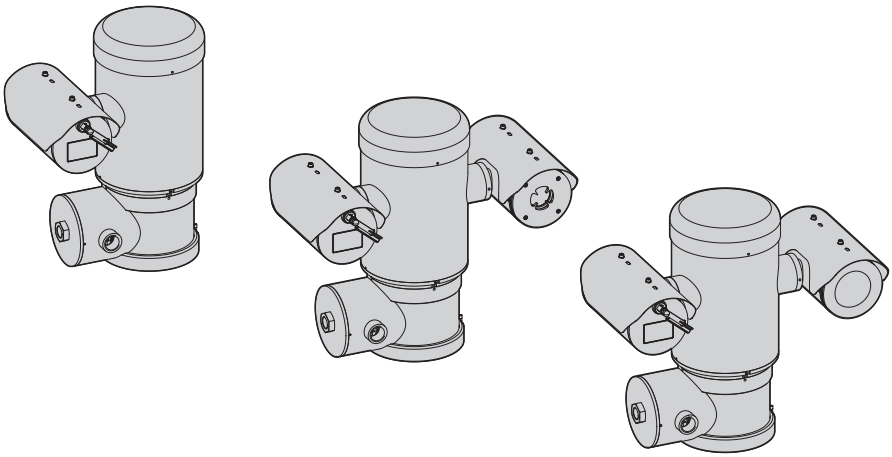
MAXIMUS MPX SERIES2 (MPXHD)
MAXIMUS MPXL SERIES2 (MPXL)
MAXIMUS MPXT SERIES2 (MPXT)

Flameproof PTZ camera



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.

This document has been compiled and published using product descriptions and specifications available at the time of publication. The contents of this document and the specifications of the products discussed herein are subject to change without notice. Pelco Inc. reserves the right to make any such changes without notice. Neither Pelco Inc. nor any of its affiliated companies: (1) guarantees the completeness or accuracy of the information contained in this document; or (2) is responsible for your use of, or reliance on, the information. Pelco Inc. shall not be responsible for any losses or damages (including consequential damages) caused by reliance on the information presented herein.

For greater certainty, the use of "manufacturer" in this manual means "VIDEOTEC s.r.l.".

1.1 Typographical conventions

DANGER!
Explosion hazard.
Read carefully to avoid danger of explosion.

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.

DANGER!
Hot surface.
Avoid contact. Surfaces are hot and may cause personal injury if touched.

DANGER!
Emission of visible light or infrared.
Can be harmful for eyes. Pay attention to the provided indications.

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.

Underlined titles
Information is subject to certifications.

2 Notes on copyright and information on trademarks

The mentioned names of products or companies are trademarks or registered trademarks.

Pelco, the Pelco logo, and other trademarks associated with Pelco products referred to in this publication are trademarks of Pelco, Inc. or its affiliates.

ONVIF® is a trademark of Onvif, Inc.

Other names or logos mentioned herein may be the trademarks of their respective owners.

The absence of the symbols ™ and ® in proximity to each trademark in this document or at all is not a disclaimer of ownership of the related trademark.

Covered by one or more claims of the patents listed at patentlist.hevcadvance.com.

3 Safety rules

DANGER!
Explosion hazard.
Read carefully to avoid danger of explosion.

- Installation and maintenance of the appliance must be carried out by specialist technical staff in compliance with the applicable reference standard EN/IEC 60079-14, EN/IEC 60079-17 and national standards.
- Do not open the device when powered and in explosive atmosphere.
- 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.
- Make all connections, installation and maintenance work in a non-explosive atmosphere.
- The equipotential connection is mandatory to avoid the risk of ignition of products installed in potentially explosive environments.
- This device must be connected to an earth conductor (protective earth). This connection must only be performed through the power line connector. External equipotential bonding connections must also be performed but only for supplementary bonding connection to earth, and required by local codes or authority.
- Before powering the product in an explosive atmosphere, ensure the cover is closed correctly.
- The temperature of the surfaces of the device is increased by exposure to direct sunlight. The surface temperature class of the device was determined only with ambient ambient temperature, without taking into consideration direct sunlight.
- Make sure that all the equipment are certified for the application and for the environment in which they will be installed.
- Any change that is not expressly approved by the manufacturer will invalidate the warranty.

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

- Make sure that the power is off when installing or carrying out maintenance, with the circuit-breaker open.
- A power disconnect device must be included in the electrical installation, and it must be very quickly recognizable and operated if needed.
- The electrical system to which the unit is connected must be equipped with a 16A 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).
- Be careful not to use cables that seem worn or old.
- 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.
- All the cables must comply with IEC60332-1-2, IEC 60332-1-3 and IEC/EN60079-14.
- When commencing installation make sure that the specifications for the power supply for the installation correspond with those required by the device.
- For continued protection against risk of fire, replace only with same type and rating of fuse. Fuses must be replaced only by service personnel.
- This equipment is not suitable for use in locations where children are likely to be present.

DANGER!
Mechanical hazard.
Risk of crushing or shearing.

- Hazardous moving parts. Keep fingers and other body parts away.

DANGER!
Hot surface.
Avoid contact. Surfaces are hot and may cause personal injury if touched.

- 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.

DANGER!
Emission of visible light or infrared.
Can be harmful for eyes. Pay attention to the provided indications.

- Do not stare at the lamp when on. Can be harmful for eyes.
- CAUTION! The infrared LED illuminator emits high-intensity visible light. In compliance with standard EN62471/IEC62471, the photobiological safety assessment has classified the device in Risk Group 2, where it exceeds the values of the Exempt Group. The risk linked to the observer depends on how the product has been installed and is used. For installation, follow the instructions in this manual. Do not look directly at the illuminator using optical lenses. Exposure hazard values (EHV): 30.1s. Hazard distances (HD): 200mm.
- CAUTION! The white LED illuminator emits visible high intensity light. In compliance with standard EN62471/IEC62471, the photobiological safety assessment has classified the device in Risk Group 2, where it exceeds the values of the Exempt Group. The risk linked to the observer depends on how the product has been installed and is used. For installation, follow the instructions in this manual. Do not look directly at the illuminator using optical lenses. Exposure hazard values (EHV): 33.3s. Hazard distances (HD): 200mm.

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.

- Make sure that the installation complies with local regulations and specifications.
- Make connections and tests in the laboratory before carrying out installation on site.
- Check that the power supply socket and cable are adequately dimensioned.
- Use suitable cables that can withstand the operating temperatures.
- All disconnected cables must be electrically isolated.
- The system can be installed only in a standard or inverted position (ceiling mount).
- Make sure the product is secured to building before operation.
- At start up the system makes some automatic calibration movements: do not stand near the device when it is powering on.
- 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 technical services, consult only and exclusively authorized technicians.
- This product must only be repaired by suitably trained personnel or under the supervision of VIDEOTEC personnel in accordance with the foreseen terms and conditions: IEC/EN60079-19.
- Only use original VIDEOTEC. Strictly adhere to the maintenance instructions attached to each replacement kit.

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

- Given the considerable weight of the system, use an appropriate transport and handling system. The staff must carry out the handling of the product in compliance with the common accident prevention standards.
- Before proceeding with installation, check the supplied material to make sure it corresponds to the order specification by examining the identification labels.
- Equipment is intended for installation in restricted access area.
- 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.
- 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. Use methods and materials capable of supporting at least 4 times the weight of the device.
- Contact the manufacturer for information on the dimensions of the flameproof joint.
- For all maintenance interventions, we recommend you return the product to the laboratory that will perform all required operations.
- This device is remotely controlled and may change position at any time. 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.
- 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.
- To comply with the main supply voltage dips and short interruption requirements, use a suitable Uninterruptible Power Supply (UPS) to power the unit.
- 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.

4 Product description and type designation

The MAXIMUS MPX series is a range of electropolished AISI316L steel PTZ cameras that can be installed in potentially explosive environments.

The MAXIMUS MPX series is equipped with a NPT or metric cables entry according to the model.

The MAXIMUS MPX series has an IP66/IP68/IP69 degree of protection and can be installed in environments with temperatures from -40°C to +80°C (check the marking for each model available).

Versions are available with: visible camera, thermal camera, visual and thermal camera, visible camera with LED illuminator (IR or visible light).

4.1 Range of use

The unit is designed for use in a fixed location, for surveillance of areas classified as zone 1-21 and zone 2-22 with potentially explosive atmospheres.

The unit has been built and certified in compliance with directive 2014/34/UE and with the international standards IECEX, which define its range of application and minimum safety requirements.

4.2 Specific use conditions

Contact the manufacturer for information on the dimensions of the flameproof joint.

Ambient temperature and Surface temperature – see instructions.

Care shall be taken to prevent accumulation of electrostatic charges. See installation instructions.

The unit can be only installed in standard or inverted position.

4.3 Gas Group, Dust Group and Temperatures

The device is certified for the IIC group (Gas) and the IIIC group (dust).

The temperature class, the maximum surface temperature and the temperature of the cables entry depend on the characteristics of the installable devices (dissipated power, Watt) and the ambient temperature.

The features are specified for each model in its specific chapters.

4.4 Characteristics of installable devices

All the internal components must be installed inside by the manufacturer.

4.5 Cable entry

The product is supplied with plastic caps for cable entry protection. They cannot be used for installation.

Unused cable entries must be closed using appropriate Ex certified locking devices with "db" and "tb" explosion protection, suitable for the use conditions and installed correctly.

All cable glands shall be Ex certified, as appropriate, with protection type "db" and "tb", suitable for the conditions of use and installed correctly.

When conduit is used, a suitable Ex certified stopping box shall be used, as appropriate, with protection type "db" and "tb", suitable for the conditions of use and installed correctly.

The stopping box must be fitted within 50mm (1.97in) from the enclosure entry.

The cable entry temperatures are specified in the marking.

To maintain the IP level of product use cable glands with appropriate IP level and apply to threads a sealant compliant with standard IEC/EN60079-14.

4.5.1 Stopping plug

The stopping plug supplied is not KCs certified.

With the product, an Ex certified stopping plug is supplied with “db” and “tb” explosion-proof type protection. Thread sealant is also supplied, in compliance with IEC/EN60079-14, the use ensure the IP degree.

The stopping plug installation instructions are available on https://peppers.co.uk.

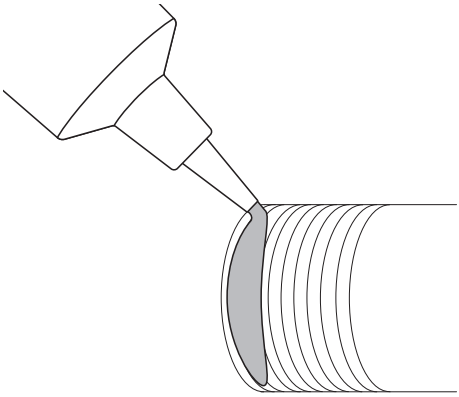

Fig. 1

4.6 Product marking

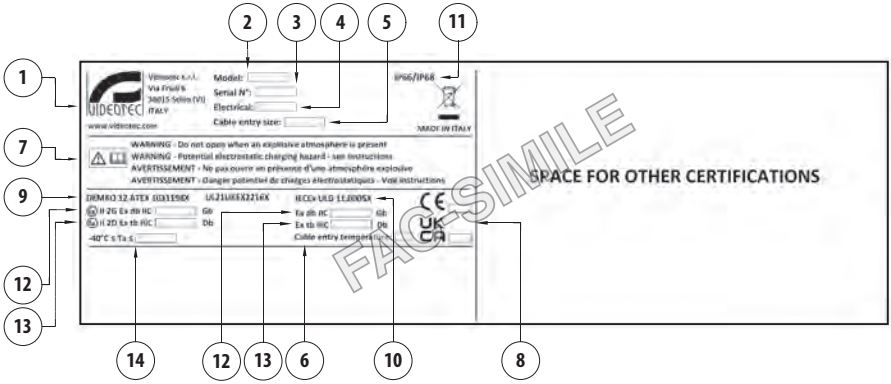

Fig. 2

1. Manufacturer's name and address.
2. Model.
3. The serial number consists in 12 numeric characters, the second and third digits define the last two numbers of the year of manufacture.
4. Electrical characteristics (voltage V, frequency Hz, current A, power W).
5. Number, dimension and type of cable entries.
6. Cable entry temperature.
7. Warnings.
8. The number of the accredited body that provides the quality assessment.
9. ATEX marking. The Class temperature depends on the electronics installed inside and the ambient temperature.
10. IECEx marking. The Class temperature depends on the electronics installed inside and the ambient temperature.
11. IP protection degree.
12. T Class (Tx or Tx...Tx).
13. Maximum surface temperature (Tx°C or Tx°C... Tx°C).
14. Ambient temperature (-40°C ≤ Ta ≤+TX°C, -40°C ≤ Ta ≤ TX°C or TX°C, -40°C ≤ Ta ≤ TX°C or TX°C or TX°C).

Example of marking:

EXAMPLE DATA				
Dissipated power in housing (W)	**T Class**	**Maximum surface temperature**	**Cable entry temperature**	**Ambient temperature**
7	T4	T135°C	90°C	-40°C ≤ Ta ≤ 80°C
	T6…T5	T85°C…T100°C	80°C	-40°C ≤ Ta ≤ 60°C or 70°C
	T6…T4	T85°C...T135°C	90°C	-40°C ≤ Ta ≤ 60°C or 70°C or 80°C

Tab. 1

4.7 For UL/CSA standard reference only.

The flameproof joints are not intended to be repaired.

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

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

In the USA, the National Electrical Code (NEC) and in Canada the Canadian Electrical Code (CEC) apply to electrical equipment used on hazardous industrial premises.

Important safety instructions

WARNING: DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
AVERTISSEMENT: NE PAS OUVRIR EN PRÈSENCE D'UNE ATMOSPHÉRE EXPLOSIVE.

WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS.
AVERTISSEMENT: DANGER POTENTIEL DE CHARGES ÈLECTROSTATIQUES - VOIR INSTRUCTIONS.

WARNING: A SEAL SHALL BE INSTALLED WITHIN 50MM OF THE ENCLOSURE.
AVERTISSEMENT: UN SCELLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50MM DU BOÎTIER.

In installations according to UL/CSA standards, installation is compulsory of the separator provided as indicated in the relevant chapter (6.8 Installations according to UL/CSA standards, page 25).

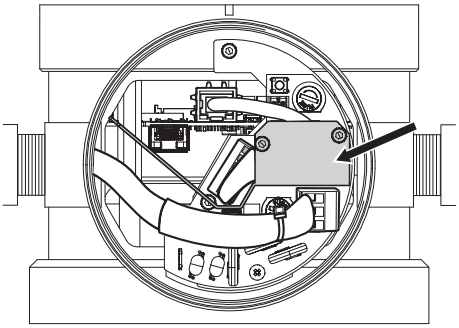

Fig. 4

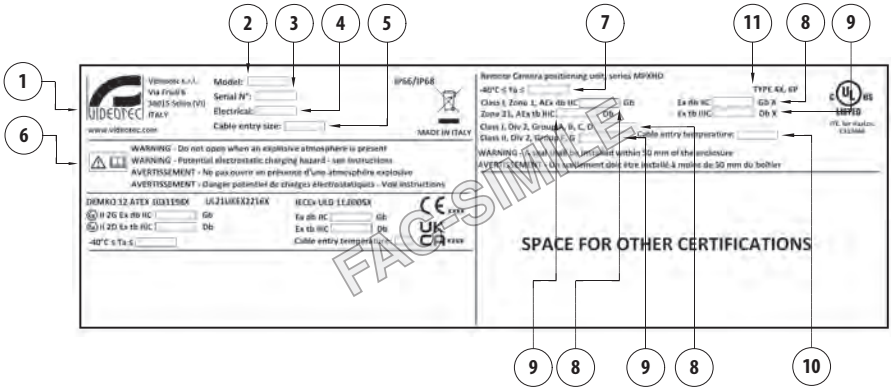

Fig. 5

1. Manufacturer's name and address.
2. Model.
3. The serial number consists in 12 numeric characters, the second and third digits define the last two numbers of the year of manufacture.
4. Electrical characteristics (voltage V, frequency Hz, current A, power W).
5. Number, dimension and type of cable entries.
6. Warnings.
7. Ambient temperature (-40°C ≤ Ta ≤+TX°C, -40°C ≤ Ta ≤ TX°C or TX°C, -40°C ≤ Ta ≤ TX°C or TX°C or TX°C).
8. T Class (Tx or Tx...Tx).
9. Maximum surface temperature (Tx°C or Tx°C... Tx°C).
10. Cable entry temperature.
11. Level of protection Type.

Connections

The choice of connection must comply with local legislation in force.

Cable glands: select a cable gland in compliance with UL2225 with the following protection AEx db IIC and/or AEx tb IIIC and C22.2 with the following protection Ex db IIC and/or Ex tb IIIC in compliance with the marking of the product.
Conduit: it is necessary to install a sealing device within 50mm of the product input when the conduit is used.

Regulation references:

UL 60079-0, 7th Edition, Explosive Atmospheres - Part 0: Equipment – General requirements

UL 60079-1, 7th Edition, Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d"

UL 60079-31, 2nd Edition, Explosive Atmospheres - Part 31: Equipment Dust Ignition Protection by Enclosure "t"

CSA C22.2 No. 60079-0:19, Explosive Atmospheres - Part 0: Equipment - General requirements

CSA C22.2 No. 60079-1:16, Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d"

CSA C22.2 No. 60079-31:15, Explosive Atmospheres - Part 31: Equipment Dust Ignition Protection by Enclosure "t"

4.8 Model identification

4.8.1 Day/Night camera

MAXIMUS MPX SERIES2 - CONFIGURATION OPTIONS								
	Voltage	**Camera**	**Temperature class and ambient temperature**	**Options**				
MPXHD	**1** 230Vac	**5** Pelco® Day/Night 30X zoom, Full HD camera	**E** T6...T5 -40°C/+55°C or +70°C	**0** Without accessories	**0**	**0**	**C**
	2 24Vac			**S** With SD CARD			
	3 120Vac						
	5 220Vac						
	6 100Vac						

Tab. 2 MAXIMUS MPX SERIES2 (MPXHD)

MAXIMUS MPX SERIES2 - CERTIFICATIONS AND MARKINGS				
Part number	**Certification**	**Marking**	**Ambient temperature**	**Cable entry temperature**
MPXHD*5E**C	ATEX	Ⓔx II 2 G Ex db IIC T6...T5 Gb Ⓔx II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +55°C or +70°C	80°C
	IECEx	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	UK Ex	Ⓔx II 2 G Ex db IIC T6...T5 Gb Ⓔx II 2D Ex tb IIIC T85°C...T100°C Db		
	Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F and G T6...T5		80°C with Ta = 69°C 81°C with Ta = 70°C
	Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F and G T6...T5		

Tab. 3 MAXIMUS MPX SERIES2 (MPXHD)

4.8.2 Day/Night camera with LED illuminator

MAXIMUS MPXL SERIES2 - CONFIGURATION OPTIONS													
	Voltage		**Day/Night camera**		**Illuminator**		**Lens**		**Temperature class and ambient temperature**		**Accessories**		
MPXL	**1**	from 220Vac up to 230Vac	**5**	Pelco® camera, Day/Night 30X zoom, FullHD	**8**	850nm	**2**	Spot, Wide	**F**	ATEX - IECEx - INMETRO - EAC Ex - KCs - UK Ex T6...T4 -40°C/+50°C or +60°C or +70°C cULus T5...T4 -40°C/+40°C or +60°C	**0**	Without accessories	**00C**
	2	24Vac			**W**	White light					**S**	With SD CARD	
	3	120Vac											
	6	100Vac											

Tab. 4 MAXIMUS MPXL SERIES2 (MPXL)

MAXIMUS MPXL SERIES2 - CERTIFICATIONS AND MARKINGS				
Part number	**Certification**	**Marking**	**Ambient temperature**	**Cable entry temperature**
MPXL1582F**C, MPXL2582F**C, MPXL3582F**C	ATEX	⟨Ex⟩ II 2G Ex db IIC T6...T4 Gb ⟨Ex⟩ II 2D Ex tb IIIC T85°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C or +70°C (T6/T85°C with Ta ≤ +50°C) (T5/T100°C with Ta ≤ +60°C) (T4/T135°C with Ta ≤ +70°C)	+80°C with Ta ≤ +60°C +90°C with Ta ≤ +70°C
	IECEx	Ex db IIC T6...T4 Gb Ex tb IIIC T85°C...T135°C Db		
	EAC Ex	1Ex db IIC T6...T4 Gb X Ex tb IIIC T85°C...T135°C Db X		
	INMETRO	Ex db IIC T6...T4 Gb Ex tb IIIC T85°C...T135°C Db		
	KCs	Ex db IIC T6...T4 Gb Ex tb IIIC T85°C...T135°C Db		
	UK Ex	⟨Ex⟩ II 2G Ex db IIC T6...T4 Gb ⟨Ex⟩ II 2D Ex tb IIIC T85°C...T135°C Db		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4	-40°C ≤ Ta ≤ +40°C or +60°C (T5/T100°C with Ta ≤ +40°C) (T4/T135°C with Ta ≤ +60°C)	+80°C
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		

Tab. 5 MAXIMUS MPXL SERIES2 (MPXL)

4.8.3 Unit with Day/Night and thermal camera

MAXIMUS MPXT SERIES2 - CONFIGURATION OPTIONS						
	Voltage	**Day/Night camera**	**Thermal Camera**	**Temperature class and ambient temperature**	**Options**	**Frequency**
MPXT	**1** 230Vac	**5** Pelco® Day/Night 30X zoom, Full HD camera	**C** 34° HFOV, Thermal camera 6.3mm, 320x256	**H** ATEX - IECEx - INMETRO - EAC Ex - KCs - UK -40°C ≤ Ta ≤ +50°C or +70°C (T6/T85°C with Ta ≤+50°C) (T5/T100°C with Ta ≤+70°C) cULus -40°C ≤ Ta ≤ +50°C or +65°C or +70°C (T6/T85°C with Ta ≤+50°C) (T5/T100°C with Ta ≤+65°C) (T4/T135°C with Ta ≤+70°C)	**S00** With SD CARD	**D** **-** 9Hz
	2 24Vac		**F** 12° HFOV, Thermal camera 18mm, 320x256			**H** 30Hz
	3 120Vac		**L** 33° HFOV, Thermal camera 14mm, 640x512			
	5 220Vac		**N** 18° HFOV, Thermal camera 24.4mm, 640x512			

Tab. 6 MAXIMUS MPXT SERIES2 (MPXT)

MAXIMUS MPXT SERIES2 - CERTIFICATIONS AND MARKINGS				
Part number	**Certification**	**Marking**	**Ambient temperature**	**Cable entry temperature**
MPXT*5*HS*D*	ATEX	⟨Ex⟩ II 2G Ex db IIC T6...T5 Gb ⟨Ex⟩ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +50°C or +70°C (T6/T85°C with Ta ≤ +50°C) (T5/T100°C with Ta ≤ +70°C)	+81°C with Ta ≤ +70°C +80°C with Ta ≤ +69°C
	IECEx	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	UK Ex	⟨Ex⟩ II 2G Ex db IIC T6...T5 Gb ⟨Ex⟩ II 2D Ex tb IIIC T85°C...T100°C Db		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T4 Gb Zone 21, AEx tb IIIC T85°C...T135°C Db Class I, Div 2, Group A, B, C, D T6...T4 Class II, Div 2, Group F, G T6...T4	-40°C ≤ Ta ≤ +50°C or +65°C or +70°C (T6/T85°C with Ta ≤ +50°C) (T5/T100°C with Ta ≤ +65°C) (T4/T85°C with Ta ≤ +70°C)	+83°C with Ta ≤ +70°C +80°C with Ta ≤ +67°C
	UL Hazardous Location Canada	Ex db IIC T6...T4 Gb X Ex tb IIIC T85°C...T135°C Db X Class I, Div 2, Group A, B, C, D T6...T4 Class II, Div 2, Group F, G T6...T4		

Tab. 7 MAXIMUS MPXT SERIES2 (MPXT)

5 Preparing the product for use

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

5.1 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.

5.2 Contents

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

- Flameproof PTZ camera
- Sunshield (2 for MAXIMUS MPXT SERIES2 and MAXIMUS MPXL SERIES2)
- Silicone sheath
- O-ring replacement part kit, hexagon socket set screws
- Stopping plug
- Sealant
- Cable ties
- Separation barrier for installations according to UL/CSA standards
- Instruction manual

5.3 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

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

PELCO strongly recommend to test the device configuration and performance before putting it in the final installation site.

6.1 Installation options

It is possible to install the unit with several brackets.

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

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.

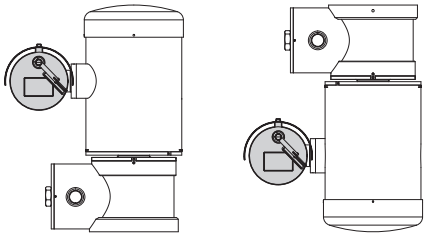

Fig. 6

6.1.1 Fixing to parapet or ceiling mount

Fix the adaptor (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.

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.

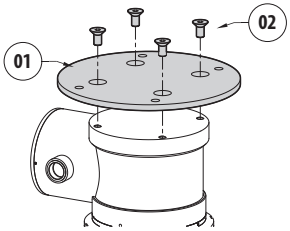

Fig. 7

Use the external holes in the adapter 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.

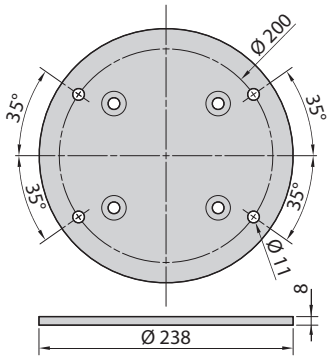

Fig. 8

6.1.2 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 four times the weight of the unit.

Then, fix the device to the bracket using the 4 flat washers, the 4 spring washers in stainless steel and the 4 hexagonal head screws in stainless steel (A4 class 70) supplied (M10x20mm).

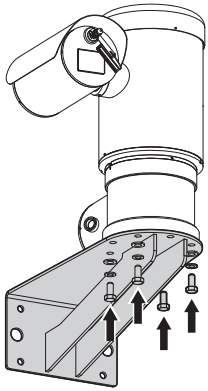

Fig. 9

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.

6.1.3 Fixing with corner adaptor module or pole

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

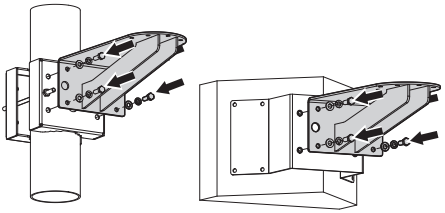

Fig. 10

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.

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.

To fix the device to the bracket, consult the relevant chapter (6.1.2 Fixing with wall mount bracket, page 19).

6.1.4 Sunshield mounting

Remove the protective film before the sunshield installation (if present).

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

Fix the sunshield to the housing using the screws and washers screwed into the upper body of the housing.

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

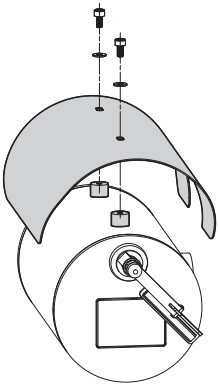

Fig. 11

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

6.2 Opening of the connections compartment

The safety grub screw is used to prevent the unscrewing of the threaded cover from the connection compartment. Remove the security grub screw before unscrewing the threaded cover.

The bottom of the unit has no.2 3/4" NPT cable entries (or M25 special version).

To install the connections, remove the safety grub screw (01) using a male 1.5mm hex key, the threaded cover (02) (30mm hex nut) and the plastic plugs (03).

The plastic plugs are only used for shipping purposes and should not be used during operation.

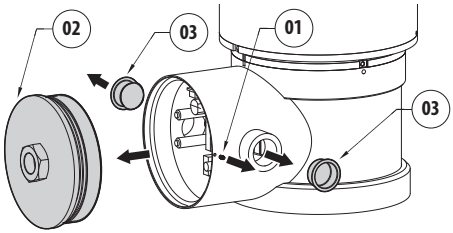

Fig. 12

By unscrewing the threaded lid, the connectors are accessed.

6.3 Connector board description

BOARD DESCRIPTION		
Connector	**Function**	**Terminals - Nominal section of the cables used**
J1	Power supply line	from 0.2mm² (24AWG) up to 2.5mm² (13AWG)
J6	Alarms, Remote reset and serial line	from 0.2mm² (24AWG) up to 1.0mm² (17AWG)
J8	Relay	from 0.2mm² (24AWG) up to 1.0mm² (17AWG)
F1	Fuse	-
F2	Fuse	-
P1	Reset push-button	-
RJ45	Ethernet Connector	-
SFP	SFP connector	-

Tab. 8

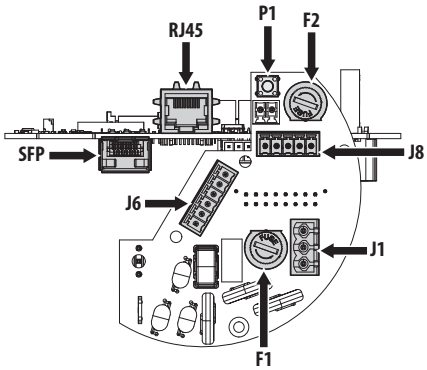

Fig. 13

6.4 Ground connection

6.4.1 Earthing equipotential connection

The equipotential connection must be carried out using an external cable with a minimum 4mm² section (11AWG).

Connect the cable for the earthing equipotential connection with the eyelet terminal supplied (suitable for cables with 4mm² (11AWG) up to 6mm² (9AWG) section).

Fasten the eyelet using the M5 screw and lock washer supplied.

Characteristics of the M5 screw:

- Material: A4 Class 70
- Screw head: ISO 4762
- Length: 8mm (0.3in)

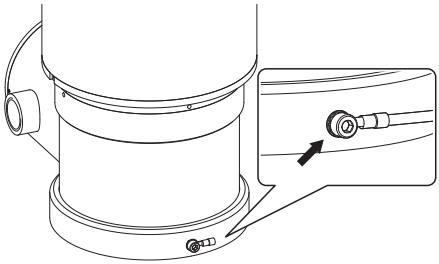

Fig. 14

6.4.2 Connection of the safety earthing

The earthing cable must be connected to the internal connector (J1, 6.3 Connector board description, page 21).

6.5 Connecting the power supply

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.

Earth cable should be about 10mm longer than the other two, so that it will not be disconnected accidentally if pulled.

The ground conductor should be equal or greater in section than the section of the power supply cables.

The power supply cable must be covered by the silicone sheath (01) supplied. The silicone sheath must be fastened with the corresponding cable tie (02). For installations according to UL/CSA standards, pass the power supply cable through the cables input on the left (03), as indicated in the figure.

If using the PELCO multipolar cable and a fibre optic cable, you are advised to use the left cables input (03) for the multipolar cable and the right cables input (04) for the fibre optic.

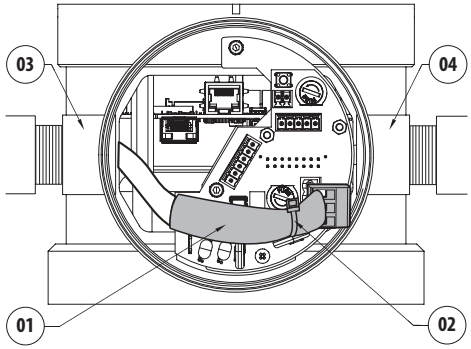

Fig. 15

Extract the removable power line connector from the connector board (J1, 6.3 Connector board description, page 21).

Connect the electrical power cables as indicated in the relevant table (Tab. 9, page 23).

CONNECTING THE POWER SUPPLY	
Cable colour	**Terminals**
Power supply 24Vac	
Defined by the installer	~/24Vac
Defined by the installer	~/24Vac
Yellow/Green	⏚
Power supply 100Vac, 120Vac, 220Vac, 230Vac	
Blue	(N) Neutral
Brown	(L) Phase
Yellow/Green	⏚

Tab. 9

6.6 Connecting alarms, remote reset and relays

All signal cables must be grouped together by means of a cable tie.

CONNECTION OF THE ALARM INPUTS AND RELAYS		
Connectors	**Terminals**	**Description**
J6	AL1, COM	Self-powered alarm input fitted in the common terminal
	RST, RST	Remote reset
J8	RL1A, RL1B	Dry output contacts, can be activated by alarm or by user control
	RL2A, RL2B	Contact for washer pump activation

Tab. 10

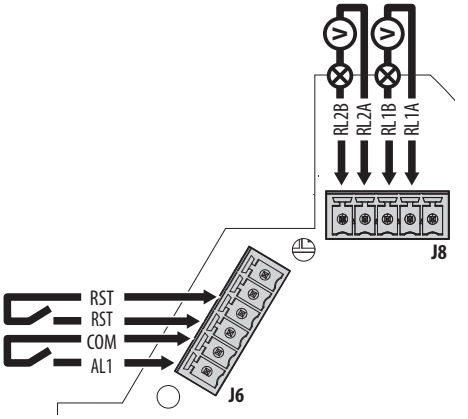

Fig. 16

6.6.1 Connecting an alarm with dry contact

Connect terminals AL1 and COM to connector J6 as shown in the image (Fig. 16, page 23).

Maximum length of the alarm cables: 200m (656ft).

Use a shielded cable to carry out the connection.

6.6.2 Remote Factory Default connection

Connect the two RST terminals on connector J6 as illustrated in the figure (Fig. 16, page 23).

Maximum cable length: 200m (656ft).

Read the Factory Default chapter to find out how to use the remote reset (10.2.2 Factory Default, page 30).

6.6.3 Relays connection

Maximum relay voltage and current: read the technical data in the relevant chapter (14 Technical data, page 32).

Connect terminals RL1A, RL1B, RL2A, RL2B to connector J8 as shown in the image (Fig. 16, page 23).

The device can be equipped with a washing system as an accessory. Use the terminals RL2A and RL2B to control the wash system.

6.7 Ethernet connection

The product is equipped with an integrated Ethernet switch that manages a RJ45 port and a slot for SFP modules.

6.7.1 Connection via RJ45

Make connections in accordance with the TIA/EIA-568-B standard.

Connect the Ethernet cable to port RJ45 (6.3 Connector board description, page 21).

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

- STP (isolated)
- Category 5E or category 6

Use a shielded RJ45 connector on both ends of the cable. The Ethernet cable shield (user side) must always be earthed via the connector.

6.7.2 Connection via SFP

The optical modules compliant with the SFP (Small Form Factor Pluggable) standard are conversion devices of the electrical to optical signal and the optical to electrical signal.

The SFP module should be suitable for the installation system.

Consult the SFP module manual for the relevant specifications.

The SFP module (not supplied by PELCO) must meet the following requirements:

- **Laser: Class 1, complies with EN60825-1**
- **UL/IEC 60950-1 or UL/IEC 62368-1 Certification**

The user switch, connected via the SFP module, must work at a speed of 100Mbps. Check the settings of the switch to which the product is connected.

PELCO has tested various types of SFP modules. For further information please contact the PELCO service center.

Insert the SFP module (not supplied) in the SFP slot (6.3 Connector board description, page 21).

6.8 Installations according to UL/ CSA standards

Pay attention not to damage the conductors and the boards.

For installations according to UL/CSA standards, the cables for Ethernet, reset, alarms, relays and fibre optics should be inserted in the right cables entry (01) as indicated in the following figure (Fig. 17, page 25).

For installations according to UL/CSA standards, pass the power supply cable through the cables input on the left (02), as indicated in the figure (Fig. 17, page 25).

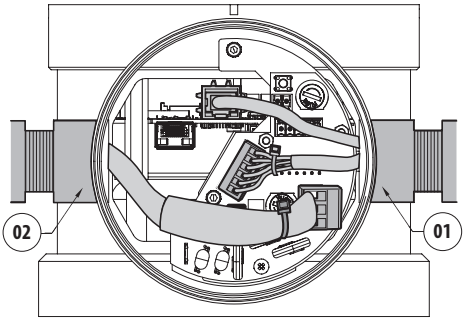

Fig. 17

In installations according to UL/CSA standards, installation is compulsory of the separation barrier provided.

Having inserted all the connectors and before powering the device, install the separation barrier supplied.
Fasten the barrier (01) using the specific screws and washers (02) to the prepared spacers (03) (Fig. 18, page 25 and Fig. 19, page 25).

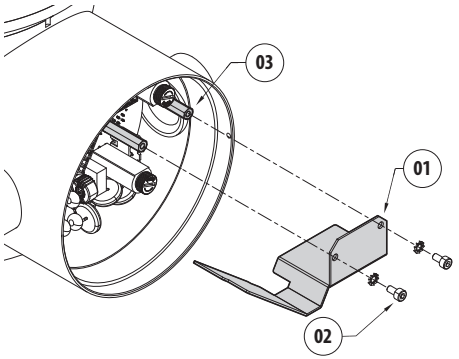

Fig. 18

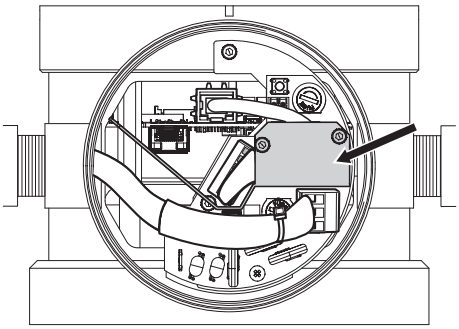

Fig. 19

6.9 Connection compartment closing

If you can't turn by hand the threaded lid before the OR reaches the tube of the connection compartment this means that there are debris\dirt on the threads or that the lid is misaligned. In this case there's a serious danger of threads damaging. Unscrew the lid and check the alignement and/or clean the threads.

Never force the rotation of threaded lid before the OR reaches the connection compartment, otherwise thread damage could occur.

If you suspect that any kind of thread damaging has occurred, suspend the installation. The device could be no longer safe for the installation on a potentially explosive atmosphere. In this case contact VIDEOTEC technical support.

Before closing the cover, check the integrity of the O-ring gasket. If the gasket is damaged, replace it with the one supplied (10.1.2 Replacing the gasket, page 28).

Verify that there is no dirt or debris.

Lubricate the threads with grease compliant with IEC/EN60079-14 to facilitate screwing the cover on.

Arrange the cables so that there is no interference when closing the threaded lid of the connection compartment.

Screw by hand the threaded lid of the connection compartment till the OR gasket reaches the tube.

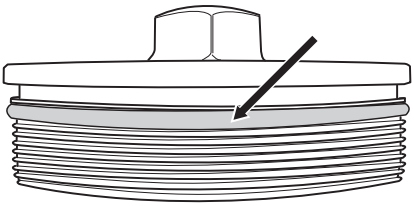

Fig. 20

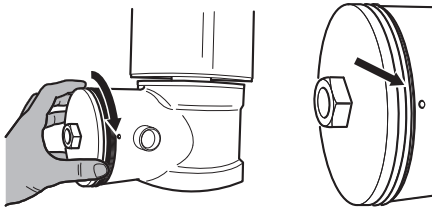

Fig. 21

Use a 30mm wrench for closing the threaded lid of the connection compartment. Make sure that there's no gap between the threaded cap and the junction box tube after tightening the cap.

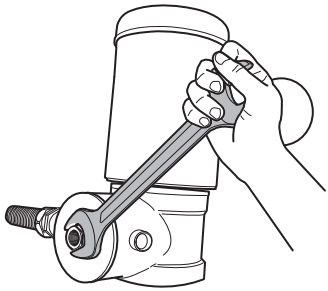

Fig. 22

Fixing the safety grub screw is necessary to complete product closure, to prevent unwanted unscrewing of the threaded plug.

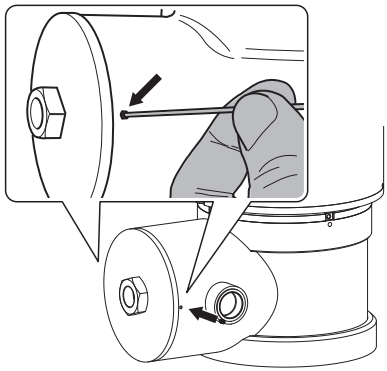

Fig. 23

7 Switching on

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

The automatic pre-heating (De-Ice) process could be started whenever the device is switched on and the ambient temperature is below -10°C (+14°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.

It takes a few minutes for the unit to become fully operational after it is switched on.

To switch off the unit disconnect the power.

8 Configuration

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. Configuring the IP address of the PC as belonging to the same subnet (example: IP address: 169.254.1.1, subnet mask: 255.255.0.0).

Use an ONVIF compliant VMS or the Motorola Solutions Camera Configuration Tool to find the IP address of the device.

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 address: http://IP address.

On first access, the Home page will be displayed.

Additional information about setting up and using the device is available in: www.pelco.com/exsite-enhanced-2

9 Instructions for normal operation

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

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.

The device control can be performed through different modes:

- Through the user's controls of the web interface (8.2 Web interface, page 27).
- Through Video Management Software (VMS) that supports the ONVIF protocol. In this case the special controls are implemented using the auxiliary commands of the ONVIF protocol.

9.1 Enabling the LED illuminator

MAXIMUS MPXL is equipped with a LED illuminator. The illuminator is composed of two groups of LEDs called SPOT and WIDE. The operating parameters of the illuminator are set using the web interface of the PTZ unit.

10 Maintenance

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

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

Use only VIDEOTEC 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 this case extraordinary maintenance is necessary.

10.1.2 Replacing the gasket

Replace the connection compartment cover seal using the one supplied.

Open and close the connection compartment as described in the previous chapters.

Replace the gasket, paying attention to position it correctly.

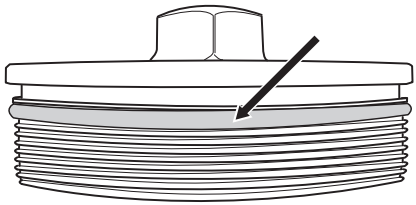

Fig. 24

10.1.3 Replacement of the wiper blade

In models equipped with a wiper, the worn blades can be replaced.

Unscrew the rivet nut fastening the blade and remove it with the washers. Replace the worn blade with a new one. Apply a good quantity of threadlocker (Loctite 270), reposition the rivet nut and the washers by adjusting fastening until the blade correctly tits to the glass. Activate the wiper to check the blade is correctly adjusted.

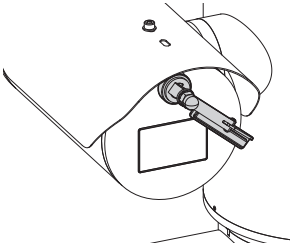

Fig. 25

10.2 Extraordinary maintenance

10.2.1 Fuse replacement

CAUTION! To ensure protection against the risk of fire, replace the fuse with one the same type and value. The fuse must only be replaced by qualified staff.

If necessary, replace the fuses illustrated in figure (6.3 Connector board description, page 21).

To maintain cULus Listed certification, the fuse must be UL Listed. 2A (OMEGA GT520220, BUSSMAN S505), 4A (OMEGA GT520240, BUSSMAN S505), 5A (OMEGA GT520250, BUSSMAN S505).

FUSES REPLACEMENT MPXHD, MPXR, MPXT		
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
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Tab. 11

FUSES REPLACEMENT MPXL		
Supply voltage	**Fuse (F1)**	**Fuse (F2)**
24Vac, 50/60Hz	T 5A H 250V 5x20	T 5A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 5A H 250V 5x20
220Vac/230Vac, 50/60Hz	T 2A H 250V 5x20	T 5A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 5A H 250V 5x20

Tab. 12

10.2.2 Factory Default

If the access password is no longer available, follow the procedure to reset to default factory settings.

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

To restore the factory settings relative to the network, user access and camera configuration follow this procedure:

- Switch off the unit.
- Open the connection compartment.
- Press and hold the reset button (P1, 6.3 Connector board description, page 21).
- Power the unit.
- Wait 30 seconds.
- Release the reset button.
- Wait for 2 minutes.
- Switch off the unit.
- Close the connections compartment.
- Power the unit.

It is also possible to perform the reset in remote mode. Follow the procedure below:

- Switch off the unit.
- Connect the RST contacts of connector J6 (6.3 Connector board description, page 21).
- Power the unit.
- Wait 30 seconds.
- Disconnect the RST contacts.
- Wait for 2 minutes.
- Switch off the unit.
- 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 27.

11 Cleaning

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

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

11.1 Routine cleaning

11.1.1 Cleaning the glass window

Cleaning should be done with mild detergent diluted with water.

11.1.1 Cleaning the germanium window

When cleaning the window, take care not to scratch or damage the outer surface treated with carbon coating. Damage to this coating could also interfere with the transparency of the surface to infrared light.

Cleaning should be done with mild detergent diluted with water.

Remove the protective grate and the spacer, unscrewing the countersunk screws on the front of the housing, using a 2mm spark-proof hexagonal wrench.

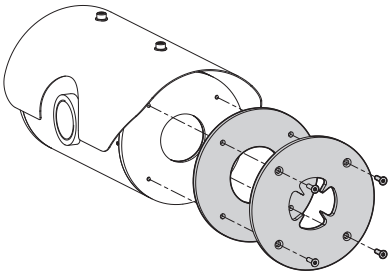

Fig. 26

Once done cleaning, reassemble the protection grid.

Pay attention to the fixing. Tightening torque: 1Nm.

11.1.2 Cleaning the product

The outside surface of the product must never be covered in more than 5 mm of dust.

The cleaning of the product should be carried out according to the instructions in this chapter in order to prevent accumulation of electrostatic charges.

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

12 Removing the SD card

12.1 Maintenance

If the SD card needs to be retrieved, contact PELCO Technical Support.

Telephone number: 1-800-289-9100.

In case of product tampering, the warranty is void.

13 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.

14 Troubleshooting

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

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 turn on.**
CAUSE	Wiring error, blown fuse.
SOLUTION	Make sure the connections are correct. Check the continuity of the fuses and replace them with the indicated models should they fail.

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.

PROBLEM	**The device does not move during the start-up phase.**
CAUSE	The ambient temperature is too low.
SOLUTION	Wait until the end of the pre-heating procedure. The following message is displayed on the web page: De-Ice procedure in progress.

PROBLEM	**The illuminator reduces in intensity or switches off.**
CAUSE	In high ambient temperatures, the illuminator automatically reduces the brightness flow.
SOLUTION	Do not intervene. To reduce the temperature, the system will automatically restart the illuminator.

15 Technical data

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 General

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

15.1.2 Mechanical

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90°

Horizontal speed (variable): from 0.1°/s up to 100°/s

Tilt speed (variable): from 0.1°/s up to 100°/s

Accuracy of preset positions: 0.02°

Integrated wiper

Window with extra clear tempered glass

- Thick: 12mm (0.47in)

Unit weight: 26.5kg (58lb)

15.1.3 Electrical

Supply voltage/Current consumption:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0.54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Power consumption:

- 120W max

15.1.4 Network

RJ45 port

- Ethernet connection: 10BASE-T/100BASE-T

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet connection:100BASE-FX
- Supply voltage: 3.3V
- Standard: MSA compliant

The SFP module (not supplied by PELCO) must meet the following requirements:

- Laser: Class 1, complies with EN60825-1
- Certification: UL/IEC 60950-1 or UL/IEC 62368-1

15.1.5 I/O interface

Input for remote reset: 1

Alarm inputs: 1

Relay outputs: 1+1 (1A, 30Vac/60Vdc max, one relay reserved for washer pump and one configurable)

15.1.6 Video

Video encoder

- Communication protocol: ONVIF, Profile G, Profile S and Profile T
- Protocols: IPv4, IPv6, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP,UDP, IGMP, ICMP, DHCP, Zeroconf, ARP
- Streaming Protocols: RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP
- Video compression: H.264, H.265, Motion JPEG
- Streaming: Multi-stream H.264, Multi-stream H.265, Motion JPEG
- Motion Detection:

Pixel motion: Selectable sensitivity and threshold

Classified object detection

- Security: Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication
- Device Management Protocols: SNMP v2c, SNMP v3

15.1.7 Cameras

Resolution: Full HD 1080p (1920x1080pixel)

Image Sensor: 1/2.8" Progressive Scan CMOS

Focal length: from 4.3mm (wide) up to 129mm (tele)

Zoom: 30x

Max Aperture: F1.6

Horizontal Angle of View Based on Aspect Ratio: (16:9) 2.3°-66°

Electronic Shutter Control: Automatic, Manual

White balance: Automatic, Manual

Wide Dynamic Range: 120dB

Exposure Control: Automatic, Manual, Priority (Iris Priority, Shutter Priority), Brightness, Custom

De-fog: On/Off

Privacy Zones

Day/Night Control: Automatic, Manual

Flicker Control: 60Hz, 50Hz

Backlight Compensation: On/Off

15.1.8 Environment

For indoors and outdoors installation

Operating temperature:

- Continuous working (in enclosed space): from -40°C (-40°F) up to +55°C (131°F)
- Continuous working (with ambient convection): from -40°C (-40°F) up to +60°C (140°F)
- De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

- PTZ static: 230km/h (143mph) max.
- PTZ operational at the maximum speed: 210km/h (130.5mph) max.

Relative humidity: from 5% up to 95%

15.1.9 Certifications

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Electromagnetic compatibility (CE): EN50130-4, EN55032 (Class A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN IEC 63000

Outdoor installation (CE): EN60950-22, IEC60950-22

Vibration test: EN50130-5, EN60068-2-6

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07) (not available for 100Vac versions): cULus Listed

UL certification (UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (not available for 100Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

IP protection degree (EN/IEC60529): IP66, IP67, IP68, IP69

Level of protection Type (UL50E) (not available for 100Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.1.10 Certifications - Explosion-proof applications

ATEX (EN IEC 60079-0, EN 60079-1, EN 60079-31)

IECEx (IEC 60079-0, IEC 60079-1, IEC 60079-31)

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac versions)

EAC Ex (TR CU 012/2011)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31)

KCs (Employment and labor department 2021-22)

15.2 MAXIMUS MPXL SERIES2 (MPXL)

15.2.1 General

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

15.2.2 Mechanical

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90°

Horizontal speed (variable): from 0.1°/s to 100°/s

Tilt speed (variable): from 0.1°/s to 100°/s

Accuracy of preset positions: 0.02°

Integrated wiper

Window with extra clear tempered glass

- Thick: 12mm (0.47in)

Unit weight: 31kg (68lb)

15.2.3 Electrical

Supply voltage/Current consumption:

- from 220Vac up to 230Vac ±10%, 0.54A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Power consumption:

- 120W max

15.2.4 Network

RJ45 port

- Ethernet connection: 10BASE-T/100BASE-T

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet connection:100BASE-FX
- Supply voltage: 3.3V
- Standard: MSA compliant

The SFP module (not supplied by PELCO) must meet the following requirements:

- Laser: Class 1, complies with EN60825-1
- Certification: UL/IEC 60950-1 or UL/IEC 62368-1

15.2.5 I/O interface

Input for remote reset: 1

Alarm inputs: 1

Relay outputs: 1+1 (1A, 30Vac/60Vdc max, one relay reserved for washer pump and one configurable)

15.2.6 Illuminators

The illuminator with IR or white LED

Number of LED groups selectable:2 (spot, wide)

Wide beam angle of dispersion: 40° (horizontal), 16° (vertical)

Spot beam angle of dispersion: 13° (horizontal), 13° (vertical)

Maximum viewing distance: 200m

Illuminator activation: configurable by software,can be activated via presets, can be activated according to the zoom factor, based on the scene brightness, from alarm input or manually

Illuminator with IR type LED

- Wavelength: 850nm
- Number of LEDs: 11

Illuminator with white light LED

- Light color temperature: 6500K
- Number of LEDs: 10

15.2.7 Environment

For indoors and outdoors installation

Operating temperature:

- Continuous working (in enclosed space): from -40°C (-40°F) up to +55°C (131°F)
- Continuous working (with ambient convection): from -40°C (-40°F) up to +60°C (140°F)
- De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

- PTZ static: 230km/h (143mph) max.
- PTZ operational at the maximum speed: 210km/h (130.5mph) max.

Relative humidity: from 5% up to 95%

15.2.8 Certifications

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Electromagnetic compatibility (CE): EN50130-4, EN55032 (Class A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN IEC 63000

Outdoor installation (CE): EN60950-22, IEC60950-22

Photobiological safety (CE): EN62471, IEC62471

Vibration test: EN50130-5, EN60068-2-6

UL certification (UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (not available for 100Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

IP protection degree (EN/IEC60529): IP66, IP67, IP68, IP69

Level of protection Type (UL50E) (not available for 100Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.9 Certifications - Explosion-proof applications

ATEX (EN IEC 60079-0, EN 60079-1, EN 60079-31)

IECEx (IEC 60079-0, IEC 60079-1, IEC 60079-31)

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac versions)

EAC Ex (TR CU 012/2011)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31)

KCs (Employment and labor department 2021-22)

UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 General

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

15.3.2 Mechanical

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90°

Horizontal speed (variable): from 0.1°/s to 100°/s

Tilt speed (variable): from 0.1°/s to 100°/s

Accuracy of preset positions: 0.02°

Integrated wiper

15.3.3 Housing's window

Window with extra clear tempered glass

- Thick: 12mm (0.47in)

Germanium window

- Thick: 8mm (0.3in)
- External treatment: antiscratch (Hard Carbon Coating - DLC)
- Internal treatment: antireflection
- Spectral range: from 7.5µm up to 14µm
- Medium transmittance (from 7.5µm up to 11.5µm): 87.5%
- Medium transmittance (from 11.5µm up to 14µm): 72.1%

Unit weight: 31kg (68lb)

15.3.4 Electrical

Supply voltage/Current consumption:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0.54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Power consumption:

- 120W max

15.3.5 Network

RJ45 port

- Ethernet connection: 10BASE-T/100BASE-T

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet connection:100BASE-FX
- Supply voltage: 3.3V
- Standard: MSA compliant

The SFP module (not supplied by PELCO) must meet the following requirements:

- Laser: Class 1, complies with EN60825-1
- Certification: UL/IEC 60950-1 or UL/IEC 62368-1

15.3.6 I/O interface

Input for remote reset: 1

Alarm inputs: 1

Relay outputs: 1+1 (1A, 30Vac/60Vdc max, one relay reserved for washer pump and one configurable)

15.3.7 Environment

For indoors and outdoors installation

Operating temperature:

- Continuous working (in enclosed space): from -40°C (-40°F) up to +55°C (131°F)
- Continuous working (with ambient convection): from -40°C (-40°F) up to +60°C (140°F)
- De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

- PTZ static: 230km/h (143mph) max.
- PTZ operational at the maximum speed: 210km/h (130.5mph) max.

Relative humidity: from 5% up to 95%

15.3.8 Certifications

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Electromagnetic compatibility (CE): EN50130-4, EN55032 (Class A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN IEC 63000

Outdoor installation (CE): EN60950-22, IEC60950-22

Photobiological safety (CE): EN62471, IEC62471

Vibration test: EN50130-5, EN60068-2-6

UL certification (UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (not available for 100Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

IP protection degree (EN/IEC60529): IP66, IP67, IP68, IP69

Level of protection Type (UL50E) (not available for 100Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.9 Certifications - Explosion-proof applications

ATEX (EN IEC 60079-0, EN 60079-1, EN 60079-31)

IECEx (IEC 60079-0, IEC 60079-1, IEC 60079-31)

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac versions)

EAC Ex (TR CU 012/2011)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31)

KCs (Employment and labor department 2021-22)

UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)

THERMAL CAMERAS (RESOLUTION 320X256)		
Lens	**6.3mm**	**18mm**
VOx microbolometer sensor not cooled	√	√
Interpolated resolution	720x480	720x480
Pixel dimensions	12µm	12µm
Spectral response - long wave infrared (LWIR)	from 7.5µm up to 14µm	from 7.5µm up to 14µm
Internal shutter (only for sensor compensation)	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√
Adaptive Contrast Enhancement (ACE)	√	√
Digital Zoom	8x	8x
Image updating frequency	7.5fps	7.5fps
Image updating high frequency	30fps	30fps
Typical dynamic range scene 320	from -40°C (-40°F) up to +160°C (320°F) or from -40°C (-40°F) up to +370°C (698°F) (selectable)	from -40°C (-40°F) up to +160°C (320°F) or from -40°C (-40°F) up to +370°C (698°F) (selectable)
Horizontal field of view	34°	12°
Vertical field of view	27.2°	9.6°
F-number	F/1.01	F/1.04
Thermal sensitivity (NETD)	< 50mK at f/1.0	< 50mK at f/1.0
Person (detection / recognition / identification)	131/33/20	381/95/59
Car (detection / recognition / identification)	608/152/94	1753/438/270

Fig. 27 Thermal camera (320X256).

THERMAL CAMERAS (RESOLUTION 640X512)		
Lens	**14mm**	**24.4mm**
VOx microbolometer sensor not cooled	√	√
Interpolated resolution	720x480	720x480
Pixel dimensions	12µm	12µm
Spectral response - long wave infrared (LWIR)	from 7.5µm up to 14µm	from 7.5µm up to 14µm
Digital Detail Enhancement (DDE)	√	√
Adaptive Contrast Enhancement (ACE)	√	√
Digital Zoom	8x	8x
Image updating frequency	7.5fps	7.5fps
Image updating high frequency	30fps	30fps
Typical dynamic range scene 640	from -40°C (-40°F) up to +150°C (302°F) or from -40°C (-40°F) up to +500°C (932°F) (selectable)	from -40°C (-40°F) up to +150°C (302°F) or from -40°C (-40°F) up to +500°C (932°F) (selectable)
Horizontal field of view	32°	18°
Vertical field of view	25.6°	13.5°
F-number	F/1.00	F/1.00
Thermal sensitivity (NETD)	< 50mK at f/1.0	< 50mK at f/1.0
Person (detection / recognition / identification)	279/70/43	505/126/78
Car (detection / recognition / identification)	1296/324/199	2506/627/386

Fig. 28 Thermal camera (640X512).

16 Technical drawings

The indicated measurements are expressed in millimetres.

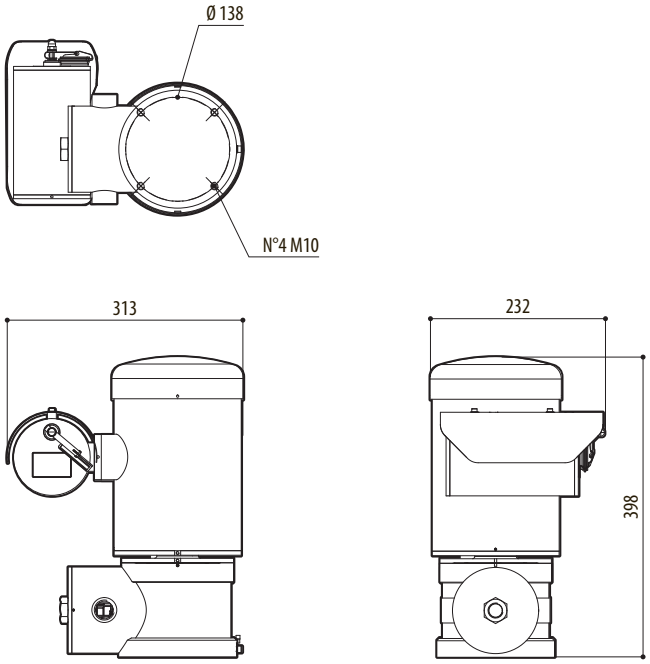

Fig. 29 MAXIMUS MPX SERIES2 (MPXHD).

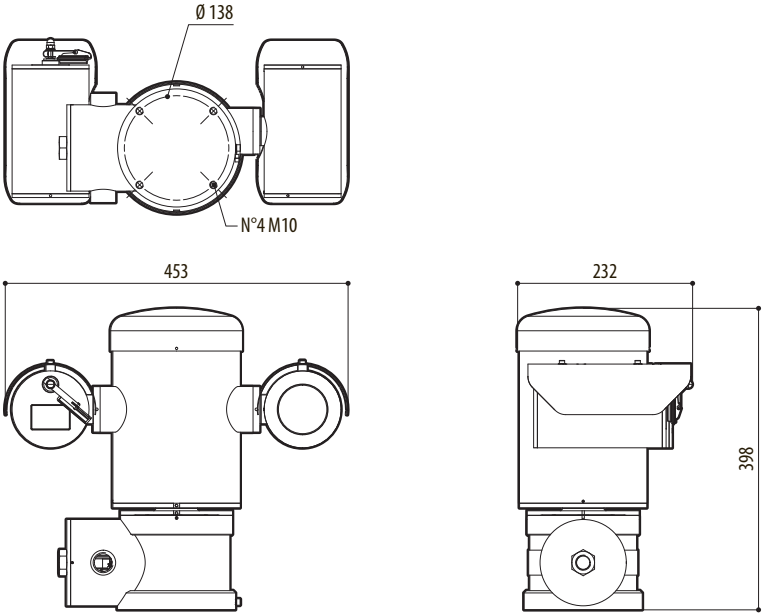

Fig. 30 MAXIMUS MPXL SERIES2 (MPXL).

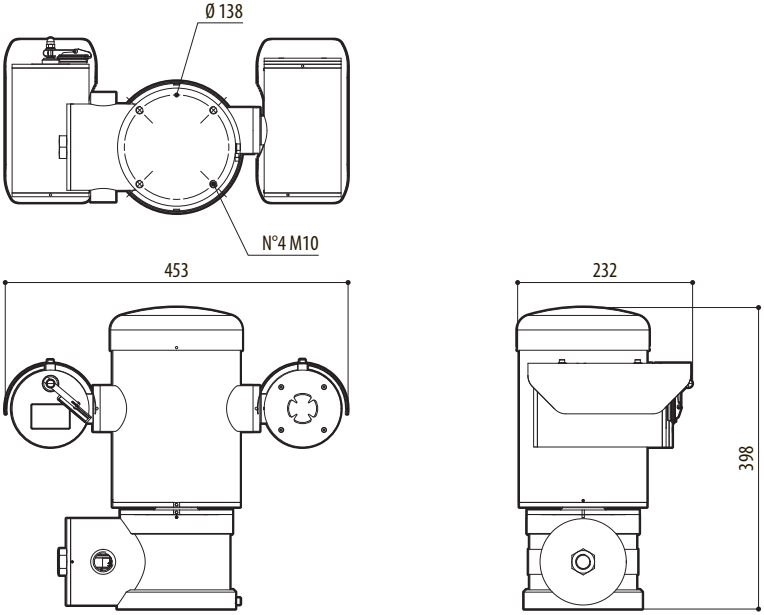

Fig. 31 MAXIMUS MPXT SERIES2 (MPXT).

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MNLCMPXHDC_2323_EN