# AXIS PTZ Camera

## Preventive Maintenance Instructions and Checklist

Q6054-E Mk III

P5625-E Mk II

P5514-E

Q6125-LE

Q6215-LE

Q6315-LE

# AXIS PTZ Camera

## Introduction

AXIS PTZ cameras are designed for long-lasting operation. To minimize the effects of exterior conditions (for example, weather and wear), to avoid problems, and to keep the expected operation levels (performance and product life), the PTZ camera, and the operation of it, will benefit from regular maintenance.

This document is intended for both customers and installers. It includes preventive maintenance instructions and a preventive maintenance checklist that are easy to follow. We recommend using the device's installation guide as a reference. See *Preparations on page 3* for more information.

The instructions and the checklist are divided into two subsections:

1. Firmware maintenance – tasks that can be performed remotely.

2. Hardware and installation maintenance – tasks that affect the physical installation and must be performed at the camera location.

Axis recommends that you do these preventive maintenance tasks each year. We also recommend cooperating with the camera operator before, during, and after each maintenance round.

If you encounter any problems when performing the preventive maintenance tasks, contact *axis.com/support*.

## Preparations

Download the latest versions of the device's **user manual** and **installation guide** from *axis.com*. Use them as handbooks when following the preventive maintenance instructions and checklist.

Also download the **latest firmware** or make sure you have access to the Internet when performing the maintenance tasks. Read the instructions carefully and start with the firmware maintenance section.

### Safety instructions

**⚠CAUTION**

- Avoid exposing the Axis device to shocks or heavy pressure.
- Do not install the device on unstable brackets, surfaces or walls.
- Use only applicable tools when installing the Axis device. Excessive force could cause damage to the device.
- Do not use chemicals, caustic agents, or aerosol cleaners. Use a clean cloth dampened with pure water for cleaning.
- Use only accessories that comply with technical specification of the device. These can be provided by Axis or a third party.
- Use only spare parts provided by or recommended by Axis.
- Do not attempt to repair the device by yourself. Contact Axis support or your Axis reseller for service matters.

For more information about hazard levels and safety instructions, see the installation guide of the device.

## Instructions

### Firmware maintenance

The tasks in this section can be performed remotely and should be performed before the hardware maintenance tasks.

**The following tasks are related to the camera's firmware:**

- Perform the tasks on the camera's webpage (live view).

- You can use the device with the following browsers:

|  | ChromeTM | Firefox® | Edge® | Safari® |
|---|---|---|---|---|
| Windows® | recommended | x | x | x |
| MacOS® | recommended |  |  | x |
| Other operating systems | x | x |  |  |

### PTZ counter

**Purpose:** Maintain the pan and tilt parts of the PTZ mechanism. The PTZ counter keeps track of the pan and tilt movements. The PTZ cameras are designed and tested to endure (x) movements.

**Actions:**

- Go to **Settings > System > Maintenance > Reports** and click **View the server report**. Search for **PTZCounter**.

- If the counter is above the (x) value

    - but the camera still functions normally, use it as normal while observing its behavior.

    - and the camera is not functioning to your satisfaction, contact Axis support *axis.com/support* to open a case for maintenance.

| Camera model | Movements (x) cycles at operating temperature 25 °C (77 °F) |
|---|---|
| AXIS Q60/-E Series | 20 000 000 pan, 20 000 000 tilt |
| AXIS Q61-E/-LE Series | 20 000 000 pan, 20 000 000 tilt |
| AXIS Q6215-LE | 5 000 000 pan, 5 000 000 tilt, wiper 1 000 000 |
| AXIS Q6315-LE | 2 000 000 pan, 2 000 000 tilt |
| AXIS P5414-E, AXIS P5415-E | 500 000 pan, 500 000 tilt |
| AXIS P5514/-E, AXIS P5515/-E | 300 000 pan, 300 000 tilt |
| AXIS P5522/-E, AXIS P5532/-E, AXIS P5534/-E | 500 000 pan, 500 000 tilt |
| AXIS P5624-E Mk II, AXIS P5635-E Mk II, AXIS P5654-E, AXIS P5655-E | 500 000 pan, 500 000 tilt |
| AXIS V59 Series | 400 000 pan, 400 000 tilt |
| AXIS M50 Series | 10 000 pan, 10 000 tilt |
| AXIS M55 Series | 300 000 pan, 300 000 tilt |

## Instructions

### Temperature

**Purpose:** Prevent environmental factors from affecting the camera. For example, extreme temperatures caused by direct sunlight, can cause unexpected behavior in the camera.

**Actions:**

- Go to **Settings > System > Maintenance > Reports** and click **View the server report** . Check for *fan failures* and if *the temp counter* is higher than 5.

- If there are many warnings or the temp counter is high, consider taking precautions that reduce the risk of exposing the camera to extremely hot or cold temperatures.

  *Fan failure* example: `temperature_ctrld[814]:  Fan failure detected on fan 0`

  *Temp counter* example: `Tempcounter 50`

### Vibrations

**Purpose:** Keep the accuracy of the PTZ mechanism, which is sensitive to vibrations, and achieve ideal operation when zooming.

**Actions:**

- Go to **Settings > System > Maintenance > Reports** and click **View the server report**. Search for pan/tilt errors, which can be an indication of vibrations that cause problems for the camera. Example of pan error from server report: `domed[759]:  Pan position error!`

  Contact the camera owner/operator to identify issues caused by vibrations.

- Vibrations can be reduced by using another mounting option or improve the existing one. A potential cause could be that the screws are loose between the bracket and the pole/wall. See *Screws on page  7* for more information.

### Preset positions

**Purpose:** Maintain the preset positions. Presets are supposed to stay in their configured locations. However, due to certain conditions such as temperature variations and normal wear they could become offset over time.

Note

It could be difficult to detect or remember the original location of a previously configured preset position. If this is the case, talk to the camera operator.

**Actions:**

- If any of the presets are offset, go to **Settings > PTZ > Preset positions** and reconfigure the preset to the desired location by adding a preset with the same name.

- If the preset accuracy offset is high, go to **Settings > PTZ > Limits** and turn off **E-flip**.

- If the offset is still higher than 0.5°C after completing the actions above, contact *axis.com/support*.

### PTZ test

**Purpose:** Test the PTZ mechanism. The built-in PTZ test is designed to calibrate the camera block and check for problems.

**Actions:**

- Go to **Settings > System > Maintenance > PTZ status** and click **Test**.

  If any errors are reported, go to **Settings > System > Maintenance > Reports** and click **Download the server report**. Contact *axis.com/support*.

### SD card (if applicable)

**Purpose:** Check SD card performance. For optimal performance and to avoid a corrupt database on the SD card, follow the recommendations. Memory cards with a storage capacity up to 64 GB can be used for local recording with removable storage. The minimum recommendation is SDHC and SDXC cards of speed class 10. For information about the latest recommendations, go to *axis.com*.

**Actions:**

- Go to **Settings > System > Storage > Recordings** and view one recording. Make sure it is intact.

- Check the status of the SD card. Go to **Settings > System > Storage > Onboard storage**:

    1. Stop ongoing recordings

    2. Remove the storage

    3. Check the SD card

    4. Repair, if needed

- If recording to the SD card still fails, use **ext4** to format it.

- If all of the actions above fail, contact *axis.com/support*.

### Latest firmware

**Purpose:** Make sure that the camera is up to date and has its full potential.

We recommend you to run the camera with the latest firmware.

**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.

> **Note**
>
> The support in other systems, such as Video Management Software systems (VMS), is often dependent on the camera firmware version. Make sure the system supports the camera's firmware.

**Actions:**

- Check *axis.com/support/firmware*, or check with the VMS provider, for the latest available firmware.

- If there is a later firmware version than the one installed on the camera, download and install it.

    Upgrade just one camera in the system. Make sure that the camera is working properly in the system and then upgrade all the other cameras.

- To avoid an upgrade failure, for example if the internet connection is slow, do the upgrade through a local connection.

## Hardware installation and maintenance

The following tasks are related to the camera installation and hardware. To meet the life expectancy of the camera, or even exceed it, make sure to:
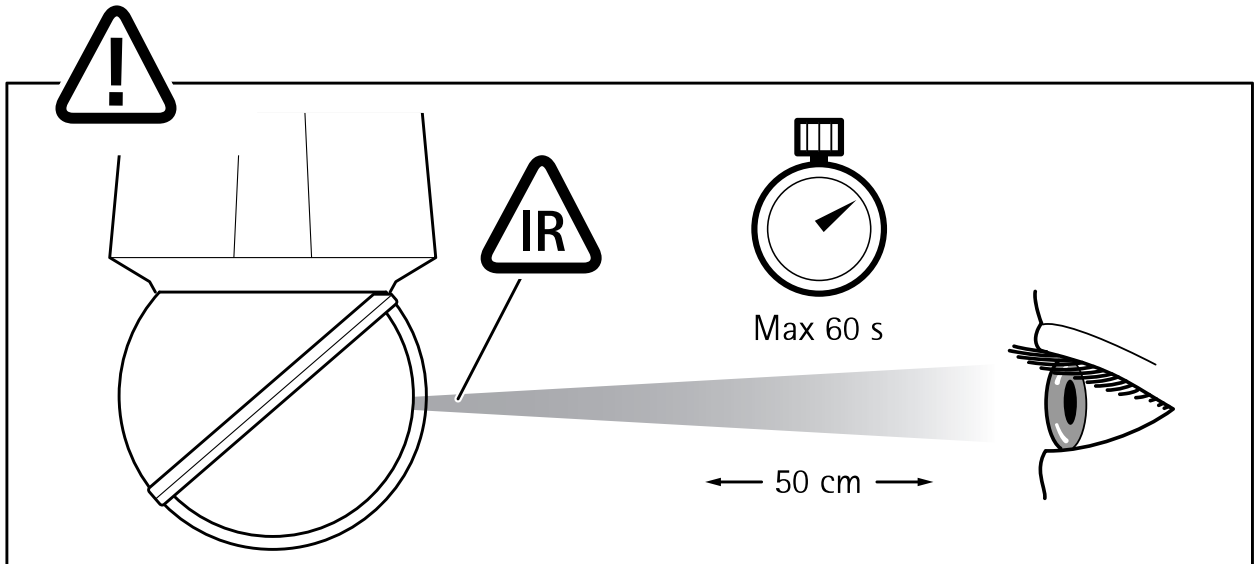
- Keep the hardware in good condition.

- Select camera location, placement and installation materials with care.

**⚠WARNING**

If your camera has IR, don't look at the operating lamp



## Dome cover cleaning

**Purpose:** Maintain image quality and avoid focusing problems.

**Actions:**

- For general cleaning of a dome cover, use a non-abrasive, solvent-free neutral soap or detergent with water and a soft cloth. Rinse well with clean lukewarm water. Dry with a soft cloth to prevent water spotting.

- For detailed instructions, see the device's user manual.

## Scratches and cracks in the dome cover

**Purpose:** Maintain image quality and the IP rating of the camera.

**Actions:**

- Inspect the dome cover for scratches and cracks. If you find severe scratches or cracks, replace the dome cover to ensure image quality and to maintain the camera's IP rating (a stable environment inside the camera).

- See the device's installation guide on how to replace the dome cover.

- A replacement dome cover can be ordered as a spare part by an Axis reseller.

## Screws

**Purpose:** Keep the camera protected against incidents and maintain the IP rating.

**Actions:**

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## Instructions

The name and location of parts may vary between devices. For more information, see the device's installation guide.

- Inspect the dome ring screws, the dome bracket screws, the screws that secure the camera on the mounting bracket, and the screws that secure the bracket on the wall or on the pole.

- If the screws are loose, tighten the screws to prevent incidents, keep the environmental protection and limit vibrations (bracket screws). Tighten the screws with regards to each specific torque value in the device's installation guide.
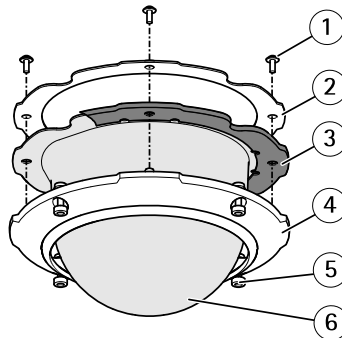


*Example of Q6044-E. (5) dome ring screws (1) dome bracket screws*

### General camera condition

**Purpose:** Make sure that the camera parts are intact. Broken or scratched parts could affect the camera's general performance.

**Actions:**

- Clean the sunshield and the camera casing with a non-abrasive, solvent-free neutral soap or detergent with water and a soft cloth.

- If the camera is severely damaged, contact *axis.com/support* for guidance, in cooperation with the camera operator.

### Inspect the bracket

**Purpose:** Make sure that the bracket is operational and provides the best possible conditions.

**Actions**:

- Inspect the bracket and remove insects and dirt.

- If the camera is installed on an Axis bracket, we recommend installing AXIS T91A6 Pipe Seal inside the bracket. This increases the level of protection against insects.

### Cabling (ethernet)

**Purpose:** Avoid network and camera problems, for example power drops, by making sure that the cabling meets the requirements of your equipment.

**Actions:**

- Inspect the cabling to the camera and make sure that they are not bent or brittle.

- If needed, change the cables or improve the positioning of the cable runs.

- For more information about the cabling at installations, see the device's Installation guide or check out Axis general guidelines at: *axis.com/learning/installation-and-configuration*

### RJ45 push-pull connector (IP66) – valid for outdoor models (–E) only

**Purpose:** Maintain the camera's ingress protection rating (IP code). To comply with the IP66-rated design of the camera and maintain the IP66 protection, the supplied RJ45 push-pull connector (IP66) shall be used. Alternatively, use the RJ45 IP66-rated cable with premounted connector (sold separately).

**Actions:**

- Make sure that RJ45 push-pull connector (IP66) is used and that it is correctly mounted.

    - Make sure that the connector isn't damaged or loose in any way.

    - Make sure that the plastic network connector shield is intact and is still mounted on the camera. The connector shield cannot be removed from the camera.
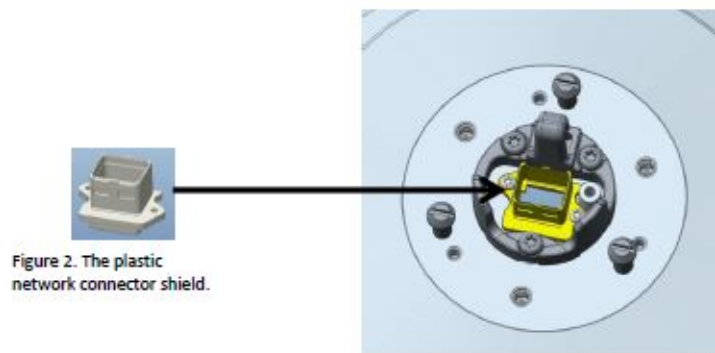


*Figure 2. The plastic network connector shield.*

*The plastic network connector shield.*

Both the connector and the premounted cable are available from an Axis reseller. Instructions for mounting the IP66 connector: *axis.com/support/faq/FAQ116166*

### Outer heat sink – valid for cold models (–C) only

**Purpose:** Maintain the performance of the cooling system by cleaning the outer heat sink

**Actions:**

- Clean the outer heat sink according to the instructions in the device's installation guide.

### Pressurize – valid for steel models (–S) only

**Purpose:** Check and fill the camera with Nitrogen gas twice a year to prevent condensation.

**Actions:**

- Repeat the filling process three times. Release the pressure between each filling, to make sure that all air and humidity is purged from the housing.

Note

> The camera housing has an pressure relief valve that limits the filling pressure to 0.5 bar (7 psi). During normal use the pressure inside the camera housing may drop below that pressure. For full protection make sure that the pressure is above 0.2 bar (3 psi) .

1. Set the regulator gauge on the gas cylinder to 0.5 bar (7 psi).

2. Remove the caps from the inlet valve and the pressure relief valve.

3. Place the chuck on the inlet valve and press down to fill the camera with nitrogen.

4. When the pressure inside the camera housing reaches 0.5 bar (7 psi) the pressure relief valve will open. Place your hand over the pressure relief valve to verify that the gas is flowing out.

5. Lift the pressure relief valve to let the overpressure out of the camera unit.

6. Repeat the filling process a total of 3 times, leaving the camera pressurized the last time.

7. Put the caps back on the inlet valve and the pressure relief valve.

For more information, see the device's installation guide.

## Preventive maintenance checklist

### Preventive maintenance checklist

| Customer: | | Date: | |
|---|---|---|---|
| Location/site: | | Technician name: | |
| Camera model: | | Technician phone: | |
| Camera name: | | Technician email: | |
| Camera serial number: | | | |

P = Performed, N/P = Not performed, N/A = Not applicable

| Firmware | | | |
|---|---|---|---|
| *Item* | *Header* | *Actions* | *Comment* |
| 1. | PTZ counter | ☐P ☐N/P ☐N/A | Value: |
| 2. | Temperature | ☐P ☐N/P ☐N/A | |
| 3. | Vibrations | ☐P ☐N/P ☐N/A | |
| 4. | Presets positions | ☐P ☐N/P ☐N/A | |
| 5. | PTZ test | ☐P ☐N/P ☐N/A | |
| 6. | SD card (if applicable) | ☐P ☐N/P ☐N/A | |
| 7. | Latest firmware | ☐P ☐N/P ☐N/A | Firmware: |
| **Hardware/Installation** | | | |
| *Item* | *Header* | *Actions* | *Comment* |
| 8. | Dome cover cleaning | ☐P ☐N/P ☐N/A | |
| 9. | Inspect the dome cover for scratches and crack | ☐P ☐N/P ☐N/A | |
| 10. | Inspect the screws | ☐P ☐N/P ☐N/A | |
| 11. | General camera condition | ☐P ☐N/P ☐N/A | |
| 12. | Inspect the bracket | ☐P ☐N/P ☐N/A | |
| 13. | Cabling (ethernet) | ☐P ☐N/P ☐N/A | |
| 14. | RJ45 push-pull connector (IP66) | ☐P ☐N/P ☐N/A | |
| 15. | Outer heat sink (only Q60-C) | ☐P ☐N/P ☐N/A | |
| 16. | Pressurize (only Q60-S) | ☐P ☐N/P ☐N/A | |

Contacted Axis support on item(s) _____

Online helpdesk case numbers on item(s) _____

Signature _____