



Technical Specifications

MOBOTIX MOVE 2MP Varifocal IR Vandal Turret

The MOBOTIX MOVE 2MP Varifocal 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 Vari-Focal Turret Camera allows you to easily remote adjust the field of view and focus by a motorized lens, ensuring optimal positioning and alignment to meet the specific requirements of your surveillance scenario. 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
- Motorized Vari-Focal Lens 2.7mm to 13.5mm
- WDR up to 120 dB
- Integrated adaptive 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.



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Product Information

| | |
|--------------|--------------------------------|
| Product Name | 2MP Varifocal IR Vandal Turret |
| Order Code | Mx-VT1A-203-IR |

Hardware Design

| | |
|-------------------------|--|
| Processor | Novatec NT98560 (Single-core ARM® Cortex®-A9, 960 MHz) |
| Memory | RAM: 512 MBytes FLASH: 256 MBytes |
| 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 | Vari-Focal Lens Focal Length: 2.7mm to 13.5mm Aperture: F1.4-2.8 H x V FOV: 111°-34°(H) 61°-19°(V) |

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 | Motorized optical: 2.67x |
| 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 |

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 |

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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)

General

Housing Material

Metal

Housing Color

RAL 9003

Adaptive 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

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Safety: LVD

| | |
|------------|---|
| Warranty | 5 years; mechanically wearable parts (motor, gears, belts, etc.) excluded |
| Dimensions | ø 120 x 104 mm (overall) |
| Weight | 715 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.

- **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 Level Order Code | Focal Length | Detection | Observation | Recognition | Identification |
|--------------------------|----------------|------------------|------------------|-----------------|-----------------|
| Mx-VT1A-203-IR | 2.7 mm (Wide) | 19.9 m/ 65.46 ft | 11.5 m/ 37.83 ft | 7.2 m/ 23.68 ft | 3.2 m/ 10.53 ft |
| | 13.5 mm (Tele) | 51 m/ 167.76 ft | 26.1 m/ 85.86 ft | 15.9 m/ 52.3 ft | 6.9 m/ 22.7 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!

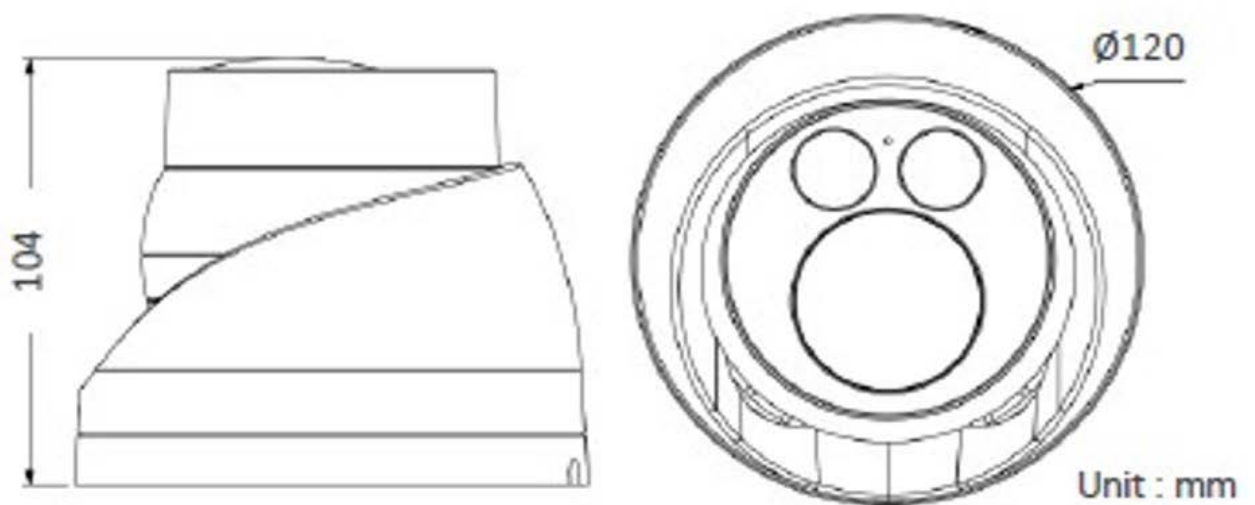







Fig. 1: Mx-VT1A-203-IR: All measurements in mm

Accessories for Vandal Turret Cameras



| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|--|---|--|--|----------------|
|  <p data-bbox="245 965 384 992">Mx-M-SD-C</p> | <p>Weatherproof corner mount for MOVE Speed Dome/Vandal Turret cameras.</p> | <p>All MOVE Speed Dome/Vandal Turret cameras. Requires Mx-M-SD-W or Mx-M-SD-WL.</p> <p>CAUTION! Cannot be used with MX-M-SD-WM!</p> | <p>SPCC steel, hammer-blow painted RAL9003</p> | <p>2.17 kg</p> |
|  <p data-bbox="245 1615 384 1641">Mx-M-SD-P</p> | <p>Weatherproof pole mount for MOVE Speed Dome/Vandal Turret cameras.</p> | <p>All MOVE Speed Dome/Vandal Turret cameras. Requires Mx-M-SD-W or Mx-M-SD-WL.</p> <p>CAUTION! Cannot be used with MX-M-SD-WM!</p> | <p>Zinc-galvanized SECC steel, powder-coated RAL9003</p> | <p>1.58 kg</p> |

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| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|---|---|--|--|----------------|
|  | <p>Weatherproof pole mount for MOVE Speed Dome/Vandal Turret cameras for extreme conditions.</p> | <p>All MOVE Speed Dome/Vandal Turret cameras. Requires Mx-M-SD-W or Mx-M-SD-WL.</p> | <p>Stainless steel 3 mm, white</p> | <p>1.23 kg</p> |
| <p>MX-MH-SecureFlex-ESWS</p> | | <p>CAUTION! Cannot be used with MX-M-SD-WM!</p> | | |
|  | <p>Weatherproof wall mount for MOVE Speed Dome/Vandal Turret cameras.</p> | <p>All MOVE Speed Dome/Vandal Turret cameras. Can be combined with Mx-M-SD-C or Mx-M-SD-P.</p> | <p>Die-cast ADC12 aluminium alloy, hammer-blow painted RAL9003</p> | <p>0.84 kg</p> |
| <p>Mx-M-SD-W</p> | | | | |
|  | <p>Extended weatherproof wall mount for MOVE Speed Dome/Vandal Turret cameras.</p> | <p>All MOVE Speed Dome/Vandal Turret cameras. Can be combined with Mx-M-SD-C or Mx-M-SD-P.</p> | <p>Die-cast ADC12 aluminium alloy, hammer-blow painted RAL9003</p> | <p>1.5 kg</p> |
| <p>Mx-M-SD-WL</p> | | | | |

Technical Specifications


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

MOBOTIX MOVE 2MP Varifocal IR Vandal Turret

| 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 Turret cameras. | 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 |
|---|--|---|---|--------|

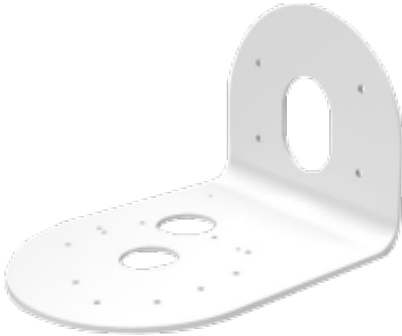

MX-M-SD-PMEXT

Technical Specifications

MOBOTIX MOVE 2MP Varifocal IR Vandal Turret

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

MOBOTIX MOVE 2MP Varifocal IR Vandal Turret

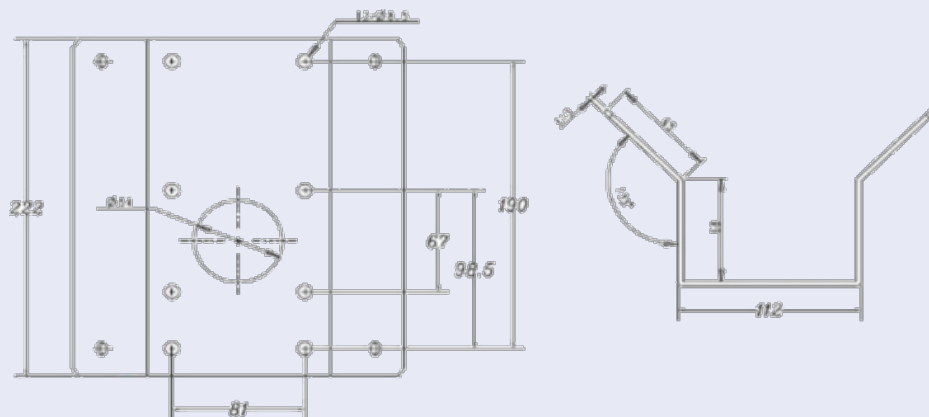
| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|--|--|--------------------------------------|---|---------|
|  | Wall mount for MOVE Vandal Turret cameras. | All MOVE Vandal Turret (VT) cameras. | A1050P aluminium alloy, stove-enamel finish RAL9003 | 0.3 kg |
|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

Dimensions

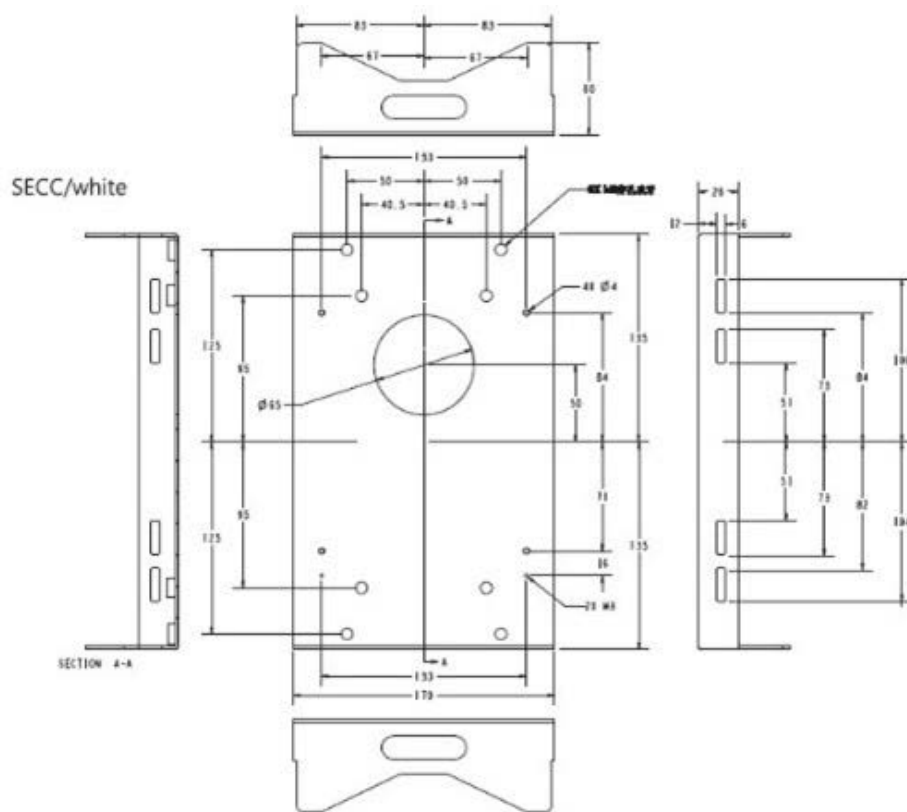
Order Code

Dimensions

Mx-M-SD-C



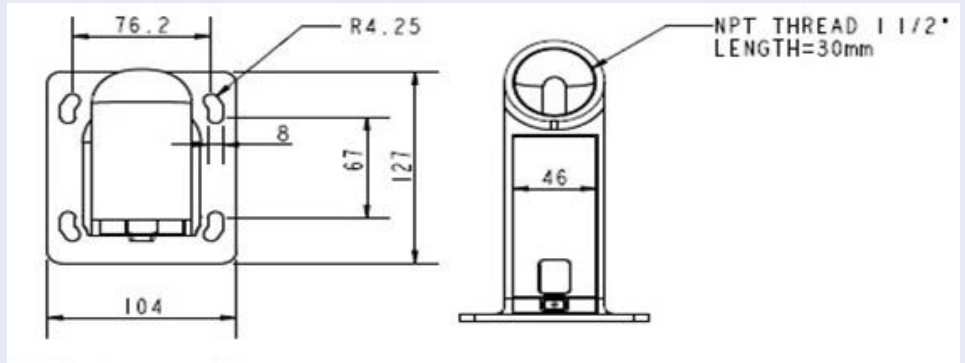
Mx-M-SD-P



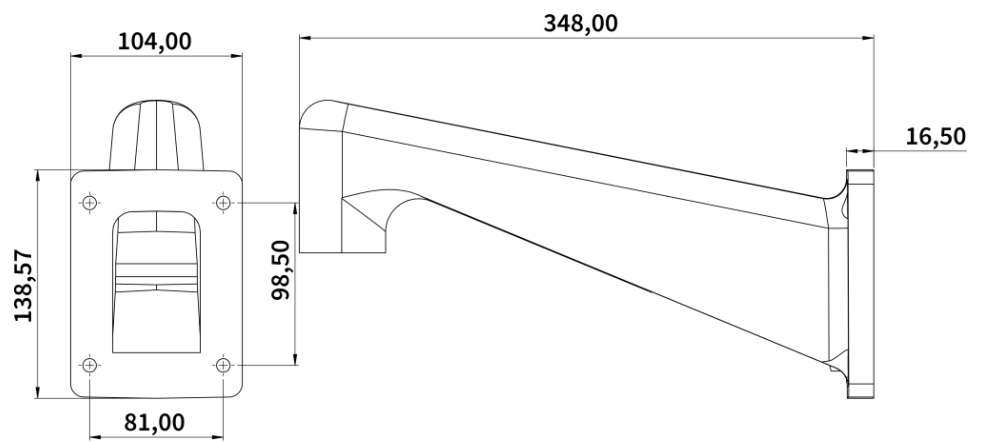
Order Code

Dimensions

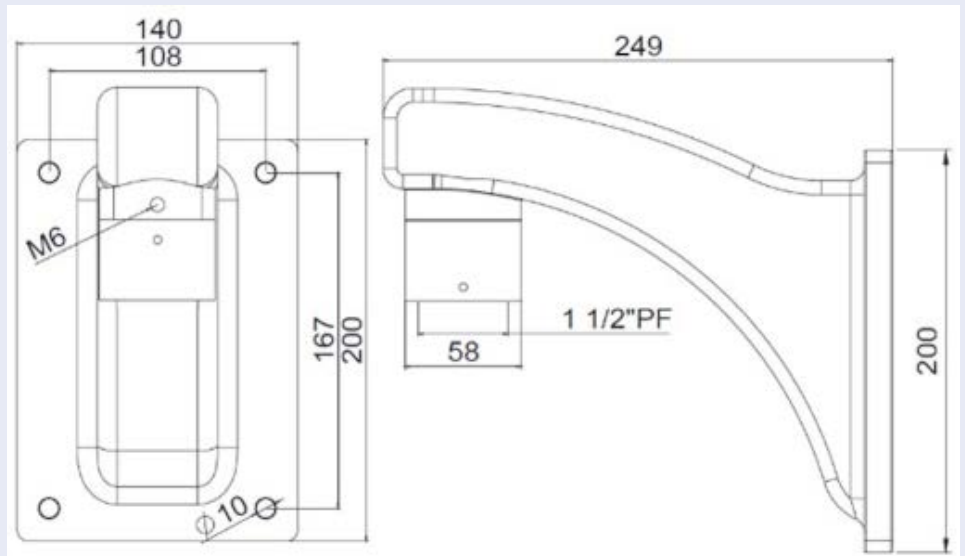
Mx-M-SD-W



Mx-M-SD-WL



MX-M-SD-WM



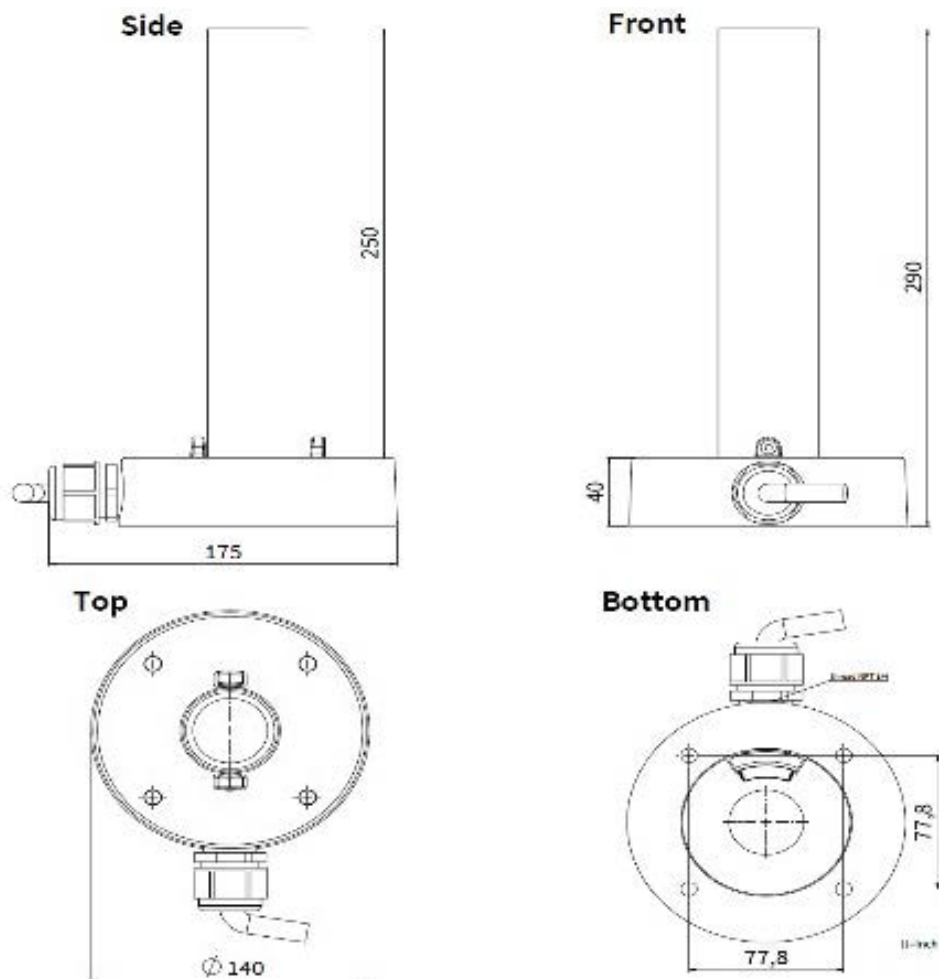
Technical Specifications

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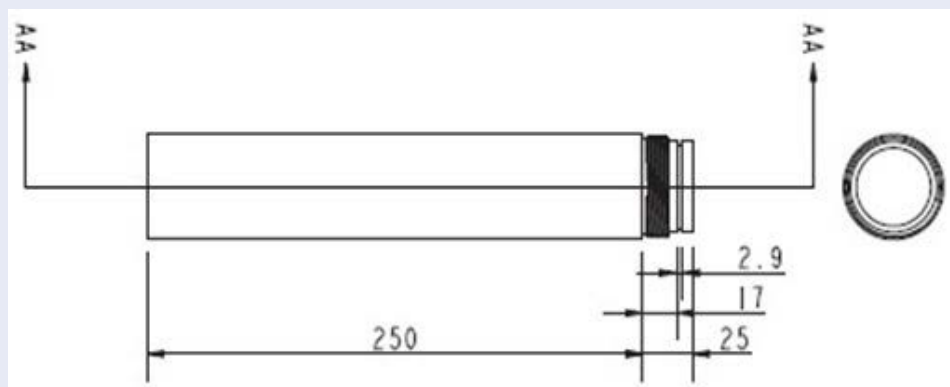
Order Code

MX-M-SD-PM

Dimensions



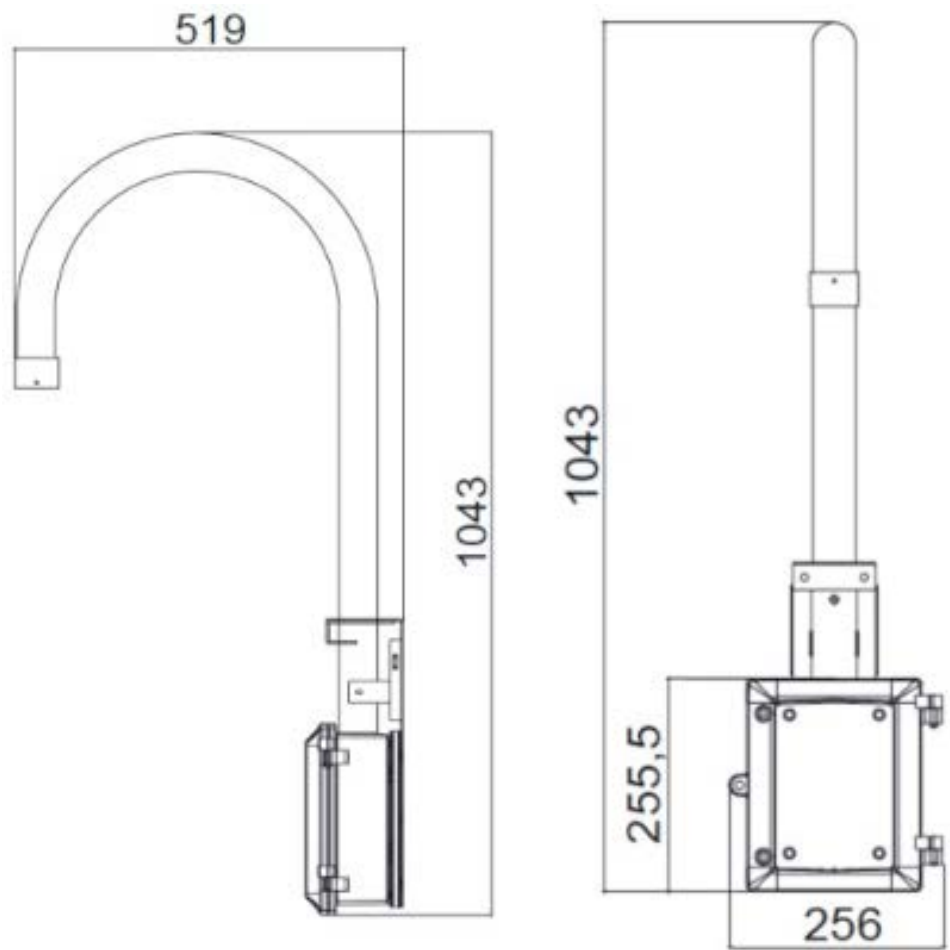
MX-M-SD-PMEXT



Order Code

MX-M-SD-GN

Dimensions



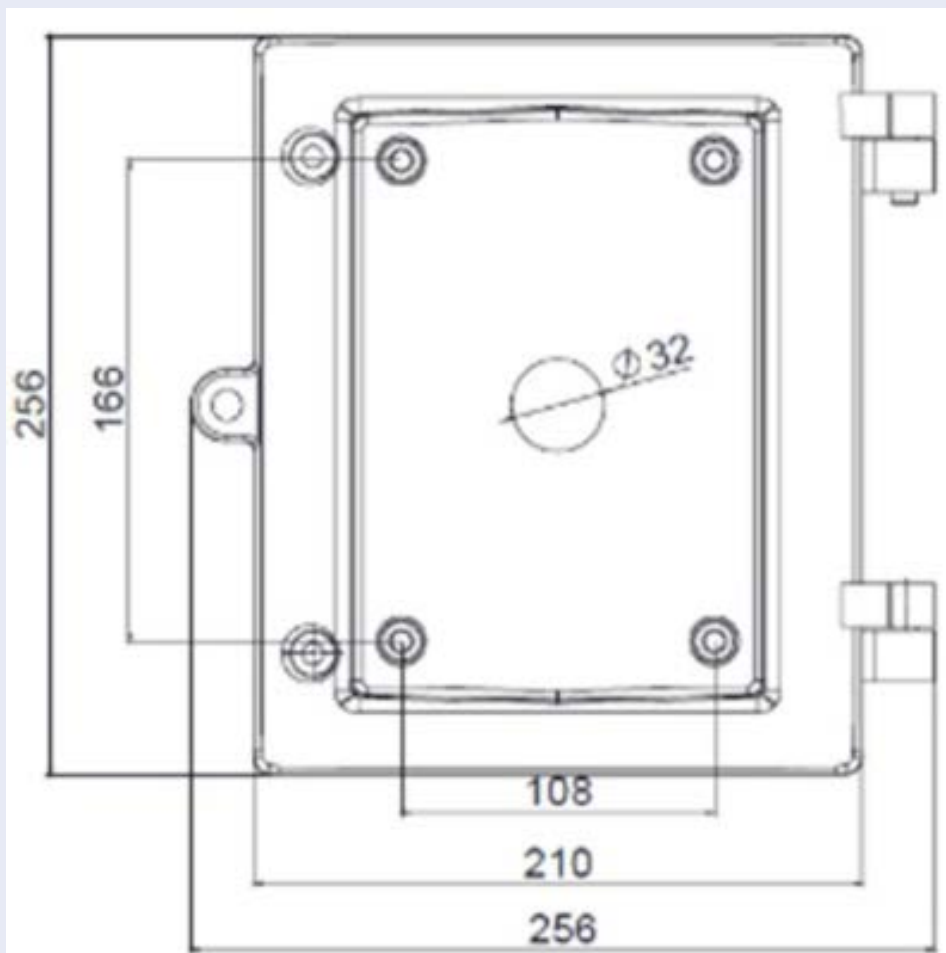
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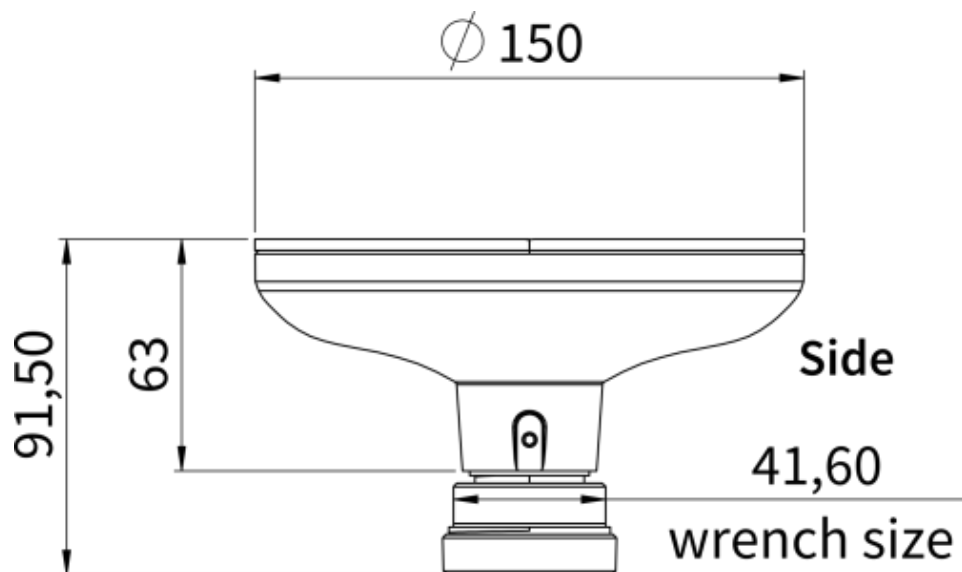
Order Code

MX-M-SD-WMJB

Dimensions



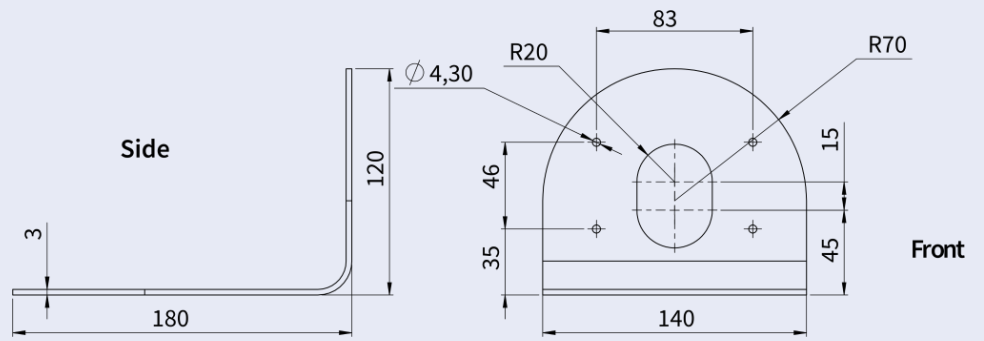
Mx-M-VT-AP



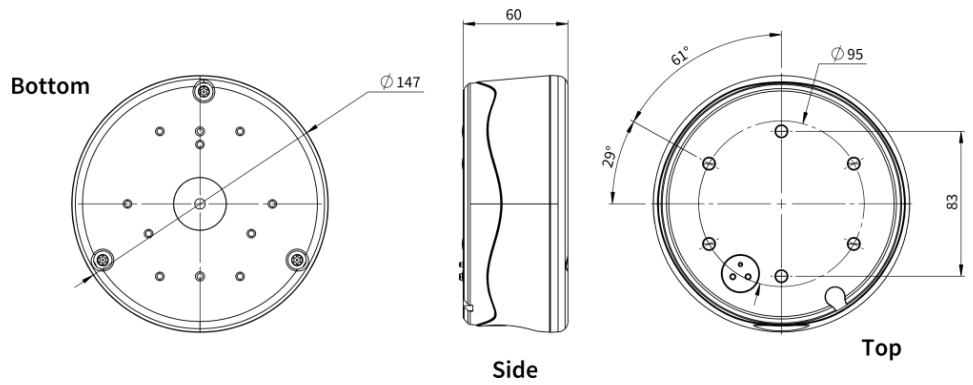
Order Code

Mx-M-VT-WM

Dimensions



Mx-M-VT-JB



Accessories for All Cameras

| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|--|--|--|--------------------------|----------|
|  <p data-bbox="169 1070 440 1097">MX-NPA-UPOE1A-60W</p> | <p data-bbox="533 517 911 1283">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.</p> | All cameras. | Plastic hous- ing, black | 0.45 kg |
|  <p data-bbox="169 1731 440 1758">Mx-A-ETP1A-2601-SET</p> | <p data-bbox="533 1328 911 1948">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 • Max. 95 Mbps transmission bandwidth, range up to</p> | All cameras. Requires Mx-A-ETP1A-2601-POW. | Plastic hous- ing, black | 0.368 kg |


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| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|------------------------|--|------------------------|--------------------|--------|
| | <p>600 m/656 yd for data only, 300 m/328 yd for PoE depend- ing on the quality of the twis- ted-pair link • 128 bit AES network data encryption • Power supply 2-wire trans- mitter (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 Over- voltage 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 • Oper- ational temperature: -20 to 60°C • Dimensions: 80.4(L) x 61.6(W) x 24(H)mm • Weight: RX/TX: 102g • Warranty: 2 years</p> | | | |

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| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|--|---|--|------------------------|---------|
|  <p>Mx-A-ETP1A-2601-POW</p> | <p>Plug-type power supply for Mx-A-ETP1A-2601-SET.</p> <p>Output: 57V DC +/-3% / 1.2 A • Input: 90-260V AC (47-63Hz) • 68,4 Watt • Operating Temperature: 0-40°C/32-122°F</p> | Mx-A-ETP1A-2601-SET | Plastic housing, black | 0.49 kg |
|  <p>Mx-A-KBD1A-PTZ-JOG</p> | <p>MOBOTIX USB Keyboard with PTZ Joystick & Jog-Shuttle.</p> <p>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 predefined 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.</p> | <p>All cameras. Requires Windows or macOS computer with USB 2.0 or better.</p> | Plastic housing, black | 1.9 kg |

| Picture/ Order Code | Description | Compatible Products | Material/ Color | Weight |
|---|--|------------------------|------------------------------|----------------|
|  | <p>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.</p> | <p>All cameras.</p> | <p>Plastic housing, gray</p> | <p>0.31 kg</p> |
| <p>MX-SWITCH1</p> | | | | |

Further Reading

[Manuals and Quick Installation documents](#)



[Technical Specifications](#)



[MOBOTIX MOVE Installation Hints](#)



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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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