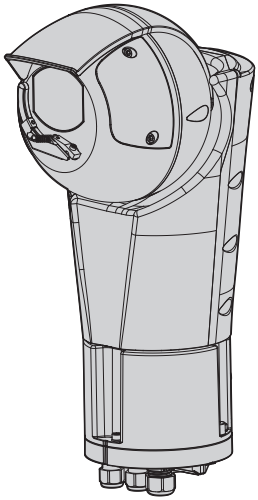
AVIGILON

H5A Rugged PTZ Camera

PTZ camera with high performance and extreme reliability



EN English - Instruction manual

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1 About this manual

Read all the documentation supplied carefully before installing and using this product. Keep the manual in a convenient place for future reference.

1.1 Typographical conventions

DANGER!
High level hazard.
Risk of electric shock. Disconnect the power supply before proceeding with any operation, unless indicated otherwise.

DANGER!
Mechanical hazard.
Risk of crushing or shearing.

CAUTION!
Medium level hazard.
This operation is very important for the system to function properly. Please read the procedure described very carefully and carry it out as instructed.

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

2 Notes on copyright and information on trademarks

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INTEL® Core™ 2 Duo, INTEL® Core™ 2 Quad, INTEL® Xeon® are the property of Intel Corporation.

ONVIF® is a trademark of Onvif, Inc.

3 Safety rules

CAUTION! Hazardous moving parts. Keep fingers and other body parts away.

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.

CAUTION! In order to reduce the risk of fire, only use UL Listed or CSA certified cables with sections greater than or equal to 0.14mm² (26AWG).

CAUTION! The infrared LED illuminator emits high-intensity invisible light. For further details on configuration and use, refer to the illuminator accessory manual.

CAUTION! The white LED illuminator emits high intensity light. For further details on configuration and use, refer to the illuminator accessory manual.

During normal operation the surface of the illuminator can reach high temperatures. Do not allow direct contact and position the appliance where it is inaccessible to unauthorised persons. Before touching, switch off the illuminator and allow to cool for a minimum period of 10 minutes.

- 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.
- The equipment is intended for installation in a Restricted Access Area by specialist technical staff.
- Before starting any operation, make sure the power supply is disconnected.
- 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 (4.2 Product marking label, page 8).
- 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.
- Use a Class 2 listed UL tranformer, compliant with the Standards in force, only for products marked UL, powered at 24Vac.
- In the case of a 24Vac power supply, you must provide for adequate separation from the AC power supply line using double or reinforced insulation between the main power supply line and the secondary circuit.
- A power disconnect device must be included in the electrical installation, and it must be very quickly recognizable and operated if needed.
- The separate protective earthing terminal provided on this product shall be permanently connected to earth.

- 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.
- 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 power supply voltage must not exceed the limits: 24Vac ±10%, 24Vdc ±10%.
- 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.
- To comply with the main supply voltage dips and short interruption requirements, use a suitable Uninterruptible Power Supply (UPS) to power the unit.
- The Cat5e/Cat6 shielded (STP) Ethernet cable is required to fully comply with EMC regulatory standards.
- To meet the requirements of the EN 50121-4 Railway Applications Standard, use an external power supply or PoE injector that is also compliant with EN 50121-4.
- The appliance includes moving parts. Make sure that the unit is positioned where it is inaccessible under normal operating conditions.
- Attach the Dangerous Moving Parts label near the device. (Fig. 3, page 10).
- Do not use the appliance in the presence of flammable substances.
- Do not allow children or unauthorised people to use the appliance.
- The device can only be considered to be switched off when the power supply has been disconnected and the connection cables to other devices have been removed.
- 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.
- Take all necessary precautions to prevent the apparatus from being damaged by electrostatic discharge.
- The unit has been made for connection using a three-core cable. To make a correct connection to the earth circuit, follow the instructions in this handbook.
- Handle the unit with great care, high mechanical stress could damage it.

4 Product description and type designation

The H5A Rugged PTZ camera is ideal as a video surveillance solution for outdoor applications in urban centres, critical infrastructures, traffic and railways. It was designed to guarantee complete reliability and continuous operation in more difficult external environments and offer exceptional strength against corrosion and a vast range of temperatures.

4.1 Product overview

The product consists of 3 parts:

1. Sunshield.
2. Body.
3. Base.

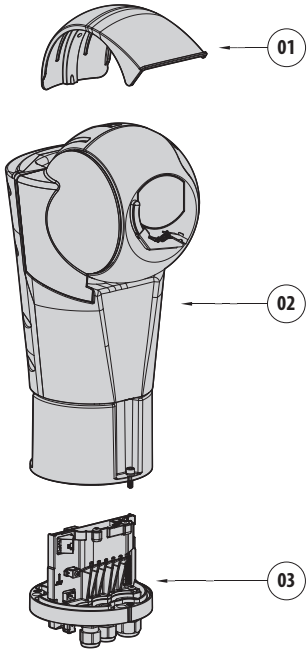

Fig. 1

4.2 Product marking label

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

The product has a label applied in compliance with CE marking.

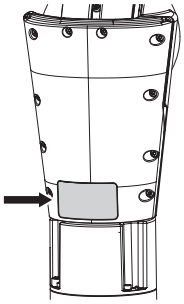

Fig. 2

The label shows:

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

4.3 Model identification

H5A RUGGED PTZ BASE CAMERA OPTIONS	
Part Number	**Description**
2.0C-H5A-RGDPTZ-DP36	H5A Rugged PTZ camera 2MP 36x-24Vac/dc
4.0C-H5A-RGDPTZ-DP36	H5A Rugged PTZ camera 4MP 36x-24Vac/dc
8.0C-H5A-RGDPTZ-DP36	H5A Rugged PTZ camera 8MP 36x-24Vac/dc

Tab. 1

OPTIONAL MOUNTS AND ACCESSORIES	
Part number	**Description**
AVUEI8AA	Infrared illuminator 850nm for Avigilon H5A Rugged PTZ Camera, grey-white (RAL9002)
AVUEI8AAP	IR illuminator 850nm for long distance lighting for Avigilon H5A Rugged PTZ Camera, grey-white colour (RAL9002)
AVUEI9AA	Infrared illuminator 940nm for Avigilon H5A Rugged PTZ Camera, grey-white (RAL9002)
AVUEIWAA	White light illuminator 850nm for Avigilon H5A Rugged PTZ Camera, grey-white (RAL9002)
AVUEIWAAP	White light illuminator for long distance lighting for Avigilon H5A Rugged PTZ Camera, grey-white colour (RAL9002)
AVUEBP0AA	Parapet bracket with internal cable channel for Avigilon H5A Rugged PTZ Camera, grey-white colour (RAL9002)
AVUEBP4AA	Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 4 poles for Avigilon H5A Rugged PTZ Camera, grey-white (RAL9002)
AVUEBP7AA	Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 7 poles for Avigilon H5A Rugged PTZ Camera, grey-white (RAL9002)
AVUEBWAA	Wall mount bracket for Avigilon H5A Rugged PTZ Camera, grey-white (RAL9002)
AVUEAP	Pole adaptor in stainless steel AISI 316L
AVUEAC	Corner adaptor in stainless steel AISI 316L
AVUEAW	Counter-plate in stainless steel AISI 316L
AVCOMB100A	Communication box in polycarbonate, 220Vac-230Vac
AVCOMB200A	Communication box in polycarbonate, 24Vac
AVCOMB300A	Communication box in polycarbonate, 120Vac-127Vac
AVWASPT0V5L5M00	Water tank 5l (1.3gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac
AVWASPT0V23L11M00	Water tank 23l (6gal), pump with delivery up to 11m (36ft) with water floating, IN 230Vac-24Vac-120Vac
AVWASPT1V23L30M00	Water tank 23l (6gal), pump with delivery up to 30m (98ft) with water floating, IN 230Vac
AVWASPT3V23L30M00	Water tank 23l (6gal), pump with delivery up to 30m (98ft) with water floating, IN 120Vac
AVSURGEPR	Lightning surge protection device for Ethernet line
POE-INJ-BT-90W-NA	Gigabit 802.3bt 90W PoE Power Injector, single port
AVOUESUN04	Spare sunshield, grey-white (RAL9002)
AVOUEWIPER	Spare wiper blade
AVOUEMAN	Camera Maintenance Kit (1 x power connector, 1 x I/O connector, 1 x Plate for safety chain coupling, 2 x M16 cable glands, 1 x M20 cable gland, 1 x reduction gasket, for Ethernet cable with pre-assembled connector, for cable gland M20, 1 x reduction gasket, for alarm cable, for cable gland M16, 1 x base gasket, 1 x Allen wrench, 1 x 2.5A fuse)

Tab. 2

Refer to the instruction manual included with your accessory for more information on their installation and use.

5 Preparing the product for use

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

5.1 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.

Fig. 3

5.2 Unpacking

A thin oil film due to the gasket may be present on the unit. This oil film does not alter the mechanical performance of the unit. Refer to the cleaning instructions in the relevant chapter (11 Cleaning, page 28).

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.

5.3 Contents

Check the contents to make sure they correspond with the list of materials as below:

- H5A Rugged PTZ camera
- Sunshield
- Accessories package:
  - Allen wrench
  - Power connector
  - I/O connector
  - Label (CAUTION: Hazardous moving parts)
  - Reduction gasket, for alarm cable, for cable glands M16
  - Reduction gasket, for Ethernet cable with pre-assembled connector, for cable gland M20
  - Instruction manual
  - Plate for safety chain coupling
  - Screw for sunshield fastening

5.4 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.

6 Installation

Never, under any circumstances, make any changes or connections that are not shown in this handbook. Failure to follow the connection instructions that are given in the handbook may create serious safety hazards for people and for the installation.

Do not change the wiring in the product as it is supplied to you. Failure to follow this instruction may create serious safety hazards for people and for the installation, and will also invalidate the warranty.

The product can be powered in 24Vac/24Vdc or via PoE 90W.

Keep the connection diagram for future reference.

6.1 Installation mode

The product can be installed in various modes using the supports and various adaptors available, meeting every installation requirement.

6.1.1 Viewing angles

The figure displays the viewing angles of the tilt in the two installation modes (upright or inverted).

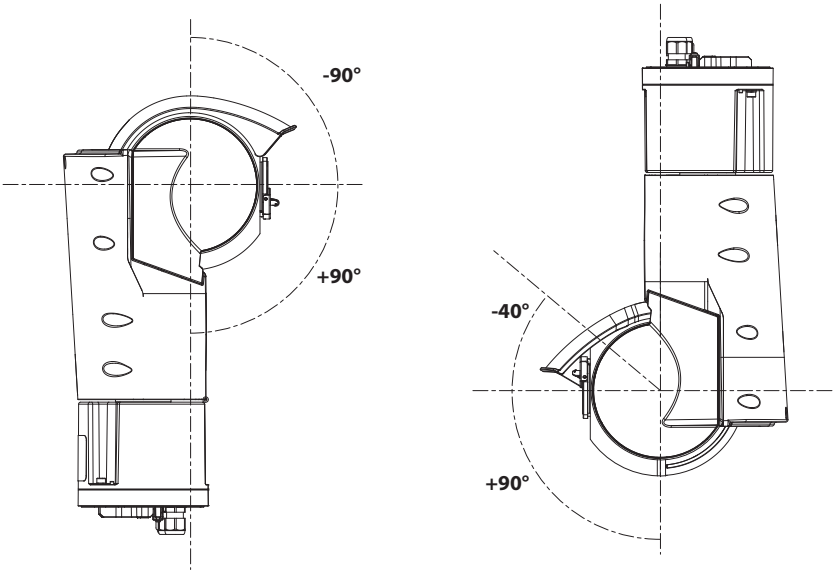

Fig. 4

6.1.2 Installation with internal cable passage

This installation mode allows cable passage inside the mounting brackets.

The figure below shows the various upright mounting options.

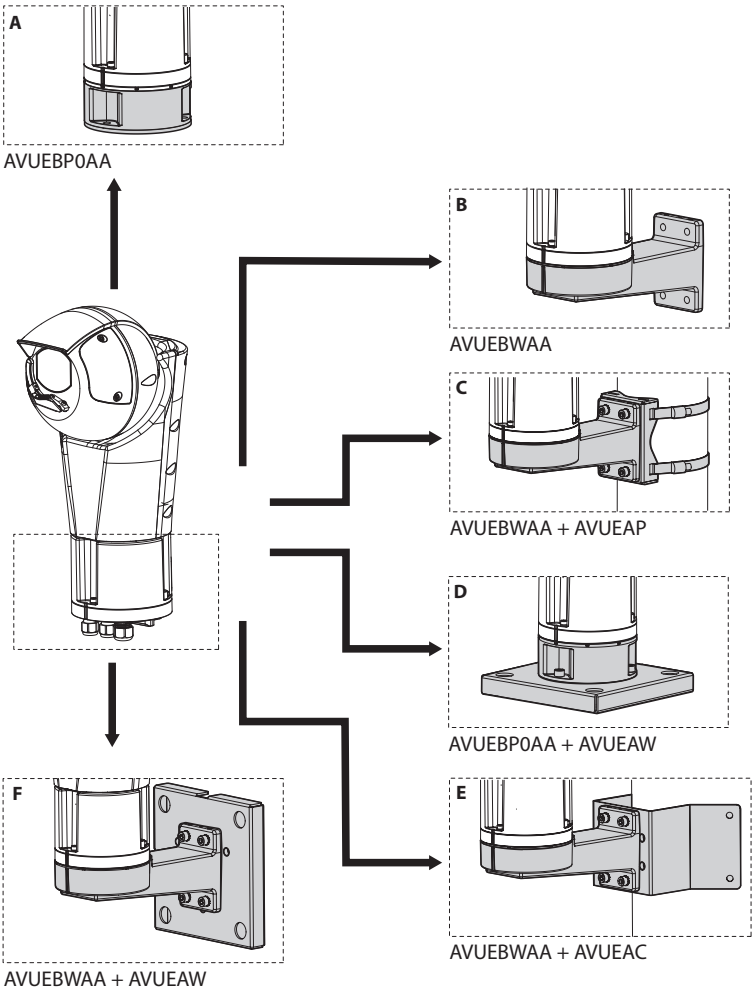

Fig. 5

6.1.3 Installation with internal cable passage with product inverted

CAUTION! Always secure the product with the safety chain (6.8 Fastening of the safety coupling, page 20).

This installation mode allows cable passage inside the mounting brackets.

The figure below shows the various inverted mounting options.

In the event of installation of the product inverted, the sunshield must be assembled as illustrated in the relevant chapter (6.7 Sunshield mounting, page 20) and enable the Ceiling Orientation mode using the web interface.

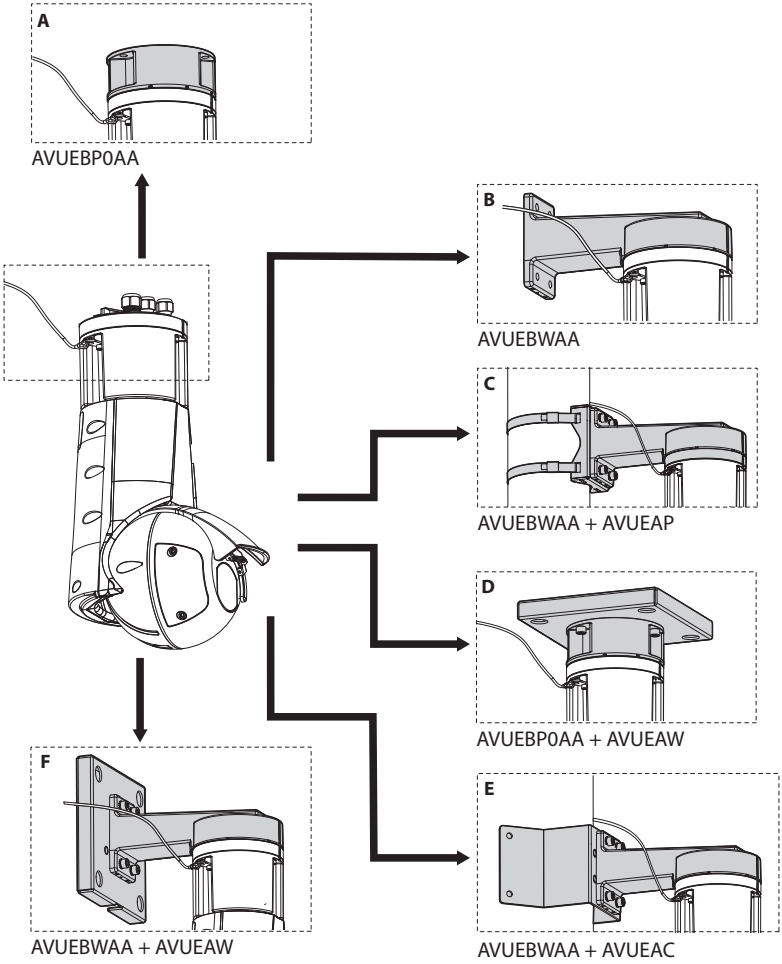

Fig. 6

6.1.4 Installation with quick connectors

This installation mode with the quick connectors allows easy and fast replacement of the unit.

The figure below shows the various upright mounting options.

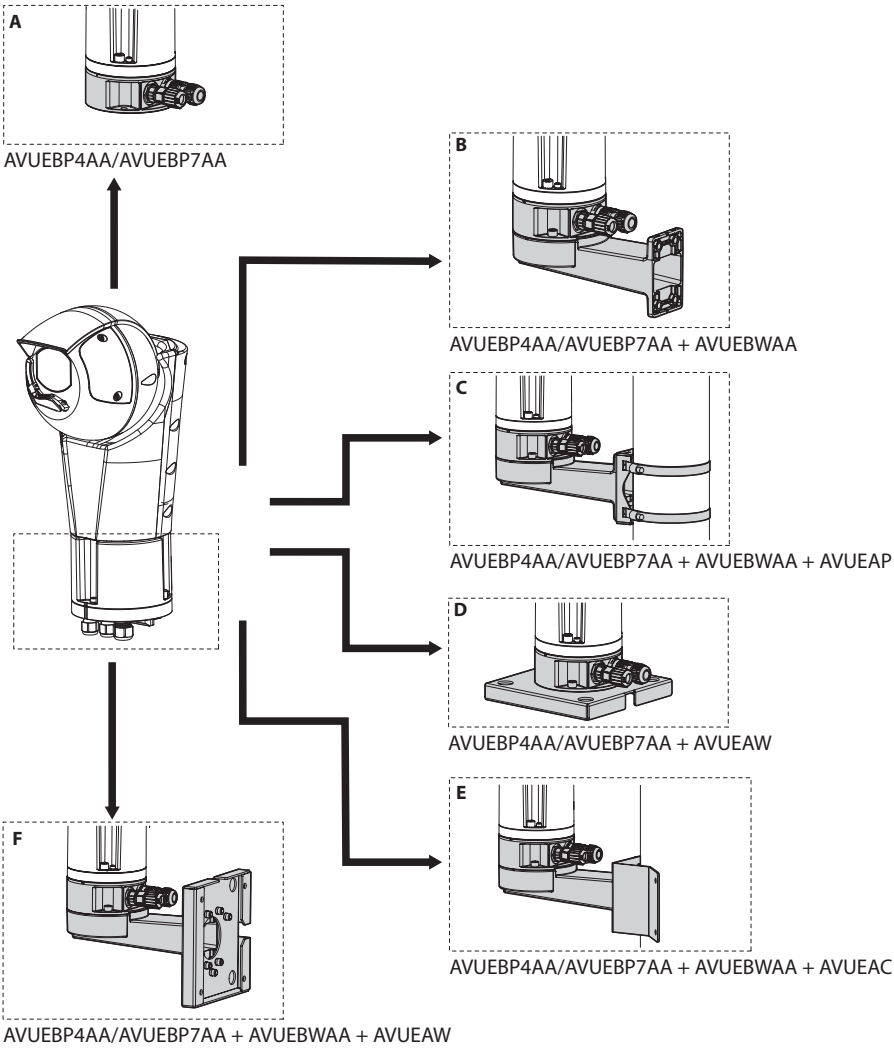

Fig. 7

6.1.5 Installation with quick connectors with product inverted

CAUTION! Always secure the product with the safety chain (6.8 Fastening of the safety coupling, page 20).

This installation mode with the quick connectors allows easy and fast replacement of the unit.

The figure below shows the various inverted mounting options.

In the event of installation of the product inverted, the sunshield must be assembled as illustrated in the relevant chapter (6.7 Sunshield mounting, page 20) and enable the Ceiling Orientation mode using the web interface.

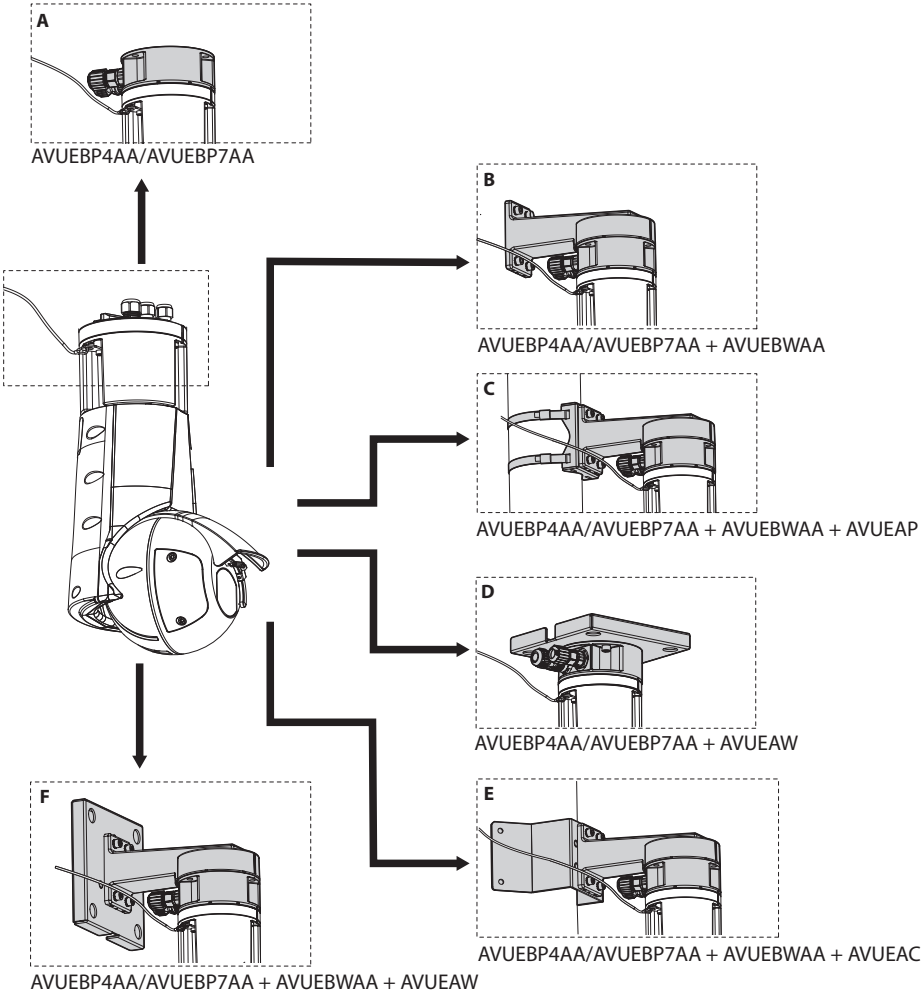

Fig. 8

6.1.6 Typical connection of accessories

The figure displays how the accessories can be connected to the product.

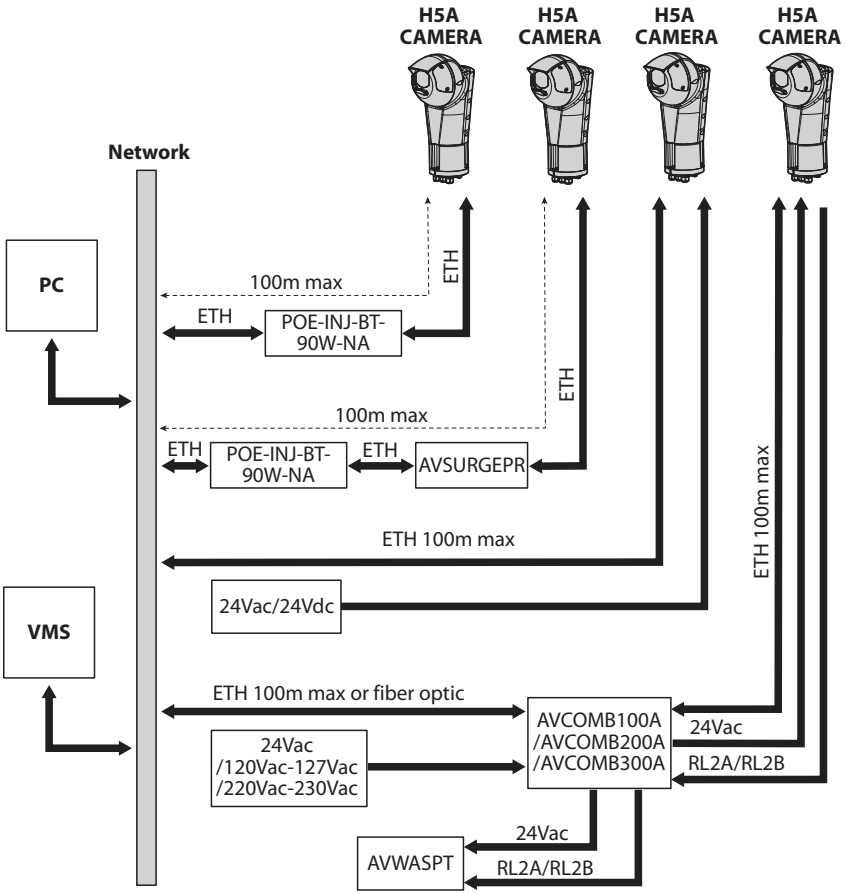

Fig. 9

The power supply cables must be appropriately dimensioned. 0.75mm² (18AWG) or heavier wire is recommended for most cable runs between the 24Vac/24Vdc power source and the camera (15 Technical data, page 30). If a longer cable run is required, a wire gauge table should be consulted to ensure that the voltage at the camera does not drop outside of the specified range when the camera is operating at the maximum rated power draw.

The AVSURGEPR accessory must be installed close to the PTZ.

6.2 Opening the base of the product

To avoid scratching the product with the hexagonal wrench, align the groove on the body of the product with the screw before screwing it in.

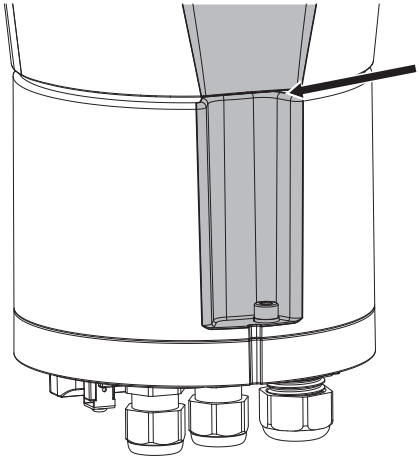

Fig. 10

Unscrew the three screws at the bottom of the product (Fig. 11, page 17).

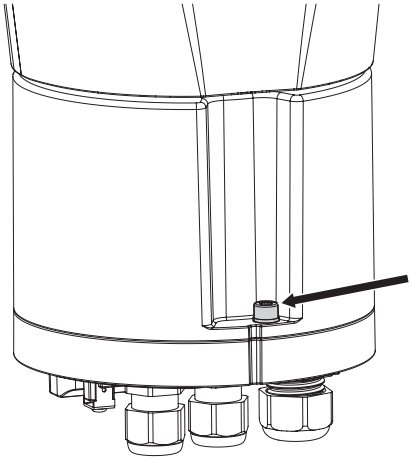

Fig. 11

6.3 Mounting the bracket

Take special care when attaching and fastening down the apparatus. If the equipment must be fastened to a concrete surface, plugs must be used with a minimum traction force of 300dN each. For a metal surface use screws with a diameter of at least 8mm and of an appropriate length. The fastening system must be capable of supporting at least 4 times the weight of the entire equipment (PTZ, supports and adapters).

The device should be assembled vertically. Any other position could impair the performance of the device.

Various types of optional mounts and accessories are available (4.3 Model identification, page 9).

Choose the mounting accessories for the installation you want to implement (6.1 Installation mode, page 11).

Install the optional mounts and accessories by following the instruction manuals provided with the mount or accessory.

6.4 Cable management

The cables must be adequately fastened to the structure to avoid causing the cables to be accidentally unplugged.

You must use cables suited to the type of installation you are using.

For conductor section and cable sheath diameters which can be used, please refer to the technical data in the relevant chapter (15 Technical data, page 30).

Insert the cables into the cable glands.

If the cable has a pre-assembled connector, replace the gasket inside the cable gland with the one supplied. Insert the Ethernet cable in the gasket as illustrated in the figure (Fig. 12, page 18). Pass the cable with connector RJ45 through the M20 cable gland.

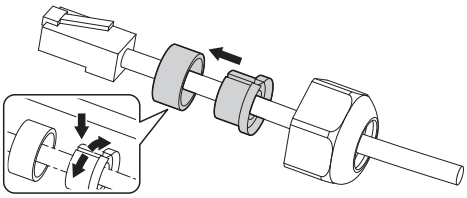

Fig. 12

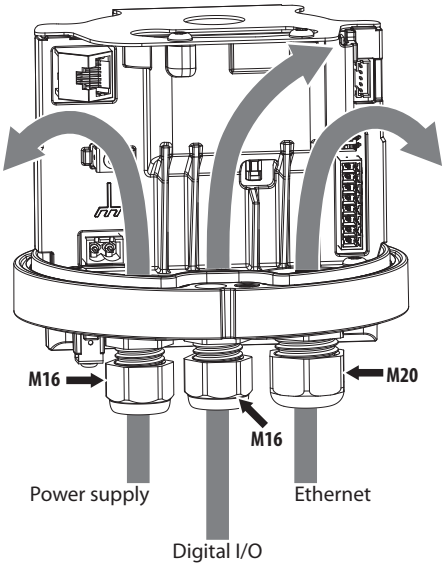

Fig. 13

Tighten the cable glands.

Pay attention to the fixing. Tightening torque : 1.5Nm (±0.2Nm) for M16 cable glands, 2Nm (±0.2Nm) for M20 cable glands.

If a cable gland does not have a cable inserted, a specific cap must be inserted for closure. Always close the cable glands with the stated tightening torque.

6.5 Fixing the base to the support

For further details on installing the camera with mounts and accessories, refer to the manual provided with the mount or accessory.

6.6 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 64 GB 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 rear of the housing and remove the housing back cover (Fig. 14, page 19).

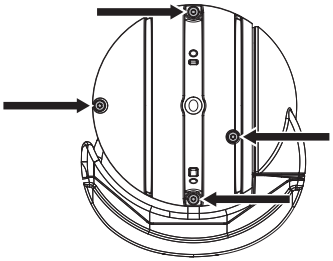

Fig. 14

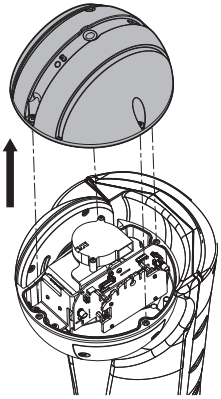

Fig. 15

Insert the memory card into the slot as indicated (Fig. 16, page 19). Pay attention to the direction of the memory card.

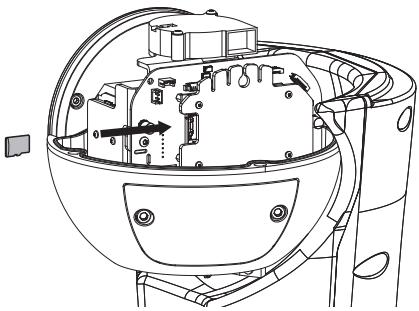

Fig. 16

Replace the housing back cover and fix the four screws.

Apply threadlocker in the fastening screws (Loctite 243®).

Pay attention to the fixing. Tightening torque: 1.6Nm (±0.2Nm).

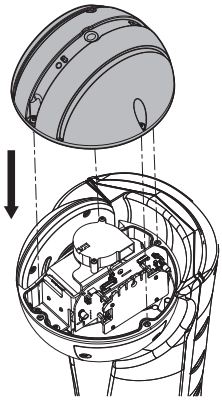

Fig. 17

6.7 Sunshield mounting

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

Pay attention to the fixing. Tightening torque: 1.6Nm (±0.2Nm).

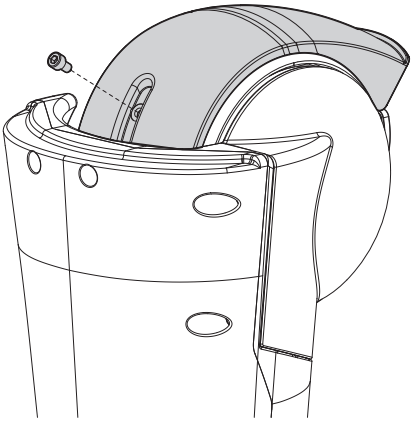

Fig. 18 Upright installation of the product.

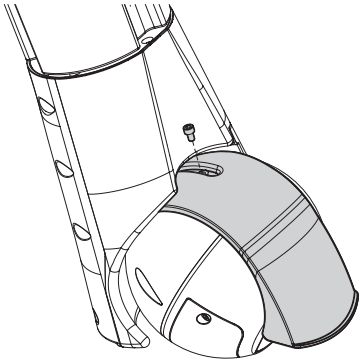

Fig. 19 Installation of the product inverted.

6.8 Fastening of the safety coupling

Take special care when attaching and fastening down the apparatus. If the equipment must be fastened to a concrete surface, plugs must be used with a minimum traction force of 300dN each. For a metal surface use screws with a diameter of at least 8mm and of an appropriate length. The fastening system must be capable of supporting at least 4 times the weight of the entire equipment (PTZ, supports and adapters).

The product is equipped with a safety coupling to secure the product to a second fixing point through a safety chain or cable.

Position the safety coupling and fix it with the screw and the washer supplied as shown in the figure below.

Use an external anchor point to fix the chain or the safety cable to the unit support surface. Choose a chain or safety cable capable of supporting 4 times the weight of the unit, including its brackets and adaptors.

Pay attention to the fixing. Tightening torque: 4.5Nm (±0.2Nm).

Apply thread-locker into the holes for screws (Loctite 243®).

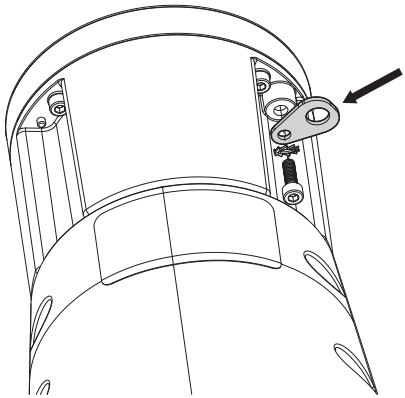

Fig. 20

6.9 Connector board description

The earth ground cable must always be connected to the relevant terminal (GND_INT or GND_EXT, Fig. 21, page 21).

BOARD DESCRIPTION	
Connector	**Function**
J3	Ethernet
J4	Power supply
J6	Digital I/O
S1, S2	Reset to Factory Default Settings
GND_INT (internal earth ground terminal)	The GND_INT and GND_EXT are both suitable to ground the unit. Use the GND_EXT terminal if the GND earth cable cannot be passed through the cable glands (check the diameters of the cable glands allowed in the technical data section).
GND_EXT (external earth ground terminal)	

Tab. 3

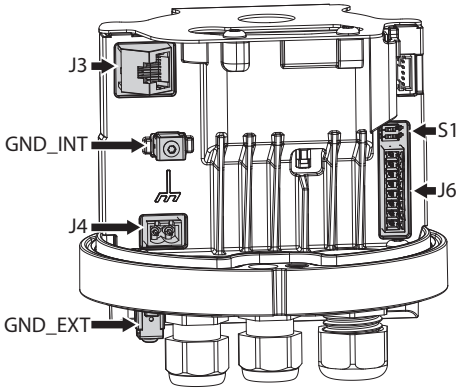

Fig. 21

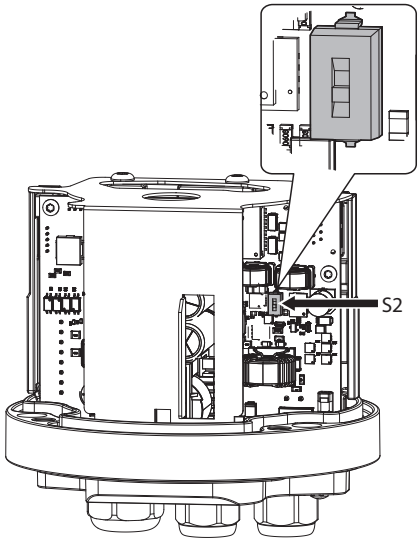

Fig. 22

6.10 Connecting the power supply

6.10.1 24Vac/24Vdc power supply

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.

Do not power the product using auto-transformers.

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

For conductor section and cable sheath diameters which can be used, please refer to the technical data in the relevant chapter (15 Technical data, page 30).

In case of continuous current power supply, either polarity can be used.

To power the unit, use the power supply units indicated in the technical data sheet of the product on the website: avigilon.com, or use a toroidal transformer with nominal power of at least 200VA.

Connect the power supply cable to the relative connector (J4, Fig. 23, page 22).

Connect the ground cable to the relevant terminal (GND_INT, Fig. 23, page 22).

The power cables must be sized according to the ratio between the supply current and the distance to be covered.

If the product is powered by two sources of power simultaneously (24V and PoE 90W), only the 24V line will be used, disabling the PoE 90W power supply.

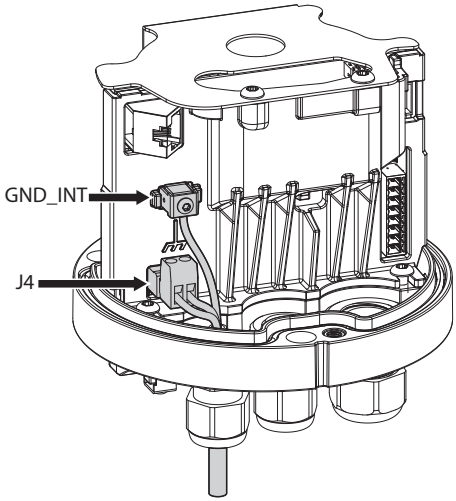

Fig. 23

The removable connector is supplied in the kit.

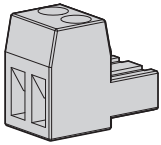

Fig. 24

6.10.2 PoE 90W power supply

The product can be powered by 90W PoE according to standard IEEE 802.3bt (CLASS 8).

The PoE injector must have at least 90W power.

By default, the product is configured to work according to standard IEEE 802.3bt.

The use of the POE-INJ-BT-90W-NA Injector is highly recommended (Tab. 2, page 9).

If the product is powered by two sources of power simultaneously (24V and PoE 90W), only the 24V line will be used, disabling the PoE 90W power supply.

There are two DIP switches inside the base, which are set by default as below:

- S1-DIP2 = OFF
- S2-DIP1 = OFF

For correct product operation, always leave S1-DIP2 and S2-DIP1 in the default position (S1 Fig. 21, page 21 and S2 Fig. 22, page 21).

6.11 Alarms and relays connections

For conductor section and cable sheath diameters which can be used, please refer to the technical data in the relevant chapter (15 Technical data, page 30).

Maximum relay voltage and current: consult the technical data in the relevant chapter (15 Technical data, page 30).

Connect the digital I/O cable to the relative connector (J6, Fig. 25, page 23).

The maximum cable length for each alarm is 200m.

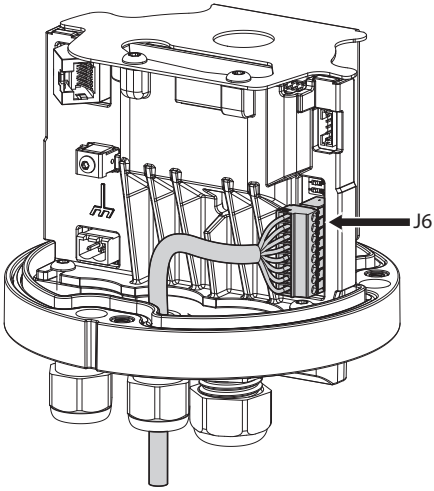

Fig. 25

The removable connector is supplied in the kit.

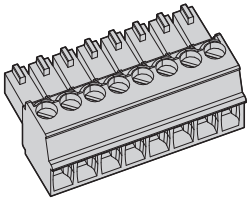

Fig. 26

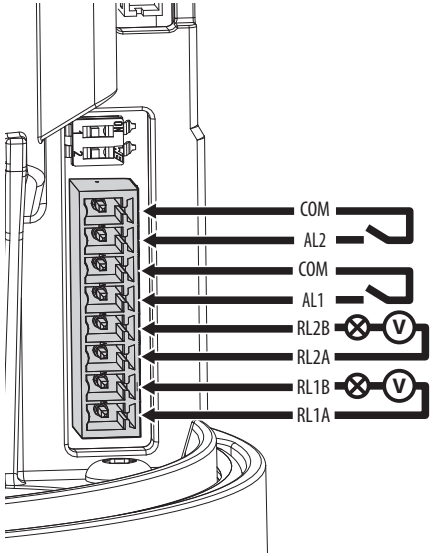

Fig. 27

CONNECTION OF THE ALARM INPUTS AND RELAYS	
Terminals	**Description**
RL1A, RL1B, RL2A, RL2B	Dry contacts of the two relays which can be activated via alarm or by user command
AL1, AL2, COM	Self-powered alarm inputs referred to the shared terminal

Tab. 4

The device can be equipped with a washing system as an accessory. Connect the pump activation signal cable to the indicated relay: RL2A, RL2B.

6.12 Ethernet cable connection

Use of Ethernet cables with the following characteristics is highly recommended:

- Minimum cabling type: Class D (ISO/IEC11801:1995) or Category 5 (ANSI/EIA/TIA-568-A:1995).
- Shielded twisted cable (STP).
- 4 pair.
- Maximum DC Loop Resistance: 25Ohm.

Connect the ethernet cable to the relative connector (J3, Fig. 28, page 24).

If the product is powered by 90W PoE, the ground cable must be connected to the relevant terminal (GND_EXT, Fig. 28, page 24).

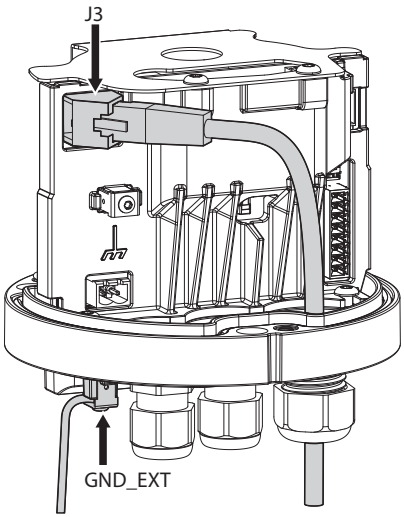

Fig. 28

6.13 Installation of the upper body

Installation of the upper body must take place with the base not powered.

Check the LED indicated in the figure is off (Fig. 29, page 24).

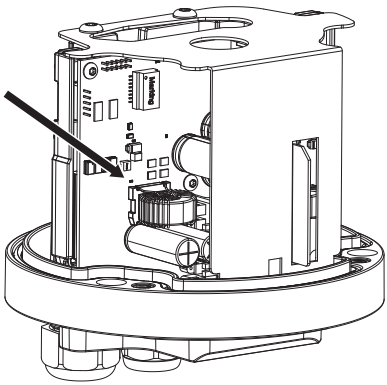

Fig. 29

Check the gasket on the base is in good condition and positioned correctly.

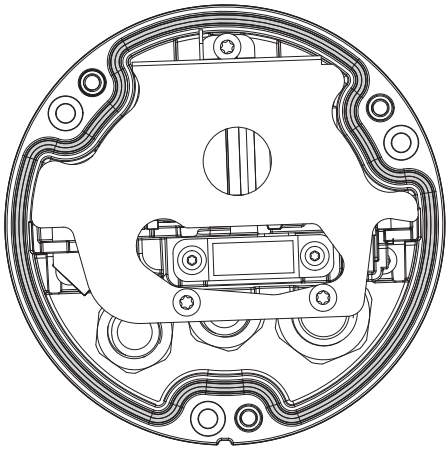

Fig. 30

Place the unit body on the base aligning the reference marks. Be especially careful not to damage internal components during installation.

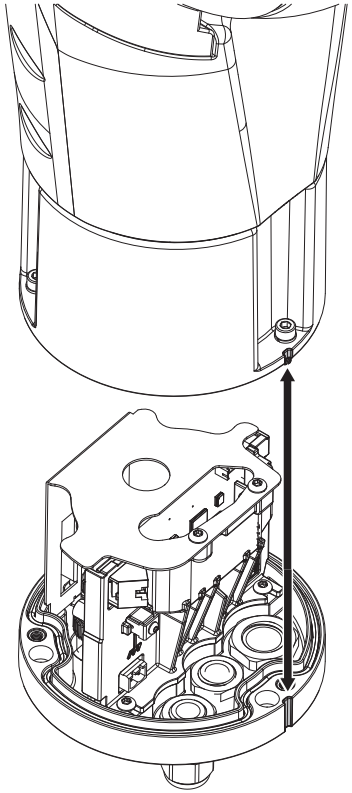

Fig. 31

To avoid scratching the product with the hexagonal wrench, align the groove on the body of the product with the screw before screwing it in (Fig. 32, page 25).

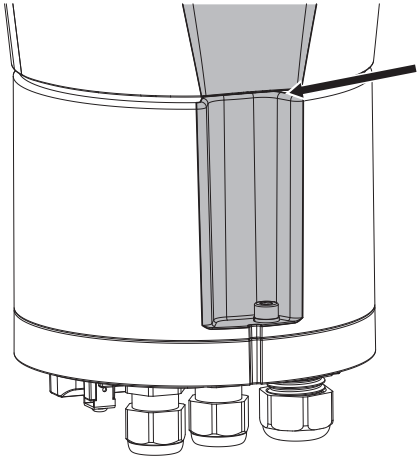

Fig. 32

Fasten the upper unit to the base using the 3 fixing screws.

Pay attention to the fixing. Tightening torque: 4.5Nm (±0.2Nm).

Apply thread-locker into the holes for screws (Loctite 222®).

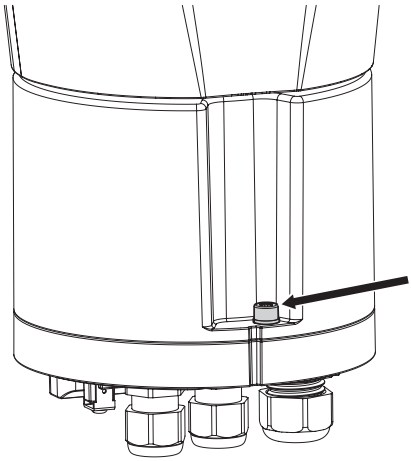

Fig. 33

7 Switching on

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.

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.

8 Configuration

You must create a user with administrator privileges when first connecting to the camera, before the camera is operational.

8.1 Default IP address

The unit is configured to obtain an IP address from a DHCP server.

The IP address acquired via DHCP is visible in the DHCP server log file.

If the DHCP server is not available, the unit automatically configures itself with a self-generated IP address in the 169.254.x.x/16 subnet. To connect your PC to setup the camera with a self-generated IP address, configure your PC to belong in the same subnet (example: IP address: 169.254.1.1, subnet mask: 255.255.0.0).

Use an ONVIF compliant VMS or a network sniffer to find the IP address of the device (IP scan utility).

8.2 Web interface

8.2.1 First access to the web pages

The first operation in configuring the device consists in connecting to the web interface.

To access the web interface of the product, simply use a browser to connect to http://ip_address.

On first access, you will be directed to the Add a new user page to create the first user account.

Additional information about setting up and using the device is available in the following guides:

- Web Interface User Guide — Avigilon High Definition H4 and H5 IP Cameras
- Avigilon Camera Configuration Tool User Guide
- Designing a Site with Avigilon Video Analytics
- Avigilon Control Center™ Client User Guide

These guides are available on help.avigilon.com and on the Avigilon website: avigilon.com/products.

9 Instructions for wiper operation

Do not use the wiper if the ambient temperature is under 0°C or if there is ice.

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

10 Maintenance

Before carrying out any type of maintenance, read the "Safety rules" chapter carefully in the product manual.

CAUTION! Device installation and maintaining must be performed by specialist technical staff only.

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

Use only AVIGILON original spare parts.

10.1 Routine maintenance

10.1.1 Inspecting the cables

The cables should not show signs of damage or wear, which could generate hazardous situations. In cases of damaged or worn cables, repair or replacement will be required.

10.1.2 Replacement of the wiper blade

For further details on wiper replacement and use, refer to the manual included with the wiper replacement part.

10.2 Extraordinary maintenance

10.2.1 Reset to Factory Default Settings

It is possible to reset to the factory default settings if the device is no longer functioning as expected.

The effect of the Factory Default procedure is the same as restoring the factory default settings through the web interface (Hard Reset button).

To execute the default factory procedure, you need to access the DIP switch (S1) on the connectors' card (Fig. 21, page 21).

Follow the procedure below:

- Disconnect the power supply to the unit.
- Open the base of the product (6.2 Opening the base of the product, page 17).
- Set DIP 1 of switch S1 ON.

Function	S1		Description
	DIP 1	DIP 2	–
Reset to Factory Default Settings	ON	–	Enabled
	OFF	–	Disabled

Tab. 5

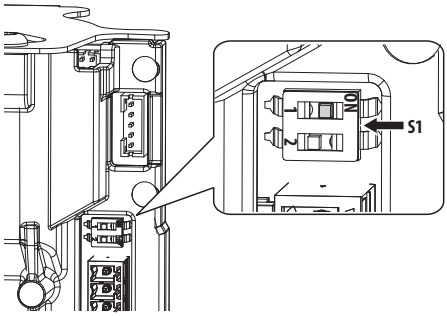

Fig. 34

- Assemble the upper body (6.13 Installation of the upper body, page 24).
- Power the unit. Wait for 2 minutes.
- Disconnect the power supply to the unit.
- Open the base of the product (6.2 Opening the base of the product, page 17).
- Reset DIP 1 of switch S1 OFF.

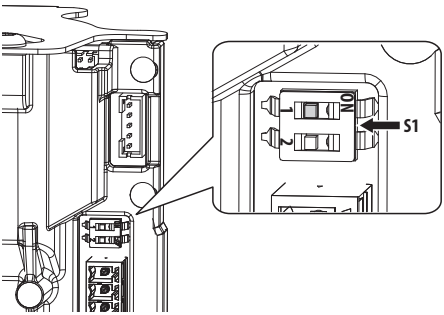

Fig. 35

- Assemble the upper body (6.13 Installation of the upper body, page 24).
- Power the unit.

Once the factory default procedure has finished, you need to configure the unit as described in chapter: 8.1 Default IP address, page 26.

11 Cleaning

11.1 Cleaning the window and external surfaces of the product

Avoid ethyl alcohol, solvents, hydrogenated hydrocarbide, strong acid and alkali. Such products may irreparably damage the surface.

We recommend using a soft cloth with neutral soap diluted with water or specific products to clean the lenses.

12 Information on disposal and recycling

The European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) mandates that these devices should not be disposed of in the normal flow of municipal solid waste, but they should be collected separately in order to optimize the recovery stream and recycling of the materials that they contain and to reduce the impact on human health and the environment due to the presence of potentially hazardous substances.

The symbol of the crossed out bin is marked on all products to remember this.

The waste may be delivered to appropriate collection centers, or may be delivered free of charge to the distributor where you purchased the equipment at the time of purchase of a new equivalent or without obligation to a new purchase for equipment with size smaller than 25cm (9.8in).

For more information on proper disposal of these devices, you can contact the responsible public service.

13 Warranty

The product has a 5 year warranty with the following exceptions:

- Wiper blade.
- Slip-ring: maximum 4,000,000 revolutions or operations.
- Motor belts: maximum 7,000,000 revolutions or operations.

Warranty service and technical support can be obtained by contacting Avigilon Technical Support: avigilon.com/contact-us/.

14 Troubleshooting

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

PROBLEM	**The product does not go on.**
CAUSE	Cabling error or wrong PoE power supply type/class.
SOLUTION	Make sure the connections are correct. Verify that the PoE power supply is compatible with the product.
PROBLEM	**The product does not go on. The LED indicated in the figure is off (Fig. 29, page 24).**
CAUSE	Possible fault on fuse F3.
SOLUTION	Contact the technical assistance service (AVIGILON).
PROBLEM	**The shooting area do not correspond to the selected preset position.**
CAUSE	Loss of absolute position reference point.
SOLUTION	Reset the equipment by switching off and on again.

15 Technical data

CAUTION! TNV-1 installation type. The installation is type TNV-1, do not connect it to SELV circuits.

CAUTION! In order to reduce the risk of fire, only use UL Listed or CSA certified cables with sections greater than or equal to 0.14mm² (26AWG).

15.1 H5A Rugged PTZ camera

15.1.1 General

Easy installation thanks to the self-centering connector

Zero backlash

Quick configuration and setup

Dynamic positioning control system

Functions: Preset, Preset Tour (Patrol), Autoflip, Autopan via Preset Tour

Maximum number of presets: 250

15.1.2 Mechanical

Constructed from aluminium and technopolymer

Epoxy-polyester powder painted, standard colour grey-white (RAL9002)

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90° (inverted installation, from -40° up to +90°)

Horizontal speed (variable): from 0.1°/s up to 250°/s

Tilt speed (variable): from 0.1°/s up to 250°/s

Accuracy of preset positions: 0.05°

Cable glands: 2xM16 + 1xM20 + special gasket for pre-wired Ethernet cables

Unit weight: 7.1kg (15.6lb) (7.4kg (16.3lb) with LED illuminator)

Glass window

- Thick: 6mm (0.24in)

15.1.3 Electrical

Supply voltage/Current consumption:

- PoE 90W using POE-INJ-BT-90W-NA. Device is compatible with other IEEE802.3bt Class 8 power sources, but operation is not guaranteed.
- 24Vac ±10%, 50/60Hz, 100VA max (aux power supply)
- 24Vdc ±10%, 71W max (aux power supply)

Power consumption with illuminator off:

- 20W, PTZ stationary, heating switched off (with the ECO-MODE function enabled, energy saving function that is activated only when the PTZ is stationary)
- 28W, PTZ stationary, heating switched off (with the ECO-MODE function not enabled)
- 28W, PTZ moving, heating switched off
- 51W, peak at start-up, heating and de-icing functions switched on

Power consumption with illuminator on:

- 34W, PTZ stationary, heating switched off (with the ECO-MODE function enabled, energy saving function that is activated only when the PTZ is stationary)
- 41W, PTZ stationary, heating switched off (with the ECO-MODE function not enabled)
- 41W, PTZ moving, heating switched off
- 66W, peak at start-up, heating and de-icing functions switched on

Power supply cables section: from 0.75mm² (18AWG) up to 2.5mm² (13AWG)

Cables signal section: from 0.14mm² (26AWG) up to 1mm² (17AWG)

Multipolar cable sheath diameter:

- Cable glands M16: from 4.5mm (0.2in) up to 10mm (0.4in)
- Cable glands M20: from 8mm (0.3in) up to 13mm (0.5in)

Alarm inputs: 2 (auto-powered from 12Vdc up to 18Vdc)

Relay outputs: 2 (1A, 30Vac/30Vdc max)

15.1.4 Network

Ethernet connection: 100 Base-TX

Connector: RJ45

15.1.5 Illuminators

LED illuminator

Wavelength: 850nm, 940nm (only AVUEIxxx), white light

AVUEIxxx

- Wide beam: 40° (horizontal), 16° (vertical)
- Spot beam: 14° (horizontal), 14° (vertical)

AVUEIxxxP

- Wide beam: 13° (horizontal), 13° (vertical)
- Spot beam: 13° (horizontal), 13° (vertical)

Wide beam activation: based on the scene brightness, from alarm input or manually

Spot beam activation (can be activated only when the wide beam is active): can be activated on preset, based on the zoom factor or with the wide beam

Automatic and remote switching on

No calibration required for light beam alignment with the camera

The illuminator does not slow down the P&T's rotation speed

Automatic recognition of the type of illuminator installed

15.1.6 Environment

For indoors and outdoors installation

Operating temperature

- Continuous functioning: from -40°C (-40°F) up to +65°C (149°F)
- De-icing function intervention: from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

- PTZ static: 230km/h (143mph) max.
- PTZ in motion at the maximum speed with LED illuminator: 230km/h (143mph) max.

Relative humidity: from 5% up to 95%

16 Technical drawings

The indicated measurements are expressed in millimetres.

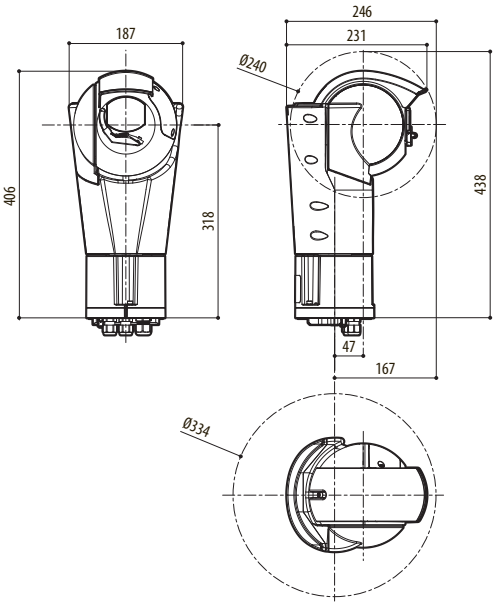

Fig. 36 H5A Rugged PTZ Camera.

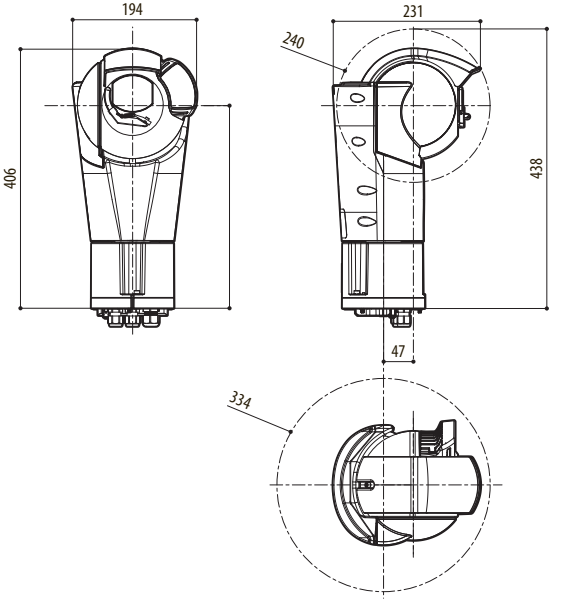

Fig. 37 H5A Rugged PTZ Camera with LED illuminator.

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