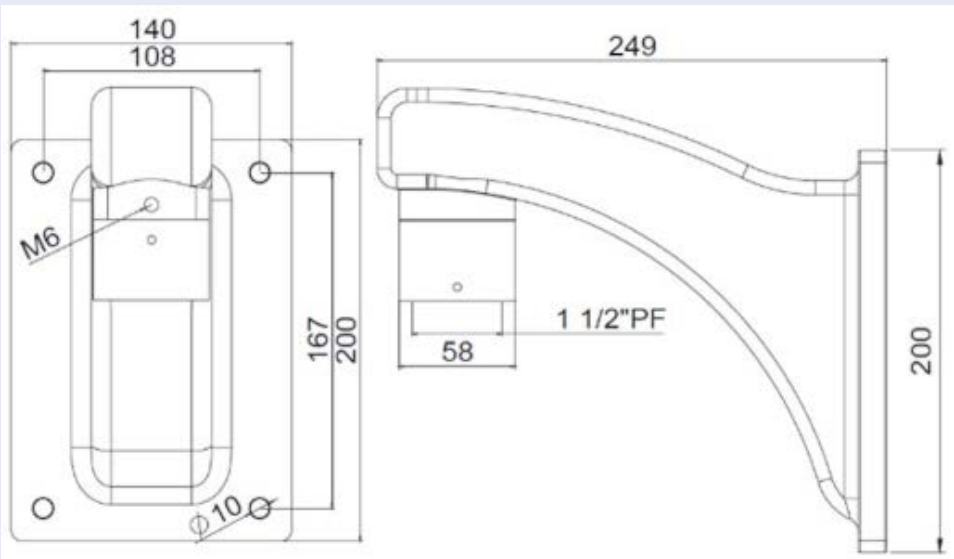
Order Code

Mx-M-SD-WL

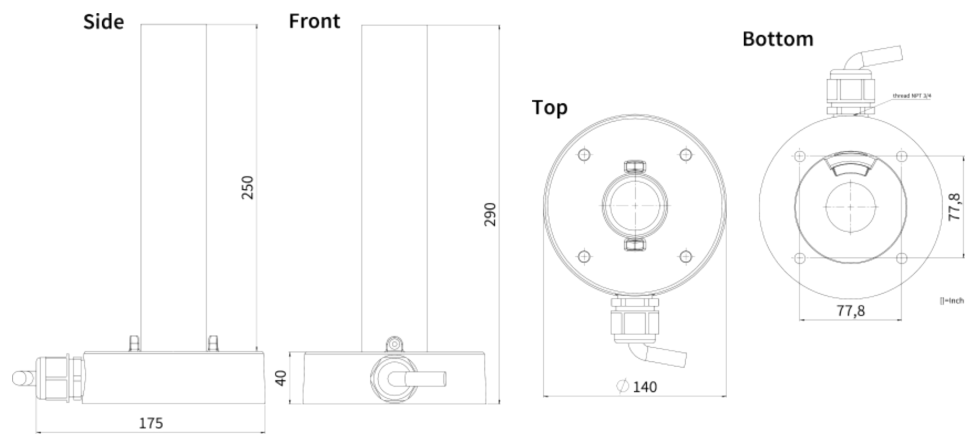
Dimensions



MX-M-SD-WM

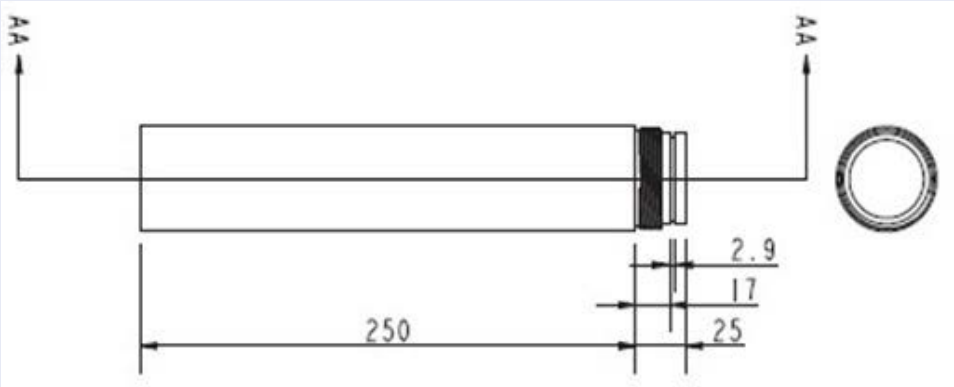
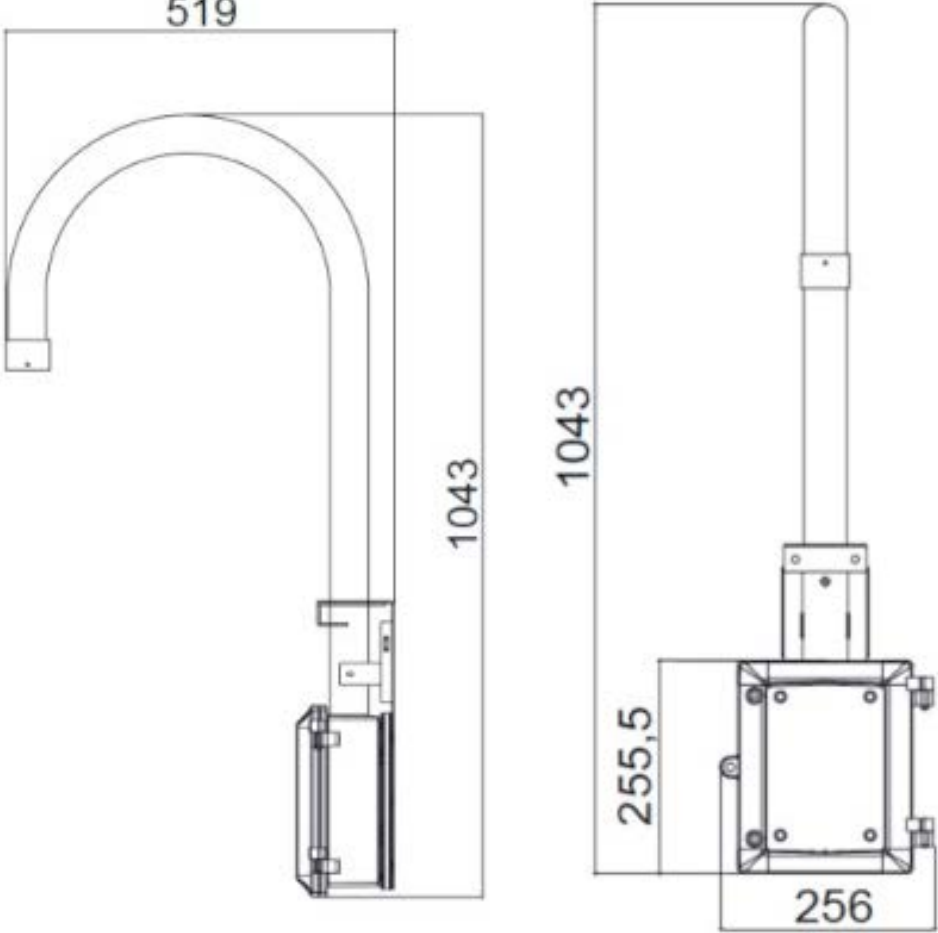


MX-M-SD-PM



Technical Specifications

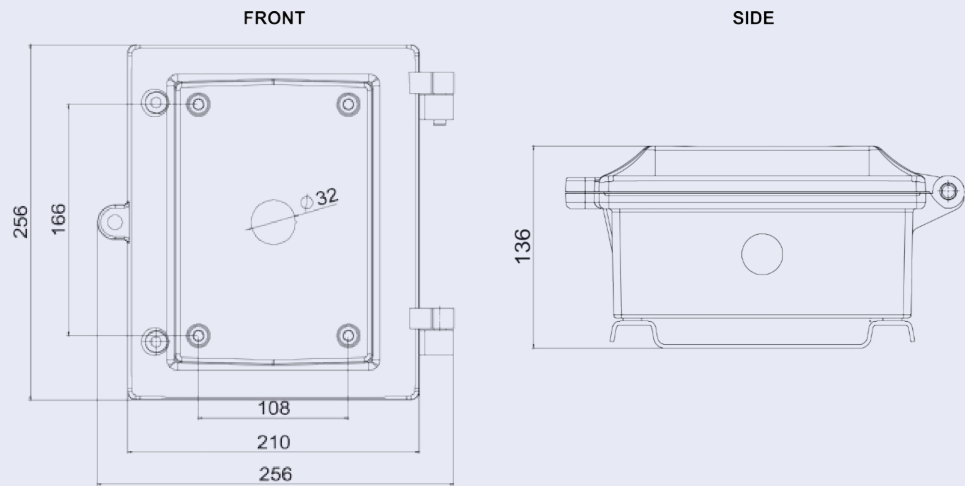
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Order Code	Dimensions
MX-M-SD-PMEXT	
MX-M-SD-GN	

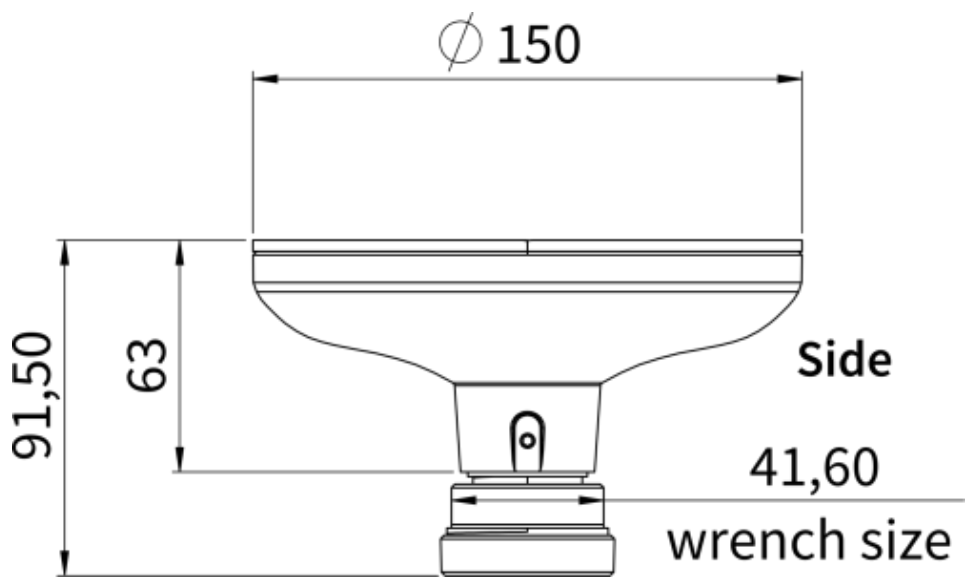
Order Code

Dimensions

MX-M-SD-WMJB



Mx-M-VT-AP



MOBOTIX MOVE 2MP IR Vandal Turret

Dimensions

The drawing shows two views of a mechanical part:

- Side View (Left):** Shows a horizontal base of 180 units and a vertical section of 120 units. A small fillet with a radius of 3 units is at the corner. A hole with a diameter of $\varnothing 4,30$ is located on the vertical section.
- Front View (Right):** Shows a semi-circular top with a radius of R20. The total width is 140 units. The height from the base to the top of the semi-circle is 45 units. The distance from the base to the center of the hole is 35 units. The distance from the center of the hole to the right edge of the semi-circle is 83 units. The distance from the center of the hole to the right edge of the base is 46 units. The distance from the center of the hole to the right edge of the vertical section is 15 units. A fillet with a radius of R70 is at the corner of the vertical section.

Bottom

$\phi 147$

Side

60

Top

$\phi 95$

61°

29°

83

18 / 24

Accessories for All Cameras

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 MX-NPA-UPOE1A-60W	UPoE Power Injector 60W. PoE++ 60W Network Power injector • AC Input Voltage: 100 to 240 VAC (50 to 60Hz) • AC Input Current: 1.5A @100-240 VAC • Operating Ambient Temperature: • -10° to 40°C @60W • -10° to 50°C, humidity 10 to 90% @30W • IEEE 802.3bt compliant • Output power of 60W over 4-pairs • Supports 10/100/1000Base-T applications • Plug-and-play installation • Full Protection OVP, OCP• Supports 10/100/1000Base-T applications.	All cameras.	Plastic housing, black	0.45 kg
 Mx-A-ETP1A-2601-SET	Media converter set Ethernet (PoE+) – Twisted-Pair. Complete set consisting of two two-wire transmit/receive units for establishing an Ethernet transmission path via twisted-pair cables. • Transmission of Ethernet and PoE+ power supply via two-wire line according to IEEE1901. • Simple connection of 10/100 Mbps Ethernet end devices •	All cameras. Requires Mx-A-ETP1A-2601-POW.	Plastic housing, black	0.368 kg

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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
	Max. 95 Mbps transmission bandwidth, range up to 600 m/656 yd for data only, 300 m/328 yd for PoE depending on the quality of the twisted-pair link • 128 bit AES network data encryption • Power supply 2-wire transmitter (Tx) and receiver (Rx) as well as end device via PoE+ network switch or external power supply 56VDC / 1.2A (not included!) • Connected end devices are supplied via PoE switch IEEE802.3af(PoE), IEEE802.3at (PoE+), UPoE up to 60W (requires ext. power supply unit). • Status LEDs (data, power supply, data link, PoE) • Integrated Overvoltage protection (IEC 61000-4-5 4kV (1.2 / 50us), 2kA(8 / 20us)) • Power Supply: TX: T-Linx or DC12V~57V, RX: PoE Switch or DC48V~57V • Operational temperature: -20 to 60°C • Dimensions: 80.4(L) x 61.6(W) x 24(H)mm • Weight: RX/TX: 102g • Warranty: 2 years			

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 Mx-A-ETP1A-2601-POW	Plug-type power supply for Mx-A-ETP1A-2601-SET. Output: 57V DC +/-3% / 1.2 A • Input: 90-260V AC (47-63Hz) • 68,4 Watt • Operating Temperature: 0–40°C/32–122°F	Mx-A-ETP1A-2601-SET	Plastic housing, black	0.49 kg
 Mx-A-KBD1A-PTZ-JOG	MOBOTIX USB Keyboard with PTZ Joystick & Jog-Shuttle. USB control panel for operating MOBOTIX MxMC 2.6 and higher and MOBOTIX HUB incl. Control of software PTZ and motorized PTZ cameras and pan/tilt devices • Integrated 3-axis joystick • Integrated jog shuttle • 38 control keys with backlight pre-defined for MxMC functions or freely definable for MOBOTIX HUB • Integrated alarm buzzer • Suitable for operation as HID device on MOBOTIX VMS with Windows and MAC based operating systems via USB 2.0 • Suitable for right- and left-handed users • Power supply: USB, max. 350 mA • Operating temperature: 0°–45°C/32–113 °F.	All cameras. Requires Windows or macOS computer with USB 2.0 or better.	Plastic housing, black	1.9 kg

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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 MX-SWITCH1	MOBOTIX network switch for DIN (top-hat) rail mounting. 5x RJ45 port with 100 MBit/s (1x uplink, 4x PoE+ with max. 75 W). Supply: 48 V DC, max. 75 W. Simplified cabling for door stations due to available connectivity for anti-theft protection, door opener and MxBus. MxBus, anti-theft protection, door and lock contact can be connected via separate wires of Ethernet cable.	All cameras.	Plastic housing, gray	0.31 kg

Further Reading

[Manuals and Quick Installation documents](#)



[Technical Specifications](#)



[MOBOTIX MOVE Installation Hints](#)



[MOBOTIX Community](#)





EN_08/25

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