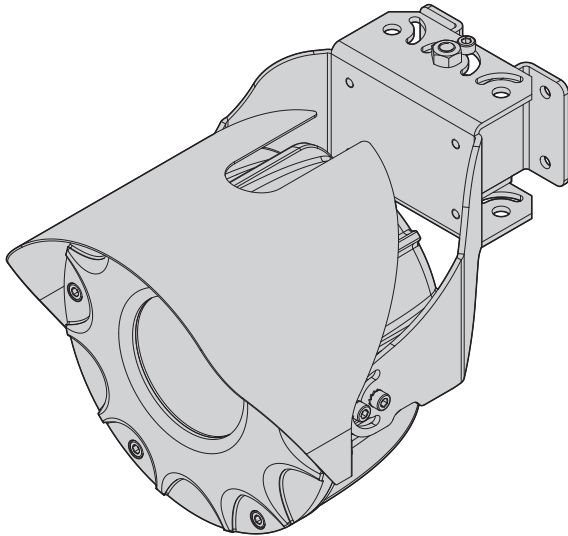




MAXIMUS MMX

Flameproof FULL HD camera in a compact design



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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 "VIDEOTECH 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.



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.

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.

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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 guarantee.



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 10A 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.
- TNV-1 installation type. The installation is type TNV-1, do not connect it to SELV circuits.
- Handle the product with care to avoid accidental contacts, sharp edges and corners.
- 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.
- 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.
- To comply with the main supply voltage dips and short interruption requirements, use a suitable Uninterruptible Power Supply (UPS) to power the unit.
- Device shall be supplied by PS2 energy source
- 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: 24Vac ($\pm 10\%$) or 24Vdc ($\pm 5\%$).
- 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

EN – English – Instruction manual

The MMX flameproof housing was designed for installation in potentially explosive environments, manufactured in AISI 316L shot peened and electro-polished stainless steel. The housing can be powered 24Vac, 24Vdc or using an Ethernet (PoE+) cable. The housing is equipped with a 1/2" NPT input. The MMX housing has an IP66/IP68/IP69 level of protection and can be installed, according to the class, in an ambient with temperatures that vary between -40°C up to +70°C.

4.1 Product overview

The main parts of the product are illustrated below.

01. Fastening support.
02. Reinforcement support.
03. Housing support.
04. Spacer.
05. M8x80 screw.
06. Sunshield.
07. Housing.

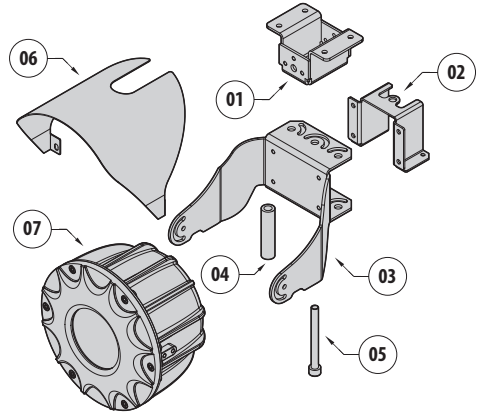


Fig. 1

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.

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

The cameras to be installed shall not contain cells or batteries.

The cameras must have basic geometric shapes.

Ambient temperature and surface temperature - see the instructions.

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

4.4 Gas Group, Dust Group and Temperatures

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

Ambient temperature: -40°C/+65°C or +70°C.

TEMPERATURE CLASS	MAXIMUM AMBIENT TEMPERATURE
T6 / T85°C	+65°C
T5 / T100°C	+70°C

Tab. 1

4.5 Cable entry

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.

4.6 Product marking label




Fig. 2

1. Number of the accredited body providing quality evaluation.
2. Manufacturer's name and address.
3. Model.
4. Ambient temperature of use.
5. The serial number consists in 12 numeric characters, the second and third digits define the last two numbers of the year of manufacture.
6. Electrical characteristics (voltage V, frequency Hz, current A, power W).
7. Type, size and number of cable entries
8. ATEX marking. The Class temperature depends on the electronics installed inside and the ambient temperature.
9. IECEx marking. The Class temperature depends on the electronics installed inside and the ambient temperature.
10. Warnings.
11. IP protection degree.

4.7 For UL/CSA standard reference only.

 **The flameproof joints are not intended to be repaired.**

 **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. These Codes contain the installation regulations for electrical facilities in all areas and refer to a number of further standards of other institutions with specifications for the construction and installation of suitable equipment.**

Important safety instructions

WARNING: A SEAL SHALL BE INSTALLED WITHIN 50 mm OF THE ENCLOSURE.

AVERTISSEMENT: UN SCÈLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50 mm DU BOÎTIER.

WARNING: "CABLE ENTRY AND BRANCHING POINT IS 83.2°C AT +65°C AMBIENT AND 88.2°C AT +70°C AMBIENT. USE SUITABLE CABLE AND CABLE GLANDS".

AVERTISSEMENT: LA TEMPÉRATURE DE L'ENTRÉE DE CÂBLE ET DU POINT DE BRANCHEMENT EST DE 83.2°C JUSQU'À +65°C AMBIANT ET DE 88.2°C JUSQU'À +70°C AMBIANT. UTILISEZ LE CÂBLE ET LES PRESSE-ÉTOUPES APPROPRIÉS.

WARNING: DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE IS PRESENT.

AVERTISSEMENT - NE PAS OUVRIR EN PRÉSENCE D'UNE ATMOSPHÈRE EXPLOSIVE

WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

AVERTISSEMENT - DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES - VOIR INSTRUCTIONS

Marking label



Fig. 3

NEMA Types: TYPE 4X, TYPE 6P

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 d IIC and C22.2 with the following protection Ex d IIC 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 60950-1, 2nd Edition, 2019-05-09 (Information Technology Equipment - Safety - Part 1: General Requirements)

CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)

UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements)

CAN/CSA C22.2 No. 62368-1-14, 2nd Ed, Issued: 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements)

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

MAXIMUS MMX - CONFIGURATION OPTIONS						
	Voltage	Camera	Connections	Video Output		
MMX	2 24Vdc/ 24Vac, PoE+	6 Day/Night camera 3X zoom, FullHD	0 Without cable, without cable gland	Z IP	A	Complies with ON-VIF, Profile Q, Profile S and Profile T
			A Cable gland Ex d 1/2" NPT and 4m (13ft) armoured cable			
			B Cable gland Ex d 1/2" NPT and 10m (32.8ft) armoured cable			

Tab. 2

MAXIMUS MMX - CERTIFICATIONS AND MARKINGS (WITH CABLE)			
Certification	Marking	Ambient temperature	Cable input temperature
ATEX	Ⓜ II 2 G Ex db IIB T6...T5 Gb Ⓜ II 2 D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C	+83.2°C with Ta ≤ +65°C +88.2°C with Ta ≤ +70°C
IECEX	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
EAC Ex	1Ex db IIB T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
INMETRO	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
UK Ex	Ⓜ II 2 G Ex db IIB T6...T5 Gb Ⓜ II 2 D Ex tb IIIC T85°C...T100°C Db		

Tab. 3

MAXIMUS MMX - CERTIFICATIONS AND MARKINGS (WITHOUT CABLE)			
Certification	Marking	Ambient temperature	Cable input temperature
ATEX	Ⓜ II 2 G Ex db IIB T6...T5 Gb Ⓜ II 2 D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C	+83.2°C with Ta ≤ +65°C +88.2°C with Ta ≤ +70°C
IECEX	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
EAC Ex	1Ex db IIB T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
KCs	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
INMETRO	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
Hazardous Location America	Class I, Zone 1, AEx db IIB T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2 Group C, D T6...T5 Class II, Div 2, Group F and G T6...T5		
Hazardous Location Canada	Ex db IIB T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2 Group C, D T6...T5 Class II, Div 2, Group F and G T6...T5		
UK Ex	Ⓜ II 2 G Ex db IIB T6...T5 Gb Ⓜ II 2 D Ex tb IIIC T85°C...T100°C Db		

Tab. 4

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
- O-ring replacement part kit
- Bracket kit
- 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.

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

6.1 Installation options



The M8 axis must always be in the vertical position.

The brackets supplied allow installation of the product in the positions illustrated below.

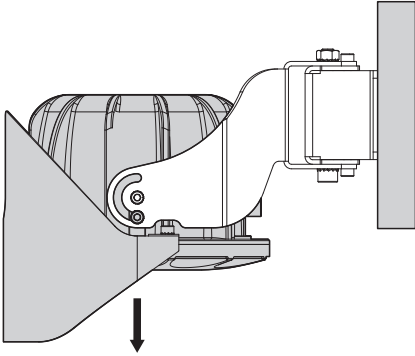


Fig. 4 Example of wall installation, vertical rotation, -90° .

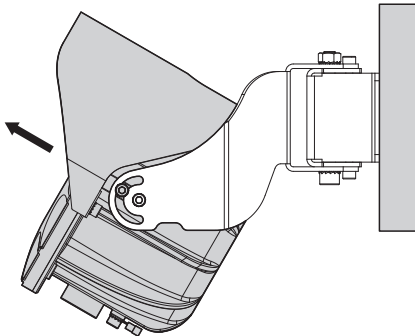


Fig. 5 Example of wall installation, vertical rotation, $+30^\circ$.

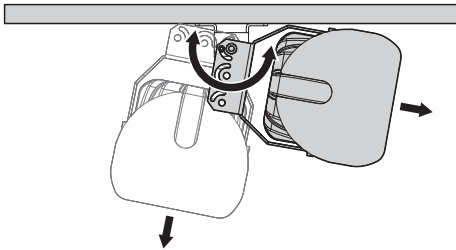


Fig. 6 Example of wall installation, horizontal rotation, from 26° up to 80° .

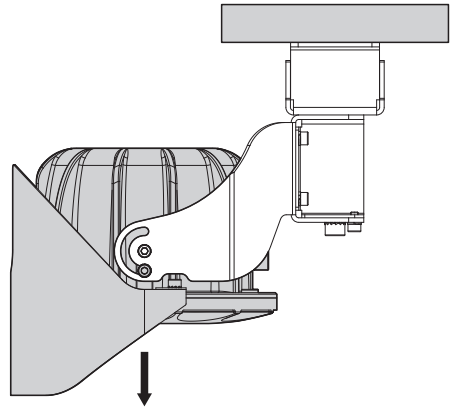


Fig. 7 Example of ceiling installation, vertical rotation, -90° .

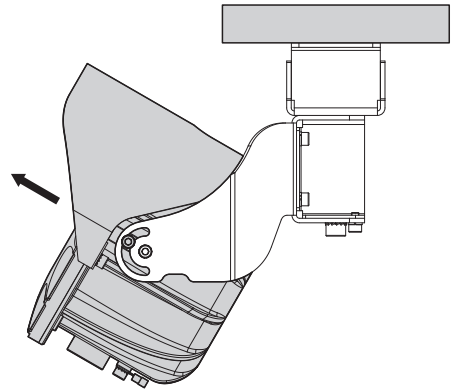


Fig. 8 Example of ceiling installation, vertical rotation, $+30^\circ$.

6.1 Fixing to parapet or ceiling mount

The product can be installed on a parapet or on the ceiling.

Fasten the fastening support (01) to its final installation surface.

Tighten the screws.

Attach the reinforcement support (02) to the housing support (03) using the M5 screws and the 5 washers supplied. Fasten the 2 supports assembled as such to the fastening support (01) using the M8 screw (05), the 8 toothed washers and a relevant spacer (04). Once the final position of the product is defined, fully tighten the M8 screw (05) and fasten the M5 screw (08) to block rotation.

The cable connected to the housing could hinder operations. You can, by dismantling the sunshield, rotate the housing 180° (6.2 Sunshield mounting, page 17).

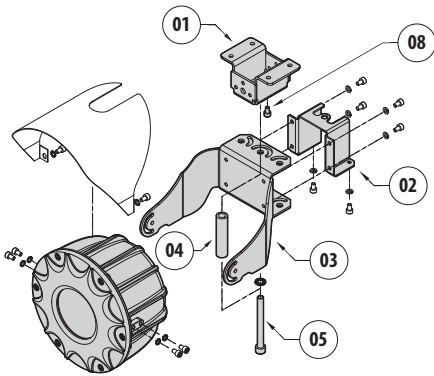


Fig. 9 Ceiling mounting (housing in normal position).

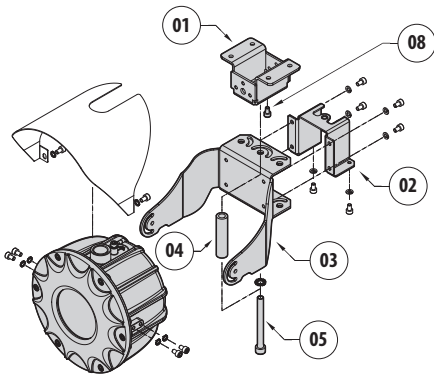


Fig. 10 Ceiling mounting (housing in overturned position).

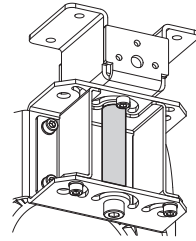


Fig. 11 Rear view of completed installation.

Fastening to a parapet or to the ceiling depends on the position of the fastening support.

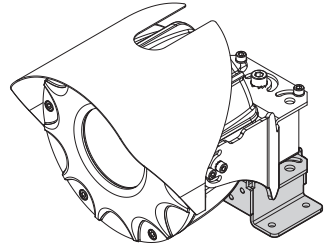


Fig. 12 Parapet mounting.

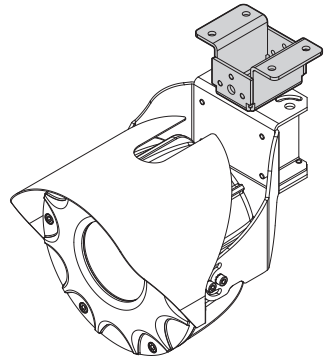


Fig. 13 Ceiling mounting.



Pay attention to the fixing. Tightening torque: M5 screws, 9Nm (± 0.5 Nm). M8 screw, 16.5Nm (± 0.5 Nm).

6.1.2 Wall mounting

The product can be installed on a wall.

Fasten the fastening support (01) to its final installation surface.

Tighten the screws.

Attach the housing support (03) to the fastening support (01) using the M8 screw (05), washers and nut. Once the final position of the product is defined, fully tighten the M8 screw (05) and fasten the M5 screws (08) to block rotation.

The cable connected to the housing could hinder operations. You can, by dismantling the sunshield, rotate the housing 180° (6.2 Sunshield mounting, page 17).

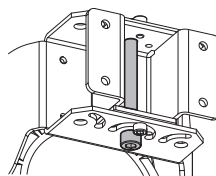


Fig. 16 Rear view of completed installation.

Pay attention to the fixing. Tightening torque: M5 screws, 9Nm ($\pm 0.5Nm$). M8 screw, 16.5Nm ($\pm 0.5Nm$).

6.2 Sunshield mounting

The product is supplied with the sunshield already installed.

For installation or maintenance needs, the sunshield can be dismantled. Unscrew the sunshield screws and remove it.

Re-assemble the sunshield before fastening the housing to the housing support.

Pay attention to the fixing. Tightening torque: 6Nm ($\pm 0.5Nm$).

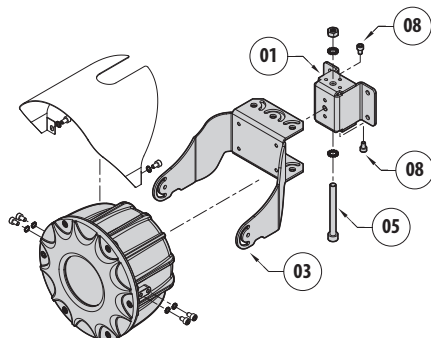


Fig. 14 Housing in normal position.

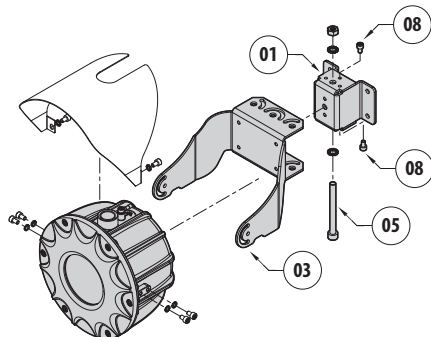


Fig. 15 Housing in overturned position.

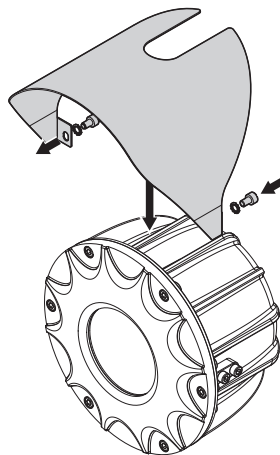


Fig. 17

6.3 Housing opening



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

Unscrew the fastening screws and remove the front cover from the housing body.

Screws properties

- Diameter/Screw pitch: M5x0.8
- Material: A4
- Screw head: ISO 4762
- Length: 8mm (0.3in)
- Yield stress (min): 450N/mm²

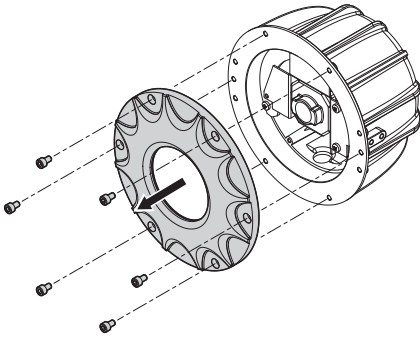


Fig. 18

6.4 Slide removal

Unscrew the 3 M4 screws to remove the slide. Before removing the slide, check that cables are not fastened with a clip.

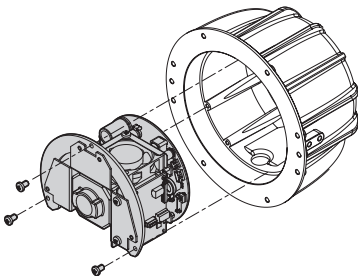


Fig. 19

6.5 Housing board description

BOARD DESCRIPTION	
Connector/ Terminal	Function
J1	Power supply line (24Vac/24Vdc)
J4	Heater
J5	Board test
J6	Blower
J7	Connection to the video encoder
J8	Ethernet, PoE+ power supply
F1	Fuse
SW1	Reset dip-switch

Tab. 5

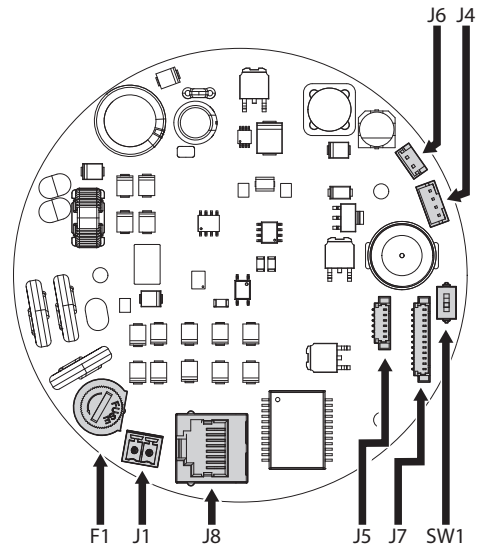


Fig. 20

6.6 Connecting the power supply

6.6.1 Connecting the power supply, 24Vac/24Vdc (version of the product not cabled)

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

ⓘ The polarity of the voltage, applied to the power terminal, is irrelevant.

CONNECTING THE POWER SUPPLY		
Power supply 24Vac/24Vdc		
Colour	Terminals	Cable section
Defined by the installer	~/+	from 0.14mm ² (28AWG) up to 1.5mm ² (16AWG)
Defined by the installer	~/-	from 0.14mm ² (28AWG) up to 1.5mm ² (16AWG)

Tab. 6

CABLES SPECIFICATIONS		
Cable section	Supply voltage	Maximum cable length
1.5mm ² (16AWG)	24Vdc	20m (66ft)
	24Vac	40m (131ft)

Tab. 7

⚠ 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).

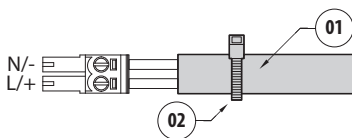


Fig. 21

The power supply cables should be connected to the power supply terminal of the housing board (J1, 6.5 Housing board description, page 18).

6.6.2 Connecting the power supply, PoE+ (version of the product not cabled)

The product can be powered using PoE+ (Power Over Ethernet) devices in compliance with the international standard for technological information IEEE 802.3at, using an Ethernet data cable Category 5E.

ⓘ Maximum Ethernet cable length (category 5E): 100m.

The PSE (Power-Supplying Equipment) devices suitable for the product power supply must comply with the standard IEEE 802.3at (PoE+).

The Ethernet cable should be connected to connector RJ45 of the housing board (J8, 6.5 Housing board description, page 18).

⚠ The Ethernet cable shield must always be earthed via the connector. Always use a shielded RJ45 connector.

Carry out the connections as described in the table (according to the standard: TIA/EIA-568-B).

CONNECTION OF THE ETHERNET CABLE	
Pin number	Cable colour
1	Orange-White
2	Orange
3	Green-White
4	Blue
5	Blue-White
6	Green
7	Brown-White
8	Brown

Tab. 8

6.6.3 Connecting the power supply, 24Vac/24Vdc (version of the product cabled)

Perform the connections following the instructions reported in the table .

CONNECTING THE POWER SUPPLY (24VAC/24VDC)		
Colour	Function	Cable section
Black 1	~/+	1.5mm ² (16AWG)
Black 2	~/-	1.5mm ² (16AWG)

Tab. 9

6.6.4 Connecting the power supply, PoE+ (version of the product cabled)

The product can be directly connected to an Ethernet switch equipped with a PoE+ (End-Span configuration) port or a classic Ethernet switch using a PoE Injector (Mid-Span configuration).

6.7 Connection of the Ethernet cable



The Ethernet cable shield must always be earthed via the connector. Always use a shielded RJ45 connector.

Use Ethernet cables with the following characteristics:

- STP (shielded)
- Category 5E
- Cable minimum section: 0.22mm² (24AWG).

For further information refer to the relative chapter (6.6.2 Connecting the power supply, PoE+ (version of the product not cabled), page 19).

6.7.1 Connection of the Ethernet cable (cabled version of the product)

The product can be directly connected to an Ethernet switch.

The example below shows a typical installation.

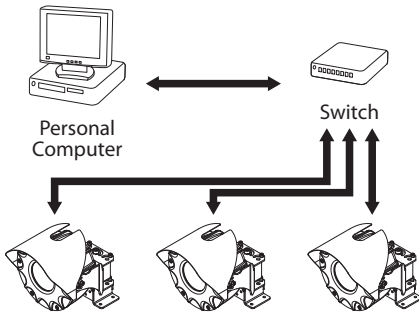


Fig. 22

6.8 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
- Screw head: ISO 4762
- Length: 8mm (0.3in)
- Yield stress (min): 450N/mm²



CAUTION! The external equipotential connections must be set up through the eyelet on the outside of the product. Do not use as a protective terminal.

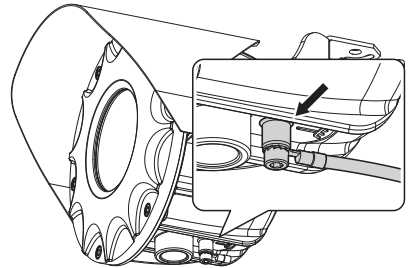


Fig. 23

6.9 Housing closure

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

⚠ During product opening and closing operations, be careful not to damage the flameproof joint.

⚠ Before closing the front cover, check the O-ring gasket is intact. If the sealing is damaged replace it with the one supplied.

Verify that there is no dirt or debris.

Arrange the cables so that they do not hinder closing of the front cover. To avoid tearing of cables, there is a hole under the slide for a fastening clip.

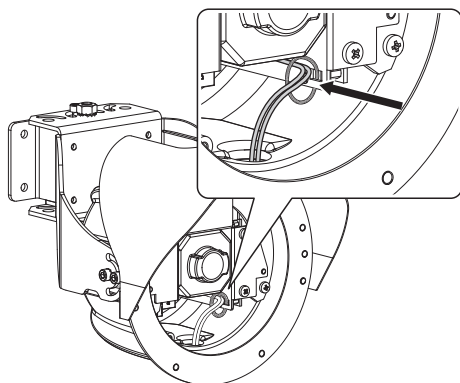


Fig. 24

Insert the front cover in the housing body, keeping the closure holes between the cover and the body aligned.

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

Screw back the previously removed screws.

Screws properties

- Diameter/Screw pitch: M5x0.8
- Material: A4
- Screw head: ISO 4762
- Length: 8mm (0.3in)
- Yield stress (min): 450N/mm²

⚠ Pay attention to the fixing. Tightening torque: 9Nm (±0.5Nm).

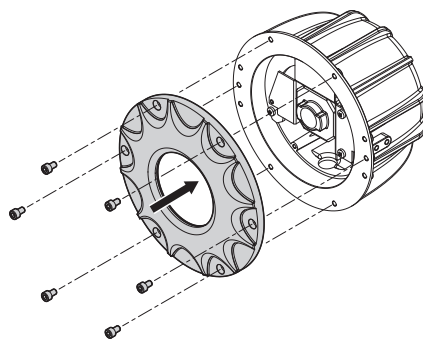


Fig. 25

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 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 `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

8.2.2 Inserting an SD Card

For onboard video storage capabilities, please insert an industrial grade microSD card into the slot as show (Fig. 26, page 22).

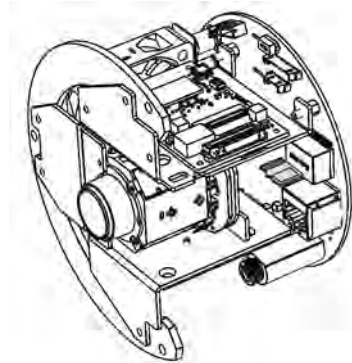


Fig. 26

9 Maintenance

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

9.1 Routine maintenance

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

9.1.1 Inspecting the cables

The cables should not show signs of damage or wear, which could generate hazardous situations. In these cases, cable maintenance must be carried out.

9.2 Extraordinary maintenance

9.2.1 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.

i To maintain cULus Listed certification, the fuse must be UL Listed (OMEGA GT520222, BUSSMAN S507).

The used fuse is described below.

FUSE REPLACEMENT	
Supply voltage	Fuse (F1)
24Vac, 50/60Hz	T 2A H 250V 5x20
24Vdc	

Tab. 10

As an alternative, use an fuse featuring the same characteristics.

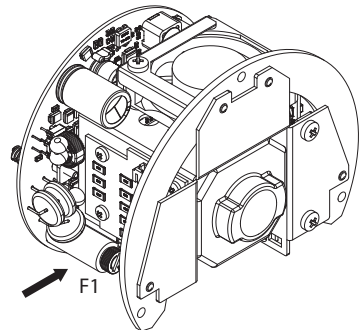


Fig. 27

9.2.2 Replacing the gasket

Replace the O-ring gasket of the product with the one supplied.

Open and close the cover as described in the chapters above.

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

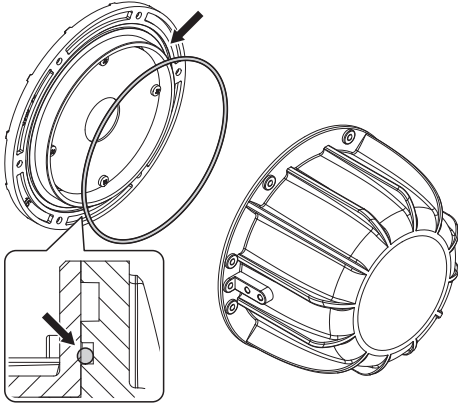


Fig. 28

9.2.3 Factory Default

It is possible to reset to the factory default settings.

The effect of the Factory Default procedure is the same as restoring the factory default settings through the web interface (Web Interface manual, Tools Page, Hard Reset button).

Follow the procedure below:

- Disconnect the power supply to the unit.
- Open the housing and remove the slide.
- Set the reset dip switch to ON (SW1, 6.5 Housing board description, page 18).
- Re-insert the slide and close the housing.
- Power the unit. Wait for 2 minutes.
- Disconnect the power supply to the unit.
- Open the housing and remove the slide.
- Set the reset dip switch to OFF (SW1, 6.5 Housing board description, page 18).
- Re-insert the slide and close the housing.
- Power the unit.



Once the factory default procedure has terminated, you need to configure the unit as described in the relevant chapter (8.1 Default IP address, page 22).

10 Cleaning



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



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

10.1 Cleaning the glass window

Cleaning should be done with mild soap diluted with water.

10.2 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.

11 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.

12 Troubleshooting



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



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

PROBLEM

The product does not go on.

CAUSE

Wrong cabling, broken fuse.

SOLUTION

Make sure the connections are correct. Check continuity of the fuse and, if faulty, replace it with the indicated model.

PROBLEM

Video streaming is not visible.

CAUSE

Incorrect IP address settings.

SOLUTION

Check the device IP address and the configuration of the computer network card.

CAUSE

Automatic preheating procedure (De-Ice) in progress.

SOLUTION

Wait until the end of the pre-heating procedure. If the ambient temperature is too low the unit will remain blocked.

13 Technical data

13.1 Mechanical

AISI 316L stainless steel construction

External shot peened and electro-polished surfaces

Sunshield

Supports for wall, ceiling or parapet installation

Unit weight:

- 6.5kg (14.3lb) (housing only + mounting bracket)
- 8.5kg (18.7lb) (housing with 4m (13ft) armoured multipolar cable)

13.2 Cable glands

Cable entry: 1 hole, 1/2" NPT

Cable gland Ex d 1/2"NPT (with pre-installed cable only)

13.3 Housing's window

Material: Tempered glass

Usable diameter: 73.5mm (2.9in)

13.4 Electrical

Supply voltage/Current consumption

- 24Vac, 1.32A, 50/60Hz
- 24Vdc, 0.9A
- PoE+ (IEEE 802.3at)

Power consumption:

- 21W (24Vac, 1.32A, 50/60Hz)
- 20W (24Vdc, 0.9A)
- 21W (PoE+)

Armoured cable

- External diameter: 16.8mm (0.66in)±0.4mm (0.016in)
- Diameter under armature: 12.4mm (0.5in)±0.3mm (0.012in)
- Colour: black RAL 9005

Armoured cable composition:

- 3x1.5mm² (15AWG)
- 4x2x0.22mm² (24AWG) (cat. 5E F/STP)

13.5 Network

Ethernet connection: 100 Base-TX

Connector: RJ45

13.6 Cameras

Day/Night Full HD 3x

Resolution: 6mp - (16:9) 3200 x 1800 (3:2) 3072 x 2048

Max image rate: 1080p/30fps

Image Sensor: 1/1.8" progressive scan CMOS

WDR Off dynamic range: 85dB

WDR On dynamic range: 120dB

3D noise reduction: Yes

Lens:

- From f= 4.9mm (wide) up to 8.0mm (tele)
- From F1.8

Zoom: 1.6x

Horizontal Angle of View Based on Aspect Ratio:
(16:9) 50°- 91°, *(3:2) 47°- 72°

Vertical Angle of View Based on Aspect Ratio: (16:9)
29°- 51°, *(3:2) 27°- 48°

Electronic Shutter Control: Automatic, Manual

White balance: Automatic, Manual

Iris Control: Automatic, Open, Closed

Camera Tampering Detection: Yes

Day/Night Control: Automatic, Manual

Flicker Control: 60Hz, 50Hz

Backlight Compensation: Adjustable

Privacy Zones: Yes

13.7 Environment

For indoors and outdoors installation

Certification temperature: from -40°C (-40°F) up to +65°C (149°F) (T6/T85°C) or +70°C (158°F) (T5/T100°C)

Operating temperature:

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

Relative humidity: from 5% up to 95%

13.8 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, IP68 (2 hours, 5m (16ft)), IP69

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

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1 CAN/CSA C22.2 No. 62368-1-14): cULus Listed

Electromagnetic compatibility (North America): FCC part 15 (Class A), ICES-003 (Class A)

Level of protection Type (UL50E): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

NDAA-compliant

13.9 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)

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

KCs (Employment and labor department 2021-22)

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31)

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)

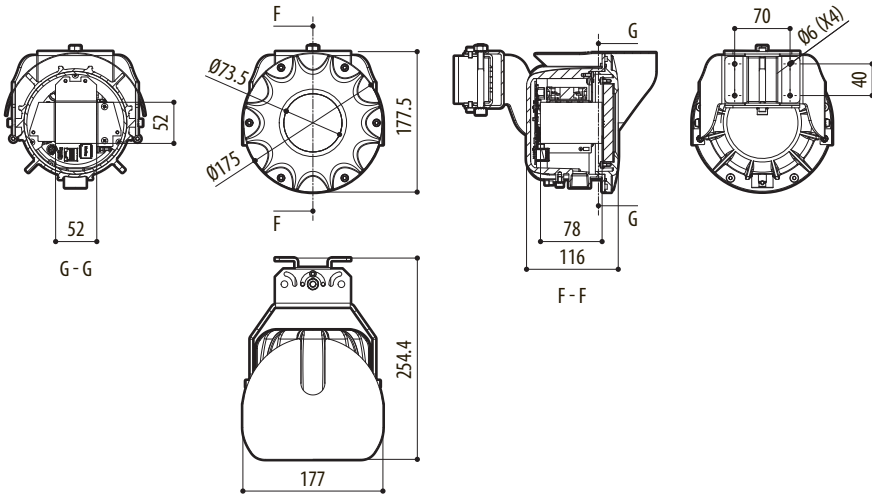
UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)

14 Technical drawings



The indicated measurements are expressed in millimetres.

WALL MOUNTING



PARAPET OR CEILING MOUNTING

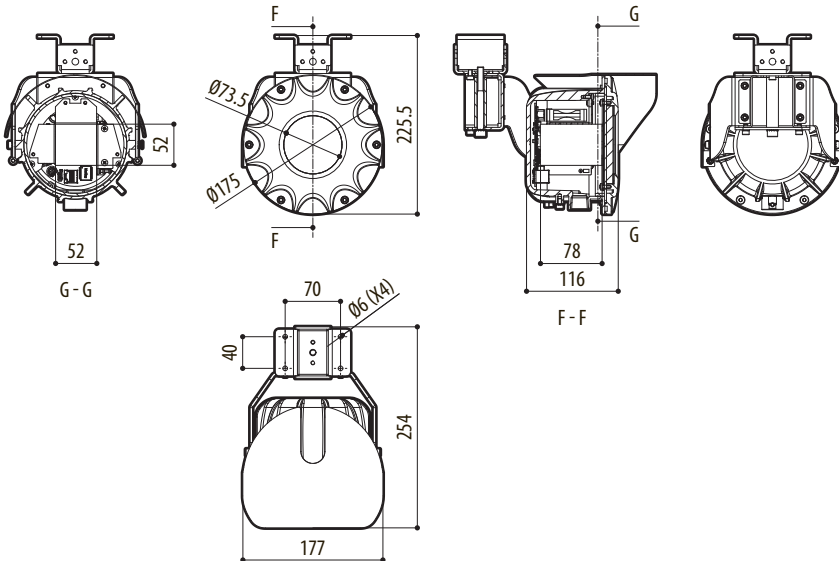


Fig. 29 MAXIMUS MMX.



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

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