

## M3057-PLVE Mk II Network Camera

## User Manual

# M3057-PLVE Mk II Network Camera

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## Get started

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### Get started

#### Find the device on the network

To find Axis devices on the network and assign them IP addresses in Windows®, use AXIS IP Utility or AXIS Device Manager. Both applications are free and can be downloaded from [axis.com/support](http://axis.com/support).

For more information about how to find and assign IP addresses, see the document *How to assign an IP address and access your device* on the device page at [axis.com](http://axis.com).

#### Browser support

You can use the device with the following browsers:

	Chrome™	Firefox®	Edge®	Safari®
Windows®	recommended	x	x	
macOS®	recommended			x
Other operating systems	x	x		

If you need more information about recommended browsers, go to [axis.com/browser-support](http://axis.com/browser-support).

#### Access the device

1. Open a browser and enter the IP address or host name of the Axis device.  

If you have a Mac computer (macOS), go to Safari, click Bonjour and select the device from the drop-down list. To add Bonjour as a browser bookmark, go to **Safari > Preferences**.

If you do not know the IP address, use AXIS IP Utility or AXIS Device Manager to find the device on the network.
2. Enter the username and password. If you access the device for the first time, you must set the root password. See *Set a new password for the root account* on page 3.
3. The live view page opens in your browser.

#### Verify that no one has tampered with the firmware

To make sure that the device has its original Axis firmware, or to take full control of the device after a security attack:

1. Reset to factory default settings. See *Reset to factory default settings* on page 22.  

After the reset, secure boot guarantees the state of the device.
2. Configure and install the device.

#### Set a new password for the root account

##### Important

The default administrator username is **root**. If the password for root is lost, reset the device to factory default settings.

1. Type a password. Follow the instructions about secure passwords. See *Secure passwords* on page 4.
2. Retype the password to confirm the spelling.
3. Click **Create login**. The password has now been configured.

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### Secure passwords

#### Important

Axis devices send the initially set password in clear text over the network. To protect your device after the first login, set up a secure and encrypted HTTPS connection and then change the password.

The device password is the primary protection for your data and services. Axis devices do not impose a password policy as they may be used in various types of installations.

To protect your data we strongly recommend that you:

- Use a password with at least 8 characters, preferably created by a password generator.
- Don't expose the password.
- Change the password at a recurring interval, at least once a year.

### Webpage overview

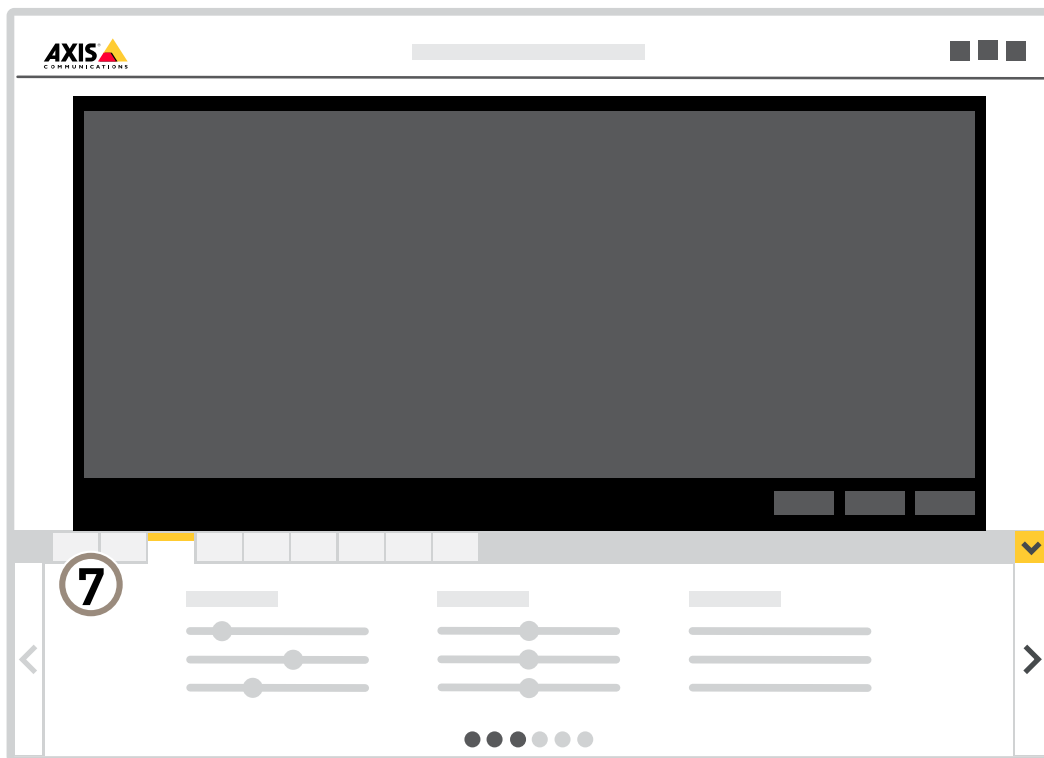


- 1 Live view control bar
- 2 Live view
- 3 Product name
- 4 User information, color themes, and help
- 5 Video control bar
- 6 Settings toggle

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7 Settings tabs

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## Additional settings

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### Additional settings

#### Adjust the image

If you want to know more about different image settings, see *Learn more on page 18*.

#### Rotate image (Digital roll)


To rotate the 360° view, go to **System > Orientation** and use the slider.

You can also use the text field to change the roll angle.

##### Note

All views will be affected when you rotate the image.

#### Configure Quad view

1. Select Quad view among the live feed sources.
2. Go to **Settings > System > Orientation** and click .
3. Change the view order by drag and drop the yellow boxes.







##### Note

Quad view is available in these mounting modes:

- Desk
- Ceiling

#### About capture modes

A capture mode is one of the possible views for this product and can be accessed from the drop-down list in the product's live stream view.



View	Symbol	Aspect ratio	Resolutions M3057-PLVE MkII
Overview		1:1	2016x2016 to 160x160
Panorama		8:3 16:9 32:9	2560x960 to 192x72 2560x1440 to 256x144 2560x720 to 1280x360
Double Panorama		4:3 16:9	2560x1920 to 384x288 2560x1440 to 512x288
Quad View		4:3 16:9	2560x1920 to 384x288 2560x1440 to 512x288
View Areas 1-4		4:3 16:9	1920x1440 to 320x240 1920x1080 to 256x144
Corner Left/Right		8:3 2:1	2304x864 to 192x72 2368x1184

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(Continued)


Double Corner		4:3 1:1	1920x1440 to 384x288 2016x2016 to 480x480
Corridor		4:3 16:9	2560x1920 to 320x240 2560x1440 to 256x144

### Select capture mode

Which capture mode to choose depends on the requirements of frame rate and resolution for the specific surveillance setup. For specifications about available capture modes, see the product's datasheet. To find the latest version of the datasheet, go to [axis.com](http://axis.com).

### Level the camera

To adjust the view in relation to a reference area or object, use the leveling guide in combination with the digital roll slider in the camera.

1. Go to Settings > System > Orientation and click .
2. Adjust the camera by using **Digital roll** until the position of the reference area or object, is aligned with the leveling guide.

### Select exposure mode

There are different exposure mode options in the camera that adjusts aperture, shutter speed, and gain to improve image quality for specific surveillance scenes. Go to Settings > Image > Exposure and select between the following exposure modes:

- For most use cases, select **Automatic** exposure.
- For environments with certain artificial lighting, for example fluorescent lighting, select **Flicker-free**.  
Select the same frequency as the power line frequency.
- For environments with certain artificial light and bright light, for example outdoors with fluorescent lighting at night and sun during daytime, select **Flicker-reduced**.  
Select the same frequency as the power line frequency.
- To lock the current exposure settings, select **Hold current**.

### Optimize IR illumination

In most cases, the exposure of the image is automatically adjusted to obtain optimal image quality. If the camera is placed close to a wall or a corner, it can sometimes result in saturation of parts of the image. When this happens, the LED's closest to the wall or corner are automatically dimmed to avoid saturating the image.

Depending on the installation environment and the conditions around the camera, for example external light sources in the scene, you can sometimes improve the IR illumination if you manually adjust the intensity of the LED's.

1. Go to Settings > Image > Day and night, and turn on **Allow illumination**.
2. Turn on **Live view control**.
3. Minimize **Settings**.
4. In the live view control bar, click the **Illumination** button, turn on **IR light** and select **Manual**.
5. Adjust the intensity.

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### Benefit from IR light in low-light conditions using night mode

Your camera uses visible light to deliver color images during the day. As the available light diminishes, you can set the camera to automatically shift to night mode, in which the camera uses both visible light and near-infrared light to deliver black-and-white images. Since the camera uses more of the available light it can deliver brighter, more detailed, images.

1. Go to **Settings > Image > Day and night**, and make sure that the **IR cut filter** is set to **Auto**.

### Reduce noise in low-light conditions

To reduce noise in low-light conditions, you can adjust one or more of the following settings:

- Adjust the trade-off between noise and motion blur. Go to **Settings > Image > Exposure** and move the **Blur-noise trade-off** slider toward **Low noise**.
- Set the exposure mode to automatic.

#### Note

A high max shutter value can result in motion blur.

- To slow down the shutter speed, set max shutter to the highest possible value.
- Reduce sharpness in the image.

### Reduce motion blur in low-light conditions

To reduce motion blur in low-light conditions, adjust one or more of the following settings in **Settings > Image > Exposure**:

- Move the **Blur-noise trade-off** slider toward **Low motion blur**.

#### Note

When you increase the gain, image noise also increases.

- Set **Max shutter** to a shorter time, and **Max gain** to a higher value.

If you still have problems with motion blur:

- Increase the light level in the scene.
- Mount the camera so that objects move toward it or away from it rather than sideways.

### Maximize details in an image

#### Important

If you maximize details in an image, the bitrate will probably increase and you might get a reduced frame rate.

- Set the compression as low as possible.
- Select MJPEG streaming.
- Turn off Zipstream functionality.

### Handle scenes with strong backlight

Dynamic range is the difference in light levels in an image. In some cases the difference between the darkest and the brightest areas can be significant. The result is often an image where either the dark or the bright areas are visible. Wide dynamic range (WDR) makes both dark and bright areas of the image visible.



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*Image without WDR.*



*Image with WDR.*

### Note

WDR might cause artifacts in the image.

1. Go to **Settings > Image > Wide dynamic range.**
2. Turn on WDR.
3. If you still have problems, go to **Exposure** and adjust the **Exposure zone** to cover the area of interest.

Find out more about WDR and how to use it at [axis.com/web-articles/wdr](https://axis.com/web-articles/wdr).

### Hide parts of the image with privacy masks

You can create one or several privacy masks to hide parts of the image.

1. Go to **Settings > Privacy mask.**
2. Click **New.**
3. Adjust the size, color, and name of the privacy mask according to your needs.

### Show an image overlay

To add an image as an overlay in the video stream:

1. Go to **Settings > Overlay.**
2. Click **Image list.**
3. Upload an image and click **Done.**
4. Click **Create overlay.**
5. Select **Image** and click **Create.**

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6. Select the image from the drop-down list.
7. To position the image overlay, choose **Custom** or one of the presets.
8. Click **Create**.

### Show a text overlay in the video stream when the device detects motion

This example explains how to display the text "Motion detected" when the device detects motion:

Make sure that AXIS Video Motion Detection is running:

1. Go to **Settings > Apps > AXIS Video Motion Detection**.
2. Start the application if it is not already running.
3. Make sure you have set up the application according to your needs.

Add the overlay text:

4. Go to **Settings > Overlay**.
5. Select **Create overlay** and select **Text overlay**.
6. Enter #D in the text field.
7. Choose text size and appearance.
8. To position the text overlay, choose **Custom** or one of the presets.

Create a rule:

9. Go to **System > Events > Rules** and add a rule.
10. Type a name for the rule.
11. In the list of conditions, select **AXIS Video Motion Detection**.
12. In the list of actions, select **Use overlay text**.
13. Select a view area.
14. Type "Motion detected".
15. Set the duration.
16. Click **Save**.

#### Note

If you update the overlay text it will be automatically updated on all video streams dynamically.

### Show the pan or tilt position as a text overlay

You can show the pan or tilt position as an overlay in the image.

1. Go to **Settings > Overlay** and click **Create overlay**.
2. Select **Text** and click **Create**.
3. In the text field, type #x to show the pan position.  
Type #y to show the tilt position.
4. Choose appearance, text size, and alignment.

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5. Include the text overlay.
6. The current pan and tilt positions show up in the live view image and in the recording.

To learn more about different pan, tilt, and zoom settings, see .

### View and record video

To learn more about settings for viewing and recording video, see *Streaming and storage on page 18*.

### Reduce bandwidth and storage

#### Important

If you reduce the bandwidth it can result in loss of details in the picture.

1. Go to live view and select **H.264**.
2. Go to **Settings > Stream**.
3. Do one or more of the following:
  - Turn on the Zipstream functionality and select the desired level.

#### Note

The zipstream settings are used for both H.264 and H.265.

- Turn on dynamic GOP and set a high GOP length value.
- Increase the compression.
- Turn on dynamic FPS.

#### Note

Web browsers do not support H.265 decoding. Use a video management system or application supporting H.265 decoding.

### Set up network storage

To store recordings on the network, you need to set up network storage:

1. Go to **Settings > System > Storage**.
2. Click **Setup** under **Network storage**.
3. Enter the IP address of the host server.
4. Enter the name of the shared location on the host server.
5. Move the switch if the share requires a login, and enter username and password.
6. Click **Connect**.

### Record and watch video

To record video you must first set up network storage, see *Set up network storage on page 11*, or have an SD card installed.

#### Record video

1. Go to the live view.
2. To start a recording, click **Record**. Click again to stop the recording.

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## Additional settings

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### Watch video

1. Click **Storage > Go to recordings**.
2. Select your recording in the list and it will play automatically.

## Set up rules and alerts

You can create rules to make your device perform an action when certain events occur. A rule consists of conditions and actions. The conditions can be used to trigger the actions. For example, the device can start a recording or send an email when it detects motion, or show an overlay text when it records.

### Trigger an action

1. Go to **Settings > System > Events** to set up a rule. The rule defines when the device will perform certain actions. Rules can be setup as scheduled, recurring, or for example, triggered by motion detection.
2. Select the **Condition** that must be met to trigger the action. If you specify more than one condition for the rule, all of the conditions must be met to trigger the action.
3. Select which **Action** the device should perform when the conditions are met.

#### Note

If you make changes to an active rule, then the rule needs to be restarted for the changes to take effect.

## Save power when no motion is detected

This example explains how to turn on power saving mode when no motion is detected in the scene.

#### Note

When you turn on power saving mode, the IR illumination range is reduced.

Make sure that AXIS Video Motion Detection is running:

1. Go to **Settings > Apps > AXIS Video Motion Detection**.
2. Start the application if it is not already running.
3. Make sure you have set up the application according to your needs.

Create a rule:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, under **Application**, select **AXIS Video Motion Detection (VMD)**.
4. Select **Invert this condition**.
5. In the list of actions, under **Power saving mode**, select **Use power saving mode while the rule is active**.
6. Click **Save**.

## Record video when the camera detects motion

This example explains how to set up the camera to start recording to the SD card five seconds before it detects motion and to stop one minute after.

Make sure that AXIS Video Motion Detection is running:

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1. Go to **Settings > Apps > AXIS Video Motion Detection**.
2. Start the application if it is not already running.
3. Make sure you have set up the application according to your needs.

Create a rule:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, under **Application**, select **AXIS Video Motion Detection (VMD)**.
4. In the list of actions, under **Recordings**, select **Record video while the rule is active**.
5. Select an existing stream profile or create a new one.
6. Set the prebuffer time to 5 seconds.
7. Set the postbuffer time to 60 seconds.
8. In the list of storage options, select **SD card**.
9. Click **Save**.

### Provide visual indication of an ongoing event

You have the option to connect the AXIS I/O Indication LED to your network camera. This LED can be configured to turn on whenever certain events occur in the camera. For example, to let people know that video recording is in progress.

#### Required hardware

- AXIS I/O Indication LED
- An Axis network video camera

#### Note

For instructions on how to connect the AXIS I/O Indication LED, see the installation guide provided with the product.

The following example shows how to configure a rule that turns on the AXIS I/O Indication LED to indicate that camera is recording.

1. Go to **Settings > System > I/O Ports**.
2. Go to **Settings > System > Events**.
3. Create a new rule.
4. Select the **Condition** that must be met to trigger the camera to start recording. It can, for example, be a time schedule or motion detection.
5. In the list of actions, select **Record video**. Select a stream profile or create a new. Also set the **Prebuffer** and **Postbuffer** as required.
6. Save the rule.
7. Create a second rule and select the same **Condition** as in the first rule.
8. In the list of actions, select **Toggle I/O while the rule is active**, and then select the port the AXIS I/O Indication LED is connected to. Set the state to **Active**.
9. Save the rule.

Other scenarios where AXIS I/O Indication LED can be used are for example:

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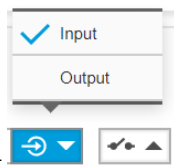
- Configure the LED to turn on when the camera starts, to indicate the presence of the camera. Select **System ready** as a condition.
- Configure the LED to turn on when live stream is active to indicate that a person or a program is accessing a stream from the camera. Select **Live stream accessed** as a condition.

### Configure I/O ports

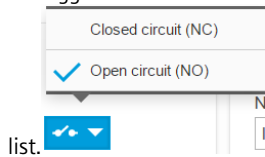
You need to connect the switch relay to the camera from the camera's webpage. First, configure the I/O ports:

#### Set the PIR detector to an input port

1. Go to **System > I/O ports**.

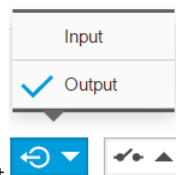


2. Select **Input** in the **Port 1** drop-down list.
3. Give the input module a descriptive name, for example "PIR detector".
4. To trigger an event whenever the PIR detector senses motion, select **Open circuit** in the drop-down

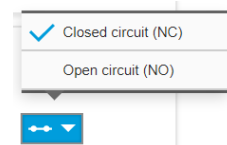


#### Set the switch relay to an output port

1. Go to **System > I/O ports**.



2. Select **Output** in the **Port 2** drop-down list.
3. Give the output module a descriptive name, for example "Gate switch".



4. To open the gate whenever an event is triggered, select **Closed circuit** in the drop-down list.

### Create rules

For the camera to open the gate when the PIR detector senses someone nearby, you need to create a rule in the camera:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule, for example "Open gate".
3. In the list of conditions, select **PIR detector**.
4. In the list of actions, select **Toggle I/O once**.

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5. In the list of ports, select **Gate switch**.
6. Set state to **Active**.
7. Set the duration.
8. Click **Save**.
9. Create another rule with the name "Direct the camera to the gate".
10. Select the same input signal as before, but as action select the previously created "Gate entrance" preset position.
11. Click **Save**.

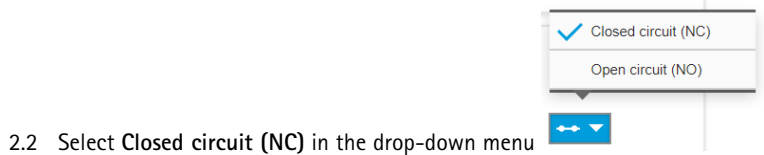
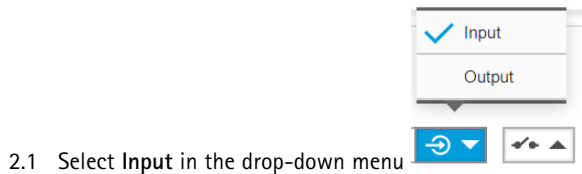
### Set up intrusion alarm

#### Before you start

- Connect the intrusion alarm switch to pin 1 (ground) and pin 3 (digital I/O) of the camera's I/O connector.



#### Configure the input port

1. Go to **Settings > System > I/O ports**.
2. For **Port 1**:



#### Create a rule

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, under **I/O**, select **Digital input**.
4. In the list of ports, select **Input 1**.
5. In the list of actions, under **Notifications**, select **Send notification to email**.
6. Select a recipient from the list or go to **Recipients** to create a new recipient.

To create a new recipient, click  . To copy an existing recipient, click  .

7. Type a subject and a message for the email.
8. Click **Save**.

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## Additional settings

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### Detect tampering with input signal

This example explains how to trigger an alarm when the input signal has been cut or short-circuited. For more information about the I/O connector, see *page 27*.

1. Go to **Settings > System > I/O Ports** and turn on **Supervised I/O** for one of the ports.

Create a rule:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, select **Digital input** and then select a port.
4. In the list of actions, select **Send notification to email** and then select a recipient from the list. Go to **Recipients** to create a new recipient.

To create a new recipient, click . To copy an existing recipient, click .



5. Type a subject and a message for the email.
6. Click **Save**.

### Send an email automatically if someone spray paints the lens

1. Go to **Settings > System > Detectors**.
2. Turn on **Trigger on dark images**. This will trigger an alarm if the lens is sprayed, covered, or rendered severely out of focus.
3. Set a duration for **Trigger after**. The value indicates the time that must pass before an email is sent.

Create a rule:

1. Go to **Settings > System > Events > Rules** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, select **Tampering**.
4. In the list of actions, select **Send notification to email**.
5. Select a recipient from the list or go to **Recipients** to create a new recipient.

To create a new recipient, click . To copy an existing recipient, click .

6. Type a subject and a message for the email.
7. Click **Save**.



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## Cleaning recommendations

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### Cleaning recommendations

**NOTICE**

Never use harsh detergent, for example gasoline, benzene, or acetone.

1. Use a can of compressed air to remove any dust or loose dirt from the device.
2. If necessary, clean the lens with a soft cloth dampened with lukewarm water.

**Note**

Avoid cleaning in direct sunlight or at elevated temperatures, as this may cause stains when the water droplets dry.

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[Learn more](#)

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[Learn more](#)

## View area

A view area is a cropped part of the full view. You can stream and store view areas instead of the full view to minimize bandwidth and storage needs. If you enable PTZ for a view area, you can pan, tilt and zoom within it. By using view areas you can remove parts of the full view, for example, the sky.

## Capture modes

Which capture mode to choose depends on the requirements of frame rate and resolution for the specific surveillance setup. For specifications about available capture modes, see the product's datasheet at [axis.com](http://axis.com).

## Privacy masks

A privacy mask is a user-defined area that prevents users from viewing a part of the monitored area. In the video stream, privacy masks appear as blocks of solid color.

A privacy mask is a user-defined area that covers a part of the monitored area. In the video stream, privacy masks appear either as blocks of solid color or with a mosaic pattern.

You'll see the privacy mask on all snapshots, recorded video, and live streams.

You can use the VAPIX® application programming interface (API) to turn off the privacy masks.

### Important

If you use multiple privacy masks it may affect the product's performance.

### Note

Privacy masks may appear warped in some view modes.

### Note

If you view the video stream over HDMI and restart the product, the privacy masks will disappear. To show the privacy masks again, restart the video stream.

## Overlays

### Note

Image and text overlay will not be displayed on video stream over HDMI.

Overlays are superimposed over the video stream. They are used to provide extra information during recordings, such as a timestamp, or during product installation and configuration. You can add either text or an image.

## Streaming and storage

### Video compression formats

Decide which compression method to use based on your viewing requirements, and on the properties of your network. The available options are:

Motion JPEG

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## Learn more

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Motion JPEG, or MJPEG, is a digital video sequence that is made up of a series of individual JPEG images. These images are then displayed and updated at a rate sufficient to create a stream that shows constantly updated motion. For the viewer to perceive motion video the rate must be at least 16 image frames per second. Full motion video is perceived at 30 (NTSC) or 25 (PAL) frames per second.

The Motion JPEG stream uses considerable amounts of bandwidth, but provides excellent image quality and access to every image contained in the stream.

### H.264 or MPEG-4 Part 10/AVC

#### Note

H.264 is a licensed technology. The Axis product includes one H.264 viewing client license. To install additional unlicensed copies of the client is prohibited. To purchase additional licenses, contact your Axis reseller.

H.264 can, without compromising image quality, reduce the size of a digital video file by more than 80% compared to the Motion JPEG format and by as much as 50% compared to the MPEG-4 standard. This means that less network bandwidth and storage space are required for a video file. Or seen another way, higher video quality can be achieved for a given bitrate.

### H.265 or MPEG-H Part 2/HEVC

#### Note

H.265 is licensed technology. The Axis product includes one H.265 viewing client license. To install additional unlicensed copies of the client is prohibited. To purchase additional licenses, contact your Axis reseller.

## How do Image, Stream, and Stream profile settings relate to each other?

The **Image** tab contains camera settings that affect all video streams from the product. If you change something in this tab, it immediately affects all video streams and recordings.

The **Stream** tab contains settings for video streams. You get these settings if you request a video stream from the product and don't specify for example resolution, or frame rate. When you change the settings in the **Stream** tab, it doesn't affect ongoing streams, but it will take effect when you start a new stream.

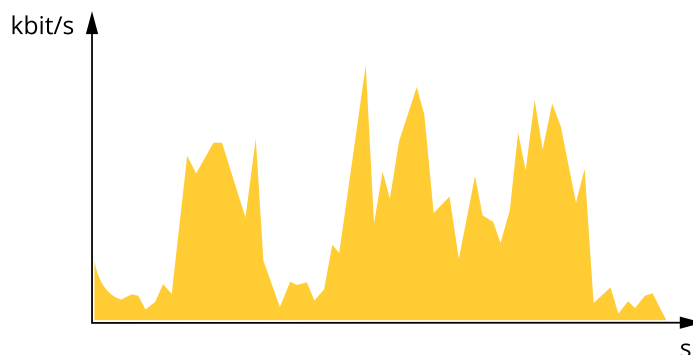
The **Stream profiles** settings override the settings from the **Stream** tab. If you request a stream with a specific stream profile, the stream contains the settings of that profile. If you request a stream without specifying a stream profile, or request a stream profile that doesn't exist in the product, the stream contains the settings from the **Stream** tab.

## Bitrate control

With bitrate control, you can manage the bandwidth consumption of your video stream.

### Variable bitrate (VBR)

With variable bitrate, the bandwidth consumption varies based on the level of activity in the scene. The more activity in the scene, the more bandwidth you need. You are guaranteed constant image quality but it requires storage margins.



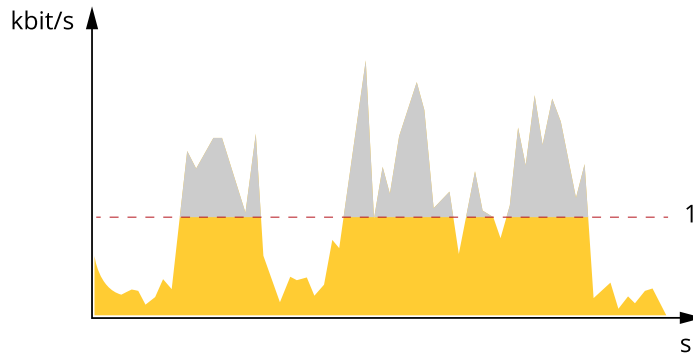
# M3057-PLVE Mk II Network Camera

## Learn more

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### Maximum bitrate (MBR)

With maximum bitrate, you can set a target bitrate to handle bitrate limitations in your system. You may see a decline in image quality or frame rate when the instantaneous bitrate is kept below the specified target bitrate. You can choose to either prioritize image quality or frame rate. We recommend that you configure the target bitrate to a higher value than the expected bitrate. This gives you a margin for additional complexity that needs to be captured.

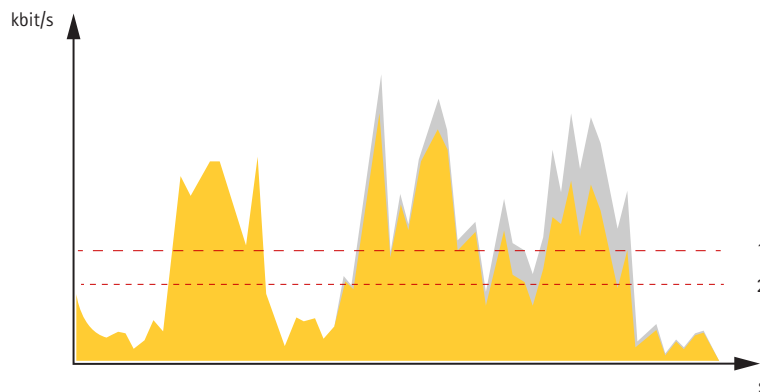


1 Target bitrate

### Average bitrate (ABR)

With average bitrate, the bitrate is automatically adjusted over a longer timescale. This is so you can meet the specified target and provide the best video quality based on your available storage. Bitrate is higher in scenes with a lot of activity, compared to static scenes. You are more likely to get better image quality when needed when using the average bitrate option. You can define the total storage required to store the video stream for a specified amount of time (retention time) when image quality is adjusted to meet the specified target bitrate. Specify the average bitrate settings in one of the following ways:

- To calculate the estimated storage need, set the target bitrate and the retention time.
- To calculate the average bitrate, based on available storage and required retention time, use the target bitrate calculator.



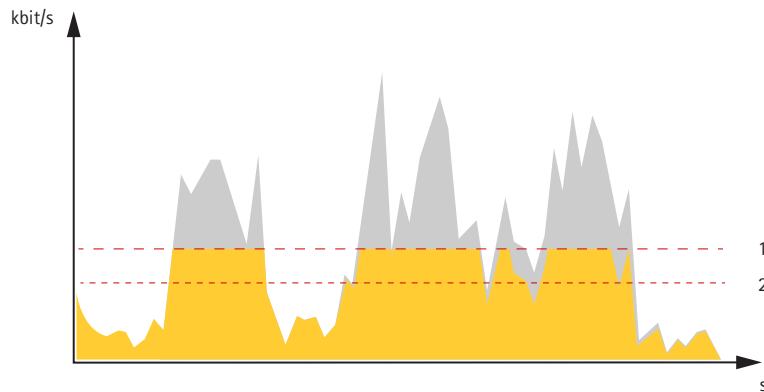
1 Target bitrate  
2 Actual average bitrate

You can also turn on maximum bitrate and specify a target bitrate within the average bitrate option.

# M3057-PLVE Mk II Network Camera

Learn more

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- 1 Target bitrate
- 2 Actual average bitrate

## Applications

AXIS Camera Application Platform (ACAP) is an open platform that enables third parties to develop analytics and other applications for Axis products. To find out more about available applications, downloads, trials and licenses, go to [axis.com/applications](http://axis.com/applications).

To find the user manuals for Axis applications, go to [axis.com](http://axis.com).

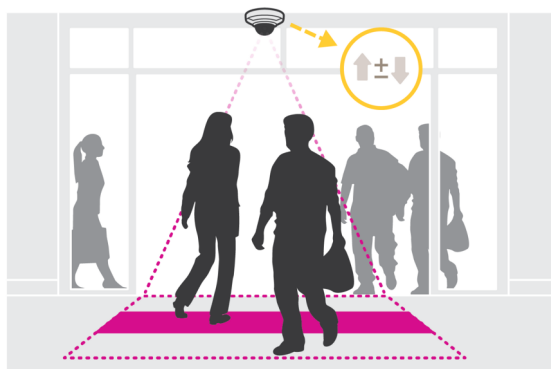
### Note

- Several applications can run at the same time but some applications might not be compatible with each other. Certain combinations of applications might require too much processing power or memory resources when run in parallel. Verify that the applications work together before deployment.

## AXIS People Counter

AXIS People Counter is an analytic application that can be installed on a network camera.

The counter is embedded in the camera which means you do not need a dedicated computer to run the application. AXIS People Counter is intended for retail environments, like stores or shopping malls, or other environments where you want to count people.



## Autotracking

# M3057-PLVE Mk II Network Camera

## Troubleshooting

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### Troubleshooting

If you can't find what you're looking for here, try the troubleshooting section at [axis.com/support](https://axis.com/support).

### Reset to factory default settings

#### Important

Reset to factory default should be used with caution. A reset to factory default resets all settings, including the IP address, to the factory default values.

To reset the product to the factory default settings:

1. Disconnect power from the product.
2. Press and hold the control button while reconnecting power. See *Product overview on page 26*.
3. Keep the control button pressed for 15–30 seconds until the status LED indicator flashes amber.
4. Release the control button. The process is complete when the status LED indicator turns green. The product has been reset to the factory default settings. If no DHCP server is available on the network, the default IP address is 192.168.0.90.
5. Use the installation and management software tools to assign an IP address, set the password, and access the video stream.

The installation and management software tools are available from the support pages on [axis.com/support](https://axis.com/support).

It is also possible to reset parameters to factory default through the web interface. Go to **Settings > System > Maintenance** and click **Default**.

#### Important

Reset to factory default should be used with caution as it resets all settings, including the IP address, to factory default values.

#### Note

The installation and management software tools are available from the support pages on [axis.com/support/downloads](https://axis.com/support/downloads).

To reset the product to factory default settings:

1. Disconnect power from the product.
2. Change the position of the factory default switch. For more information on how to access the switch, see the *Installation Guide*.
3. Re-connect power to the product.

It is also possible to reset parameters to factory default via the web interface. Go to **Setup > System Options > Maintenance** and click **Default**.

### Firmware options

Axis offers product firmware management according to either the active track or the long-term support (LTS) tracks. Being on the active track means continuously getting access to all the latest product features, while the LTS tracks provide a fixed platform with periodic releases focused mainly on bug fixes and security updates.

Using firmware from the active track is recommended if you want to access the newest features, or if you use Axis end-to-end system offerings. The LTS tracks are recommended if you use third-party integrations, which are not continuously validated against the latest active track. With LTS, the products can maintain cybersecurity without introducing any significant functional changes or affecting any existing integrations. For more detailed information about Axis product firmware strategy, go to [axis.com/support/firmware](https://axis.com/support/firmware).

# M3057-PLVE Mk II Network Camera


## Troubleshooting

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### Check the current firmware

Firmware is the software that determines the functionality of network devices. One of your first actions when troubleshooting a problem should be to check the current firmware version. The latest version may contain a correction that fixes your particular problem.

To check the current firmware:

1. Go to the product's webpage.
2. Click on the help menu .
3. Click **About**.

### Upgrade the firmware

#### Important

Preconfigured and customized settings are saved when the firmware is upgraded (provided that the features are available in the new firmware) although this is not guaranteed by Axis Communications AB.

#### Important

Make sure the product remains connected to the power source throughout the upgrade process.

#### Note

When you upgrade the product with the latest firmware in the active track, the product receives the latest functionality available. Always read the upgrade instructions and release notes available with each new release before upgrading the firmware. To find the latest firmware and the release notes, go to [axis.com/support/firmware](https://axis.com/support/firmware).

1. Download the firmware file to your computer, available free of charge at [axis.com/support/firmware](https://axis.com/support/firmware).
2. Log in to the product as an administrator.
3. Go to **Settings > System > Maintenance**. Follow the instructions on the page. When the upgrade has finished, the product restarts automatically.

AXIS Device Manager can be used for multiple upgrades. Find out more at [axis.com/products/axis-device-manager](https://axis.com/products/axis-device-manager).

### Technical issues, clues and solutions

If you can't find what you're looking for here, try the troubleshooting section at [axis.com/support](https://axis.com/support).

#### Problems upgrading the firmware

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Firmware upgrade failure	If the firmware upgrade fails, the device reloads the previous firmware. The most common reason is that the wrong firmware file has been uploaded. Check that the name of the firmware file corresponds to your device and try again.
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#### Problems setting the IP address

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The device is located on a different subnet	If the IP address intended for the device and the IP address of the computer used to access the device are located on different subnets, you cannot set the IP address. Contact your network administrator to obtain an IP address.
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# M3057-PLVE Mk II Network Camera

## Troubleshooting

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The IP address is being used by another device	Disconnect the Axis device from the network. Run the ping command (in a Command/DOS window, type <code>ping</code> and the IP address of the device): <ul style="list-style-type: none"><li>If you receive: <code>Reply from &lt;IP address&gt;: bytes=32; time=10...</code> this means that the IP address may already be in use by another device on the network. Obtain a new IP address from the network administrator and reinstall the device.</li><li>If you receive: <code>Request timed out</code>, this means that the IP address is available for use with the Axis device. Check all cabling and reinstall the device.</li></ul>
Possible IP address conflict with another device on the same subnet	The static IP address in the Axis device is used before the DHCP server sets a dynamic address. This means that if the same default static IP address is also used by another device, there may be problems accessing the device.

### The device cannot be accessed from a browser

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Cannot log in	When HTTPS is enabled, ensure that the correct protocol (HTTP or HTTPS) is used when attempting to log in. You may need to manually type <code>http</code> or <code>https</code> in the browser's address field.  If the password for the user <code>root</code> is lost, the device must be reset to the factory default settings. See <i>Reset to factory default settings on page 22</i> .
The IP address has been changed by DHCP	IP addresses obtained from a DHCP server are dynamic and may change. If the IP address has been changed, use AXIS IP Utility or AXIS Device Manager to locate the device on the network. Identify the device using its model or serial number, or by the DNS name (if the name has been configured).  If required, a static IP address can be assigned manually. For instructions, go to <a href="http://axis.com/support">axis.com/support</a> .
Certificate error when using IEEE 802.1X	For authentication to work properly, the date and time settings in the Axis device must be synchronized with an NTP server. Go to <b>Settings &gt; System &gt; Date and time</b> .

### The device is accessible locally but not externally

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To access the device externally, we recommend using one of the following applications for Windows®:

- AXIS Companion: free of charge, ideal for small systems with basic surveillance needs.
- AXIS Camera Station: 30-day trial version free of charge, ideal for small to mid-size systems.

For instructions and download, go to [axis.com/vms](http://axis.com/vms).

### Problems with streaming

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Multicast H.264 only accessible by local clients	Check if your router supports multicasting, or if the router settings between the client and the device need to be configured. The TTL (Time To Live) value may need to be increased.
No multicast H.264 displayed in the client	Check with your network administrator that the multicast addresses used by the Axis device are valid for your network.  Check with your network administrator to see if there is a firewall preventing viewing.
Poor rendering of H.264 images	Ensure that your graphics card is using the latest driver. The latest drivers can usually be downloaded from the manufacturer's website.
Color saturation is different in H.264 and Motion JPEG	Modify the settings for your graphics adapter. Go to the adapter's documentation for more information.
Lower frame rate than expected	<ul style="list-style-type: none"><li>See <i>Performance considerations on page 25</i>.</li><li>Reduce the number of applications running on the client computer.</li><li>Limit the number of simultaneous viewers.</li><li>Check with the network administrator that there is enough bandwidth available.</li><li>Lower the image resolution.</li><li>The maximum frames per second is dependent on the utility frequency (60/50 Hz) of the Axis device.</li></ul>
Can't select H.265 encoding in live view	Web browsers do not support H.265 decoding. Use a video management system or application supporting H.265 decoding.



# M3057-PLVE Mk II Network Camera

## Troubleshooting

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### Performance considerations

When setting up your system, it is important to consider how various settings and situations affect the performance. Some factors affect the amount of bandwidth (the bitrate) required, others can affect the frame rate, and some affect both. If the load on the CPU reaches its maximum, this also affects the frame rate.

The following factors are the most important to consider:

- High image resolution or lower compression levels result in images containing more data which in turn affects the bandwidth.
- Rotating the image in the GUI will increase the product's CPU load.
- Access by large numbers of Motion JPEG or unicast H.264 clients affects the bandwidth.
- Simultaneous viewing of different streams (resolution, compression) by different clients affects both frame rate and bandwidth.

Use identical streams wherever possible to maintain a high frame rate. Stream profiles can be used to ensure that streams are identical.

- Accessing Motion JPEG and H.264 video streams simultaneously affects both frame rate and bandwidth.
- Heavy usage of event settings affects the product's CPU load which in turn affects the frame rate.
- Using HTTPS may reduce frame rate, in particular if streaming Motion JPEG.
- Heavy network utilization due to poor infrastructure affects the bandwidth.
- Viewing on poorly performing client computers lowers perceived performance and affects frame rate.
- Running multiple AXIS Camera Application Platform (ACAP) applications simultaneously may affect the frame rate and the general performance.

### Need more help?

#### Useful links

- *How to assign an IP address and access your device*

#### Contact support

Contact support at [axis.com/support](https://axis.com/support).

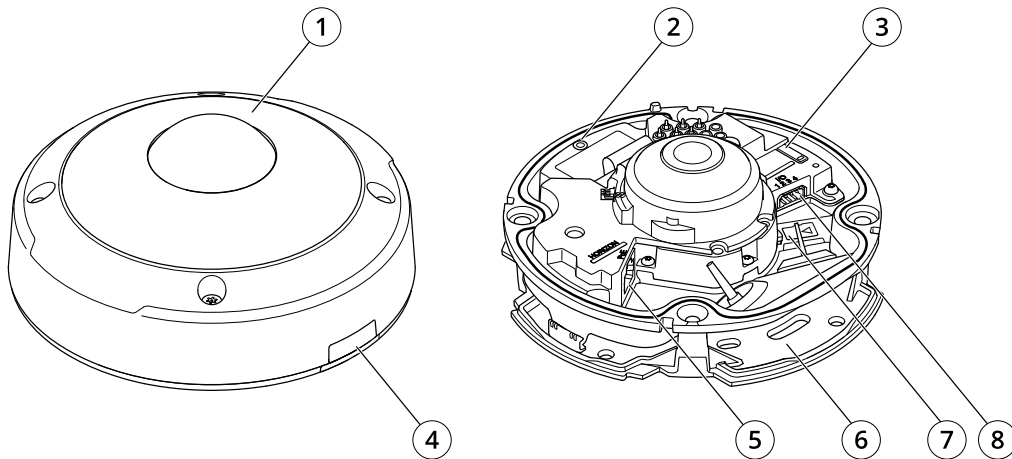
# M3057-PLVE Mk II Network Camera

## Specifications

### Specifications

To find the latest version of the product's datasheet, go to the product page at [axis.com](http://axis.com) and locate **Support & Documentation**.

### Product overview



- 1 IR illumination
- 2 Status LED indicator
- 3 Control button
- 4 Lid
- 5 Network connector (PoE)
- 6 Mounting bracket
- 7 SD card slot
- 8 I/O connector

### LED indicators

**Note**

The Status LED can be configured to flash while an event is active.

Status LED	Indication
Unlit	Connection and normal operation.
Green	Shows steady green for 10 seconds for normal operation after startup completed.
Amber	Steady during startup. Flashes during firmware upgrade or reset to factory default.
Amber/Red	Flashes amber/red if network connection is unavailable or lost.
Red	Firmware upgrade failure.

# M3057-PLVE Mk II Network Camera

## Specifications

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### SD card slot

#### NOTICE

- Risk of damage to SD card. Do not use sharp tools, metal objects, or excessive force when inserting or removing the SD card. Use your fingers to insert and remove the card.
- Risk of data loss and corrupted recordings. Do not remove the SD card while the product is running. Unmount the SD card from the product's webpage before removal.

This product supports microSD/microSDHC/microSDXC cards.

For SD card recommendations, see [axis.com](http://axis.com).



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### Buttons

#### Control button

The control button is used for:

- Resetting the product to factory default settings. See *Reset to factory default settings* on page 22.

#### Intrusion alarm switch

Use the intrusion alarm switch to get a notification when someone opens the device's housing. Set up an action rule, for example recording or notification, to perform an action when the switch is activated. See *Set up intrusion alarm* on page 15.

### Connectors

#### Network connector

RJ45 Ethernet connector with Power over Ethernet (PoE).

#### I/O connector

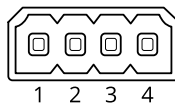
Use the I/O connector with external devices in combination with, for example, motion detection, event triggering, and alarm notifications. In addition to the 0 V DC reference point and power (DC output), the I/O connector provides the interface to:

**Digital input** – For connecting devices that can toggle between an open and closed circuit, for example PIR sensors, door/window contacts, and glass break detectors.

**Supervised input** – Enables possibility to detect tampering on a digital input.

**Digital output** – For connecting external devices such as relays and LEDs. Connected devices can be activated by the VAPIX® Application Programming Interface or from the product's webpage.

4-pin terminal block

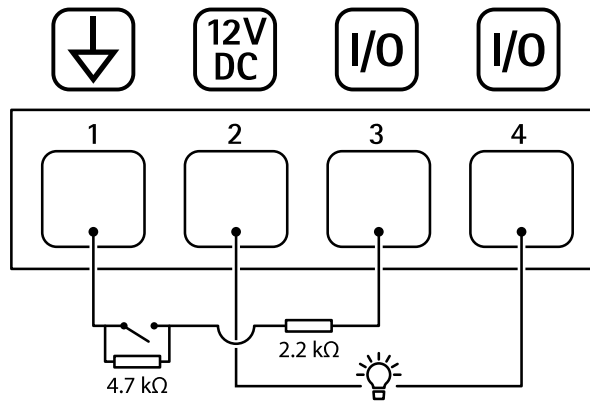


# M3057-PLVE Mk II Network Camera

## Specifications

Function	Pin	Notes	Specifications
DC ground	1		0 V DC
DC output	2	Can be used to power auxiliary equipment. Note: This pin can only be used as power out.	12 V DC Max load = 50 mA
Configurable (Input or Output)	3-4	Digital input or Supervised input – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate. To use supervised input, install end-of-line resistors. See connection diagram for information about how to connect the resistors.	0 to max 30 V DC
		Digital output – Internally connected to pin 1 (DC ground) when active, and floating (unconnected) when inactive. If used with an inductive load, e.g., a relay, connect a diode in parallel with the load, to protect against voltage transients.	0 to max 30 V DC, open drain, 100 mA

### Example



- 1 DC ground
- 2 DC output 12 V, max 50 mA
- 3 I/O configured as supervised input
- 4 I/O configured as output

