

## Compact and Flexible Indoor Camera for Ceilings



- Includes MxAnalytics video analysis tools out-of-the-box
- Recording on internal MicroSD card (SDXC)
- Signal Input/Output and MxBus via optional MX-Bus-IO-Module
- Optional audio version with microphone and speaker
- Sensors for temperature, illumination, shock detection integrated
- Installation is as simple as installing a ceiling spotlight

**MOBOTIX 6MP camera for flexible use in indoor applications, install as complete Indoor Camera p25 (Day or Night) with selected lenses or as camera module p25 (Day or Night) with separate lens (MX-B036 to MX-B237).**  
[www.mobotix.com](http://www.mobotix.com) > Products > p25

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### Variants of the p25



MX-p25-Day	MX-p25-Night	Variant
6MP (3072x2048) Color	6MP (3072x2048) Black&White	
MX-p25-BOD1*	MX-p25-BOD1-N*	p25 camera module, for lenses MX-B036 to MX-B237 (f/1.8, 103° to 15°, self-mounted*)
MX-p25-D016	MX-p25-N016	p25 Hemispheric with Fisheye lens MX-B016 (f/2.0, 180° horiz. angle of view)
MX-p25-D036	MX-p25-N036	p25 with ultra-wide-angle lens MX-B036 (f/1.8, 103° horiz. angle of view)
MX-p25-D061	Self-mounted* with MX-p25-BOD1-N	p25 with wide-angle lens MX-B061 (f/1.8, 60° horiz. angle of view)
MX-p25-D079	Self-mounted* with MX-p25-BOD1-N	p25 with standard lens MX-B079 (f/1.8, 45° horiz. angle of view)
MX-p25-D119	Self-mounted* with MX-p25-BOD1-N	p25 with tele lens MX-B119 (f/1.8, 31° horiz. angle of view)
MX-p25-D237	Self-mounted* with MX-p25-BOD1-N	p25 with distance tele lens MX-B237 (f/1.8, 15° horiz. angle of view)

\*Requires focusing after self-mounting the lens (see «Initial Operation of the p25»)

### p25 Standard Delivery



Item	Count	Part Name
1.1	1	Housing with spring clips and tiltable camera receptacle (installed)
1.2	1	Back cover (installed)
1.3	1	Main board with lens mount (installed)
1.4	1	Lens (only installed in camera models listed in «Variants of the p25»)
1.5	1	Blind cover (only when self-mounting the lens with MX-p25-BOD1)
1.6	1	Ethernet patch cable, 50 cm/19.7 in, black (installed)
1.7	1	MicroSD card pre-installed (SDHC montiert, SDXC supported)
1.8	1	Flat-head screwdriver, blue
1.9	1	Lens wrench red (only with MX-p25-BOD1 and lenses D036 to D237)
1.10	1	Allen wrench 1.5 mm

### Connecting the p25



For information on **connecting** the p25, please see the *M25 Camera Manual*, section «Network and Power Connection, Additional Cables».

Regarding the **initial operation** of the p25, please see the *M25 Camera Manual* in Chapter 3, «Initial Operation».



### Installing the Lens (Only MX-p25-BOD1 Variant)

The steps listed below are only required if the p25 has been ordered with separate lens for self-mounting (see «Variants of the p25»).

#### 1. Remove the blind cover

Remove the blind cover that protects the image sensor during shipping from the lens mount.



#### 2. Install the lens

Screw the lens into the lens mount. Depending on the physical length of the lens, you can use your hand and then the red lens wrench (item 1.9). After initial operation of the camera, remember to adjust the focus of the lens (see «Initial Operation of the p25»).



### Removing/Installing the Back Cover

The steps listed below are only required if you need to access the inside of the camera housing. **Make sure the power supply to the camera is disconnected before opening the housing!**

**Caution:** In order to avoid damage from electrostatic discharge, you should touch a grounded device before opening the housing of the camera (e.g., the blank metal at the back of a computer). This will remove any static electricity that may have built up.

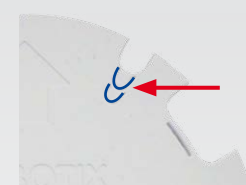
#### 1. Remove the cover

Remove the back cover of the p25 by inserting a flat-head screwdriver into one of the slots at the side as shown in the figure and turning it slightly. Repeat the process for the two other slots and lift the back cover from the housing.



#### 3. If required, enlarge the cable guide

If the cable guide is not large enough for additional cables, enlarge the guide accordingly. Depending on the size required, break out either one or two elements of the cable guide using pliers (see blue markings in the figure).



#### 2. Follow the procedures

Follow the procedures for the work inside the housing as described in the sections listed below:

- → **Inserting/Exchanging the SD Card**
- → **Installing the MX-Bus-IO-Module**



#### 4. Attach back cover

Insert the back cover, so that the large arrow (highlighted blue in the figure) is positioned in the viewing direction of the camera. Make sure the cables and wires are guided properly through the cable guide, then carefully press the back cover into the housing until it clicks into place.



### Inserting/Exchanging the SD Card

All camera models can use the integrated microSD card (SDXC) to record video data. In order to exchange the microSD card, please proceed as outlined in the following instruction. For information on reliable SD cards, please see the MOBOTIX website [www.mobotix.com](http://www.mobotix.com) > Support > MX Media Library > Planning in the document *MicroSD Card Whitelist for MOBOTIX Cameras*.

When replacing the SD card, make sure that recording has been deactivated in the browser (**Admin Menu > Storage > Storage on External File Server / Flash Device**; activate recording again in the same dialog). Follow the instructions in section «Removing/Installing the Back Cover» to access the inside of the camera and to close it again after inserting the SD card.

#### 1. Remove the SD card

If a microSD card has been installed, gently press with your finger as indicated by the arrow until you hear a **click**. Then release the SD card. The card is protruding slightly and can be easily removed.



#### 2. Insert the SD card

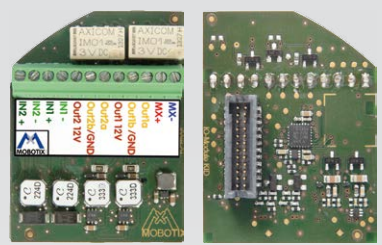
Insert the microSD card and gently press with your finger as indicated by the arrow until you hear another **click**. Make sure that the SD card is fully inserted.



### Installing the MX-Bus-IO-Module

For the p25, you can use the optionally available MX-Bus-IO-Module to attach MxBus devices (e.g., an MX-GPS-Box), to attach external sensors using the signal inputs and to switch other devices via the signal outputs. To facilitate the installation of the module, you should attach the connection wires before inserting the module.

Follow the instructions in section «Removing/Installing the Back Cover» to access the inside of the camera and to close it again after inserting the module.



#### 1. Attach the connection cables

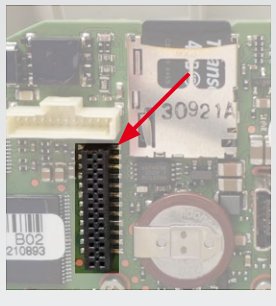
Attach the connection cables as shown in the terminal connector overview.

Terminal Connectors				
MX- MX+	MxBus connections	MxBus		Outputs
	Out1 A	Output 1 A	Relay pot.-free	
Out1 B /GND	Output 1 B/GND	–	Output 1 12 V self-powered	
Out1 12V	Output 1 12 V	–	–	
Out2 A	Output 2 A	Relay pot.-free	–	
Out2 B/GND	Output 2 B/GND	–	Output 2 12 V self-powered	
Out2 12V	Output 2 12 V	–	–	
IN1 -	Output 1 -	Inputs		
IN1 +	Output 1 +			
IN2 -	Output 2 -			
IN2 +	Output 2 +			

#### 2. Insert the MX-Bus-IO-Module

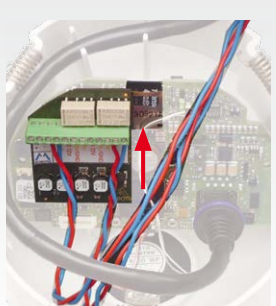
Hold the MX-Bus-IO-Module with attached connection wires over the receptacle on the main board (red arrow in figure).

Use one finger to carefully press the board of the module onto the receptacle. Make sure that the green terminal connector block is pointing upward (towards the SD card, see red arrow in figure below).



Make sure that the MX-Bus-IO-Module is fully inserted.

Please also make sure that the connection wires are guided in a loop so that the cables do not lift the module out of its receptacle when adjusting the camera tilt (see figure).



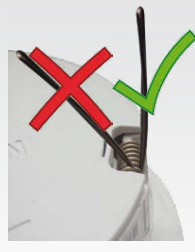
## Installing the p25

Use the drilling template on the back for this purpose (red circle) or draw a circle with 105 mm/4.13 in diameter for the cut-out. Cut out the hole for the camera, then guide the cables (network cable, USB cable, MxBus and signal input/output wires) through the hole.

### 1. Install the p25

Press the spring clips back and insert the p25 into the hole in the camera. The spring clips will snap outward, thus firmly holding the camera in place.

Make sure that you only press back the spring clips as shown in the image. Do not press them back any further as the springs may snap out of their fixtures otherwise.



### 2. Roughly align the p25

Turn the camera until it roughly points into the intended direction; once it is running, you will adjust the camera according to the live image (see «Initial Operation of the p25»).



## Removing the p25

### 1. Pull out the camera

Pull the camera from its position by gently pulling the camera downward on one side, then the other side. **Take care to NOT let the spring clips snap forward (risk of injury!).**

### 2. Remove the cables

Remove the cables coming from the building (network cable, USB cable, MxBus and signal input/output wires). Pull out the camera.

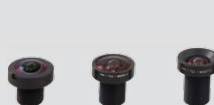


## Initial Operation of the p25

The initial operation starts with connecting the power supply (see section «Network and Power Connection, Additional Cables» in the M25 Camera Manual). The first access follows the procedure described in the same manual in the section «Initial Operation of the Camera». All other tasks require access to the camera's user interface in the browser. Enter the camera's IP address into the address bar of the browser.

### 1. Set installed lens (only when self-mounting)

Open **Admin Menu > Hardware Configuration > Lens Configuration** dialog and select the installed lens. This step is required to select the proper special functions of the installed lens (e.g., for wide-angle lenses).

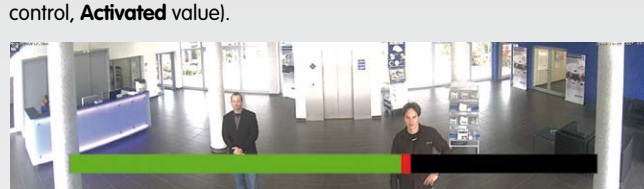


### 2. Adjust lens focus (if required)

This step is only necessary if the lens has been installed for the first time or exchanged. In cameras with a MX-B016 ("Hemispheric") lens, the lens has been focused at the factory.



Check the live image from the camera in the browser. Activate the focusing aid in the browser (**Focusing Aid** quick control, **Activated** value).



Carefully turn the lens in clockwise or counter-clockwise direction using the red lens wrench until the red area of the focusing aid is as small as possible. Remove the lens wrench every time you changed the lens focus. Once the focus is adjusted properly, deactivate the focusing aid again (**Focusing Aid** quick control, **Disabled** value).

### 3. Adjust viewing direction

Turn the image in the ceiling until the live image shows the desired viewing direction **1**.

Stick the Allen wrench (item 1.10) into the hole of the lock screw and loosen the screw a bit **2**.



Stick the blue screwdriver (item 1.8) into the receptacle for adjusting the camera tilt. Adjust the camera tilt as needed while watching the live image of the camera **1**.

Lock the camera tilt by slightly tightening the lock screw **2**.



### 4. Configuring and Using the MX-Bus-IO-Module

The camera will automatically detect an installed MX-Bus-IO-Module (see **Camera Status, System** section in browser).

The signal inputs can be used right away in the **signal input profiles** in the **Setup Menu > Event Overview**. Likewise, the signal outputs can be used in the **signal output profiles** in **Admin Menu > Hardware Configuration > Signal Out Profiles**.

In addition, the signal inputs/outputs have been entered automatically in the **Admin Menu > Assign Wires** dialog and can be used to control doors and lights.

To use one or both signal outputs not as potential-free outputs (for relays), but as **self-powered 12 V outputs**, open the **Admin Menu > Hardware Configuration > Manage Hardware Expansions** dialog. In the **MxBus/IO Board** section, click on **Connect** for each output you want to use as self-powered output.

In the live image of the browser, select the **Manage Settings** quick control and set **Store Entire Configuration** as value. The camera stores the configuration in the permanent camera memory so that the settings will be applied at the next camera reboot.

MX-		
MX+		
Out1 A		Output 1
Out1 B / GND		
Out1 12V		
Out2 A		Output 2
Out2 B / GND		
Out2 12V		
INT -		

## Important Notes

### Safety Warnings

- This product must not be used in locations exposed to the dangers of explosion.
- Make sure that you install this product as outlined in the installation instructions above.
- When installing this product, make sure that you are only using genuine MOBOTIX parts and MOBOTIX connection cables.
- Only install this product in suitable, solid materials that provide for a sturdy installation of the fixing elements used.
- When removing the camera from the ceiling, make sure that the spring clips do not snap back (**risk of injury!**).
- Electrical systems and equipment may only be installed, modified and maintained by a qualified electrician or under the direction and supervision of a qualified electrician in accordance with the applicable electrical guidelines. Make sure to properly set up all electrical connections.
- When attaching modules to the USB connector, the **power consumption of all attached modules must not exceed 1 W**.
- Due to the high performance of the p25, the area of the image sensor **can get quite hot**, especially when the ambient temperature is also high. This does not affect the proper functioning of the camera in any way. This camera must not be installed within the reach of persons.

- Make sure the power supply to the camera is disconnected before opening the camera housing (e.g., when exchanging the SD card).
- MOBOTIX products include all of the necessary configuration options for operation in Ethernet networks in compliance with data protection laws. The operator is responsible for the data protection concept across the entire system. The basic settings required to prevent misuse can be configured in the software and are password-protected. This prevents unauthorized parties from accessing these settings.
- Make sure that the operating temperature of 0 to +40 °C/+32 to +104 °F is not exceeded.

### Legal Notes

You must comply with all data protection regulations for video and sound monitoring when using MOBOTIX products. Depending on national laws and the installation location of the p25, the recording of video and sound data may be subject to special documentation or it may be prohibited. All users of MOBOTIX products are therefore required to familiarize themselves with all valid regulations and comply with these laws. MOBOTIX AG is not liable for any illegal use of its products.

## Technical Specifications

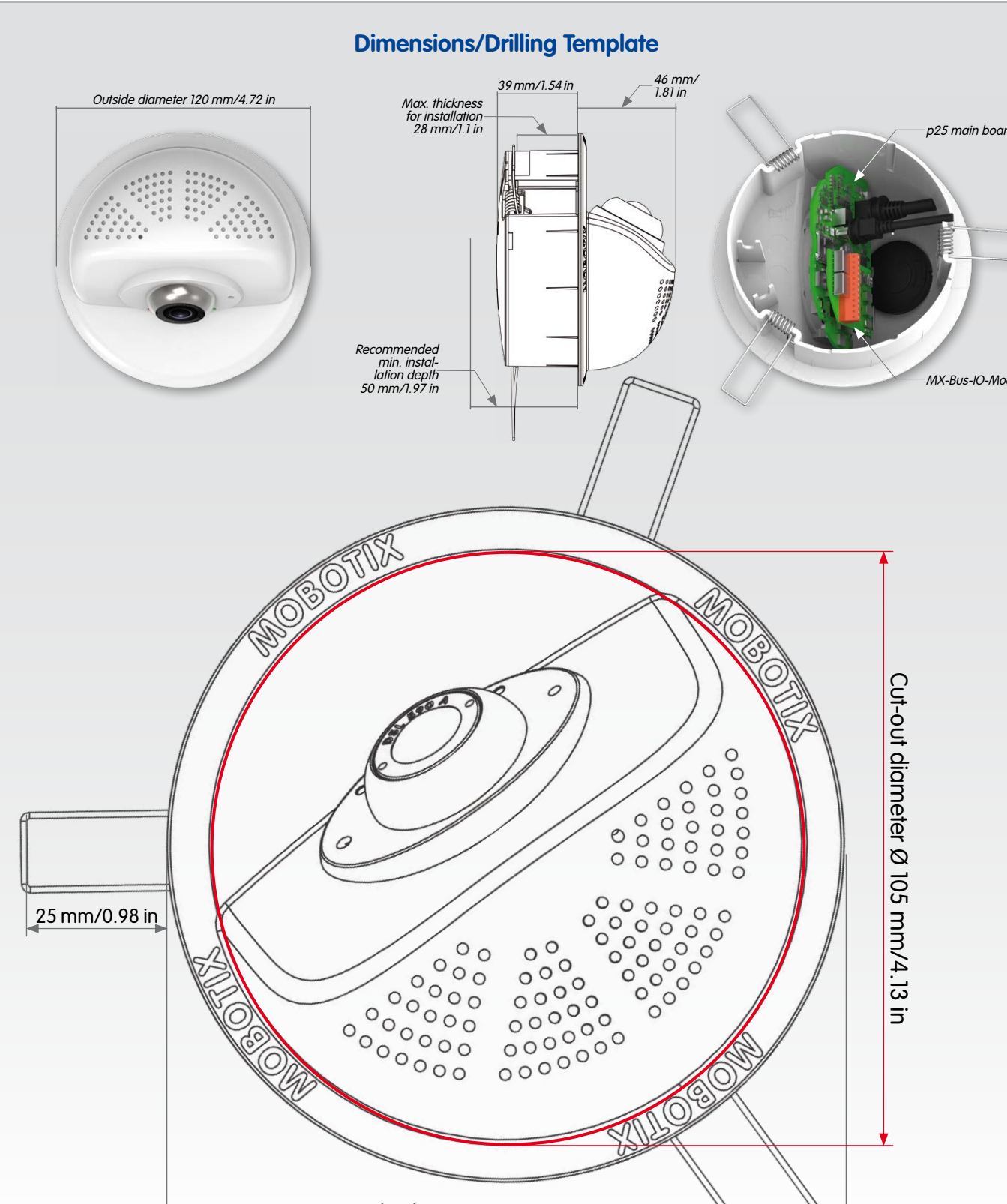
Since the p25 is identical to the M25 for the most part, the technical data listed in the *M25 Camera Manual* in Section *Technical Data* also applies to this product. You can find the *M25 Camera Manual* as a PDF file on [www.mobotix.com](http://www.mobotix.com) > **Support** > **Manuals**.



p25 (Differences Compared to M25)	
Lens Options	MX-B016 to MX-B237 (180° to 15° hor. angle of view)
Max. Image Size	6MP in 3:2 format (3072x2048)
Audio Functions	None; optionally with microphone and speaker
Interfaces	Ethernet 10/100, IPv4/IPv6, MiniUSB; MxBus and inputs/outputs using optional MxBus-IO-Module
Power Consumption	Typ. 4 W
Operating Conditions	IP20 (DIN EN 60529) 0 to +40 °C/+32 to +104 °F (DIN EN 50155)
Max. Thickness for Installation	Spring clips properly clamp down on materials from 1 to 28 mm/0.04 to 1.1 in
Dimensions	Outside diameter 120 mm/4.72 in, total height 85 mm/3.35 in, height installed 46 mm/1.81 in, recommended min. installation depth 50 mm/1.97 in
Materials	Housing: PBT GF30
Weight	approx. 270 g

MX-Bus-IO-Module	
Inputs	2 galvanically separated inputs (AC/DC, 0 to 48 V)
Outputs	<b>Variant 1 (default):</b> 2 potential-free outputs (max. load per pin: max. 30 W or max. 1 A or max. 48 V AC/DC) <b>Variant 2 (set in browser):</b> 2 powered outputs 12 V DC; max. 50 mA per output
Add. Interfaces	MxBus connections for MOBOTIX peripheral devices
Operating Conditions	Same as camera
Cross-sectional area of wires at the terminals	0.14 mm <sup>2</sup> – 0.5 mm <sup>2</sup> (AWG 21 – 26)
Power Consumption	Typ. 0.5 W, max. 1.5 W

## Dimensions/Drilling Template



Innovations – Made in Germany

The German company MOBOTIX AG is known as the leading pioneer in network camera technology and its decentralized concept has made high-resolution video systems cost-efficient.

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