a Motorola Solutions Company

# Esprit Anti-Corrosion Enhanced 1 Series, PTZ

# Installation Manual


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## Legal Notices



Disclaimer

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## Typographical conventions

This manual provides installation and operation information and precautions for the use of this device. Incorrect installation could cause an unexpected fault. Before installing this equipment read this manual carefully. Please provide this manual to the owner of the equipment for future reference.

**Warning:** This symbol indicates the presence of dangerous voltage within and outside the product enclosure that may result in a risk of electric shock, serious injury or death to persons if proper precautions are not followed.

**Caution:** This symbol alerts the user to the presence of hazards that may cause minor or moderate injury to persons, damage to property or damage to the product itself if proper precautions are not followed.

**Warning:** Failure to observe the following instructions may result in injury to persons or damage to the device.

**Caution:** Hazardous moving parts. Keep fingers and other body parts away.

**Info:** Description of system specifications. We recommend reading this part carefully in order to understand the subsequent stages.

## Important safety rules

A power disconnect device must be included in the electrical installation, and it must be very quickly recognizable and operated if needed.

**Caution:** The electrical system to which the unit is connected must be equipped with a 20A max automatic bipolar circuit breaker. The minimum distance between the circuit breaker contacts must be 3mm (0.1in). The circuit breaker must be provided with protection against the fault current towards the ground (differential) and the overcurrent (magnetothermal).

**Caution:** Device installation and maintaining must be performed by specialist technical staff only.

**Caution:** TNV-1 installation type. The installation is type TNV-1, do not connect it to SELV circuits.

If it is necessary to transport the device, this should be done with great care. Abrupt stops, bumps and violent impact could damage the unit or injure the user.

- The manufacturer declines all responsibility for any damage caused by an improper use of the appliances mentioned in this manual. Furthermore, the manufacturer reserves the right to modify its contents without any prior notice. The documentation contained in this manual has been collected and verified with great care. The manufacturer, however, cannot take any liability for its use. The same thing can be said for any person or company involved in the creation and production of this manual.

- Do not expose the camera directly to high levels of x-ray, laser, or UV radiation. Direct exposure may cause permanent damage to the image sensor.
- Before starting any operation, make sure the power supply is disconnected.
- Do not subject the device cables to excessive stress, heavy loads or pinching.
- Be careful not to use cables that seem worn or old.
- Never, under any circumstances, make any changes or connections that are not shown in this handbook. Improper use of the appliance can cause serious hazards, risking the safety of personnel and of the installation.
- Use only original spare parts. Non-original spare parts could cause fire, electrical discharge or other hazards.
- Before proceeding with installation, check the supplied material to make sure it corresponds to the order specification by examining the identification labels (*Product marking*).
- This device was designed to be permanently secured and connected on a building or on a suitable structure. The device must be permanently secured and connected before any operation.
- This is a Class A product. In a domestic environment this product may cause radio interference. In this case the user may be required to take adequate measures.
- For products marked UL, powered at 24Vac, use a UL listed TNV/ES1 isolation transformer, compliant with IEC/UL 60950-1 and IEC/UL 62368-1.
- Installation category (also called Overvoltage Category) specifies the level of mains voltage surges that the equipment will be subjected to. The category depends upon the location of the equipment, and on any surge voltage protection provided. Equipment in an industrial environment, directly connected to major feeders/short branch circuits, is subjected to Installation Category III. If this is the case, a reduction to Installation Category II is required. This can be achieved by use of an insulating transformer with an earthed screen between primary and secondary windings, or by fitting UL listed Surge Protective Devices (SPDs) from live to neutral and from neutral to earth. Listed SPDs shall be designed for repeated limiting of transient voltage surges and the following rated operation conditions: Type 2 (SPDs permanently connected to the power network and intended for installation on the load side of the service equipment); Nominal Discharge Current (In) 20kA min. For example: FERRAZ SHAWMUT, STT2240SPG-CN, STT2BL240SPG-CN rated 120Vac/240Vac, (In=20kA). Maximum distance between installation and reduction is 5m.
- The equipment is intended for installation in a Restricted Access Area by specialist technical staff.
- To comply with the main supply voltage dips and short interruption requirements, use a suitable Uninterruptible Power Supply (UPS) to power the unit.
- The safety earthing system must be carried out according to local installation dispositions.
- The separate protective earthing terminal provided on this product shall be permanently connected to earth.
- For continued protection against risk of fire, replace only with same type and rating of fuse. Fuses must be replaced only by service personnel.
- Connect the device to a power source corresponding to the indications given on the marking label. Before proceeding with installation make sure that the power line is properly isolated. The supply voltage should never exceed the limit (±10%).

- The appliance includes moving parts. Make sure that the unit is positioned where it is inaccessible under normal operating conditions. Attach the warning label supplied with the appliance, placing it near the unit so that it can be seen easily.
- Attach the Dangerous Moving Parts label near the device (*Hazardous moving parts label.*).
- Do not use the appliance in the presence of flammable substances.
- Only skilled personnel should carry out maintenance on the device. When carrying out maintenance, the operator is exposed to the risk of electrocution and other hazards.
- Use only the accessories indicated by the manufacturer. Any change that is not expressly approved by the manufacturer will invalidate the warranty.
- Before connecting all the cables make sure the device is properly connected to the earth circuit.
- If the device has to be removed from the installation, always disconnect the earth cable last.
- Take all necessary precautions to prevent the apparatus from being damaged by electrostatic discharge.
- Handle the unit with great care, high mechanical stress could damage it.
- Make especially sure that the power supply line is insulated at a sufficient distance from all the other cables, including lightning protection devices.
- The Cat5e/Cat6 shielded (STP) Ethernet cable is required to fully comply with EMC regulatory standards.

## Regulatory Notices

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class A digital apparatus complies with Canadian ICES-003.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications made to this equipment not expressly approved by Pelco Corporation or parties authorized by Pelco Corporation could void the user's authority to operate this equipment.

Disposal and Recycling Information

When this product has reached the end of its useful life, please dispose of it according to your local environmental laws and guidelines.

Risk of fire, explosion, and burns. Do not disassemble, crush, heat above 100 °C (212 °F), or incinerate.

**European Union:**

This symbol means that according to local laws and regulations your product should be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Some collection points accept products for free. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

# Overview

## Product description and type designation

PTZ camera for marine onshore/offshore or industrial applications.

The Esprit Anti-Corrosion Enhanced 1 Series, PTZ is resistant to rust and corrosion and does not require maintenance thanks to the absolute precision of the construction process and the solid AISI 316L stainless steel construction with micro-shot and electropolished surfaces.

## Product marking

The product has a label compliant with CE marking.

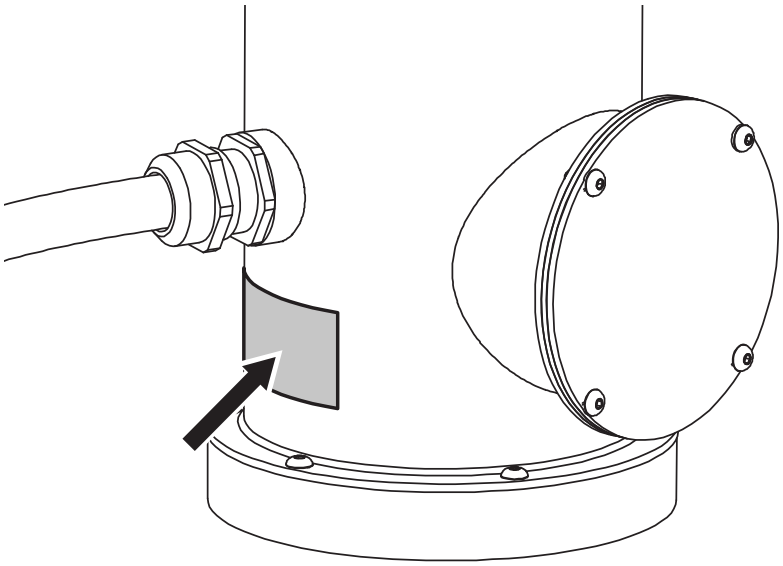

*Figure 1:  CE marking label position.*

The label shows:

- Model identification code.
- Supply voltage (Volt).
- Frequency (Hertz).
- Current consumption (Ampere).
- Protection degree (IP).
- Serial number.
- MAC Address.

### Checking the markings

Before proceeding further with installation, make sure the material supplied corresponds to the order specification by examining the marking labels.

Never, under any circumstances, make any changes or connections that are not shown in this handbook. Improper use of the appliance can cause serious hazards, risking the safety of personnel and of the installation.

## Model identification

| ESPRIT® ANTI-CORROSION ENHANCED 2MPx40 OPTIONS | | | | |
|---|---|---|---|---|
| **Resolution & lens** | **Power** | **FPS** | **Part Number** | **Description** |
| Sensor VGA 640x512;<br>Lens 50°-8.7mm. | 220-230Vac | 9Hz | EABE1-2X40VF09-SPT0-M2-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZ in stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 8.7mm, 640x512, 9Hz, IN Mains 220-230Vac, sunshield |
| | | 30Hz | EABE1-2X40VF09-SPT0-M2 | Esprit Anti-Corrosion Enhanced 1 Series, PTZ in stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 8.7mm, 640x512, 30Hz, IN Mains 220-230Vac, sunshield |
| | 120Vac | 9Hz | EABE1-2X40VF09-SPT0-M1-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZ in stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 8.7mm, 640x512, 9Hz, IN Mains 120Vac, sunshield |
| | | 30Hz | EABE1-2X40VF09-SPT0-M1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZ in stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 8.7mm, 640x512, 30Hz, IN Mains 120Vac, sunshield |
| | 24Vac | 9Hz | EABE1-2X40VF09-SPT0-AC-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZ in stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 8.7mm, 640x512, 9Hz, IN 24Vac, sunshield |
| | | 30Hz | EABE1-2X40VF09-SPT0-AC | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 8.7mm, 640x512, 30Hz, IN 24Vac, sunshield |

| ESPRIT® ANTI-CORROSION ENHANCED 2MPx40 OPTIONS | | | | |
|---|---|---|---|---|
| **Resolution & lens** | **Power** | **FPS** | **Part Number** | **Description** |
| Sensor VGA 640x512; Lens 12°-36mm. | 220-230Vac | 9Hz | EABE1-2X40VF36-SPT0-M2-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 36mm, 640x512, 9Hz, IN Mains 220-230Vac, sunshield |
| | | 30Hz | EABE1-2X40VF36-SPT0-M2 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 36mm, 640x512, 30Hz, IN Mains 220-230Vac, sunshield |
| | 120Vac | 9Hz | EABE1-2X40VF36-SPT0-M1-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 36mm, 640x512, 9Hz, IN Mains 120Vac, sunshield |
| | | 30Hz | EABE1-2X40VF36-SPT0-M1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 36mm, 640x512, 30Hz, IN Mains 120Vac, sunshield |
| | 24Vac | 9Hz | EABE1-2X40VF36-SPT0-AC-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 36mm, 640x512, 9Hz, IN 24Vac, sunshield |
| | | 30Hz | EABE1-2X40VF36-SPT0-AC | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 36mm, 640x512, 30Hz, IN 24Vac, sunshield |
| Sensor QVGA 320x256; Lens 34°-6.3mm. | 220-230Vac | 9Hz | EABE1-2X40QF06-SPT0-M2-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 6.3mm, 320x256, 9Hz, IN Mains 220-230Vac, sunshield |
| | | 30Hz | EABE1-2X40QF06-SPT0-M2 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 6.3mm, 320x256, 30Hz, IN Mains 220-230Vac, sunshield |
| | 120Vac | 9Hz | EABE1-2X40QF06-SPT0-M1-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 6.3mm, 320x256, 9Hz, IN Mains 120Vac, sunshield |
| | | 30Hz | EABE1-2X40QF06-SPT0-M1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 6.3mm, 320x256, 30Hz, IN Mains 120Vac, sunshield |
| | 24Vac | 9Hz | EABE1-2X40QF06-SPT0-AC-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 6.3mm, 320x256, 9Hz, IN 24Vac, sunshield |
| | | 30Hz | EABE1-2X40QF06-SPT0-AC | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 6.3mm, 320x256, 30Hz, IN 24Vac, sunshield |

| ESPRIT® ANTI-CORROSION ENHANCED 2MPx40 OPTIONS | | | | |
|---|---|---|---|---|
| **Resolution & lens** | **Power** | **FPS** | **Part Number** | **Description** |
| Sensor QVGA 320x256; Lens 12°-18mm. | 220-230Vac | 9Hz | EABE1-2X40QF18-SPT0-M2-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 18mm, 320x256, 9Hz, IN Mains 220-230Vac, sunshield |
| | | 30Hz | EABE1-2X40QF18-SPT0-M2 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 18mm, 320x256, 30Hz, IN Mains 220-230Vac, sunshield |
| | 120Vac | 9Hz | EABE1-2X40QF18-SPT0-M1-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 18mm, 320x256, 9Hz, IN Mains 120Vac, sunshield |
| | | 30Hz | EABE1-2X40QF18-SPT0-M1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 18mm, 320x256, 30Hz, IN Mains 120Vac, sunshield |
| | 24Vac | 9Hz | EABE1-2X40QF18-SPT0-AC-1 | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 18mm, 320x256, 9Hz, IN 24Vac, sunshield |
| | | 30Hz | EABE1-2X40QF18-SPT0-AC | Esprit Anti-Corrosion Enhanced 1 Series, PTZin stainless steel AISI316L, Visual 2MP 40x zoom, Thermal lens 18mm, 320x256, 30Hz, IN 24Vac, sunshield |

*Table 1: Esprit Anti-Corrosion Enhanced 1 Series, PTZ.*

## Preparing the Installation

**Caution:** Device installation and maintenance must be performed by specialist technical staff only.

Use appropriate tools for the installation. The particular nature of the site where the device is to be installed may mean special tools are required for installation.

Choose an installation surface that is strong enough to sustain the weight of the device, also bearing in mind particular environmental aspects, such as exposure to strong winds.

It should be installed so that no one can be hit by moving parts. It should be installed so that moving parts cannot hit other objects and create hazardous situations.

Make sure the product is secured to building before operation.

For technical services, consult only and exclusively authorized technicians.

Since the user is responsible for choosing the surface to which the unit is to be anchored, we do not supply the fixing devices for attaching the unit firmly to the particular surface. The installer is responsible for choosing fixing devices suitable for the specific purpose on hand.

It is possible to install the unit with several brackets.

We strongly recommend using only approved brackets and accessories during installation.

## Unpacking

When the product is delivered, make sure that the package is intact and that there are no signs that it has been dropped or scratched.

If there are obvious signs of damage, contact the supplier immediately.

When returning a faulty product we recommend using the original packaging for shipping.

Keep the packaging in case you need to send the product for repairs.

## Safely disposing of packaging material

The packaging material can all be recycled. The installer technician will be responsible for separating the material for disposal, and in any case for compliance with the legislation in force where the device is to be used.

## Safety precautions before use

The appliance includes moving parts. Make sure that the unit is positioned where it is inaccessible under normal operating conditions. Attach the warning label supplied with the appliance, placing it near the unit so that it can be seen easily.


*Figure 2:  Hazardous moving parts label.*

## Preparing the product for use

Any change that is not expressly approved by the manufacturer will invalidate the warranty.

## Product Package Contents

Ensure the product package contains the following:

- Pelco Esprit Anti-Corrosion Enhanced 1 Series, PTZ Camera
- Sunshields
- Bolts and screws
- Wash system kit
- Label (CAUTION: Hazardous moving parts)

- Allen wrench
- Handling flyer
- Safety leaflet

Additional supplies needed:

- Thread locking compound (Loctite 270).

Allow for one hour of time for the thread locking compound to cure during the installation .

- Screws capable of bearing 4 times the weight of the unit (for securing the ceiling mount).
- Screws and fixing devices capable of bearing 4 times the weight of the unit (for securing the wall mount).

## Installation Steps

**Caution:** Device installation and maintaining must be performed by specialist technical staff only.

Before doing any technical work on the device, disconnect the power supply.

At start up the system makes some automatic calibration movements: do not stand near the device when it is powering on.

The product is equipped with a multicore cable that allows connections to be made.

Complete the following sections to install the device.

### Range of use

Installation temperature: from -40°C (-40°F) up to +65°C (149°F).

Operating temperature: from -40°C (-40°F) up to +65°C (149°F).

### Inserting an SD card

It is possible to equip the product with a microSD memory card.

It is recommended that the microSD card have a capacity of 64GB or more. Video Speed Class microSD card required, with Class V10 or better recommended. If the microSD card does not meet the recommended capacity or write speed, the performance of the onboard storage may suffer and result in the loss of frames or footage.

Loosen the four screws on the front of the housing.

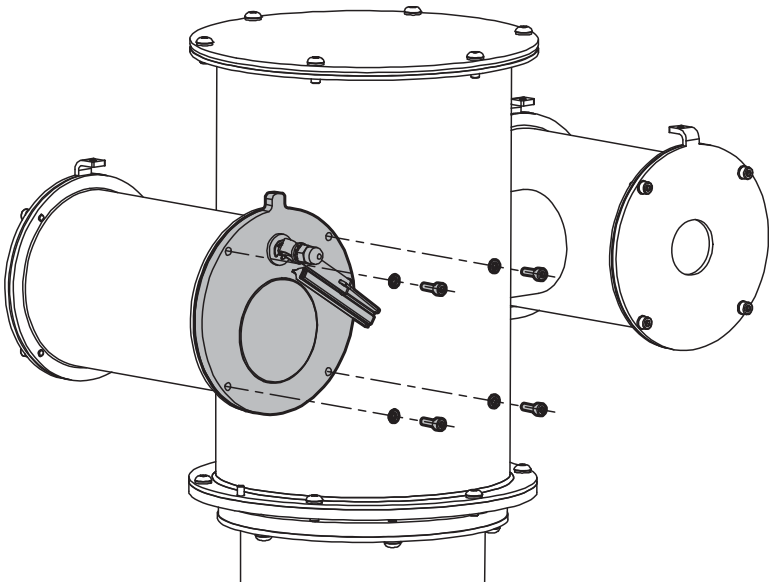

*Figure 3:  Loosen the screws .*

Remove the optical kit taking care not to damage the flat cables.

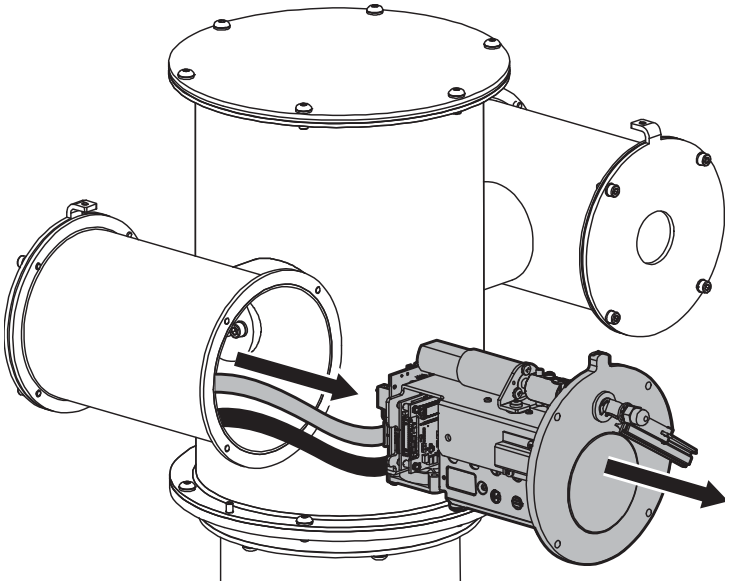

*Figure 4:  Optical kit removal.*

Insert the memory card into the slot as indicated. Pay attention to the direction of the memory card.

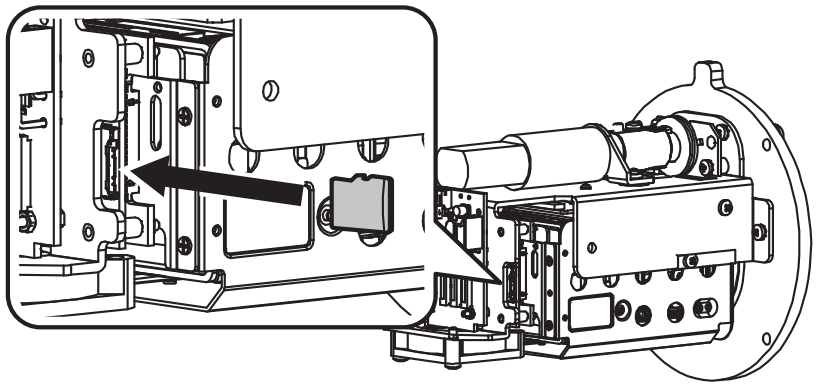

*Figure 5: Memory card insertion.*

Reassemble the optical kit and fix the four screws.

⚠ Pay attention to the fixing. Tightening torque: 1.5Nm.

## Installing the housing sunshields

You can fix the sunshields to the housing using the screws supplied.

Apply a generous amount of thread locking compound (Loctite 270) into the threaded holes.

⚠ Pay attention to the fixing. Tightening torque: 2Nm.

The thread compound must cure for one hour, allow for this period prior to completing the installation.

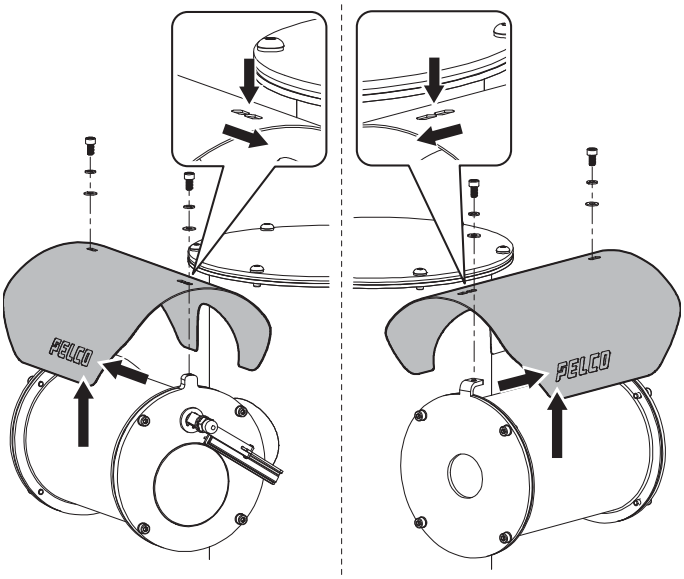


*Figure 6: Installing the housing sunshields.*

## Mounting in the Correct Orientation

The system can be installed only in a standard or inverted position (ceiling mount). When installed for inverted operation, the camera orientation and controller functions are reconfigured for normal operation

through the system's software.

Hardware adjustment is not required for inverted operation.

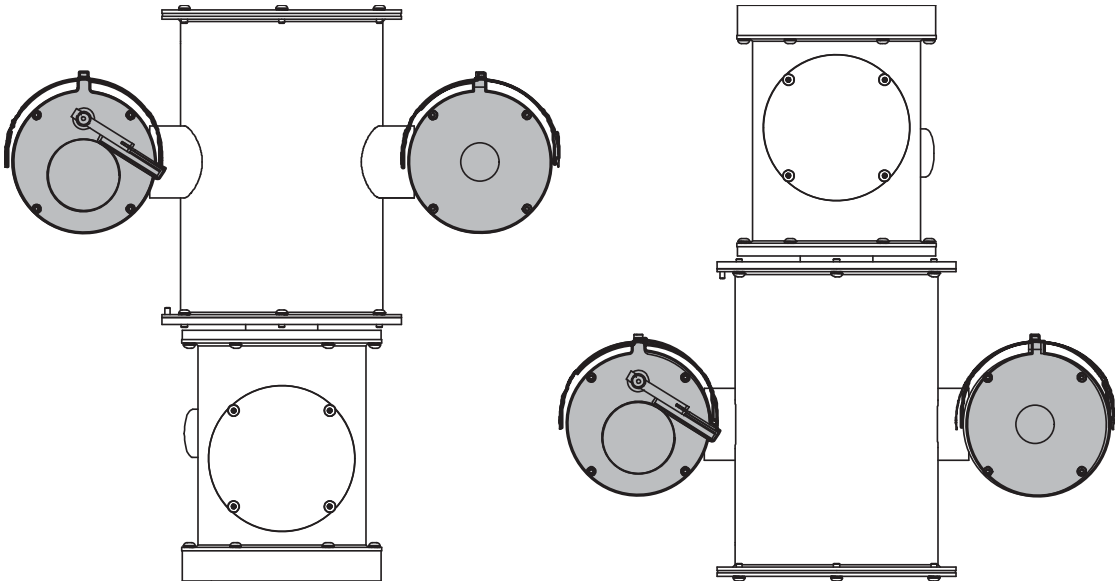

*Figure 7: Mounting in the correct orientation.*

## Fixing with parapet or ceiling bracket

For ceiling assembly, the Ceiling Assembly mode must be enabled using the web interface (*Pelco Esprit Anti-Corrosion Enhanced Operations Manual*).

Fix the bracket (01) to the bottom of the unit using the 4 flat countersunk screws (02) with hexagonal socket M10x20mm in stainless steel (A4 class 70) supplied with the bracket.

Make sure the thread are free of dirt and debris.

Apply a generous amount of thread locking compound (Loctite 270) into the threaded holes in the base of the device.

Pay attention to the fixing. Tightening torque: 35Nm.

The thread compound must cure for one hour, allow for this period prior to completing the installation.

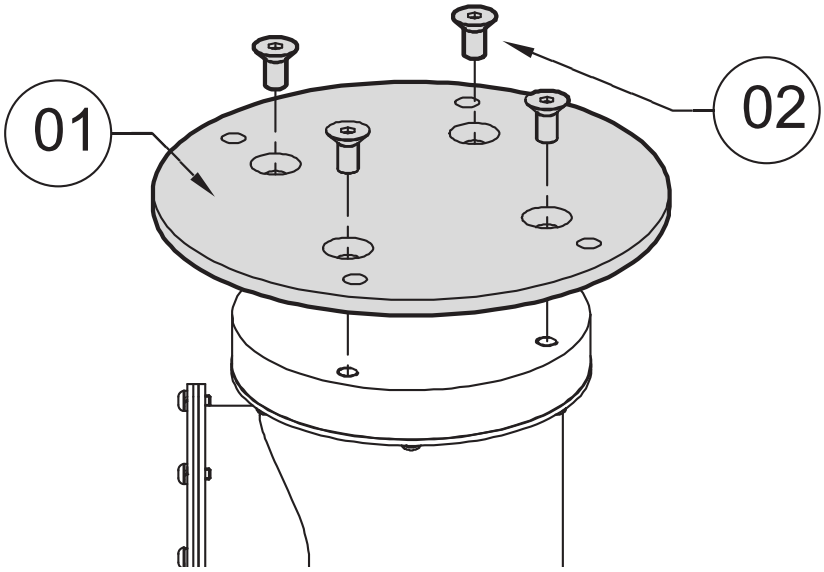


*Figure 8: Fixing to parapet or ceiling mount.*

Use the external holes in the bracket to fix the assembled unit to the parapet or to the ceiling. Use screws that can bear at least 4 times the weight of the unit.

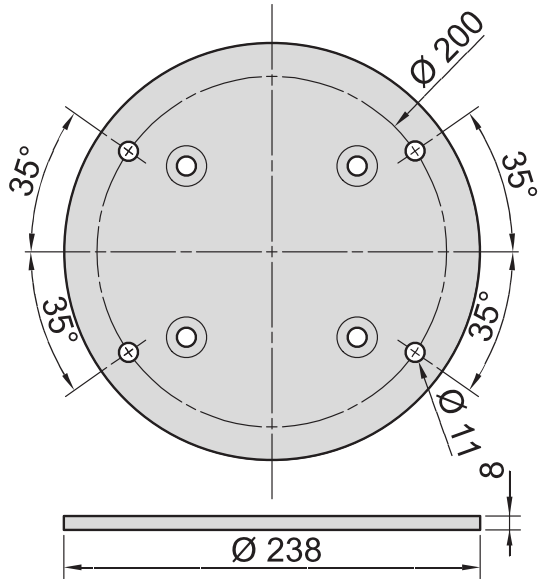


*Figure 9: Parapet or ceiling mount drilling pattern.*

## Fixing with wall mount bracket

Fasten the device to the bracket by using 4 flat washers, 4 serrated stainless steel washers and 4 stainless steel hex head screws (A4 class 70) M10x20mm supplied with the bracket.

Make sure the thread are free of dirt and debris.

Apply a generous amount of thread locking compound (Loctite 270) on the 4 screws.

Tighten the screws.

Pay attention to the fixing. Tightening torque: 35Nm.

The thread compound must cure for one hour, allow for this period prior to completing the installation.

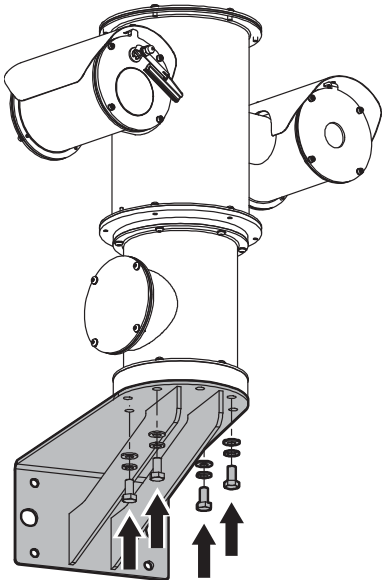

*Figure 10: Fixing with wall mount bracket.*

The bracket can be fixed to the vertical wall. Use screws and wall fixing devices that can bear at least 4 times the weight of the unit.

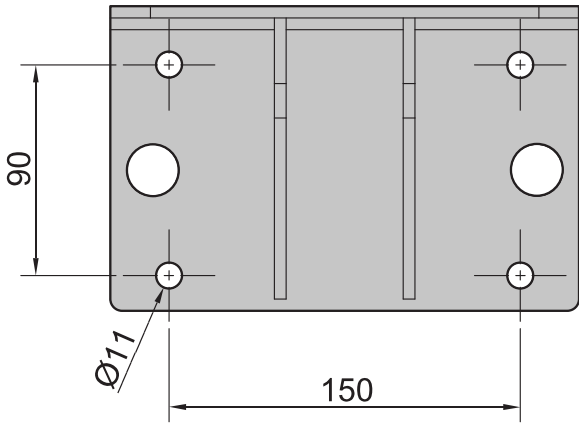


*Figure 11: Wall mount drilling pattern.*

## Fixing the unit to the pole mount adapter or corner mount adapter

The adapter can be fixed to a pole or a vertical wall. Use a pole or screws that can bear at least 4 times the weight of the unit.

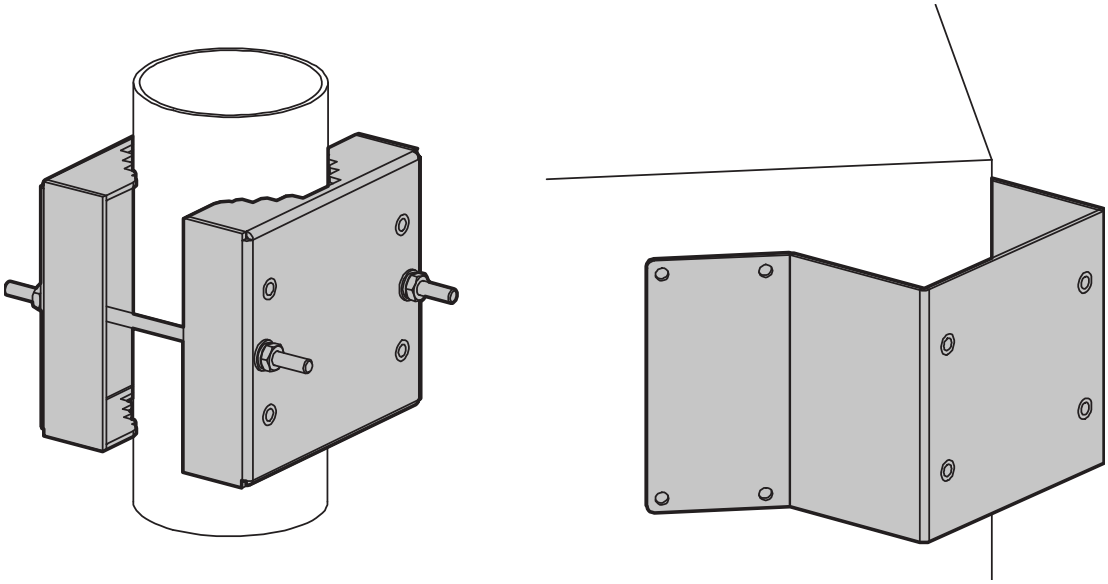

*Figure 12: Pole mount adapter or corner mount adapter*

To install the product on the corner adaptor module or pole, first of all fasten the support bracket.

To fasten the support bracket, use the 4 flat washers, the 4 elastic washers in stainless steel and the 4 hexagonal head screws in stainless steel (A4 class 70) M10x30mm supplied with the bracket.

Make sure the thread are free of dirt and debris.

Apply a generous amount of threadlocker (Loctite 270) on the 4 threaded holes on the adaptor module.

Tighten the screws.

⚠ Pay attention to the fixing. Tightening torque: 35Nm.

The thread compound must cure for one hour, allow for this period prior to completing the installation.

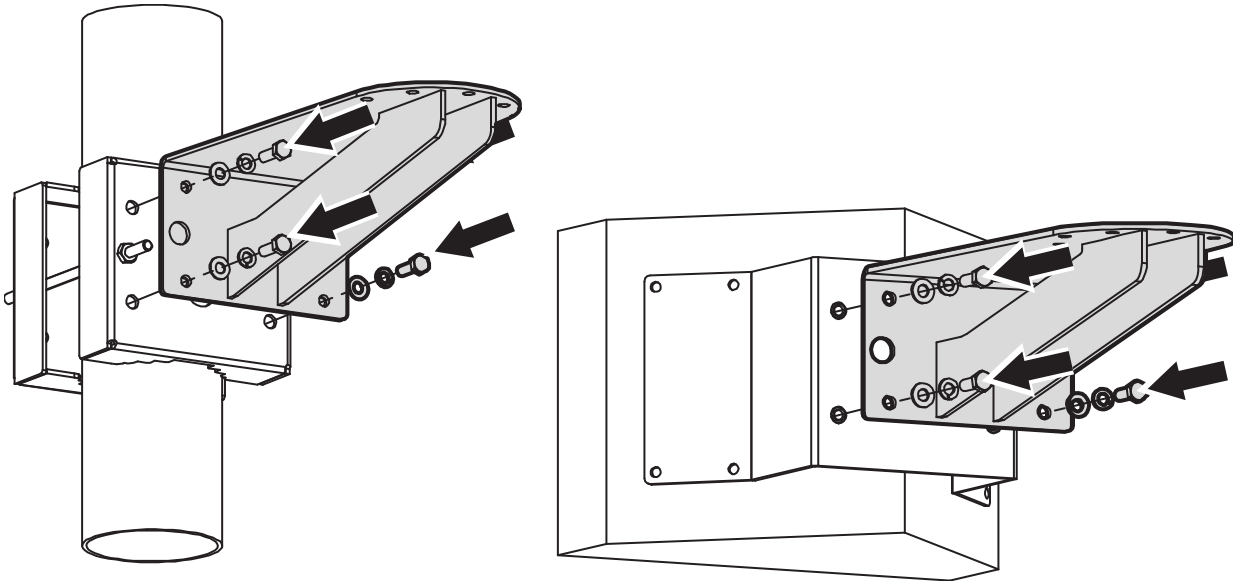

*Figure 13: Fasten the support bracket.*

To fix the device to the bracket, consult the relevant chapter (*Fixing with wall mount bracket*).

# Cable Connections

The camera is supplied with a 3m multicore cable. The cable diameter is 19mm.

## Connecting External Power

Electrical connections must be performed with the power supply disconnected and the circuit-breaker open.

When commencing installation make sure that the specifications for the power supply for the installation correspond with those required by the device.

Check that the power supply socket and cable are adequately dimensioned.

Depending on the version, the device can be provided with different power supply voltages. The power supply voltage is indicated on the product identification label (*Product marking*).

The multicore cable has the power and earthing cables inside.

Carry out the connections as described in the table.

| CONNECTING THE POWER SUPPLY | |
|---|---|
| **Cable colour** | **Description** |
| **Power supply 24Vac** | |
| Black 2 | (N) Neutral |
| Black 1 | (L) Phase |
| Yellow/Green | Safety earth |
| **Power supply 220-230Vac** | |
| Black 2 | (N) Neutral |
| Black 1 | (L) Phase |
| Yellow/Green | Safety earth |
| **Power supply 120Vac** | |
| Black 2 | (N) Neutral |
| Black 1 | (L) Phase |
| Yellow/Green | Safety earth |

*Table 2: Connecting the power supply.*

## Ethernet cable connection

The Ethernet cable shield on the operator side must always be earthed via the connector.

The RJ45 connector pinout follows the TIA/EIA-568-B standard.

## Alarms and relays connections

The Alarms and relays cable shield on the operator side must always be earthed via the cable shield braid.

The unit is equipped with the alarms and relays indicated in the table.

| ALARMS AND RELAYS CONNECTIONS | |
|---|---|
| **Cable colour** | **Description** |
| Red-Blue | Relay 1, A |
| Grey-Pink | Relay 1, B |
| Brown-Green | Relay 2, A |
| White-Green | Relay 2, B |
| Green | Common alarm, COM |
| Brown | Alarm 1 (dry contact), AL1 |
| White-Yellow | Reset input power supply |
| Black | Reset input |

*Table 3: Alarms and relays connections.*

Electrically insulate all cables not connected or not listed on the table.

### Connecting an alarm with dry contact

For a dry contact alarm (alarm AL1), implement the connection as shown in the figure.

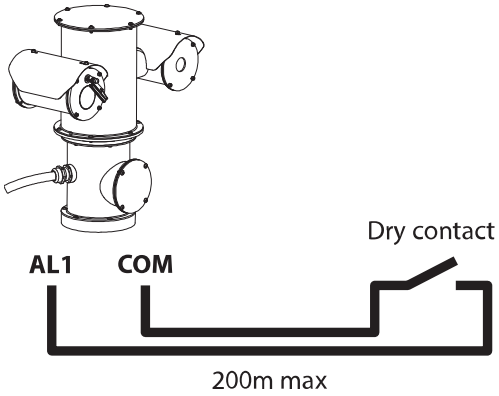


*Figure 14: Connecting an alarm with dry contact.*

The dry contact alarm can be NO (normally open) or NC (normally closed).

About the configuration please refer to the relative manual (*Configuring the Camera*).

The alarm has a reach of 200m (656ft) max, which can be obtained using a shielded cable with a minimum section of 0.25mm² (23AWG).

### Relay connection

The relays can be used with the specifications outlined below. Working voltage: up to 30Vac or 60Vdc. Current: 1A max. Use suitable cable sections with the following characteristics: from 0.25mm² (23AWG) up to 1.5mm² (15AWG).

Due to the absence of polarity, both terminals of the same relay can be connected either to alternating or direct current voltages.

### Washing system connection

For further details on configuration and use, refer to the relative manual.

When the washing system is enabled, the relay 2 reports the pump activation (*Alarms and relays connections*).

About the configuration please refer to the relative manual (*Configuring the Camera*).

## Switching on

Do not use the wiper if the ambient temperature is under 0°C (+32°F) or if there is ice.

If it is left on, the wiper automatically disables itself.

The automatic pre-heating (De-Ice) process could be started whenever the device is switched on and the ambient temperature is below 0°C (+32°F). The procedure is necessary to guarantee correct operation of the devices even at low temperatures. The duration ranges depending on environmental conditions (from 60 minutes up to 120 minutes).

The unit is switched on by connecting the power supply.

To switch off the unit disconnect the power.

### First start-up

Ensure the unit and the other components of the system are appropriately closed to prevent contact with live parts.

Make sure that all parts are fastened down firmly and safely.

## Connecting to the Camera

### Initializing a Camera Username and Password

You must create a user with administrator privileges before the camera is operational.

If the camera is in the factory default state, you will be redirected to the *New User* page to create an administrator user:

1. Enter a new *User Name* or keep the default administrator name.
2. Enter a new *Password* for the user. It is recommended to use a secure and complex password.
3. Confirm the new password.
4. For the first user, *Administrator* must be selected in the *Security Group* drop-down menu.
5. Click **Apply**. After creating the user, you will be asked to login.

If you are connecting your Pelco camera to a 3rd party VMS, you will need to set up the first user through the camera's Web Interface or Camera Configuration Tool before you connect to the 3rd party VMS.

### Assigning an IP Address

The device automatically obtains an IP address when it is connected to a network.

If the device cannot obtain an IP address from a DHCP server, it will use Zero Configuration Networking (Zeroconf) to choose an IP address. When set using Zeroconf, the IP address is in the 169.254.0.0/16 subnet.

The IP address settings can be changed using one of the following methods:

- Device's web browser interface: http://<*camera IP address*>/.
- Network Video Management software application.

### Accessing the Live Video Stream

Live video stream can be viewed using one of the following methods:

- Web browser interface: http://< *camera IP address*>/.
- Network Video Management software application.

### Configuring the Camera

Once installed, use one of the following methods to configure the camera:

- If you have installed multiple cameras, you can use the Pelco Camera Configuration Tool to configure common settings. For more information, see the *Pelco Camera Configuration Tool User Guide*.
- If the camera is connected to a third-party network management system, you can configure the camera's specialty features in the camera's web browser interface. For more information, see the *Pelco Esprit Anti-Corrosion Enhanced Operations Manual.*

## Resetting to Factory Default Settings

If the access password is no longer available, follow the procedure to reset to Factory Default Settings.

To restore the Factory Default Settings relative to the network, user access and camera configuration follow this procedure:

- Switch off the unit.
- Use a dry contact to connect the reset (black wire) signal and the relative power supply (white-yellow wire).
- Power the unit.
- Wait for 2 minutes.

- Switch off the unit.
- Open the dry contact between the reset and the relevant power supply.
- Power the unit.

Once the factory default procedure has finished, you need to configure the unit (*Initializing a Camera Username and Password*).

# Maintenance

Before doing any technical work on the device, disconnect the power supply.

**Caution:**Device installation and maintaining must be performed by specialist technical staff only.

The manufacturer declines all liability for damage to any of the apparatus mentioned in this handbook, when resulting from tampering, use of non-original spare parts, installation, maintenance and repairs performed by non-authorised, non-skilled personnel.

For damage to any parts, repair or replacement must be done by, or under supervision of Pelco.

Whenever replacing the parts as indicated, always use Pelco original spare parts and meticulously follow the maintenance instructions supplied with every spare parts kit.

For all maintenance interventions, we recommend you return the product to the laboratory that will perform all required operations.

When contacting Pelco for assistance please provide the serial number and the identification code of the model.

## Routine maintenance

### Inspecting the cables

The cables should not show signs of damage or wear, which could generate hazardous situations. In this case extraordinary maintenance is necessary.

## Extraordinary maintenance

### Fuses replacement

Before doing any technical work on the device, disconnect the power supply.

**Caution:**For continued protection against risk of fire, replace only with same type and rating of fuses. Fuses must be replaced only by service personnel.

The connector board's fuses can be replaced inside the connection compartment.

Unscrew the screws and remove the cover.

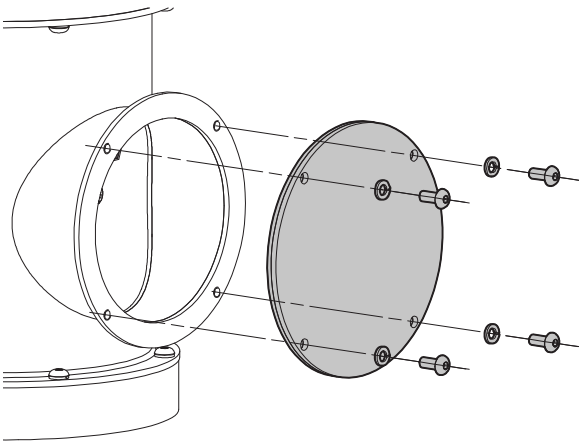

*Figure 15: Cover removal.*

The new fuses must comply with the directions given in the table.

| FUSES REPLACEMENT | | |
|---|---|---|
| **Supply voltage** | **Fuse (F1)** | **Fuse (F2)** |
| 24Vac, 50/60Hz | T 4A H 250V 5x20 | T 4A H 250V 5x20 |
| 120Vac, 50/60Hz | T 2A H 250V 5x20 | T 4A H 250V 5x20 |
| 220Vac-230Vac, 50/60Hz | T 2A H 250V 5x20 | T 4A H 250V 5x20 |

*Table 4: Fuses replacement.*

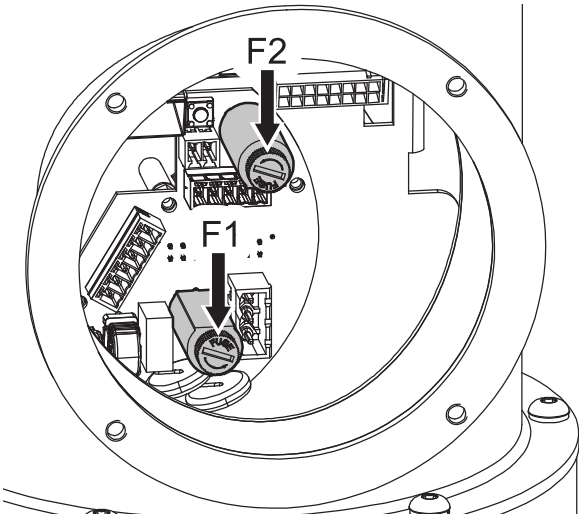


*Figure 16: Fuses position.*

At the end of the operations close the product.

Pay attention to the fixing. Tightening torque: 1.5Nm (±0.2Nm).

## Cleaning

Frequency will depend on the type of environment in which the product is used.

### Cleaning of the window and external surfaces of the product

Avoid ethyl alcohol, solvents, hydrogenated hydrocarbide, strong acid and alkali. Do not use strong or abrasive detergents when cleaning the device body. Such products may irreparably damage the surface.

The device should be cleaned using a damp cloth; compressed air must not be used.

## Troubleshooting

Contact an authorised support centre if the problems persist or you have any other issues that are not described here.

| TROUBLESHOOTING | | |
|---|---|---|
| **PROBLEM** | **CAUSE** | **SOLUTION** |
| The product does not turn on. | Wiring error, blown fuse. | Make sure the connections are correct. Check the continuity of the fuses and replace them with the indicated models should they fail. |
| The shooting area do not correspond to the selected preset position. | Loss of absolute position reference point. | Execute the unit calibration by rebooting it. |
| The device is not reachable via WEB UI and it does not move during the start-up phase. | The ambient temperature is too low. | Wait until the end of the pre-heating procedure.Refer to Switching on section for details about the automatic pre-heating (De-Ice) process. |

*Table 5: Troubleshooting.*

## Technical drawings

The indicated measurements are expressed in millimetres.

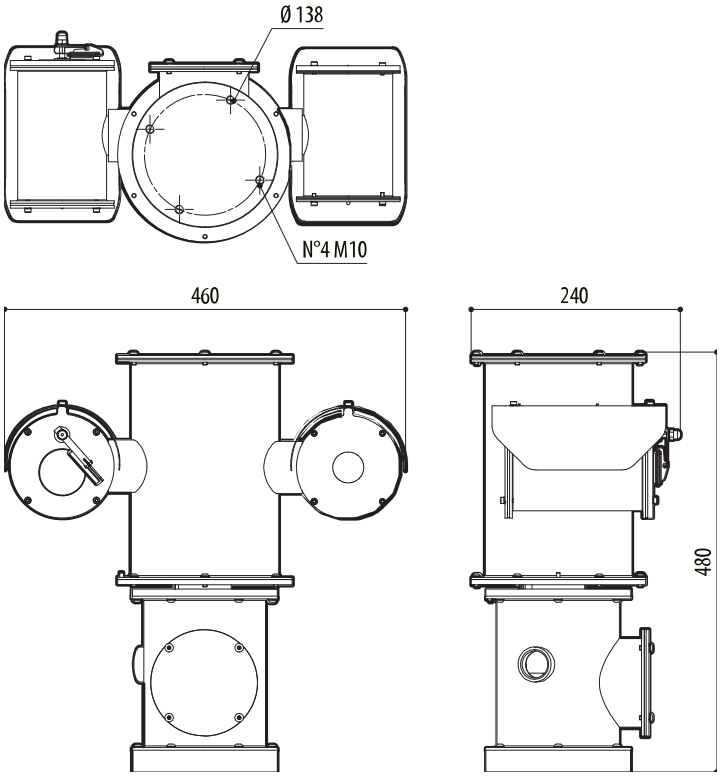


*Figure 17: Esprit Anti-Corrosion Enhanced 1 Series, PTZ.*

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