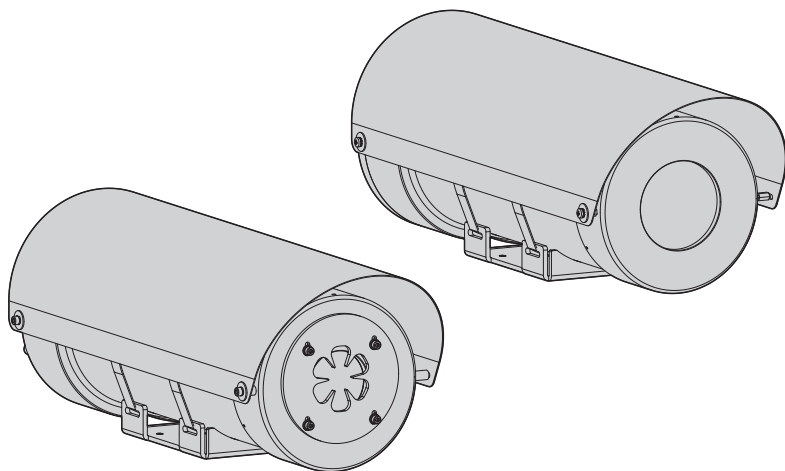


MAXIMUS MHX, MAXIMUS MHXT

Flameproof housing



Contents

1 About this manual	7
1.1 Typographical conventions	7
2 Notes on copyright and information on trademarks	7
3 Safety rules	7
4 Product description and type designation	10
4.1 Product overview	10
4.2 Range of use	10
4.3 Specific use conditions	10
4.4 Gas Group, Dust Group and Temperatures	10
4.5 Characteristics of installable devices	11
4.6 Cable entry	11
4.7 Product marking	12
4.8 Model identification	13
4.8.1 Housing for Day/Night camera	13
4.8.2 Housing for thermal camera	13
5 Preparing the product for use	14
5.1 Unpacking	14
5.2 Contents	14
5.3 Safely disposing of packaging material	14
6 Installation	14
6.1 Installation options	14
6.1.1 Parapet mounting	14
6.1.2 Bracket mounting	15
6.1.3 Fixing the unit to the pole mount adapter or corner mount adapter	16
6.1.3.1 Fixing with pole mount	16
6.1.3.2 Fixing with corner adapter	16
6.2 Sunshield mounting	17
6.3 Fastening of the wiper blade	17
6.4 Adjusting the protection grid	17
6.5 Housing opening	18
6.6 Connector board description	19
6.6.1 Description of the connectors board for MHX without wiper	19
6.6.2 Description of the connectors board for MHX with wiper and for MHXT	19
6.6.3 Description of the CPU board for MHX with wiper and for MHXT	20
6.7 Earth ground connection	21
6.7.1 Earthing equipotential connection	21
6.7.2 Connection of the safety earthing	21
6.8 Connecting the power supply	21
6.8.1 Connection of the power supply line in 24Vac and 12Vdc for MHX without wiper	21
6.8.2 Connection of the power supply line in 120Vac and 230Vac for MHX without wiper	22
6.8.3 Connection of the power supply line in 24Vac, 120Vac, 230Vac and 12Vdc for MHX with wiper and for MHXT..	23

6.9 How to install the camera/lens	23
6.10 Connection of the camera to the power supply	24
6.10.1 Connection of the camera power supply in 24Vac and 12Vdc for MHX without wiper	24
6.10.2 Connection of the camera power supply in 120Vac and 230Vac for MHX without wiper	24
6.10.3 Connection of the camera power supply in 24Vac, 120Vac, 230Vac and 12Vdc for MHX with wiper and for MHXT	25
6.11 Camera with analogue video output	25
6.12 Optical fiber connection	26
6.13 IP camera with digital data transmission	27
6.14 Connection of the IP camera's RS-485 output	27
6.15 Serial line connection	28
6.15.1 Special controls	29
6.16 Enabling the wiper	30
6.16.1 Enable from the remote button	30
6.16.2 Enable from the keyboard	30
6.17 Enabling the washer (Washer)	30
6.18 Enable an external illuminator from the day/night camera output	31
6.19 Housing closure	32
7 Switching on	32
8 Maintenance	33
8.1 Routine maintenance	33
8.1.1 Inspecting the cables	33
8.1.2 Replacing the gasket	33
8.2 Extraordinary maintenance	33
8.2.1 Fuses replacement	33
9 Cleaning	34
9.1 Cleaning the glass window	34
9.2 Cleaning the germanium window	34
9.3 Cleaning the product	34
10 Information on disposal and recycling	34
11 Troubleshooting	35
12 Technical data	35
12.1 MAXIMUS MHX	35
12.1.1 General	35
12.1.2 Mechanical	35
12.1.3 Electrical	35
12.1.4 Serial communications	36
12.1.5 I/O	36
12.1.6 Cameras	36
12.1.7 Environment	36
12.1.8 Certifications	36
12.1.9 Certifications - Explosion-proof applications	36
12.2 MAXIMUS MHXT	37
12.2.1 General	37
12.2.2 Mechanical	37

12.2.3 Housing's window	37
12.2.4 Electrical	37
12.2.5 Serial communications	37
12.2.6 Cameras	37
12.2.7 Environment	37
12.2.8 Certifications	37
12.2.9 Certifications - Explosion-proof applications	37
13 Technical drawings.....	38

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!

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.



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.

ONVIF® is a trademark of Onvif, Inc.

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.
- Before powering the product in an explosive atmosphere, ensure it 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.



Risk of explosion due to electrostatic discharge.

- The product is intended for fixed installation and the user shall not frequently touch the product in service (other than maintenance).
- Take suitable measures to ensure that no electrostatic discharges can build up in the classified area.
- The device should be cleaned using a damp cloth; compressed air must not be used.
- Make sure that all personnel and equipment are correctly grounded.
- Install only when the environmental relative humidity is over the 30% (stable, ever or for long time) or in ambient with humidity control system.
- Do not install in a location where the electrostatic charge can increase without technical solutions able to avoid electrostatic charge allowed in IEC/TS 60079-32-1, TR 600079-32-1 and/or in IEC 60079-14 standards. Example:
 - Locations near ventilation systems.
 - Locations where there is a risk of an increase in electrostatic charge caused by compressed air and dust.
 - Locations in highly charge generating processes such as highly charge generating processes, mechanical friction and separation processes of dust, pneumatic powder conveying flow, liquid droplet spraying or charge spraying application.



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 switch must be equipped with protection against overcurrent (circuit breaker).
- 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.
- Be careful not to use cables that seem worn or old.
- 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.

**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 product can be installed in any position.
- Make sure the product is to be secured to building before operation.
- 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-authorized, non-skilled personnel.
- Only use original VIDEOTEC spare parts. Strictly adhere to the maintenance instructions attached to each replacement kit.
- 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.
- Handle the product with care to avoid accidental contacts, sharp edges and corners.
- 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.

**INFO**

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

- Before proceeding with installation, check the supplied material to make sure it corresponds to the order specification by examining the identification labels.
- The equipment is intended for installation in a Restricted Access Area by specialist technical staff.
- 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.
- For all maintenance interventions, we recommend you return the product to the laboratory that will perform all required operations.
- To comply with the main supply voltage dips and short interruption requirements, use a suitable Uninterruptible Power Supply (UPS) to power the unit.
- To feed the product use a safety transformer and/or a voltage isolated power supply with the appropriate characteristics. The characteristics of output power must not exceed the following values. Supply voltage: 230Vac ($\pm 10\%$) or 24Vac ($\pm 10\%$) or 12Vdc ($\pm 5\%$).
- 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.

4 Product description and type designation

The MHX/MHXT flameproof housing was designed for installation in potentially explosive environments, manufactured in AISI 316L shot electro-polished stainless steel..

The housing can be powered by 230Vac, 24Vac, 12Vdc depending on the model. The housing is equipped with 2x 3/4" NPT input (or alternatively M25). The housing has an IP66/IP67 degree of protection and can be installed in an environment of -40°C to +60°C. Versions are available for visible camera (with or without wiper) or thermal camera.

The housing can be equipped with a fibre optic transmitter (Single Mode or Multi Mode), which gives the possibility to transmit data and video over long distances.

4.1 Product overview

The main parts of the product are illustrated below.

01. Sunshield.
02. Housing.
03. Protective grate (MHXT).

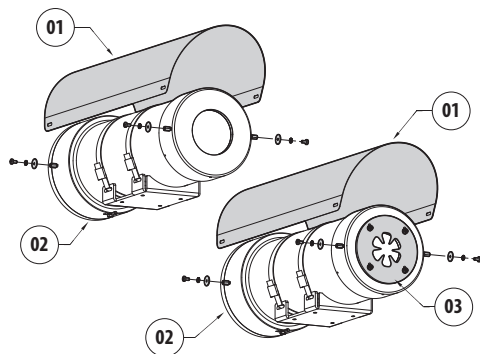


Fig. 1

4.2 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.

4.3 Specific use conditions

The external surface of the product must never be covered by more than 5 mm of dust.

To avoid accumulation of electrostatic loads during cleaning, the device must be cleaned using a damp cloth.

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

Use fasteners with property A2 or A4 Class 70, yield stress: 450N/ mm².

4.4 Gas Group, Dust Group and Temperatures

The device is certified for group IIB or IIC (Gas) and group IIIC (Dust).

Ambient temperature: -20°C/+60°C or -40°C/+60°C

GROUP IIB GAS, IIIC DUST	
Temperature class	Maximum ambient temperature
T6 / T85°C	-40°C/+60°C

Tab. 1

GROUP IIC GAS, IIIC DUSTS	
Temperature class	Maximum ambient temperature
T6 / T85°C	-20°C/+60°C
T6 / T85°C	-40°C/+60°C

Tab. 2

4.5 Characteristics of installable devices

Cameras and lenses

- Maximum power: 13W
- Dimensions (WxHxL): 80x82x245mm (3.1x3.2x9.6in)

The camera/optics must be of a basic geometric form, and installed at least 10mm from the inner surface of the enclosure window.

The camera/optics to be installed shall not be electromagnetic or contain lasers, continuous wave sources or ultrasonic energy radiating equipment.

The camera/optics to be installed shall not contain cells or batteries.

4.6 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.



CAUTION! Connectors/cable glands and cables must be suitable for an operating temperature of at least +30°C above the ambient temperature.

4.7 Product marking

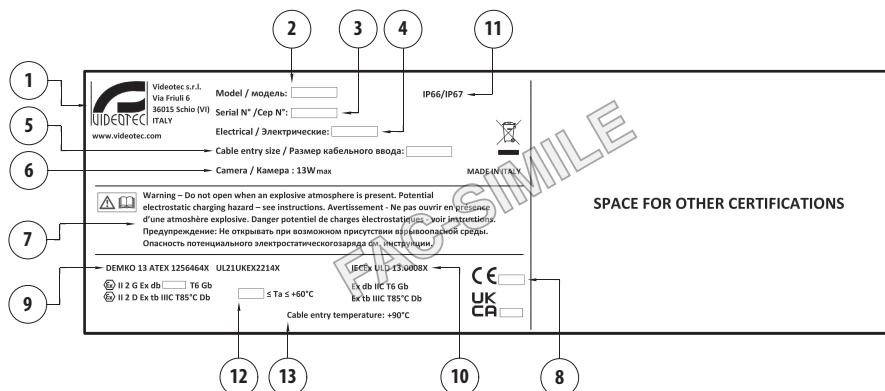


Fig. 2

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 (V, A, Hz)
5. Type, size and number of cable entries
6. Power consumption camera/lens (W).
7. Warnings.
8. The number of the accredited body that provides the quality assessment.
9. ATEX marking
10. IECEx marking
11. IP protection degree
12. Ambient temperature
13. Cable entry temperature

4.8 Model identification

4.8.1 Housing for Day/Night camera

MAXIMUS MHX - CONFIGURATION OPTIONS										
	Voltage		Certification		Options					
MHX	1	230Vac	C	IIC -40°C	S	Without wiper	0	With sunshield	00 Without camera	A
	2	24Vac			W	With wiper				
	3	120Vac								
	4	12Vdc								

Tab. 3

MAXIMUS MHX - CERTIFICATIONS AND MARKINGS			
Certification	Marking	Ambient temperature	Cable entry temperature
ATEX	Ⓜ II 2G Ex db IIC T6 Gb Ⓜ II 2D Ex tb IIIC T85°C Db	-40°C ≤ Ta ≤ +60°C	+90°C
IECEX	Ex db IIC T6 Gb Ex tb IIIC T85°C Db		
EAC Ex	1Ex db IIC T6 Gb X Ex tb IIIC T85°C Db X		
KCs	Ex db IIC T6 Gb Ex tb IIIC T85°C Db		
UK Ex	Ⓜ II 2G Ex db IIC T6 Gb Ⓜ II 2D Ex tb IIIC T85°C Db		

Tab. 4

4.8.2 Housing for thermal camera

MAXIMUS MHXT - CONFIGURATION OPTIONS							
	Voltage		Certification				
MHXT	1	230Vac	C	IIC -40°C	0 With sunshield	00 Without camera	B
	2	24Vac					
	3	120Vac					

Tab. 5

MAXIMUS MHXT - CERTIFICATIONS AND MARKINGS			
Certification	Marking	Ambient temperature	Cable entry temperature
ATEX	Ⓜ II 2G Ex db IIC T6 Gb Ⓜ II 2D Ex tb IIIC T85°C Db	-40°C ≤ Ta ≤ +60°C	+90°C
IECEX	Ex db IIC T6 Gb Ex tb IIIC T85°C Db		
EAC Ex	1Ex db IIC T6 Gb X Ex tb IIIC T85°C Db X		
KCs	Ex db IIC T6 Gb Ex tb IIIC T85°C Db		
UK Ex	Ⓜ II 2G Ex db IIC T6 Gb Ⓜ II 2D Ex tb IIIC T85°C Db		

Tab. 6

5 Preparing the product for use



Before carrying out any type of intervention, read the "Safety rules" chapter of this 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 housing
- Sunshield
- Wiring for motherboards connection
- Silicone sheath
- Cable tie
- Spacer and screws for mounting the sunshield
- Plastic spacers and screws 1/4" for camera and lens mounting
- O-ring replacement part kit
- Extraction screws
- Wiper brush (version with wiper)
- 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 intervention, read the "Safety rules" chapter of this manual.

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

6.1 Installation options

The product can be installed with different brackets and supports. Remember to exclusively use brackets and accessories approved for installation.

The housing can be installed with a slope that varies between $\pm 90^\circ$ with reference to the horizon.

6.1.1 Parapet mounting

First of all secure the base of the adapter to the final destination. Use screws that can bear at least 4 times the weight of the unit.

Apply a generous amount of thread locking compound (Loctite 270).

Tighten the screws.

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

It's possible to secure the base (01) to the column adapter NXFWBT using 4 countersunk screws (02) provided.

Secure the joint (03) to the base through nuts and washers supplied.

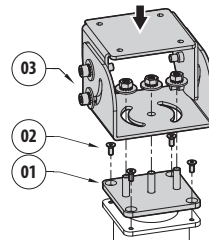


Fig. 3

Fasten the housing at the junction with the screws and washers provided.

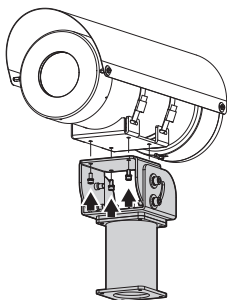


Fig. 4

Apply a generous amount of thread locking compound (Loctite 270).

Tighten the screws.



Pay attention to the fixing. Tightening torque: From 9Nm a 12Nm.

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

6.1.2 Bracket mounting

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.

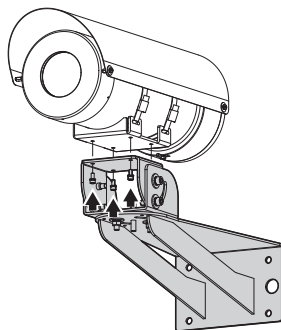


Fig. 5

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).

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: From 9Nm a 12Nm.

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

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

To install the product on a pole or at a wall corner, first of all fix the unit to the wall bracket (6.1.2 Bracket mounting, page 15).

6.1.3.1 Fixing with pole mount

Fix the wall bracket to the pole mount adapter using 4 washers, 4 stainless steel grower washer and 4 hexagon stainless steel bolts (A4 class 70) M10x30mm.

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 pole mount adapter.

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.

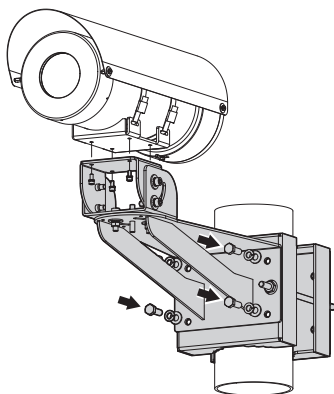


Fig. 6

6.1.3.2 Fixing with corner adapter

Fix the wall bracket to the corner mount adapter using 4 washers, 4 stainless steel grower washers 4 hexagon stainless steel bolts (A4 class 70) M10x30mm.

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 corner 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.

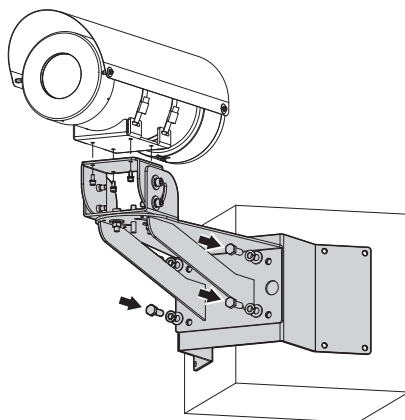


Fig. 7

6.2 Sunshield mounting

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

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

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

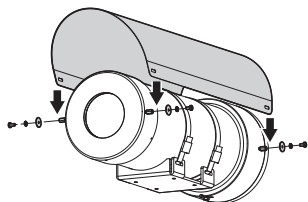


Fig. 8

6.3 Fastening of the wiper blade

Insert the blade on the wiper shaft.

Fasten the wiper brush by means of the flat washer, the toothed washer and the nut.

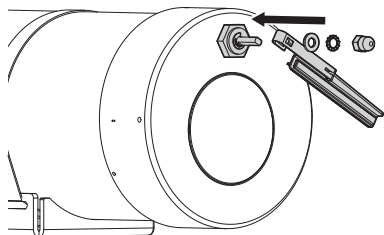


Fig. 9

6.4 Adjusting the protection grid

The protection grid may be adjusted moving it upwards, to fit it with the field of view of certain cameras.



The protective grate must always be present when the product is running.

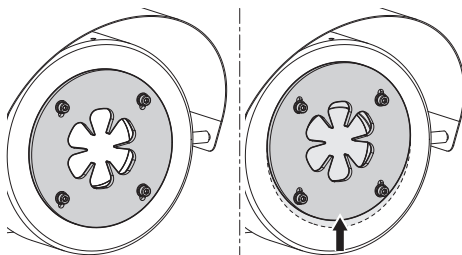


Fig. 10

6.5 Housing opening



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

To install the camera open the rear flange of the enclosure.

Remove the M6 screws on the rear cover plate of the housing (rear flange).

After removing the screws, the rear flange will remain in place due to the presence of the O-ring.

To facilitate removal of the rear flange and avoid damaging the O-ring, use the 3 x M5x60mm hexagonal head extraction screws supplied.. Once the extraction screws have been inserted, act on them symmetrically (2 or 3 turns at a time per screw) in order to slowly extract the flange.



During opening and closure operations of the product, pay attention not to damage the flameproof joint.

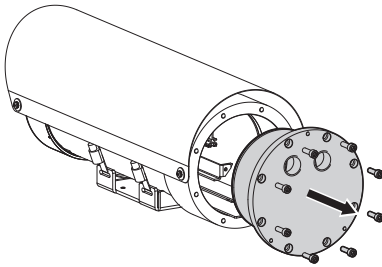


Fig. 11

Screws properties:

- Diameter/Screw pitch: M6x0.8
- Material: A2 or A4 Class 70
- Screw head: ISO 4762
- Length: 18mm
- Yield stress: 450N/mm²



Disconnect J3 and J8 connectors (version with wiper).

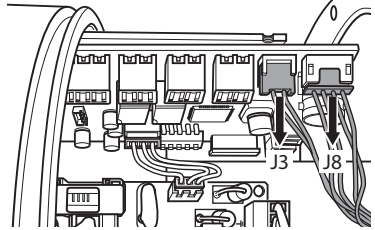


Fig. 12

6.6 Connector board description

i To identify the product model, consult the relevant chapter (4.8 Model identification, page 13).

6.6.1 Description of the connectors board for MHX without wiper

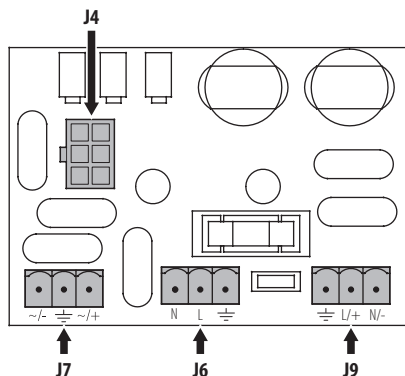


Fig. 13

BOARD DESCRIPTION		
Connector	Function	Terminals - Nominal section of the cables used
J4	jumper	–
J6	Power supply of the camera in 120Vac and 230Vac	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)
J7	Power supply of the camera in 24Vac and 12Vdc	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)
J9	Power supply line	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)

Tab. 7

6.6.2 Description of the connectors board for MHX with wiper and for MHXT

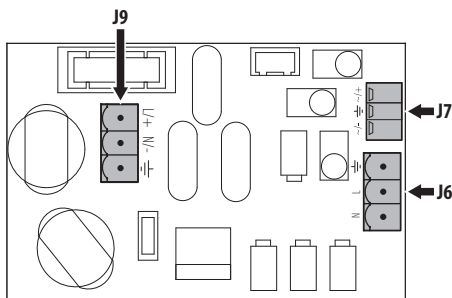


Fig. 14

BOARD DESCRIPTION		
Connector	Function	Terminals - Nominal section of the cables used
J6	Power supply of the camera in 120Vac and 230Vac	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)
J7	Power supply of the camera in 24Vac and 12Vdc	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)
J9	Power supply line	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)

Fig. 15

6.6.3 Description of the CPU board for MHX with wiper and for MHXT

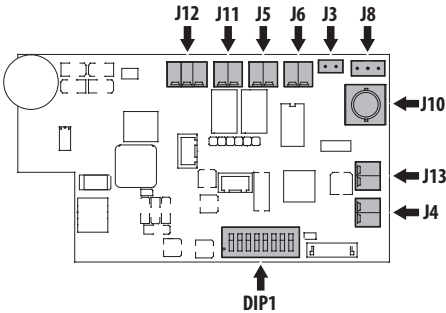


Fig. 16

BOARD DESCRIPTION		
Connector / Dip-switch	Function	Terminals - Nominal section of the cables used
J3	Wiper motor	–
J4	Day/Night camera output	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
J5	External illuminator enabling	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
J6	Wiper remote button	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
J8	Wiper sensors	–
J10	BNC for connection with fibre optic	–
J11	Washer enabling	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
J12	RS-485	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
J13	Power supply of the camera 12Vdc	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
DIP1	Serial line configuration	–

Fig. 17

6.7 Earth ground connection

6.7.1 Earthing equipotential connection

The equipotential connection must be carried out using an external cable with a minimum 4mm^2 section (11AWG).

Connect the cable for the earthing equipotential connection with the eyelet terminal supplied (suitable for cables with 4mm^2 (11AWG) up to 6mm^2 (9AWG) section).

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

Characteristics of the M5 screw:

- Material: A4
- Screw head: ISO 4762
- Length: 8mm (0.3in)
- Yield stress (min): 450N/mm^2

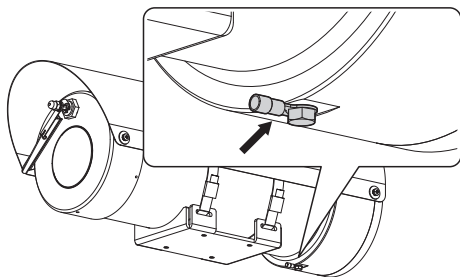


Fig. 18

6.7.2 Connection of the safety earthing

A protective earth cable must be connected to the internal connector (J9, Fig. 19, page 21, Fig. 22, page 22 e Fig. 24, page 23).

6.8 Connecting the power supply

i To identify the product model, consult the relevant chapter (4.8 Model identification, page 13).

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.

6.8.1 Connection of the power supply line in 24Vac and 12Vdc for MHX without wiper

i Insert cables into the product for a sufficient length to facilitate wiring.

Slide the power cables through the entry device.

Pull out the removable terminal (J9, connectors board).

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

! 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).

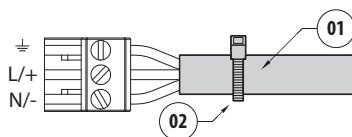


Fig. 19

Reinsert the wired terminal in the connector.

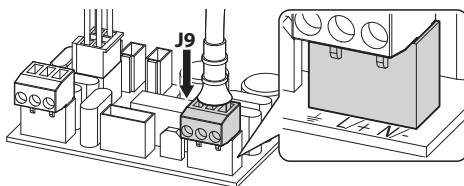


Fig. 20

Check that the jumper is inserted into connector J4.

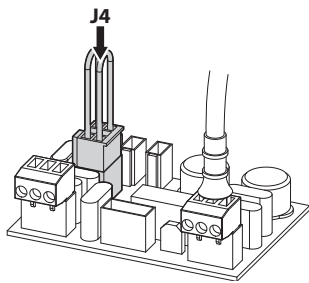


Fig. 21

Power cables to be used: 1.5mm² (15AWG).

- Earth wire type TEWN with cross section equal or bigger than line and neutral cable.
- Line and neutral wire type TFFN or MTW

6.8.2 Connection of the power supply line in 120Vac and 230Vac for MHX without wiper

i Insert cables into the product for a sufficient length to facilitate wiring.

Slide the power cables through the entry device.

Pull out the removable terminal (J9, connectors board).

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

! 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).

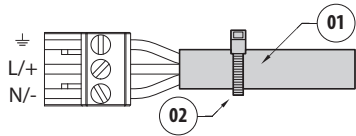


Fig. 22

Reinsert the wired terminal in the connector.

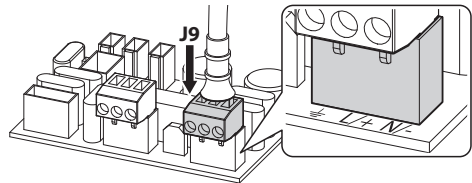


Fig. 23

CONNECTING THE POWER SUPPLY	
Cable colour	Terminals
Power supply 230Vac	
Blue	(N) Neutral
Brown	(L) Phase
Yellow/Green	Earth
Power supply 120Vac	
Blue	(N) Neutral
Brown	(L) Phase
Yellow/Green	Earth

Tab. 8

Power cables to be used: 1.5mm² (15AWG).

- Earth wire type TEWN with cross section equal or bigger than line and neutral cable.
- Line and neutral wire type TFFN or MTW

6.8.3 Connection of the power supply line in 24Vac, 120Vac, 230Vac and 12Vdc for MHX with wiper and for MHXT

i Insert cables into the product for a sufficient length to facilitate wiring.

Slide the power cables through the entry device.

Pull out the removable terminal (J9, connectors board).

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

! 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).

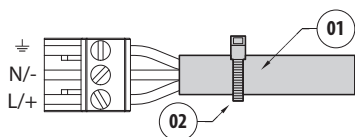


Fig. 24

Reinsert the wired terminal in the connector.

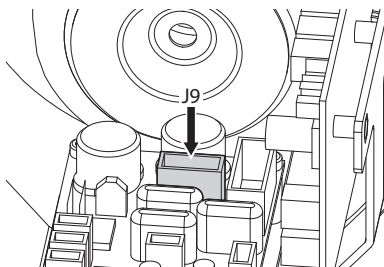


Fig. 25

Power cables to be used: 1.5mm² (15AWG).

- Earth wire type TEWN with cross section equal or bigger than line and neutral cable.
- Line and neutral wire type TFFN or MTW

6.9 How to install the camera/lens

Compatible cameras (4.5 Characteristics of installable devices, page 11):

- Power consumption (assembly, camera and lens): 13W max
- Cameras dimensions/Lenses that can be installed (WxHxL): 80x82x245mm (3.1x3.2x9.6in) max
- Minimum distance between camera and housing's window: 10mm (0.4in)

Install the camera/lens on the internal slide using the screws and the spacers supplied, so that the installation height allows perfect vision through the window.

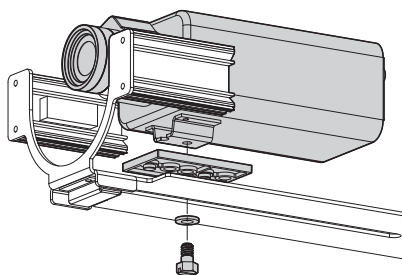


Fig. 26

The minimum installation distance between the camera and the window is 10mm (0.4in). To observe this constraint the camera mount limit is 5mm (0.2in) from the front edge of the inner slide.

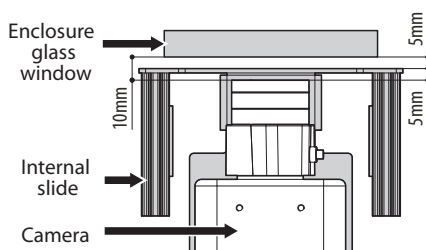


Fig. 27

6.10 Connection of the camera to the power supply



Incorrect wiring can irreparably damage the camera.



The power supply terminal can host cables with the characteristics outlined below.

**Nominal section of the cables used:
1.5mm² (15AWG).**



To identify the product model, consult the relevant chapter (4.8 Model identification, page 13).

To connect the power supply use the removable terminals supplied.

Carry out the wiring according to the camera's power supply voltage: 12Vdc o 24Vac, 120Vac o 230Vac.

6.10.1 Connection of the camera power supply in 24Vac and 12Vdc for MHX without wiper



In these versions the input voltage will be the voltage of the camera/lens.

Pull out the removable terminal (J7, connectors board). Carry out the wiring between the terminal connector and the camera's power supply terminals. Re-insert the terminal into the connector.

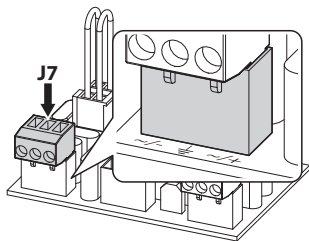


Fig. 28

6.10.2 Connection of the camera power supply in 120Vac and 230Vac for MHX without wiper



In these versions the input voltage will be the voltage of the camera/lens.

Pull out the removable terminal (J6, connectors board). Carry out the wiring between the terminal connector and the camera's power supply terminals. Re-insert the terminal into the connector.

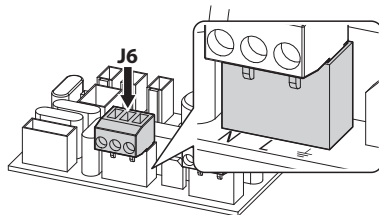


Fig. 29

6.10.3 Connection of the camera power supply in 24Vac, 120Vac, 230Vac and 12Vdc for MHX with wiper and for MHXT

Remove the removable terminal from the board. Carry out the wiring between the removable terminal and the camera's power supply terminals. Re-insert the terminal into the connector.

CONNECTION OF THE CAMERA TO THE POWER SUPPLY				
Camera power supply voltage	Housing power voltage			
	12Vdc	24Vac	120Vac	230Vac
Connector board				
230Vac	–	–	–	J6
120Vac	–	–	J6	–
24Vac	–	J7	J7	J7
CPU board				
12Vdc	J13	J13	J13	J13

Tab. 9

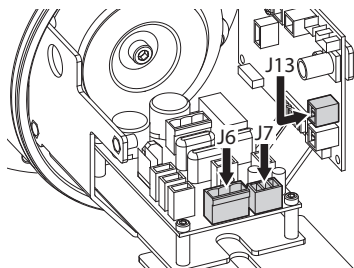


Fig. 30

6.11 Camera with analogue video output

⚠ CDS installation type (Cable Distribution System). The installation is type TNV-1, do not connect it to SELV circuits.

The video signal coming from an analogue camera can be transmitted via a coaxial cable or optical fibre.

Suggested coaxial cables are:

- RG59
- RG174A/U UL1354

Slide the coaxial cable through the entry device.

Connect the coaxial cable to the camera's BNC video connector. Use a 75Ohm BNC male connector (not supplied).

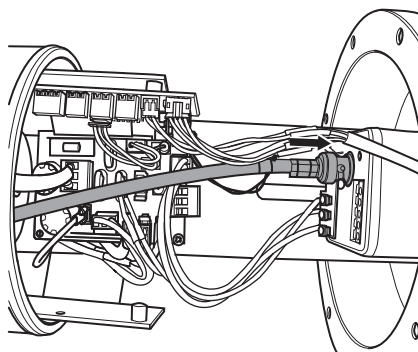


Fig. 31

6.12 Optical fiber connection



Use a type of optical fiber suitable for the receiver model installed.

Video and data transmission can be made via optical fiber.

Connect the camera's video output to the CPU board's J10 connector. Use the appropriate BNC-BNC cable supplied.

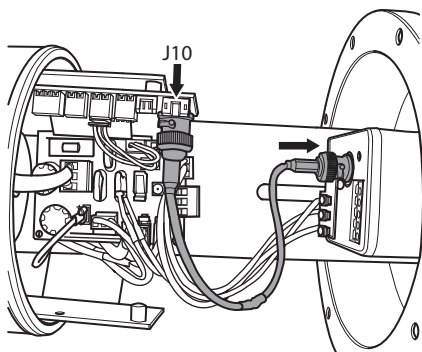


Fig. 32

For Multi Mode fibre transmitters use fibre 62.5/125µm with a maximum length of 3km (1.9mi).

For Single Mode fibre transmitters use fibre 9/125µm with a maximum length of 69km (42.9mi).

Slide the fiber through the entry device.

Connect optical fiber with ST type connector.

Connect the optical fibre to the transceiver board by paying attention to the bending radius.



For further details please refer to the manual of the optical fibre receiver.

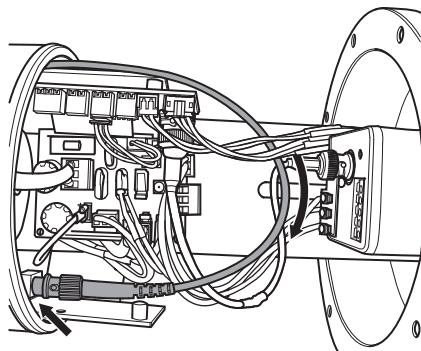


Fig. 33

6.13 IP camera with digital data transmission

⚠ If the camera has a RS-485 output refer to the relative chapter (6.14 Connection of the IP camera's RS-485 output, page 27).

⚠ CDS installation type (Cable Distribution System). The installation is type TNV-1, do not connect it to SELV circuits.

To connect the net cable a UTP is required: Category 5E or 6A, 4 pair, maximum length 100m (328ft).

Join the Ethernet cable end-to-end to an RJ45 connector.

Direct crimping is required if the product is connected to a hub or switch. Cross crimping is required if the product is connected directly to a PC.

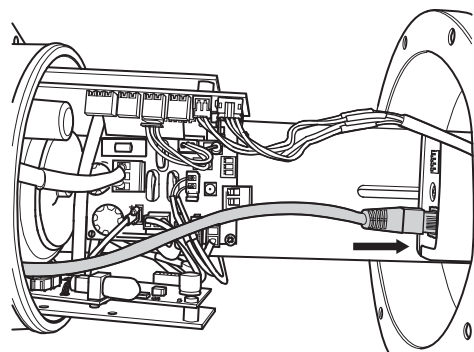


Fig. 34

The example below shows a typical installation.

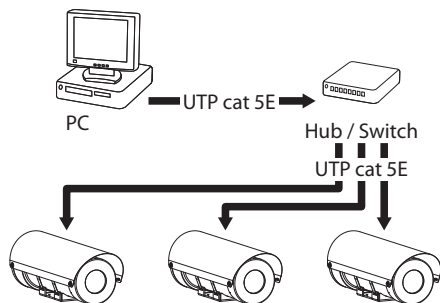


Fig. 35 Typical installation.

6.14 Connection of the IP camera's RS-485 output

If you are using an IP camera with output RS-485 it is possible to use this communication channel to send telemetry commands. (Tab. 13, page 29). The commands are sent from the camera to the CPU board. The camera must support the PELCO D (2400baud, 9600baud) or VIDEOTEC MACRO protocols (9600baud, 38400baud).

Connect the camera's RS-485 output to the CPU board's J12 connector.

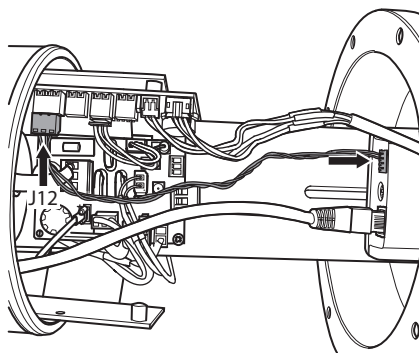


Fig. 36

CONNECTION OF THE RS-485 SERIAL OUTPUT	
Terminal	Description
A (+)	RS-485 A
B (-)	RS-485 B
AGND	Reference line RS-485

Tab. 10

6.15 Serial line connection



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 cables with sections greater than or equal to 0.14mm² (26AWG).

The product includes a one-directional communication serial line RS-485 that is internally terminated. The line works with PELCO D (2400baud, 9600baud) or VIDEOTEC MACRO protocol (9600baud, 38400baud), length 1200m max.

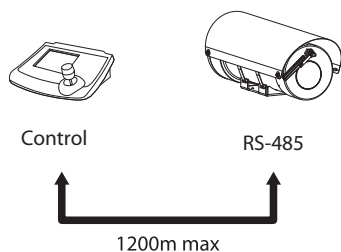


Fig. 37

The line can be configured using the board's DIP1 selector dip-switch.

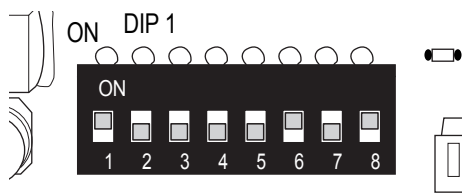


Fig. 38

Feed the serial line cables through the input device.

Connect the control cables to the removable terminal (J12, CPU board). Connect the cables as described in the table.

CONNECTION OF THE RS-485 SERIAL OUTPUT

Terminal	Description
A (+)	RS-485 A
B (-)	RS-485 B
AGND	Reference line RS-485

Tab. 11

Reinsert the wired terminal in the connector. Gather the cables with a cable tie.

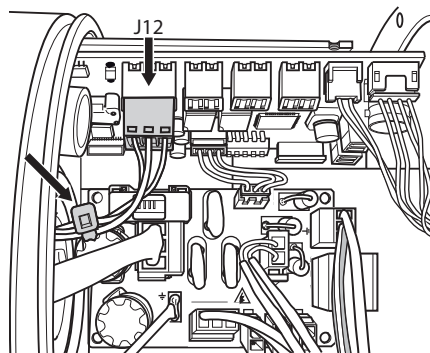


Fig. 39



When the switch rocker is up it represents the value 1 (ON). When the dip-switch rocker is down it represents the value 0 (OFF).

CONFIGURATION OF THE DIP-SWITCHES (DIP 1)

Description	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	Configuration
Address	OFF	OFF	OFF	OFF	OFF	–	–	–	Reserved
Address	ON	OFF	OFF	OFF	OFF	–	–	–	Address 01
Address	OFF	ON	OFF	OFF	OFF	–	–	–	Address 02
Address	ON	ON	OFF	OFF	OFF	–	–	–	Address 03
...	...	...	...	...	...	–	–	–	...
Address	ON	ON	ON	ON	ON	–	–	–	Address 31
Baud rate	–	–	–	–	–	ON	–	–	9600baud (PELCO D), 38400baud (VIDEOTEC MACRO)
Baud rate	–	–	–	–	–	OFF	–	–	2400baud (PELCO D), 9600baud (VIDEOTEC MACRO)
Protocol	–	–	–	–	–	–	ON	–	PELCO D
Protocol	–	–	–	–	–	–	OFF	–	VIDEOTEC MACRO
Pre-installed module	–	–	–	–	–	–	–	ON	SONY
Pre-installed module	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	FLIR

Tab. 12**6.15.1 Special controls**

SPECIAL CONTROLS		
Action	Command	
	Protocol	
	PELCO D	VIDEOTEC MACRO
Wiper Start	Save Preset 85	Save Preset 85
	Aux 3 ON	Aux 3 ON
		Wip+
Wiper Stop	Save Preset 86	Save Preset 86
	Aux 3 OFF	Aux 3 OFF
		Wip-
Washer Start	Save Preset 87	Save Preset 87
	Aux 4 ON	Aux 4 ON
		Was+
Washer Stop	Save Preset 97	Save Preset 97
	Aux 4 OFF	Aux 4 OFF
		Was-
Night Mode On	Save Preset 88	Save Preset 88
	Aux 2 ON	Aux 2 ON
		Aux+
Night Mode Off	Save Preset 89	Save Preset 89
	Aux 2 OFF	Aux 2 OFF
		Aux-
Reboot	Save Preset 94	Save Preset 94

Tab. 13

6.16 Enabling the wiper

6.16.1 Enable from the remote button

The wiper can be operated remotely using an NO (normally open) dry contact. The command has a range of about 200m (656ft) and can be achieved with an unshielded cable with a 0.25mm² minimum section (24AWG).

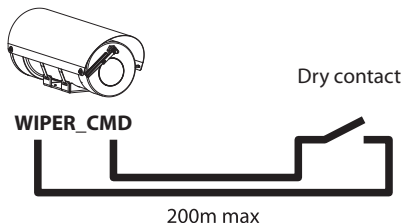


Fig. 40

Feed the control cables through the input device.
Pull out the removable terminal (J6, CPU board).
Connect the control cables.

Reinsert the wired terminal in the connector. Gather the cables with a cable tie.

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

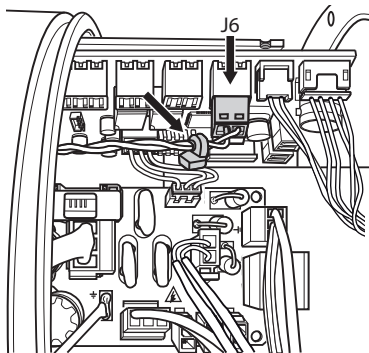


Fig. 41

i Before closing the housing, connect connectors J3 and J8 of the wiper.

6.16.2 Enable from the keyboard

If the serial communication line is being used, the wiper can be enabled from the keyboard (6.15 Serial line connection, page 28).

6.17 Enabling the washer (Washer)

! Relay operating specifications.

- Working voltage: 30Vac max or 60Vdc max.
- Current: 1A max.

Use suitable cable sections: from 0.2mm² (30AWG) up to 1mm² (16AWG).

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

If the serial communication line is being used, the washer can be enabled from the keyboard (6.15 Serial line connection, page 28).

Activation takes place via the closure of the dry contact of a relay.

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

Feed the control cables through the input device.

Pull out the removable terminal (J11, CPU board).
Connect the control cables.

Reinsert the wired terminal in the connector. Gather the cables with a cable tie.

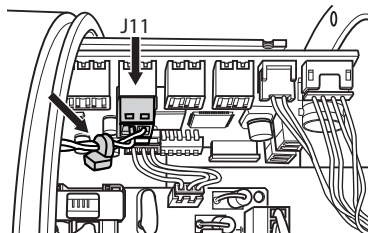


Fig. 42

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

6.18 Enable an external illuminator from the day/night camera output

The camera could be equipped with a day/night dry contact output that can be used to enable an external illuminator.

Pull out the removable terminal (J4, CPU board). Connect the camera's day/night output.

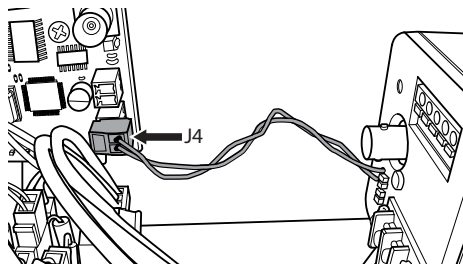


Fig. 43

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

Feed the control cables through the input device.

Activation takes place via the closure of the dry contact of a relay.

Pull out the removable terminal (J5, CPU board). Connect the control cables.

Reinsert the wired terminal in the connector. Gather the cables with a cable tie.

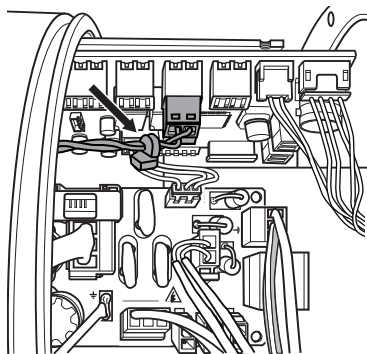


Fig. 44



Relay operating specifications.

- **Working voltage:** 30Vac max or 60Vdc max.
- **Current:** 1A max.

Use suitable cable sections: from 0.2mm² (30AWG) up to 1mm² (16AWG).

6.19 Housing closure



Test system operation for positive results before closing the product and allowing the presence of a hazardous atmosphere.



During opening and closure operations of the product, pay attention not to damage the flameproof joint.

Insert the slide into the case by sliding it under the guides.

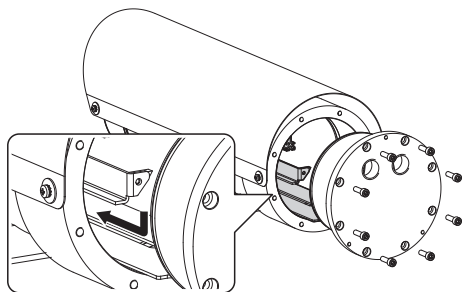


Fig. 45



Before closing the rear flange of the product, replace the O-ring gasket.

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 during the back cover closure.



In the integrated wiper version connect the wiring before closing the housing. (6.16 Enabling the wiper, page 30).



Be very careful not to damage the O-ring gasket.

Screw back the previously removed screws.



Pay attention to the fixing. Tightening torque: From 9Nm a 12Nm.

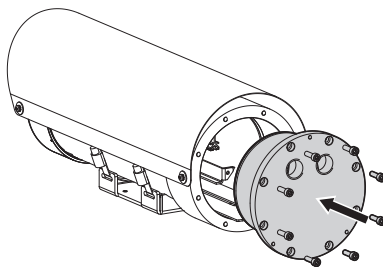


Fig. 46

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 -10°C (+14°F). The procedure is necessary to guarantee correct operation of the devices even at low temperatures. Pre-heating procedure length: 60 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 Maintenance

⚠ Before carrying out any type of intervention, read the "Safety rules" chapter of this manual.

8.1 Routine maintenance

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

Use only VIDEOTEC original spare parts.

8.1.1 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.

8.1.2 Replacing the gasket

After each opening of the product replace the O-ring gasket before closing the product. Use only VIDEOTEC original spare parts.

Open and close the rear flange of the product as described in the chapters above.

Replace O-ring gasket paying attention to position it correctly.

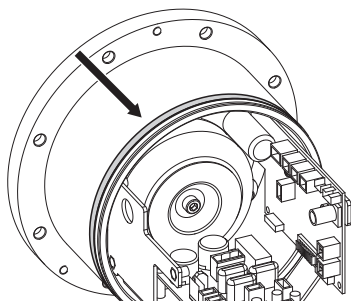


Fig. 47

8.2 Extraordinary maintenance

8.2.1 Fuses 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, the connector board's fuse can be replaced. The new fuse must comply with the directions given in the table.

FUSES REPLACEMENT	
Supply voltage	Fuse (FUS1)
12Vdc	T 4A H 250V 5x20
24Vac, 50/60Hz	T 4A H 250V 5x20
120Vac, 50/60Hz	T 1A L 250V 5x20
230Vac, 50/60Hz	T 1A L 250V 5x20

Tab. 14

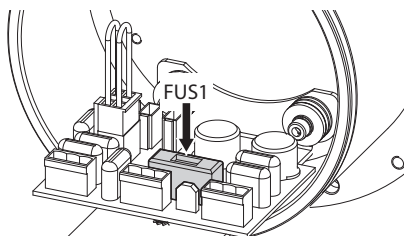


Fig. 48 MHX without wiper.

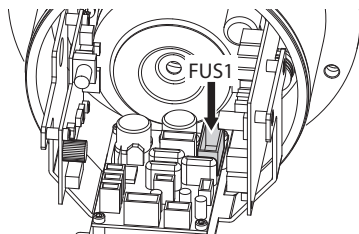


Fig. 49 MHX with wiper and MHXT.

9 Cleaning

! Before carrying out any type of intervention, read the "Safety rules" chapter of this manual.

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

9.1 Cleaning the glass window

Cleaning should be done with mild soap diluted with water.

9.2 Cleaning the germanium window

! When the unit is working the protection grid must always be installed. Failure to follow this instruction may create serious safety hazards for people and for the installation, and will also invalidate the warranty.

! 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 soap diluted with water.

Remove the protective grid unscrewing the screws and washers on the front of the enclosure using a spark-proof tool.

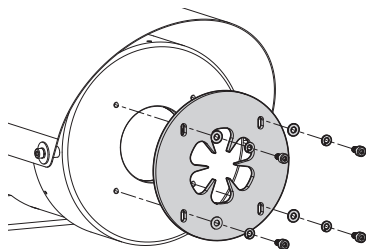


Fig. 50

After the cleaning, mount the protection grid with its screws and washers.

9.3 Cleaning the product

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

i 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.

10 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.

11 Troubleshooting



Contact the VIDEOTEC technical service or an authorized support centre if the problems listed below persist or you have any other issues that are not described here.

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

PROBLEM	The product does not go 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 wiper is frozen and unresponsive to commands.
CAUSE	The wiper is either jammed or broken.
SOLUTION	Check that the wiper is free to move.

12 Technical data

12.1 MAXIMUS MHX

12.1.1 General

AISI 316L stainless steel construction

Passivated and electropolished external surfaces

Silicone O-ring seals

12.1.2 Mechanical

2 holes 3/4" NPT for cable entry

Sunshield

Unit weight: 16.5kg (36lb)

Tempered window glass

- Usable diameter: 75mm (3.0in)
- Thick: 12mm (0.47in)

12.1.3 Electrical

Supply voltage/Current consumption/Power:

- 230Vac, 0.34A, 50/60Hz, 80W
- 120Vac, 0.5A, 50/60Hz, 60W
- 24Vac, 2.2A, 50/60Hz, 53W
- 12Vdc, 2.8A, 34W

Heater (Ton 15°C±4°C (59°F±7°F), Toff 22°C±3°C (72°F±5°F))

12.1.4 Serial communications

Serial interface: 1 RS-485 line, half-duplex

Addressable units: Up to 31, via dip-switch

Protocols:

- PELCO D: 2400baud, 9600baud
- VIDEOTEC MACRO: 9600baud, 38400baud

PELCO is registered trademark.

The product may be interfaced with devices not manufactured by VIDEOTEC. It is possible that the interface protocols have changed or are in a different configuration from earlier tested units by VIDEOTEC. VIDEOTEC recommends a test prior to installation. VIDEOTEC will not be liable for any installation costs or lost revenues in the event a compatibility problem will occur.

12.1.5 I/O

Version with wiper

- Remote wiper activation: 1 input, dry contact NO
- Day/Night camera status: 1 input
- Wash system activation relay: 1 output, 60Vdc max or 30Vac max, 1A
- Illuminator activation relay: 1 output, 60Vdc max or 30Vac max, 1A

12.1.6 Cameras

Compatible cameras:

- Power consumption (assembly, camera and lens): 13W max
- Cameras dimensions/Lenses that can be installed (WxHxL): 80x82x245mm (3.1x3.2x9.6in) max
- Minimum distance between camera and housing's window: 10mm (0.4in)

12.1.7 Environment

For indoors and outdoors installation

Operating temperature/Installation temperature: from -40°C (-40°F) up to +60°C (140°F)

Relative humidity: from 5% up to 95%

12.1.8 Certifications

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

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

RoHS (CE): EN IEC 63000

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

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

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

12.1.9 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)

EAC EX (TR CU 012/2011)

KCs (Employment and labor department 2021-22)

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

12.2 MAXIMUS MHXT

12.2.1 General

AISI 316L stainless steel construction
Passivated and electropolished external surfaces
Silicone O-ring seals

12.2.2 Mechanical

2 holes 3/4" NPT for cable entry
Window with protection grid
Sunshield
Unit weight: 16.5kg (36lb)

12.2.3 Housing's window

Germanium window
- Usable diameter: 56mm (2.2in) - Thick: 10mm (0.4in) - External treatment: antiscratch (Hard Carbon Coating - DLC), antireflection - Internal treatment: antireflection - Spectral range: from 7.5µm up to 14µm - Medium transmittance (from 7.5µm up to 11.5µm): 87.3% - Medium transmittance (from 11.5µm up to 14µm): 67.3%

12.2.4 Electrical

Supply voltage/Current consumption/Power:
230Vac, 0.34A, 50/60Hz, 80W 120Vac, 0.5A, 50/60Hz, 60W 24Vac, 2.2A, 50/60Hz, 53W 12Vdc, 2.8A, 34W
Heater (Ton 15°C±4°C (59°F±7°F), Toff 22°C±3°C (72°F±5°F))

12.2.5 Serial communications

Serial interface: 1 RS-485 line, half-duplex
--

12.2.6 Cameras

Compatible cameras:
- Power consumption (assembly, camera and lens): 13W max - Cameras dimensions/Lenses that can be installed (WxHxL): 80x82x245mm (3.1x3.2x9.6in) max - Minimum distance between camera and housing's window: 10mm (0.4in)

12.2.7 Environment

For indoors and outdoors installation
Operating temperature/Installation temperature: from -40°C (-40°F) up to +60°C (140°F)
Relative humidity: from 5% up to 95%

12.2.8 Certifications

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1
Electromagnetic compatibility (CE): EN61000-6-4, EN61000-3-2, EN61000-3-3, EN50130-4, EN55032 (Class A)
RoHS (CE): EN IEC 63000
Outdoor installation (CE): EN60950-22, IEC60950-22
IP protection degree (EN/IEC60529): IP66, IP67
Vibration test: EN50130-5, EN60068-2-6
Electromagnetic compatibility (North America): FCC part 15 (Class A)
KC certification (certification only valid for the code: MHXT1C000B)

12.2.9 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)
EAC EX (TR CU 012/2011)
KCs (Employment and labor department 2021-22)
UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)

13 Technical drawings



The indicated measurements are expressed in millimetres.

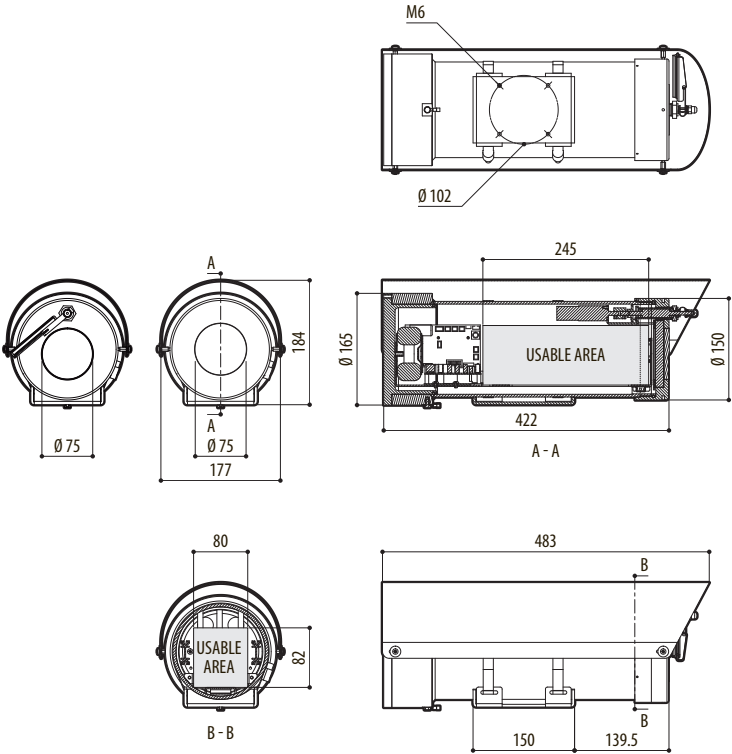


Fig. 51 MAXIMUS MHX.

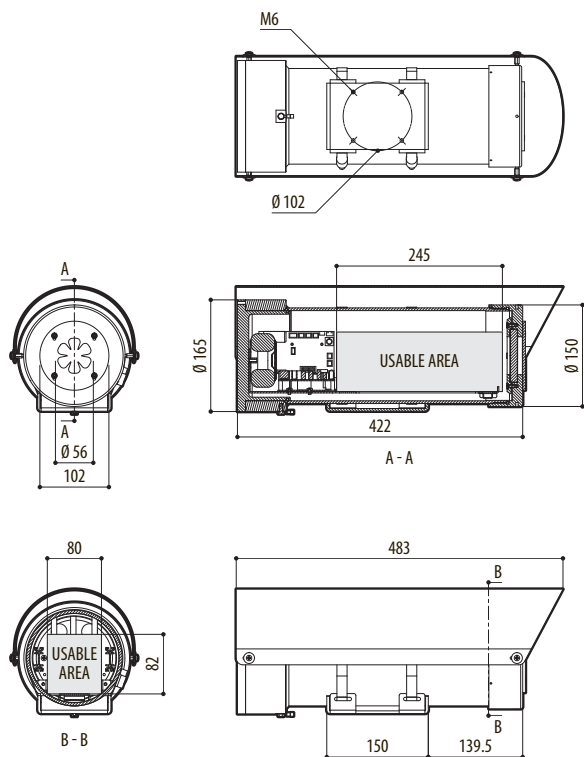


Fig. 52 MAXIMUS MHXT.



Headquarters Italy VIDEOTEC s.r.l.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

MNVCMHX_2520_EN