

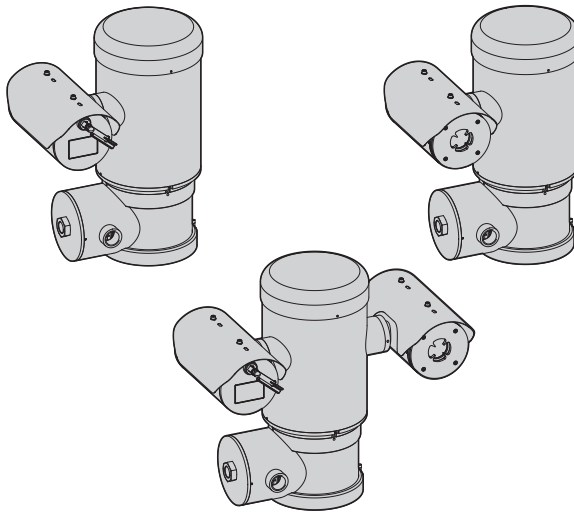


MAXIMUS MPX SERIES2 (MPXHD)

MAXIMUS MPXR SERIES2 (MPXR)

MAXIMUS MPXT SERIES2 (MPXT)

Explosion-proof PTZ camera



EN English - Instruction manual

IT Italiano - Manuale di istruzioni

FR Français - Manuel d'instructions

DE Deutsch - Bedienungsanleitung

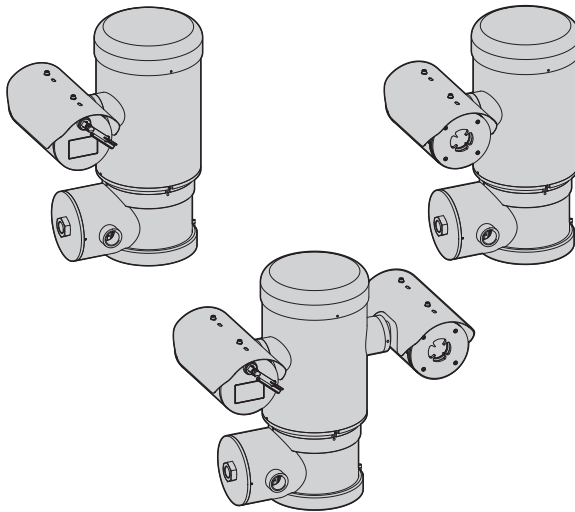
RU Русский - Руководство по эксплуатации

PT Português - Manual de instruções

KO 한국어 - 지침 설명서

MAXIMUS MPX SERIES2 (MPXHD)
MAXIMUS MPXR SERIES2 (MPXR)
MAXIMUS MPXT SERIES2 (MPXT)

Explosion-proof PTZ camera



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1 About this manual

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

1.1 Typographical conventions



DANGER!
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.

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 code EN/IEC 60079-14, EN/IEC 60079-17 and national standards.
- Do not open the device when powered and in explosive atmosphere.
- Installation should be carried out using adequate tools. The location in which the device is installed may require use of specific tools.
- Make all connections, installation and maintenance work in a non-explosive atmosphere.
- The equipotential connection is mandatory to avoid the risk of ignition of products installed in potentially explosive environments.
- This device must be connected to an earth conductor (protective earth). This connection must only be performed through the power line connector. External equipotential bonding connections must also be performed but only for supplementary bonding connection to earth, and required by local codes or authority.
- Before turning the product on in an explosive atmosphere, make sure that the connection compartment cover is properly closed.
- 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 16A max automatic bipolar circuit breaker. The minimum distance between the circuit breaker contacts must be 3mm (0.1in). The circuit breaker must be provided with protection against the fault current towards the ground (differential) and the overcurrent (magnetothermal).
- 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 system can be installed only in a standard or inverted position (ceiling mount).
- Make sure the product is to be secured to building before operation.
- At start up the system makes some automatic calibration movements: do not stand near the device when it is powered.
- 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.
- For technical services, consult only and exclusively authorized technicians.
- This product must only be repaired by suitably trained personnel or under the supervision of VIDEOTEC personnel in accordance with the foreseen terms and conditions: IEC/EN60079-19.
- Only use original VIDEOTEC spare parts. Strictly adhere to the maintenance instructions attached to each replacement kit.

**INFO**

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

- Given the considerable weight of the system, use an appropriate transport and handling system. The staff must carry out the handling of the product in compliance with the common accident prevention standards.
- Before proceeding with installation, check the supplied material to make sure it corresponds to the order specification by examining the identification labels.
- Equipment intended for installation in Restricted Access Location performed 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.
- Contact the manufacturer for information on the dimensions of the explosion proof joint.
- For all maintenance interventions, we recommend you return the product to the laboratory that will perform all required operations.
- This device is remotely controlled and may change position at any time. It should be installed so that no one can be hit by moving parts. It should be installed so that moving parts cannot hit other objects and create hazardous situations.
- This is a Class A product. In a domestic environment this product may cause radio interference. In this case the user may be required to take adequate measures.
- To comply with the main supply voltage dips and short interruption requirements, use a suitable Uninterruptable Power Supply (UPS) to power the unit.

4 Identification

4.1 Product description and type designation

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

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

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

Versions are available with visible light camera, thermal camera, or dual vision with visible light and thermal camera.

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

Contact the manufacturer for information on the dimensions of the explosion proof joint.

Ambient temperature and Surface temperature – see instructions.

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

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

4.4 Gas Group, Dust Group and Temperatures

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

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

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

4.5 Characteristics of installable devices

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

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.

4.6.1 Stopping plug



The stopping plug supplied is not KCs certified.

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

The stopping plug installation instructions are available on <https://peppers.co.uk/useful-documents/>.

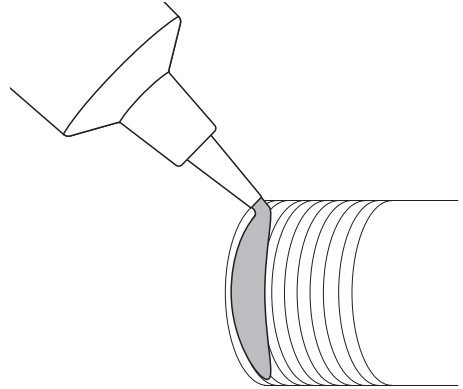


Fig. 1

4.7 Product marking

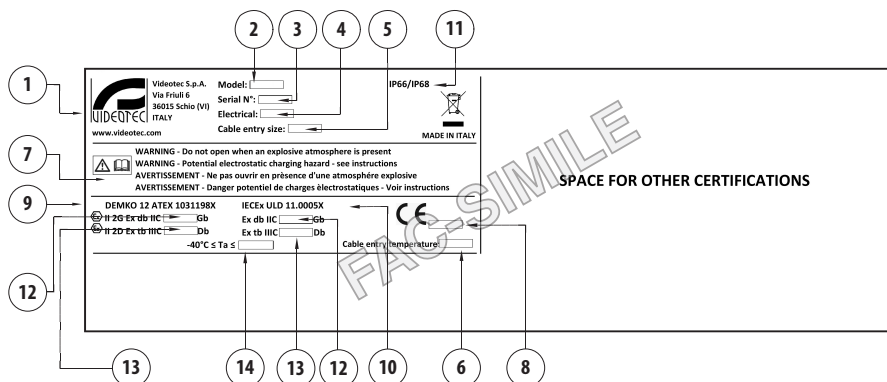


Fig. 1

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

Example of marking:

EXAMPLE DATA				
Dissipated power in housing (W)	T Class	Maximum surface temperature	Cable entry temperature	Ambient temperature
7	T4	T135°C	90°C	$-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
	T6...T5	T85°C...T100°C	80°C	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ or 70°C
	T6...T4	T85°C...T135°C	90°C	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ or 70°C or 80°C

Tab. 1

4.8 For UL/CSA standard reference only.



The flameproof joints are not intended to be repaired.



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



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



Fig. 2



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.



The 100Vac and 220Vac versions of the products are not UL certified

Important safety instructions

WARNING: DO NOT OPEN WHEN AN 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.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L'ENTRÉE DU CONDUIT DU CAISSON.

In installations according to UL/CSA standards, installation is compulsory of the separator provided as indicated in the relevant chapter (7.5.1 Installations according to UL/CSA standards, page 27).

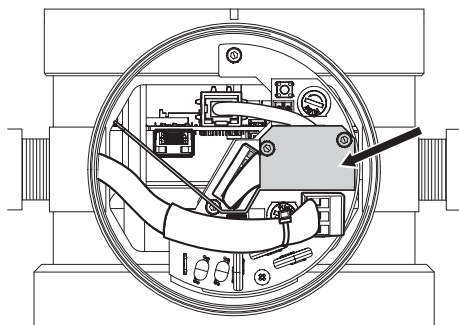


Fig. 3

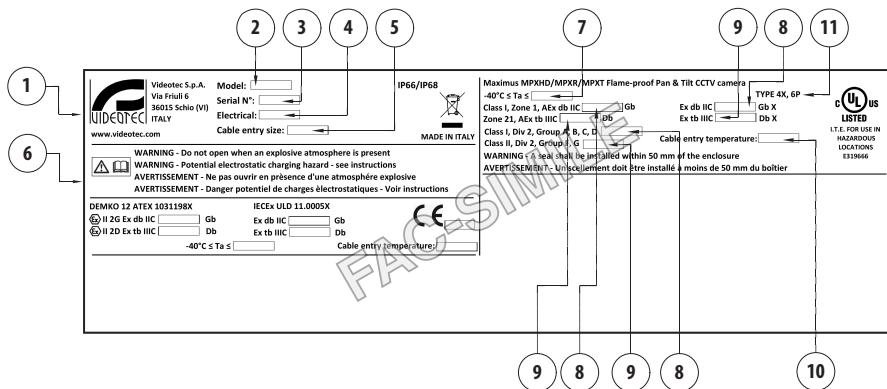


Fig. 4

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

Connections



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

Cable glands: select a cable gland in compliance with UL2225 with the following protection AEx db IIC and/or AEx tb IIC and C22.2 with the following protection Ex db IIC and/or Ex tb 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 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”

5 Versions

5.1 Day/Night camera

MAXIMUS MPX SERIES2 - CONFIGURATION OPTIONS						
	Voltage	Camera	Temperature class and ambient temperature	Video analytics	ONVIF Profiles	
MPXHD	1 230Vac	1 Super low-light Day/Night camera, FULL HD 1080p, 30x, with DELUX technology	A T6...T5 -40°C/+60°C or +70°C	0 Without integrated video analytics (without VIDEOTEC ANALYTICS)	00 Complies with ONVIF, Profile Q, Profile S and Profile T	C
	2 24Vac	2 SONY FCB-EV7520 camera, FULL HD 1080p, 30x	D T4 -40°C/+80°C	V With integrated video analytics (VIDEOTEC ANALYTICS)	01 Complies with ONVIF, Profile S and Profile T	
	3 120Vac		C T5...T4 -40°C/+55°C or +60°C			
	5 220Vac					
	6 100Vac					

Tab. 2

MAXIMUS MPX SERIES2 - CERTIFICATIONS AND MARKINGS				
Part number	Certification	Marking	Ambient temperature	Cable entry temperature
MPXHD1**A0**C, MPXHD2**A0**C, MPXHD3**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1 Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			
MPXHD5**A0**C, MPXHD6**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db		80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXHD1**D0**C, MPXHD2**D0**C, MPXHD3**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1 Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD5**D0**C, MPXHD6**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db		
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD1**CV**C, MPXHD2**CV**C, MPXHD3**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
MPXHD5**CV**C, MPXHD6**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		

Tab. 3

5.2 Thermal camera

MAXIMUS MPXR SERIES2 - CONFIGURATION OPTIONS													
	Voltage		Thermal Camera		Temperature class		Radiometry		ONVIF Profiles			Frequency	
MPXR	1	230Vac	A	Thermal camera 35mm, 336x256	A	T6...T5 -40°C/+60°C or +70°C	00	Thermal camera with radiometric functions	0	Complies with ONVIF, Profile Q, Profile S and Profile T	C	-	7.5Hz
	2	24Vac	B	Thermal camera 25mm, 336x256	D	T4 -40°C/+80°C	0R	Thermal camera with advanced radiometric functions	1	Complies with ONVIF, Profile S and Profile T		H	30Hz
	3	120Vac	V	Thermal camera 19mm, 336x256									
	5	220Vac	F	Thermal camera 13mm, 336x256									
	6	100Vac	C	Thermal camera 9mm, 336x256									
			D	Thermal camera 35mm, 640x512									
			E	Thermal camera 25mm, 640x512									
			U	Thermal camera 19mm, 640x512									

Tab. 4

MAXIMUS MPXR SERIES2 - CERTIFICATIONS AND MARKINGS				
Part number	Certification	Marking	Ambient temperature	Cable entry temperature
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 5

5.3 Dual Vision with Day/Night and thermal camera

MAXIMUS MPXT SERIES2 - CONFIGURATION OPTIONS									
	Voltage		Day/Night camera	Thermal Camera	Temperature class	Radiometry	ONVIF Profiles		Frequency
MPXT	1	230Vac	2 SONY FCB-EV7520 camera, FULL HD 1080p, 30x	A Thermal camera 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Thermal camera with radiometric functions	0 Complies with ONVIF, Profile Q, Profile S and Profile T	C	- 7.5Hz
	2	24Vac		B Thermal camera 25mm, 336x256	D T4 -40°C/+80°C	0R Thermal camera with advanced radiometric functions	1 Complies with ONVIF, Profile S and Profile T		H 30Hz
	3	120Vac		V Thermal camera 19mm, 336x256					
	5	220Vac		F Thermal camera 13mm, 336x256					
	6	100Vac		C Thermal camera 9mm, 336x256					
				D Thermal camera 35mm, 640x512					
				E Thermal camera 25mm, 640x512					
				U Thermal camera 19mm, 640x512					

Tab. 6

MAXIMUS MPXT SERIES2 - CERTIFICATIONS AND MARKINGS				
Part number	Certification	Marking	Ambient temperature	Cable entry temperature
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 7

6 Preparing the product for use



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

6.1 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.

6.2 Contents

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

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

6.3 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.

6.4 Preparatory work before installation

It is possible to install the unit with several brackets.

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

6.4.1 Methods of installation

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

Hardware adjustment is not required for inverted operation.

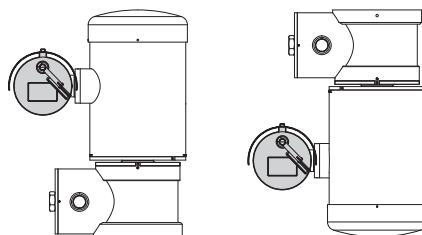


Fig. 5

6.4.2 Fixing to parapet or ceiling mount

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

Make sure the thread are free of dirt and debris.

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

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

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

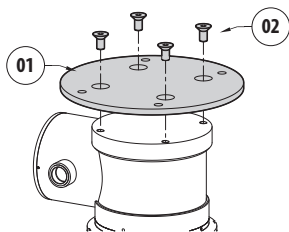


Fig. 6

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

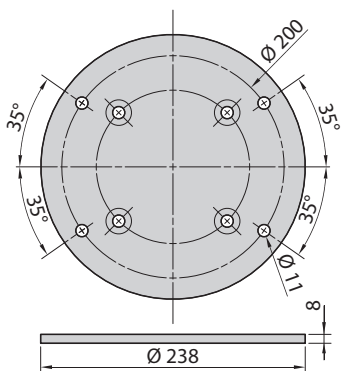


Fig. 7

6.4.3 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.

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

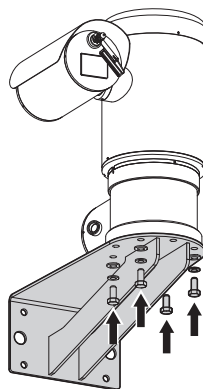


Fig. 8

Make sure the thread are free of dirt and debris.

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

Tighten the screws.

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

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

6.4.4 Fastening with corner adaptor module or pole

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

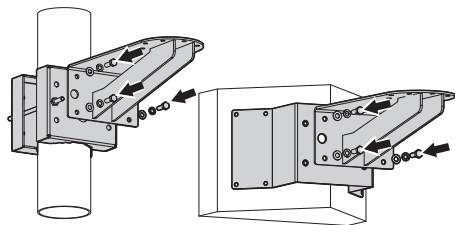


Fig. 9

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

Make sure the thread are free of dirt and debris.

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

Tighten the screws.

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

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

To fix the device to the bracket, consult the relevant chapter (6.4.3 Bracket mounting, page 22).

6.4.5 Sunshield mounting

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

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

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.

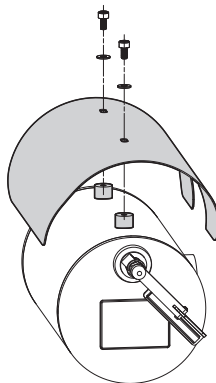


Fig. 10

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

7 Installation



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

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

7.1 Ground connection

7.1.1 Earthing equipotential connection

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

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

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

Characteristics of the M5 screw:

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

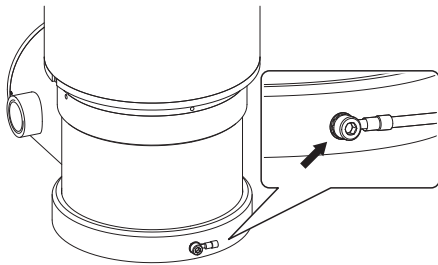


Fig. 11

7.1.2 Connection of the safety earthing

The earth wire must be connected to the internal connector (J1, 7.3 Connector board description, page 25).

7.2 Opening of the connections compartment



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

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

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

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

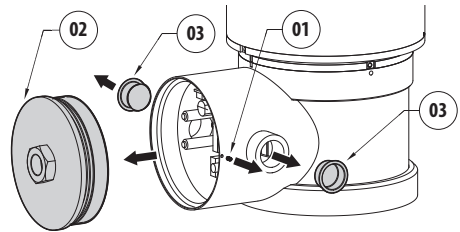


Fig. 12

By unscrewing the threaded lid, the connectors are accessed.

7.3 Connector board description

BOARD DESCRIPTION		
Connector	Function	Terminals - Nominal section of the cables used
J1	Power supply line	from 0.2mm ² (24AWG) up to 2.5mm ² (13AWG)
J6	Alarms, Remote reset and serial line	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
J8	Relay	from 0.2mm ² (24AWG) up to 1.0mm ² (17AWG)
F1	Fuse	-
F2	Fuse	-
P1	Reset push-button	-
RJ45	Ethernet Connector	-
SFP	SFP connector	-

Tab. 8

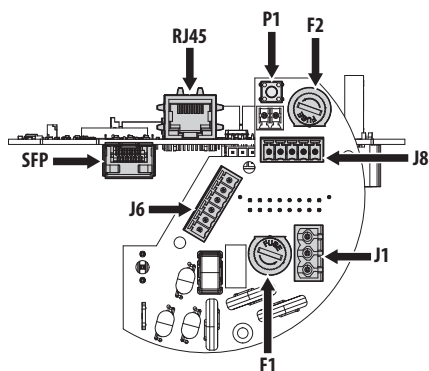


Fig. 13

7.4 Connection of the power supply line

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



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



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



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

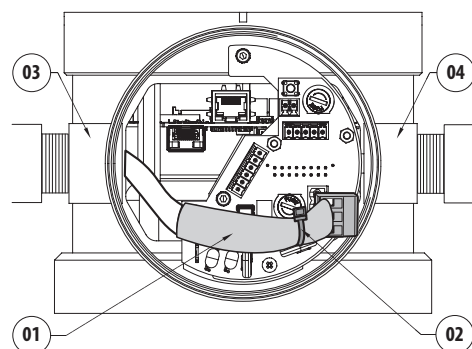


Fig. 14



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

Extract the removable power line connector from the connector board (J1, 7.3 Connector board description, page 25).

Connect the electrical power cables as indicated in the relevant table (Tab. 9, page 26).

CONNECTION OF THE POWER SUPPLY LINE	
Colour	Terminals
Power supply 24Vac	
Defined by the installer	N (Neutral)
Defined by the installer	L (Phase)
Yellow/Green	⊕
Power supply 230Vac	
Blue	N (Neutral)
Brown	L (Phase)
Yellow/Green	⊕
Power supply 120Vac	
Blue	N (Neutral)
Brown	L (Phase)
Yellow/Green	⊕

Tab. 9

7.5 Connecting alarms, remote reset and relays



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

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

Tab. 10

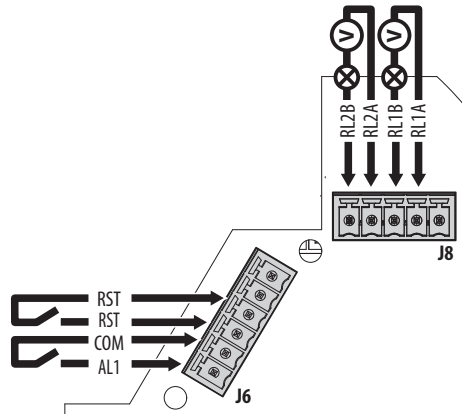


Fig. 15

7.5.1 Installations according to UL/CSA standards



Pay attention not to damage the conductors and the boards.

For installations according to UL/CSA standards, the cables for Ethernet, reset alarms, relays and fibre optics should be inserted in the right cables entry as indicated in the following figure (Fig. 16, page 27).

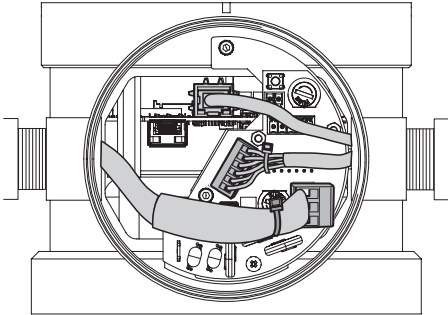


Fig. 16

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

Having inserted all the connectors and before powering the device, install the separation barrier supplied.

Fasten the barrier (01) using the specific screws and washers (02) to the prepared spacers (03) (Fig. 17, page 27 and Fig. 18, page 27).

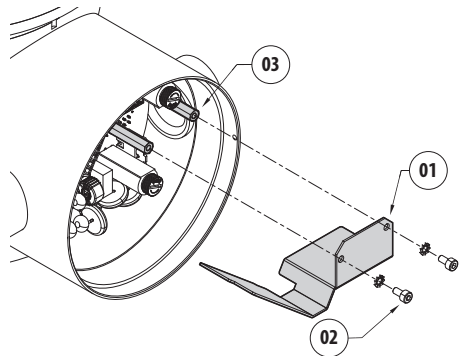


Fig. 17

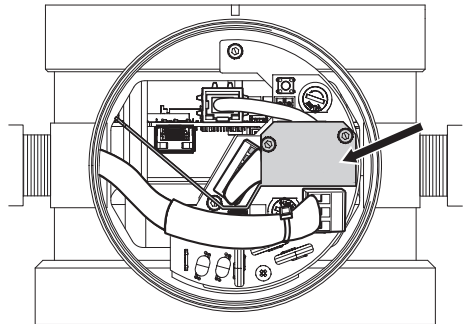


Fig. 18

7.5.2 Connecting an alarm with dry contact

Connect terminals AL1 and COM to connector J6 as shown in the image (Fig. 15, page 26).

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

Use a shielded cable to carry out the connection.

7.5.3 Connecting the remote reset

Connect the two RST terminals on connector J6 as illustrated in the figure (Fig. 15, page 26).

Maximum cable length: 200m (656ft).

Read the Factory Default chapter to find out how to use the remote reset (11.2.3 Factory Default, page 32).

7.5.4 Relays connection

i **Maximum relay voltage and current: read the technical data in the relevant chapter (15 Technical data, page 35).**

Connect terminals RL1A, RL1B, RL2A, RL2B to connector J8 as shown in the image (Fig. 15, page 26).

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

7.6 Ethernet connection

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

7.6.1 Connection via RJ45

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

Connect the Ethernet cable to port RJ45 (7.3 Connector board description, page 25).

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

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

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

7.6.2 Connection via SFP

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

The SFP module is used for the optical fiber connection. The SFP module should be suitable for the installation system.

Consult the SFP module manual for the relevant specifications.

! **The SFP module (not supplied by VIDEOTEC) must meet the following requirements:**

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

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

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

Insert the SFP module (not supplied) in the SFP slot (7.3 Connector board description, page 25).

7.7 Connection compartment closing



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



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



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



Before closing the cover, check the O-ring gasket is intact. If the gasket is damaged, replace it with the one supplied (11.1.2 Replacing the gasket, page 31).

Verify that there is no dirt or debris.

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

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

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

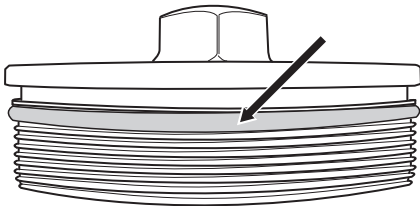


Fig. 19

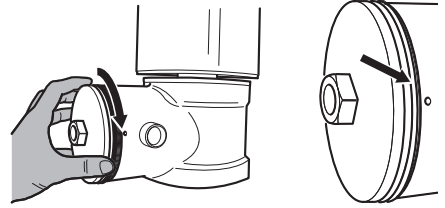


Fig. 20

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

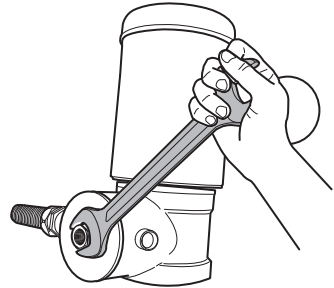


Fig. 21

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

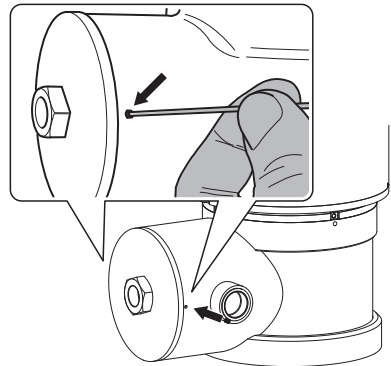


Fig. 22

8 Switching on



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



The automatic pre-heating (De-Ice) process could be started whenever the device is switched on and the ambient temperature is below -10°C ($+14^{\circ}\text{F}$). The procedure is necessary to guarantee correct operation of the devices even at low temperatures. The duration ranges depending on environmental conditions (from 60 minutes up to 120 minutes).

The unit is switched on by connecting the power supply.

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

To switch off the unit disconnect the power.

9 Configuration

9.1 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 a network sniffer to find the IP address of the device (IP scan utility).

9.2 Web interface



Browsers supported (the latest version):
Microsoft Edge, Google Chrome, Mozilla Firefox.

9.2.1 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.

To configure the web interface, consult the manual relating to the firmware version installed, available on the product web page of the website www.videotec.com.

10 Instructions for normal operation

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

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

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

The device control can be performed through different modes.

- Through the user's controls of the web interface (9.2 Web interface, page 30).
- Through Video Management Software (VMS) that supports the ONVIF protocol. In this case the Special controls are implemented using the auxiliary commands of the ONVIF protocol.
- Through PTZ Assistant software (the PTZ Assistant software is available to download on the product web page of the website www.videotec.com).

11 Maintenance

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

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

Use only VIDEOTEC original spare parts.

11.1 Routine maintenance (to be performed on a periodic basis)

11.1.1 Inspecting the cables

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

11.1.2 Replacing the gasket

Replace the connection compartment cover seal using the one supplied.

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

Replace the gasket, paying attention to position it correctly.

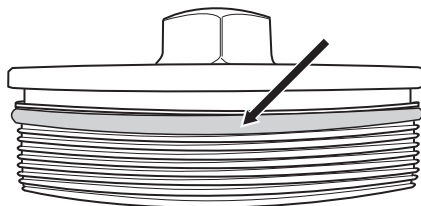


Fig. 23

11.2 Extraordinary maintenance (to be done only under particular circumstances)

11.2.1 Fuse replacement

If necessary, replace the fuses illustrated in figure (7.3 Connector board description, page 25).

FUSES REPLACEMENT		
Supply voltage	Fuse (F1)	Fuse (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Tab. 11

11.2.2 Replacement of the wiper blade

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

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

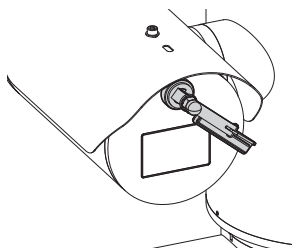


Fig. 24

11.2.3 Factory Default



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

The effect of the Factory Default procedure is the same obtained through the web interface (Hard Reset button).

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

- Switch off the unit.
- Open the connection compartment.
- Press and hold the reset button (P1, 7.3 Connector board description, page 25).
- Power the unit.
- Wait 30 seconds.
- Release the reset button.
- Wait for 2 minutes.
- Switch off the unit.
- Close the connections compartment.
- Power the unit.

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

- Switch off the unit.
- Connect the RST contacts of connector J6 (7.3 Connector board description, page 25).
- Power the unit.
- Wait 30 seconds.
- Disconnect the RST contacts.
- Wait for 2 minutes.
- Switch off the unit.
- Power the unit.



Once the factory default procedure has terminated, you need to configure the unit as described in the relevant chapter (9.1 Default IP address, page 30).

12 Cleaning

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

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

12.1 Routine cleaning (to be performed on a periodic basis)

12.1.1 Cleaning the glass window

Cleaning should be done with mild soap diluted with water.

12.1.2 Cleaning the germanium window

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

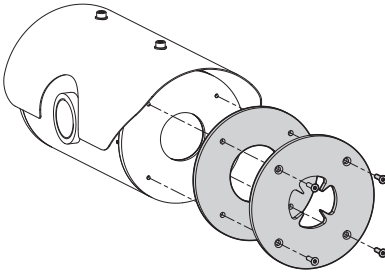


Fig. 25

Once done cleaning, reassemble the spacer and the protection grid.

12.1.3 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.

13 Information on disposal and recycling

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



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

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

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

14 Troubleshooting



Before carrying out any type of intervention, read the "Safety rules" chapter carefully in the product 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	Wiring error, blown fuse.
SOLUTION	Make sure the connections are correct. Check the continuity of the fuses and replace them with the indicated models should they fail.
PROBLEM	The shooting area do not correspond to the selected preset position.
CAUSE	Loss of absolute position reference point.
SOLUTION	Reset the equipment by switching off and on again.
PROBLEM	The device does not move during the start-up phase.
CAUSE	The ambient temperature is too low.
SOLUTION	Wait until the end of the pre-heating procedure. The following message is displayed on the web page: De-Ice procedure in progress.

15 Technical data

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 General

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

15.1.2 Mechanical

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

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

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

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

Accuracy of preset positions: 0.02°

Integrated wiper

Window with extra clear tempered glass: thick 12mm (0.47in)

Unit weight: 26.5kg (58lb)

15.1.3 Electrical

Supply voltage/Current consumption:

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

Power consumption:

- 120W max

15.1.4 Network

RJ45 port

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

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

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

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

15.1.5 I/O interface

Input for remote reset: 1

Alarm inputs: 1

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

15.1.6 Video analytics

Ultra-robust detection algorithms and auto-tracking, specifically for outdoor perimeter control.

Targets Classification: People, vehicles, generic objects

Programmable rules for video analysis, VIDEOTEC ANALYTICS (it is possible to rapidly configure up to ten rules for every preset using an intuitive control management interface)

- Line crossing: the target triggers an alarm if it crosses the line in one or both directions
- Entering/leaving area: the target triggers an alarm if it leaves or enters the configured area
- Appearing in area: the target triggers an alarm if it appears inside the configured area
- Loitering: the target triggers an alarm if it stays inside the configured area over the set time

Detection Mask: disables the detection activity in a portion of the image to prevent false alarms

Video Tampering Detection: a specific ONVIF alarm is triggered if the video camera view is obstructed (e.g. spray)

15.1.7 Cameras

Day/Night Full HD 30x DELUX

Resolution: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effective Pixels: approx. 2.38 Megapixels

Minimum Illumination:

- Colour: 0.006lx (F1.6, 30 IRE)
- B/W: 0.0006lx (F1.6, 30 IRE)

Focal length: from 4.5mm (wide) up to 135mm (tele)

Zoom: 30x (480x with digital zoom)

Iris: from F1.6 up to F9.6 (Auto, Manual)

Horizontal Viewing Angle: from 61.6° (wide end) up to 2.50° (tele end)

Vertical Viewing Angle: from 37.07° (wide end) up to 1.44° (tele end)

Shutter speed: from 1/1s up to 1/10000s (Auto, Manual)

White balance: Auto, Manual

Gain: from 0dB up to 100dB (Auto, Manual)

Wide Dynamic Range: 120dB

Focus System: Auto, Manual, Trigger

Picture Effects: E-flip, Color enhancement

Noise removal: 2D (3 levels), 3D (3 levels)

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

De-fog: On/Off

Privacy zones masking (maximum 8 settable masks)

Indoor Flicker Reduction

Auto Slowshutter: Off, On (from 1/30s up to 1/1s)

Exposure compensation: Off, On (from level 0 up to level 14)

Sharpness: from level 0 up to level 3

SONY FCB-EV7520 Day/Night Full HD 30x

Resolution: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effective Pixels: approx. 2.13 Megapixels

Minimum Illumination:

- Colour: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

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

Zoom: 30x (360x with digital zoom)

Iris: from F1.6 up to F14 (Auto, Manual)

Horizontal Viewing Angle: from 63.7° (wide end) up to 2.3° (tele end)

Vertical Viewing Angle: from 38.5° (wide end) up to 1.3° (tele end)

Shutter speed: from 1/1s up to 1/10000s (Auto, Manual)

White balance: Auto, Auto Tracing, Indoor, Outdoor, Manual, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: from 0dB up to 50.0dB (Auto, Manual)

Wide Dynamic Range: 120dB

Focus System: Auto (PTZ Trigger, Full Auto), Manual

Picture Effects: E-flip

Noise removal (2D, 3D): Off, On (from level 1 up to level 5)

Exposure Control: Auto, Manual, Priority (Shutter priority, Iris priority, Brightness priority)

De-fog: Off, Low, Mid, High

Dynamic masking of privacy zones: maximum 24 masks settable, maximum 8 simultaneously displayable

Indoor Flicker Reduction

Gain Limit: from 10.7dB up to 50dB

High sensitivity: On/Off

Backlight Compensation: On/Off

Auto Slowshutter: On/Off

Exposure compensation: Off, On (from -10.5dB up to +10.5dB)

Sharpness: from level 0 up to level 15

High Light Compensation (HLC): Off, Low, Mid, High, Masking Level (Off, On, from level 1 up to level 15)

Digital image stabilization: On/Off

15.1.8 Environment

For indoors and outdoors installation

Certification temperature: from -40°C (-40°F) up to +80°C (+176°F)

Operating temperature:

- Continuous functioning: from -40°C (-40°F) up to +65°C (149°F) (up to +50°C (122°F) for versions with VIDEOTEC ANALYTICS)
- Temperature test complies with NEMA-TS 2-2003 (R2008) par. 2.1.5.1, test profile fig. 2-1 (from -34°C (-29.2°F) to +74°C (165.2°F)) (not valid for versions with integrated video analysis, VIDEOTEC ANALYTICS)
- De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

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

Relative humidity: from 5% up to 95%

15.1.9 Certifications

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

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

RoHS (CE): EN50581

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

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

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (not available for 100Vac and 220Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac and 220Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

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

Level of protection Type (UL50E) (not available for 100Vac and 220Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

KC certification (certification valid only for code MPXHD51A001C)

15.1.10 Certifications - Explosion-proof applications

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac and 220Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac and 220Vac versions)

EAC Ex (TR CU 012/2011) (not available for 100Vac and 220Vac versions)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (not available for 100Vac and 220Vac versions)

KCs (Employment and labor department 2020-33)

15.1.11 Certifications - Marine applications

Lloyd's Register Marine Type Approval certification (with MAXIMUS MBX communication box or with FM1010 filter):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 General

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

Radiometric analysis:

- on the 4 central pixels, if the thermal camera has radiometric functions
- definition of a specific area, if the thermal camera has advanced radiometric functions

Radiometric alarm activation: If the temperature is over the threshold set, under the threshold set, between two thresholds set or outside the two thresholds set.

Actions on alarm: Activation of digital output, preset tour recall, home position recall, preset position recall and http get request.

15.2.2 Mechanical

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

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

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

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

Accuracy of preset positions: 0.02°

Unit weight: 26.5kg (58lb)

15.2.3 Housing's window

Germanium window

- Thick: 8mm (0.3in)
- 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): 87.5%
- Medium transmittance (from 11.5µm up to 14µm): 72.1%

15.2.4 Electrical

Supply voltage/Current consumption:

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

Power consumption:

- 120W max

15.2.5 Network

RJ45 port

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

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

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

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

15.2.6 I/O interface

Input for remote reset: 1

Alarm inputs: 1

Relay outputs: 1 (1A, 30Vac/60Vdc max)

15.2.7 Thermal Cameras

THERMAL CAMERAS (RESOLUTION 336X256)							
	Lens 9mm	Lens 13mm	Lens 19mm	Lens 25mm	Lens 35mm	Lens 50mm	Lens 60mm
Image Sensor	Uncooled VOx micro-bolometer	Uncooled VOx micro-bolometer	Uncooled VOx micro-bolometer	Uncooled VOx micro-bolometer	Uncooled VOx micro-bolometer	Uncooled VOx micro-bolometer	Uncooled VOx micro-bolometer
Interpolated resolution	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixel dimensions	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spectral response - long wave infrared (LWIR)	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm
Internal shutter (only for sensor compensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital Zoom	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Image updating frequency	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)
Horizontal field of view	35°	25°	17°	13°	9,3°	6,5°	5,5°
Vertical field of view	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermal sensitivity (NETD), Thermal camera with radiometric functions	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0
Thermal sensitivity (NETD), Thermal camera with advanced radiometric functions	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0
Person (detection / recognition / identification)	285m / 71m / 36m (935ft / 233ft / 118ft)	440m / 112m / 56m (1443ft / 2368ft / 183ft)	640m / 160m / 80m (2099ft / 524ft / 262ft)	930m / 230m / 116m (2099ft / 3051ft / 754ft / 380ft)	1280m / 320m / 160m (4199ft / 1050ft / 525ft)	1700m / 430m / 215m (5577ft / 1410ft / 715ft)	2000m / 510m / 255m (6561ft / 1673ft / 836ft)
Car (detection / recognition / identification)	880m / 220m / 108m (2887ft / 722ft / 354ft)	1340m / 340m / 170m (4396ft / 1115ft / 557ft)	1950m / 500m / 250m (6397ft / 1640ft / 820ft)	2800m / 710m / 360m (9186ft / 2329ft / 1181ft)	3850m / 950m / 295m (12631ft / 3116ft / 967ft)	5100m / 1320m / 660m (16732ft / 4330ft / 2165ft)	6000m / 1560m / 780m (19685ft / 5118ft / 2559ft)

Tab. 12

THERMAL CAMERAS (RESOLUTION 640X512)							
	Lens 9mm	Lens 13mm	Lens 19mm	Lens 25mm	Lens 35mm	Lens 50mm	Lens 60mm
Image Sensor	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer
Interpolated resolution	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixel dimensions	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spectral response - long wave infrared (LWIR)	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm
Internal shutter (only for sensor compensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital Zoom	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Image updating frequency	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)
Horizontal field of view	69°	45°	32°	25°	18°	12.4°	10.4°
Vertical field of view	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermal sensitivity (NETD), Thermal camera with radiometric functions	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0
Thermal sensitivity (NETD), Thermal camera with advanced radiometric functions	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0
Person (detection / recognition / identification)	250m / 63m / 31m (820ft / 207ft / 102ft)	390m / 95m / 47m (1280ft / 312ft / 154ft)	570m / 144m / 72m (1870 / 472 / 236ft)	820m / 210m / 104m (2690ft / 689ft / 341ft)	1140m / 280m / 142m (3740ft / 919ft / 466ft)	1500m / 380m / 190m (4921ft / 1247ft / 623ft)	1750m / 450m / 225m (5741ft / 1476ft / 738ft)
Car (detection / recognition / identification)	720m / 175m / 88m (2362 / 574 / 289ft)	1080m / 275m / 140m (3543ft / 902ft / 459ft)	1550m / 400m / 200m (5085ft / 1312ft / 656ft)	2200m / 580m / 290m (7218ft / 1903ft / 951ft)	3000m / 800m / 200m (9843ft / 2625ft / 656ft)	3900m / 1060m / 540m (12795ft / 3478ft / 1772)	4500m / 1240m / 640m (14764ft / 4068ft / 2100ft)

Tab. 13

15.2.8 Environment

For indoors and outdoors installation

Certification temperature: from -40°C (-40°F) up to +80°C (+176°F)

Operating temperature:

- Continuous functioning: from -40°C (-40°F) up to +65°C (149°F)
- Temperature test complies with NEMA-TS 2-2003 (R2008) par. 2.1.5.1, test profile fig. 2-1 (from -34°C (-29.2°F) to +74°C (165.2°F))
- De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

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

Relative humidity: from 5% up to 95%

15.2.9 Certifications

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

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

RoHS (CE): EN50581

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

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

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (not available for 100Vac and 220Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac and 220Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

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

Level of protection Type (UL50E) (not available for 100Vac and 220Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 Certifications - Explosion-proof applications

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac and 220Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac and 220Vac versions)

EAC Ex (TR CU 012/2011) (not available for 100Vac and 220Vac versions)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (not available for 100Vac and 220Vac versions)

KCs (Employment and labor department 2020-33)

15.2.11 Certifications - Marine applications

Lloyd's Register Marine Type Approval certification (with MAXIMUS MBX communication box or with FM1010 filter):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 General

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

Radiometric analysis:

- on the 4 central pixels, if the thermal camera has radiometric functions
- definition of a specific area, if the thermal camera has advanced radiometric functions

Radiometric alarm activation: If the temperature is over the threshold set, under the threshold set, between two thresholds set or outside the two thresholds set.

Actions on alarm: Activation of digital output, preset tour recall, home position recall, preset position recall and http get request.

15.3.2 Mechanical

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

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

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

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

Accuracy of preset positions: 0.02°

Integrated wiper

Unit weight: 31kg (68lb)

15.3.3 Housing's window

Window with extra clear tempered glass

- Thick: 12mm (0.47in)

Germanium window

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

15.3.4 Electrical

Supply voltage/Current consumption:

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

Power consumption:

- 120W max

15.3.5 Network

RJ45 port

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

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

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

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

15.3.6 I/O interface

Input for remote reset: 1

Alarm inputs: 1

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

15.3.7 Day/Night cameras

SONY FCB-EV7520 Day/Night Full HD 30x

Resolution: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effective Pixels: approx. 2.13 Megapixels

Minimum Illumination:

- Colour: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

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

Zoom: 30x (360x with digital zoom)

Iris: from F1.6 up to F14 (Auto, Manual)

Horizontal Viewing Angle: from 63.7° (wide end) up to 2.3° (tele end)

Vertical Viewing Angle: from 38.5° (wide end) up to 1.3° (tele end)

Shutter speed: from 1/1s up to 1/10000s (Auto, Manual)

White balance: Auto, Auto Tracing, Indoor, Outdoor, Manual, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: from 0dB up to 50.0dB (Auto, Manual)

Wide Dynamic Range: 120dB

Focus System: Auto (PTZ Trigger, Full Auto), Manual

Picture Effects: E-flip

Noise removal (2D, 3D): Off, On (from level 1 up to level 5)

Exposure Control: Auto, Manual, Priority (Shutter priority, Iris priority, Brightness priority)

De-fog: Off, Low, Mid, High

Dynamic masking of privacy zones: maximum 24 masks settable, maximum 8 simultaneously displayable

Indoor Flicker Reduction

Gain Limit: from 10.7dB up to 50dB

High sensitivity: On/Off

Backlight Compensation: On/Off

Auto Slowshutter: On/Off

Exposure compensation: Off, On (from -10.5dB up to +10.5dB)

Sharpness: from level 0 up to level 15

High Light Compensation (HLC): Off, Low, Mid, High, Masking Level (Off, On, from level 1 up to level 15)

Digital image stabilization: On/Off

15.3.8 Thermal Cameras

THERMAL CAMERAS (RESOLUTION 336X256)							
	Lens 9mm	Lens 13mm	Lens 19mm	Lens 25mm	Lens 35mm	Lens 50mm	Lens 60mm
Image Sensor	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer
Interpolated resolution	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixel dimensions	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spectral response - long wave infrared (LWIR)	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm
Internal shutter (only for sensor compensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital Zoom	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Image updating frequency	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)
Horizontal field of view	35°	25°	17°	13°	9,3°	6,5°	5,5°
Vertical field of view	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermal sensitivity (NETD), Thermal camera with radiometric functions	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0
Thermal sensitivity (NETD), Thermal camera with advanced radiometric functions	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0
Person (detection / recognition / identification)	285m / 71m / 36m (935ft / 233ft / 118ft)	440m / 112m / 56m (1443ft / 2368ft / 183ft)	640m / 160m / 80m (2099ft / 524ft / 262ft)	930m / 230m / 116m (3051ft / 754ft / 380ft)	1280m / 320m / 160m (4199ft / 1050ft / 525ft)	1700m / 430m / 215m (5577ft / 1410ft / 715ft)	2000m / 510m / 255m (6561ft / 1673ft / 836ft)
Car (detection / recognition / identification)	880m / 220m / 108m (2888ft / 722ft / 354ft)	1340m / 340m / 170m (4396ft / 1115ft / 557ft)	1950m / 500m / 250m (6397ft / 1640ft / 820ft)	2800m / 710m / 360m (9186ft / 2329ft / 1181ft)	3850m / 950m / 295m (12631ft / 3116ft / 967ft)	5100m / 1320m / 660m (16732ft / 4330ft / 2165ft)	6000m / 1560m / 780m (19685ft / 5118ft / 2559ft)

Tab. 14

THERMAL CAMERAS (RESOLUTION 640X512)

	Lens 9mm	Lens 13mm	Lens 19mm	Lens 25mm	Lens 35mm	Lens 50mm	Lens 60mm
Image Sensor	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer
Interpolated resolution	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixel dimensions	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spectral response - long wave infrared (LWIR)	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm	from 7.5µm to 13.5µm
Internal shutter (only for sensor compensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital Zoom	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Image updating frequency	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)
Horizontal field of view	69°	45°	32°	25°	18°	12.4°	10.4°
Vertical field of view	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermal sensitivity (NETD), Thermal camera with radiometric functions	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0
Thermal sensitivity (NETD), Thermal camera with advanced radiometric functions	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0	< 30mK at f/1.0
Person (detection / recognition / identification)	250m / 63m / 31m (820ft / 207ft / 102ft)	390m / 95m / 47m (1280ft / 312ft / 154ft)	570m / 144m / 72m (1870 / 472 / 236ft)	820m / 210m / 104m (2690ft / 689ft / 341ft)	1140m / 280m / 142m (3740ft / 919ft / 466ft)	1500m / 380m / 190m (4921ft / 1247ft / 623ft)	1750m / 450m / 225m (5741ft / 1476ft / 738ft)
Car (detection / recognition / identification)	720m / 175m / 88m (2362 / 574 / 289ft)	1080m / 275m / 140m (3543ft / 902ft / 459ft)	1550m / 400m / 200m (5085ft / 1312ft / 656ft)	2200m / 580m / 290m (7218ft / 1903ft / 951ft)	3000m / 800m / 200m (9843ft / 2625ft / 656ft)	3900m / 1060m / 540m (12795ft / 3478ft / 1772)	4500m / 1240m / 640m (14764ft / 4068ft / 2100ft)

Tab. 15

15.3.9 Environment

For indoors and outdoors installation

Certification temperature: from -40°C (-40°F) up to +80°C (+176°F)

Operating temperature:

- Continuous functioning: from -40°C (-40°F) up to +65°C (149°F)
- Temperature test complies with NEMA-TS 2-2003 (R2008) par. 2.1.5.1, test profile fig. 2-1 (from -34°C (-29.2°F) to +74°C (165.2°F))
- De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

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

Relative humidity: from 5% up to 95%

15.3.10 Certifications

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

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

RoHS (CE): EN50581

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

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

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (not available for 100Vac and 220Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac and 220Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

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

Level of protection Type (UL50E) (not available for 100Vac and 220Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 Certifications - Explosion-proof applications

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac and 220Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac and 220Vac versions)

EAC Ex (TR CU 012/2011) (not available for 100Vac and 220Vac versions)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (not available for 100Vac and 220Vac versions)

KCs (Employment and labor department 2020-33)

15.3.12 Certifications - Marine applications

Lloyd's Register Marine Type Approval certification (with MAXIMUS MBX communication box or with FM1010 filter):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

16 Technical drawings

i The indicated measurements are expressed in millimetres.

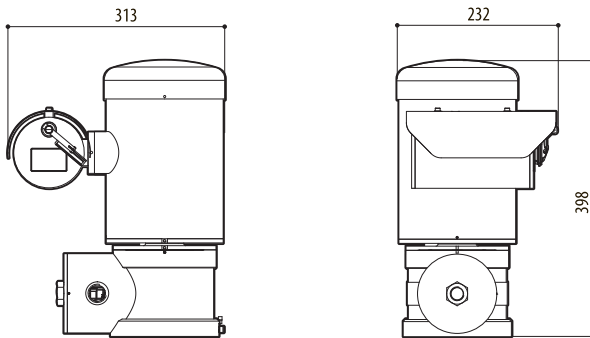
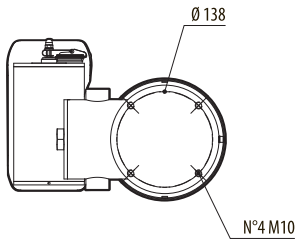


Fig. 26 MAXIMUS MPX SERIES2.

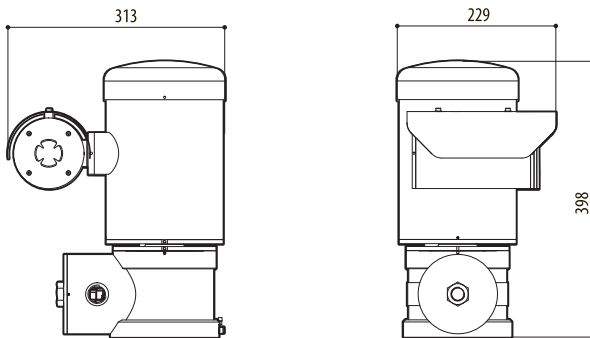
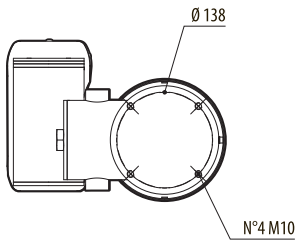


Fig. 27 MAXIMUS MPXR SERIES2.

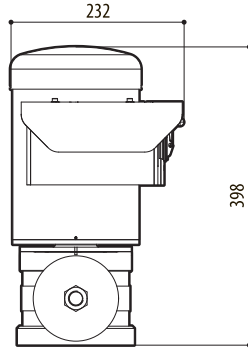
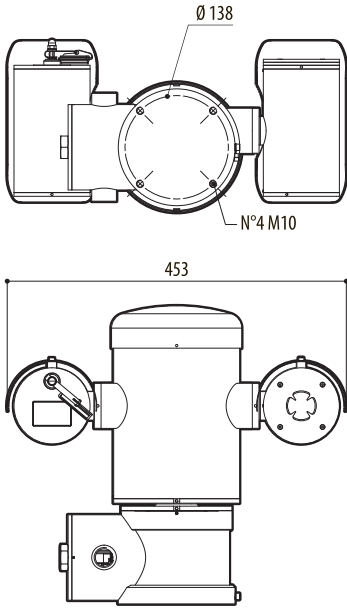


Fig. 28 MAXIMUS MPXT SERIES2.



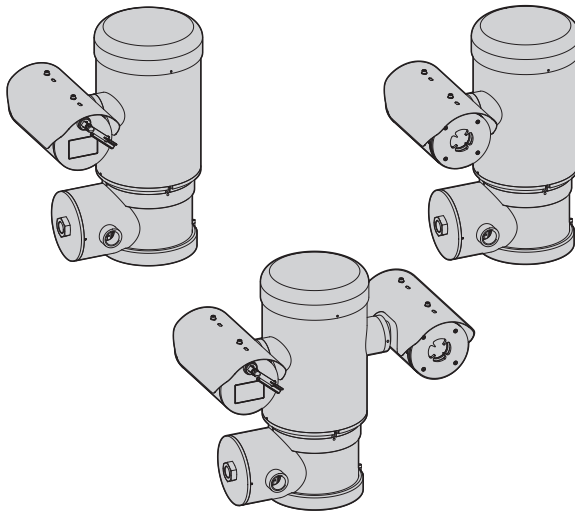
Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

MAXIMUS MPX SERIES2 (MPXHD)

MAXIMUS MPXR SERIES2 (MPXR)

MAXIMUS MPXT SERIES2 (MPXT)

Telecamera PTZ antideflagrante



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1 Informazioni sul presente manuale

Prima di installare e utilizzare questo prodotto, leggere attentamente tutta la documentazione fornita. Tenere il manuale a portata di mano per consultazioni successive.

1.1 Convenzioni tipografiche



PERICOLO!
Pericolo di esplosione.
Leggere attentamente per evitare pericoli di esplosione.



PERICOLO!
Pericolosità elevata.
Rischio di scosse elettriche. Prima di eseguire qualsiasi operazione assicurarsi di togliere tensione al prodotto, salvo diversa indicazione.



ATTENZIONE!
Pericolosità media.
L'operazione è molto importante per il corretto funzionamento del sistema. Si prega di leggere attentamente la procedura indicata e di eseguirla secondo le modalità previste.



INFO
Descrizione delle caratteristiche del sistema.
Si consiglia di leggere attentamente per comprendere le fasi successive.

Titoli sottolineati

Le informazioni sono vincolate dalle certificazioni.

2 Note sul copyright e informazioni sui marchi commerciali

I nomi di prodotto o di aziende citati sono marchi commerciali o marchi commerciali registrati appartenenti alle rispettive società.

3 Norme di sicurezza



PERICOLO!
Pericolo di esplosione.
Leggere attentamente per evitare pericoli di esplosione.

- L'installazione e la manutenzione dell'apparecchio deve essere eseguita da personale tecnico specializzato in conformità al codice di riferimento applicabile EN/IEC 60079-14, EN/IEC 60079-17 e gli standard nazionali.
- Non aprire il dispositivo se alimentato e in presenza di atmosfera esplosiva.
- Eseguire l'installazione utilizzando utensili adeguati. Il luogo in cui il dispositivo viene installato può tuttavia rendere necessario l'utilizzo di utensili specifici.
- Effettuare tutti i collegamenti, gli interventi di installazione e manutenzione in atmosfera non esplosiva.
- Il collegamento equipotenziale è mandatorio per evitare rischio di innesco per prodotti installati in ambienti potenzialmente esplosivi.
- L'apparecchio deve essere collegato a un conduttore di terra (messa a terra protettiva). Tale collegamento deve essere eseguito solo attraverso il connettore della linea di alimentazione. Le connessioni equipotenziali esterne devono essere eseguite solo laddove le norme o i codici locali prevedano l'esecuzione di connessioni di terra supplementari.
- Prima di alimentare il prodotto in atmosfera esplosiva, assicurarsi che il coperchio del vano connessioni sia chiuso correttamente.
- La temperatura delle superfici dell'apparecchio aumenta in caso di esposizione diretta alla luce solare. La classe della temperatura superficiale dell'apparecchio è stata calcolata solo a temperatura ambiente, senza tenere conto dell'esposizione diretta alla luce solare.
- Accertarsi che tutti gli apparecchi siano omologati per l'utilizzo nell'ambiente nel quale saranno installati.
- Qualsiasi intervento non espressamente approvato dal costruttore fa decadere la garanzia.



PERICOLO!
Pericolosità elevata.
Rischio di scosse elettriche. Prima di eseguire qualsiasi operazione assicurarsi di togliere tensione al prodotto, salvo diversa indicazione.

- Eseguire l'installazione e la manutenzione in assenza di alimentazione e con il dispositivo di sezionamento aperto.
- L'impianto elettrico deve essere dotato di un sezionatore di rete prontamente riconoscibile e utilizzabile in caso di necessità.
- L'impianto elettrico al quale è collegata l'unità deve essere dotato di un interruttore di protezione bipolare automatico da 16A max. La distanza minima tra i contatti dell'interruttore di protezione deve essere di 3mm. L'interruttore deve essere provvisto di protezione contro la corrente di guasto verso terra (differenziale) e la sovracorrente (magnetotermico).
- L'apparecchio si considera disattivato soltanto quando l'alimentazione è disinserita e i cavi di collegamento con altri dispositivi sono stati rimossi.
- Non utilizzare cavi con segni di usura o invecchiamento.
- Tutti i cavi devono essere conformi alla IEC60332-1-2, IEC 60332-1-3 e IEC/EN60079-14.
- All'atto dell'installazione controllare che le caratteristiche di alimentazione fornite dall'impianto corrispondano a quelle richieste dal dispositivo.
- Per assicurare la protezione contro il rischio di incendio, sostituire i fusibili con lo stesso tipo e valore. I fusibili devono essere sostituiti solo da personale qualificato.
- L'apparecchiatura non è adatta per l'uso in luoghi dov'è probabile la presenza di bambini.



ATTENZIONE!
Pericolosità media.
L'operazione è molto importante per il corretto funzionamento del sistema. Si prega di leggere attentamente la procedura indicata e di eseguirla secondo le modalità previste.

- Assicurarsi che l'installazione sia conforme alle norme locali.
- Effettuare i collegamenti e prove in laboratorio prima dell'installazione nel sito.
- Verificare che la sorgente e il cavo di alimentazione siano adeguatamente dimensionati.
- Utilizzare cavi idonei a sopportare le temperature di funzionamento.
- Tutti i cavi scollegati devono essere isolati elettricamente.
- L'unità può essere installata solamente in posizione standard o capovolta (montaggio a soffitto).
- Prima di fornire alimentazione assicurarsi che l'apparecchio sia saldamente ancorato.
- All'avvio il sistema esegue una serie di movimenti di calibrazione automatici: non sostare nei pressi dell'apparecchio quando viene acceso.
- Il costruttore declina ogni responsabilità per eventuali danni, su tutte le apparecchiature menzionate in questo manuale, derivanti da manomissione, utilizzo di ricambi non originali, installazione, manutenzione e riparazione eseguiti da personale non qualificato.
- Per interventi di assistenza tecnica rivolgersi esclusivamente a personale tecnico autorizzato.
- La riparazione di questo prodotto deve essere eseguita da personale adeguatamente addestrato o con la supervisione del personale VIDEOTEC in conformità alla norme previste: IEC/EN60079-19.
- Usare solamente ricambi originali VIDEOTEC. Seguire scrupolosamente le istruzioni di manutenzione allegate ad ogni kit di ricambio.

**INFO****Descrizione delle caratteristiche del sistema.****Si consiglia di leggere attentamente per comprendere le fasi successive.**

- Dato il peso considerevole dell'apparecchio, utilizzare un sistema di trasporto e movimentazione adeguato. Il personale addetto deve effettuare la movimentazione del prodotto nell'osservanza delle norme comuni di prevenzione degli incidenti.
- Prima di procedere con l'installazione, controllare che il materiale fornito corrisponda alle specifiche richieste esaminando le etichette di marcatura.
- L'apparecchio è destinato all'installazione in un' Area ad Accesso Limitato effettuata da personale tecnico specializzato.
- Il produttore declina ogni responsabilità per eventuali danni derivanti da un uso improprio delle apparecchiature menzionate in questo manuale. Si riserva inoltre il diritto di modificarne il contenuto senza preavviso. Ogni cura è stata posta nella raccolta e nella verifica della documentazione contenuta in questo manuale. Il produttore, tuttavia, non può assumersi alcuna responsabilità derivante dall'utilizzo della stessa. Lo stesso dicasi per ogni persona o società coinvolta nella creazione e nella produzione di questo manuale.
- Dato che la responsabilità della scelta della superficie di ancoraggio dell'unità ricade sull'utente, il produttore non fornisce in dotazione i dispositivi di fissaggio per l'ancoraggio dell'unità alla superficie. L'installatore è responsabile della scelta di dispositivi idonei alla superficie a sua disposizione. Si raccomanda l'utilizzo di metodi e materiali in grado di sopportare un peso almeno 4 volte superiore a quello dell'apparecchio.
- Contattare il costruttore per informazioni sulle dimensioni del giunto antideflagrante.
- Per qualunque intervento di manutenzione, si consiglia di riportare in laboratorio il prodotto per effettuare le operazioni necessarie.
- L'apparecchio è controllato a distanza e può pertanto cambiare posizione in qualsiasi momento. Installare l'apparecchio in modo da evitare incidenti causati dal contatto con parti in movimento, facendo sì che queste non urtino contro altri oggetti creando situazioni pericolose.
- Questo è un prodotto di Classe A. In un ambiente residenziale questo prodotto può provocare radiodisturbi. In questo caso può essere richiesto all'utilizzatore di prendere misure adeguate.
- Per essere conforme ai requisiti della normativa sugli abbassamenti e le brevi interruzioni della tensione di alimentazione, utilizzare un adeguato gruppo di continuità (UPS) per alimentare l'unità.

4 Identificazione

4.1 Descrizione e designazione del prodotto

La serie MAXIMUS MPX è una famiglia di telecamere PTZ per installazioni in ambienti potenzialmente esplosivi, costruita in acciaio AISI 316L elettrolucidato.

La serie MAXIMUS MPX è equipaggiata con ingresso cavi NPT o metrico a seconda del modello.

La serie MAXIMUS MPX ha un livello di protezione IP66/IP68/IP69 e può essere installata in ambienti con temperature da -40°C fino a +80°C (verificare la marcatura per ogni modello disponibile).

Sono disponibili versioni con: telecamera visibile, telecamera termica, telecamera visibile e termica.

4.2 Campo di utilizzo

L'impiego dell'unità è definito per l'utilizzo in postazione fissa per la sorveglianza di zone con atmosfera potenzialmente esplosiva classificate 1-21 o 2-22.

L'unità è costruita e certificata in accordo con la direttiva 2014/34/UE e gli standard internazionali IECEx che ne definiscono il campo di applicazione e i requisiti minimi di sicurezza.

4.3 Condizioni specifiche d'utilizzo

Contattare il costruttore per informazioni sulle dimensioni del giunto antideflagrante.

Temperatura ambiente e temperatura superficiale - vedere le istruzioni.

Prestare attenzione a prevenire l'accumulo di cariche elettrostatiche. Vedi le istruzioni di installazione.

L'unità può essere installata solamente in posizione standard o capovolta.

4.4 Gruppi Gas, Gruppo Polveri e Temperature

Il dispositivo è certificato per il gruppo IIC (Gas) e il gruppo IIIC (polveri).

La classe di temperatura, la massima temperatura superficiale e la temperatura dell'ingresso cavi dipendono dalle caratteristiche dei dispositivi installabili (potenza dissipata, Watt) e dalla temperatura ambiente.

Tali caratteristiche sono specificate per ogni modello nei capitoli specifici.

4.5 Caratteristiche dei dispositivi installabili

Tutti i componenti interni devono essere installati all'interno dal produttore.

4.6 Ingresso cavi

Il prodotto viene fornito con tappi di plastica per la protezione dell'ingresso cavi. Non sono utilizzabili per l'installazione.

Gli ingressi dei cavi non utilizzati devono essere chiusi utilizzando dispositivi di bloccaggio appropriati certificati Ex con tipo di protezione a prova di esplosione "db" e "tb", adatti per le condizioni di utilizzo e installati correttamente.

Tutti i pressacavi devono essere certificati Ex in maniera appropriata, con tipo di protezione a prova di esplosione "db" e "tb", adatti per le condizioni di utilizzo e installati correttamente.

Quando viene utilizzato il conduit, deve essere utilizzato un raccordo di bloccaggio certificato Ex in maniera appropriata, con tipo di protezione a prova di esplosione "db" e "tb", adatto per le condizioni di utilizzo e installato correttamente.

Il raccordo di bloccaggio deve essere posto entro 50mm (1.97in) dal dispositivo.

Le temperature di ingresso cavi sono specificate nella marcatura.

Per mantenere il grado IP del prodotto usare pressacavi con adeguato grado di protezione ed applicare ai filetti un sigillante conforme alla IEC/EN60079-14.

4.6.1 Stopping plug



Il dispositivo di bloccaggio fornito in dotazione non è certificato KCs.

In dotazione al prodotto, viene fornito un dispositivo di bloccaggio (stopping plug) certificato Ex con protezione a prova di esplosione "db" e "tb", inoltre viene fornito in dotazione un sigillante conforme alla EN60079-14 da utilizzare per garantire il grado di protezione IP del prodotto.

Le istruzioni di installazione del dispositivo di bloccaggio (stopping plug) sono disponibili su <https://peppers.co.uk/useful-documents/>.

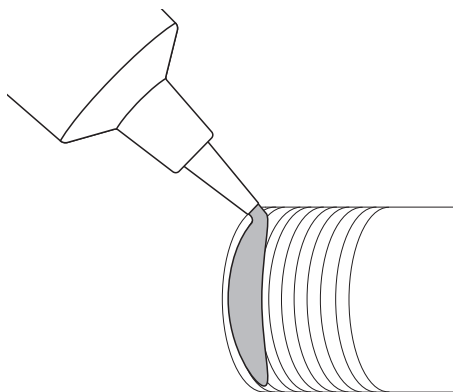


Fig. 1

4.7 Marcatura del prodotto

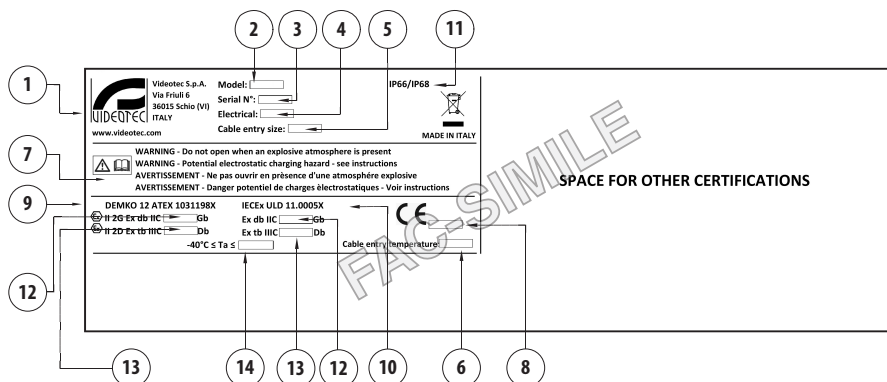


Fig. 1

1. Nome e indirizzo del costruttore.
2. Modello.
3. Il numero di serie è composto da 12 caratteri numerici, la seconda e la terza cifra definiscono gli ultimi due numeri dell'anno di produzione.
4. Caratteristiche elettriche (tensione V, frequenza Hz, corrente A, potenza W).
5. Numero, dimensione e tipo ingressi cavo.
6. Temperatura ingresso cavi.
7. Avvertenze.
8. Numero dell'organismo accreditato che fornisce la valutazione della qualità.
9. Marcatura ATEX. La Classe di temperatura dipende dall'elettronica installata all'interno e dalla temperatura ambiente.
10. Marcatura IECEx. La Classe di temperatura dipende dall'elettronica installata all'interno e dalla temperatura ambiente.
11. Grado di protezione IP.
12. T Class (Tx or Tx...Tx).
13. Massima temperatura superficiale (Tx°C or Tx°C...Tx°C).
14. Temperatura ambiente ($-40^{\circ}\text{C} \leq \text{Ta} \leq +\text{TX}^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq \text{Ta} \leq \text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$).

Esempio di marcatura:

DATI DI ESEMPIO				
Potenza dissipata in custodia (W)	T Class	Massima temperatura superficiale	Temperatura ingresso cavi	Temperatura ambiente
7	T4	T135°C	90°C	$-40^{\circ}\text{C} \leq \text{Ta} \leq 80^{\circ}\text{C}$
	T6...T5	T85°C...T100°C	80°C	$-40^{\circ}\text{C} \leq \text{Ta} \leq 60^{\circ}\text{C}$ or 70°C
	T6...T4	T85°C...T135°C	90°C	$-40^{\circ}\text{C} \leq \text{Ta} \leq 60^{\circ}\text{C}$ or 70°C or 80°C

Tab. 1

4.8 Solo per riferimento UL/CSA standard



I giunti antideflagranti non devono essere riparati.



ATTENZIONE! Parti mobili pericolose. Non avvicinare dita e altre parti del corpo.



L'apparecchiatura comprende parti mobili. Assicurarsi che l'unità venga posizionata in un'area non accessibile durante le normali condizioni di funzionamento. Applicare l'apposita etichetta fornita assieme all'apparecchio nelle sue vicinanze ed in modo ben visibile.



Fig. 2



Negli Stati Uniti il National Electrical Code (NEC) e in Canada il Canadian Electrical Code (CEC) si applicano alle apparecchiature elettriche utilizzate in ambienti industriali pericolosi.



Le versioni dei prodotti in 100Vac e 220Vac non sono certificate UL

Istruzioni di sicurezza importanti

WARNING: DO NOT OPEN WHEN AN 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.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L'ENTRÉE DU CONDUIT DU CAISSON.

Nelle installazioni secondo gli standard UL/CSA è obbligatorio installare il separatore fornito in dotazione come indicato nel relativo capitolo (7.5.1 Installazioni secondo standard UL/CSA, pagina 27).

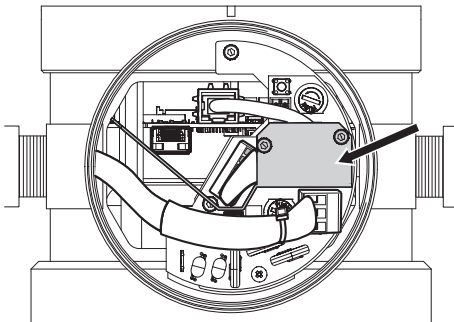


Fig. 3

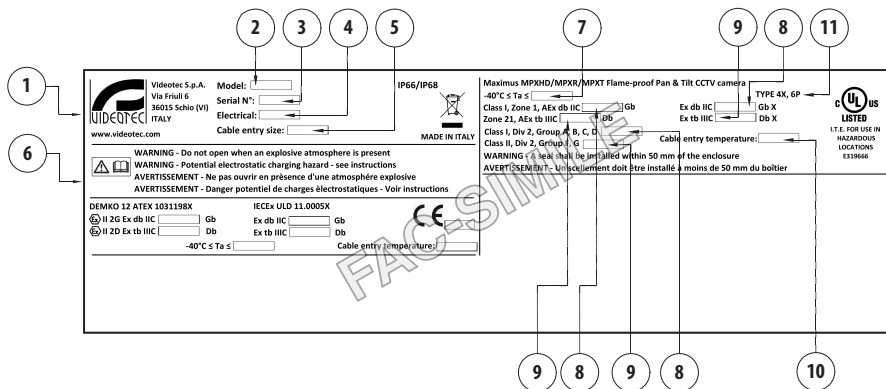


Fig. 4

1. Nome e indirizzo del costruttore.
2. Modello.
3. Il numero di serie è composto da 12 caratteri numerici, la seconda e la terza cifra definiscono gli ultimi due numeri dell'anno di produzione.
4. Caratteristiche elettriche (tensione V, frequenza Hz, corrente A, potenza W).
5. Numero, dimensione e tipo ingressi cavo.
6. Avvertenze.
7. Temperatura ambiente ($-40^{\circ}\text{C} \leq T_a \leq +T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$).
8. T Class (T_x or $T_x...T_x$).
9. Massima temperatura superficiale ($T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}...T_x^{\circ}\text{C}$).
10. Temperatura ingresso cavi.
11. Grado di protezione Type.

Collegamenti



La scelta della connessione deve essere conforme alle norme locali vigenti.

Pressacavi: selezionare pressacavi conformi a UL2225 con protezione AEx db IIC e/o AEx tb IIIC e C22.2 con la seguente protezione Ex db IIC e/o Ex tb IIIC in conformità alla marcatura del prodotto.

Conduit: è necessario installare un dispositivo di tenuta entro i 50mm dall'ingresso del prodotto quando viene utilizzato il conduit.

Riferimenti normativi:

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"

5 Versioni

5.1 Telecamera Day/Night

MAXIMUS MPX SERIES2 - OPZIONI DI CONFIGURAZIONE						
	Voltaggio	Telecamera	Classe di temperatura e temperatura ambiente	Video analisi	Profili ONVIF	
MPXHD	1 230Vac	1 Telecamera super low-light Day/Night, FULL HD 1080p, 30x, con tecnologia DELUX	A T6...T5 -40°C/+60°C or +70°C	0 Senza funzioni di video analisi integrate (senza VIDEOTEC ANALYTICS)	00 Conforme ONVIF, Profilo Q, Profilo S e Profilo T	C
	2 24Vac	2 Telecamera SONY FCB-EV7520, FULL HD 1080p, 30x	D T4 -40°C/+80°C	V Con funzioni di video analisi integrate (VIDEOTEC ANALYTICS)	01 Conforme ONVIF, Profilo S e Profilo T	
	3 120Vac		C T5...T4 -40°C/+55°C or +60°C			
	5 220Vac					
	6 100Vac					

Tab. 2

MAXIMUS MPX SERIES2 - CERTIFICAZIONI E MARCATURE				
Codice prodotto	Certificazione	Marcatura	Temperatura ambiente	Temperatura di ingresso dei cavi
MPXHD1*A0**C, MPXHD2*A0**C, MPXHD3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			
MPXHD5*A0**C, MPXHD6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db		80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXHD1*D0**C, MPXHD2*D0**C, MPXHD3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD5*D0**C, MPXHD6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db		
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD1*CV**C, MPXHD2*CV**C, MPXHD3*CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
MPXHD5*CV**C, MPXHD6*CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		

Tab. 3

5.2 Telecamera termica

MAXIMUS MPXR SERIES2 - OPZIONI DI CONFIGURAZIONE									
	Votaggio		Telecamera Termica	Classe di temperatura	Radiometria	Profili ONVIF			Frequenza
MPXR	1	230Vac	A Telecamera termica 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Telecamera termica con funzioni radiometriche	0 Conforme ONVIF, Profilo Q, Profilo S e Profilo T	C	-	7.5Hz
	2	24Vac	B Telecamera termica 25mm, 336x256	D T4 -40°C/+80°C	OR Telecamera termica con funzioni radiometriche avanzate	1 Conforme ONVIF, Profilo S e Profilo T		H	30Hz
	3	120Vac	V Telecamera termica 19mm, 336x256						
	5	220Vac	F Telecamera termica 13mm, 336x256						
	6	100Vac	C Telecamera termica 9mm, 336x256						
			D Telecamera termica 35mm, 640x512						
			E Telecamera termica 25mm, 640x512						
			U Telecamera termica 19mm, 640x512						

Tab. 4

MAXIMUS MPXR SERIES2 - CERTIFICAZIONI E MARCATURE				
Codice prodotto	Certificazione	Marcatura	Temperatura ambiente	Temperatura di ingresso dei cavi
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 5

5.3 Dual Vision con telecamera Day/Night e termica

MAXIMUS MPXT SERIES2 - OPZIONI DI CONFIGURAZIONE										
	Voltaggio		Telecamera Day/ Night	Telecamera Termica	Classe di temperatura	Radiometria	Profili ONVIF		Frequenza	
MPXT	1	230Vac	2 Telecamera SONY FCB-EV7520, FULL HD 1080p, 30x	A Telecamera termica 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Telecamera termica con funzioni radiometriche	0 Conforme ONVIF, Profilo Q, Profilo S e Profilo T	C	-	7.5Hz
	2	24Vac		B Telecamera termica 25mm, 336x256	D T4 -40°C/+80°C	0R Telecamera termica con funzioni radiometriche avanzate	1 Conforme ONVIF, Profilo S e Profilo T		H	30Hz
	3	120Vac		V Telecamera termica 19mm, 336x256						
	5	220Vac		F Telecamera termica 13mm, 336x256						
	6	100Vac		C Telecamera termica 9mm, 336x256						
				D Telecamera termica 35mm, 640x512						
				E Telecamera termica 25mm, 640x512						
				U Telecamera termica 19mm, 640x512						

Tab. 6

MAXIMUS MPXT SERIES2 - CERTIFICAZIONI E MARCATURE				
Codice prodotto	Certificazione	Marcatura	Temperatura ambiente	Temperatura di ingresso dei cavi
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 7

6 Preparazione del prodotto per l'utilizzo



Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo "Norme di sicurezza" presente nel manuale del prodotto.

6.1 Disimballaggio

Alla consegna del prodotto verificare che l'imballo sia integro e non presenti segni evidenti di cadute o abrasioni.

In caso di danni evidenti all'imballo contattare immediatamente il fornitore.

In caso di restituzione del prodotto malfunzionante è consigliato l'utilizzo dell'imballaggio originale per il trasporto.

Conservare l'imballo qualora fosse necessario inviare il prodotto in riparazione.

6.2 Contenuto

Controllare che il contenuto sia corrispondente alla lista del materiale sotto elencato:

- Telecamera PTZ antideflagrante
- Tettuccio (2 per MAXIMUS MPXT)
- Guaina silconica
- Kit di ricambio O-ring, grani di sicurezza
- Dispositivo di bloccaggio (stopping plug)
- Sigillante
- Fascette
- Barriera di separazione per installazioni secondo gli standard UL/CSA
- Manuale di istruzioni

6.3 Smaltimento in sicurezza dei materiali di imballaggio

I materiali d'imballo sono costituiti interamente da materiale riciclabile. Sarà cura del tecnico installatore smaltirli secondo le modalità di raccolta differenziata o comunque secondo le norme vigenti nel Paese di utilizzo.

6.4 Lavoro preparatorio prima dell'installazione

L'unità può essere installata con differenti staffe e supporti.

Si raccomanda di utilizzare esclusivamente staffe e accessori approvati per l'installazione.

6.4.1 Metodi di installazione

L'unità può essere installata solamente in posizione standard o capovolta (montaggio a soffitto). Se installata in quest'ultima posizione, la riconfigurazione delle funzioni di orientamento e controllo della telecamera avviene mediante il software di sistema.

Il funzionamento in posizione capovolta non richiede alcuna modifica dell'hardware.

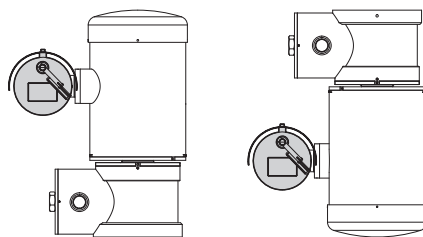


Fig. 5

6.4.2 Fissaggio a parapetto o a soffitto

Fissare l'adattatore (01) al fondo dell'unità utilizzando le 4 viti a testa svasata piana (02) con esagono incassato M10x20mm in acciaio inox (A4 classe 70) fornite in dotazione.

Assicurarsi che le filettature siano prive di sporcizia e residui.

Applicare una buona quantità di frenafiletti (Loctite 270) sui 4 fori filettati presenti sul fondo della base dell'apparecchio.

**⚠ Prestare attenzione durante il fissaggio.
Coppia di serraggio: 35Nm.**

Lasciare agire il frenafiletti per un'ora prima di ultimare l'installazione.

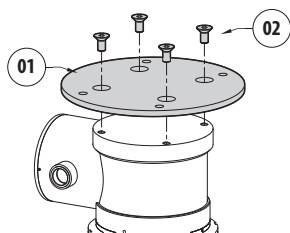


Fig. 6

Fissare l'unità assemblata al parapetto o al soffitto servendosi dei fori esterni dell'adattatore. Utilizzare viti che possono sostenere un peso almeno 4 volte superiore a quello dell'unità.

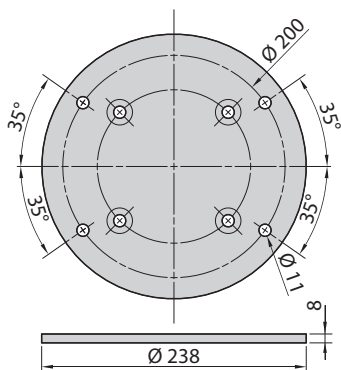


Fig. 7

6.4.3 Fissaggio con staffa

Il supporto può essere fissato direttamente ad un muro verticale. Utilizzare viti e dispositivi di fissaggio a muro che possono sostenere un peso almeno 4 volte superiore a quello dell'unità.

Per fissare il dispositivo alla staffa, utilizzare le 4 rondelle piane, 4 rondelle elastiche in acciaio inox e 4 viti a testa esagonale in acciaio inox (A4 classe 70) fornite in dotazione (M10x20mm).

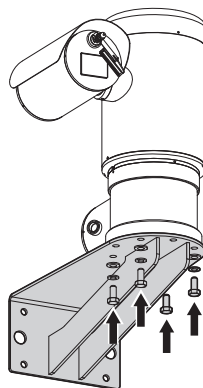


Fig. 8

Assicurarsi che le filettature siano prive di sporcizia e residui.

Applicare una buona quantità di frenafiletti (Loctite 270) sulle 4 viti.

Serrare le viti.

**⚠ Prestare attenzione durante il fissaggio.
Coppia di serraggio: 35Nm.**

Lasciare agire il frenafiletti per un'ora prima di ultimare l'installazione.

6.4.4 Fissaggio con modulo adattatore angolare oppure da palo

Per installare il prodotto sul modulo adattatore angolare o da palo prima di tutto fissare la staffa di supporto.

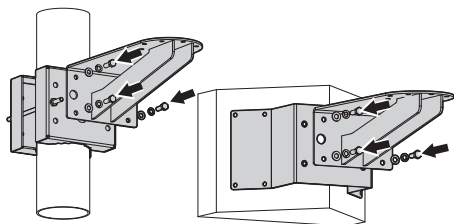


Fig. 9

Per fissare la staffa di supporto, utilizzare 4 rondelle piane, 4 rondelle elastiche in acciaio inox e 4 viti a testa esagonale in acciaio inox (A4 classe 70) da M10x30mm fornite in dotazione.

Assicurarsi che le filettature siano prive di sporcizia e residui.

Applicare una buona quantità di frenafiletti (Loctite 270) sui 4 fori filettati presenti sul modulo adattatore.

Serrare le viti.

⚠ Prestare attenzione durante il fissaggio.
Coppia di serraggio: 35Nm.

Lasciare agire il frenafiletti per un'ora prima di ultimare l'installazione.

Per fissare il dispositivo alla staffa consultare il relativo capitolo (6.4.3 Fissaggio con staffa, pagina 22).

6.4.5 Fissaggio del tettuccio

i **Prima di fissare il tettuccio della custodia rimuovere la pellicola protettiva (se presente).**

Fissare il tettuccio alla custodia utilizzando viti e rondelle avvitate sul corpo superiore della custodia.

Applicare una buona quantità di frenafiletti (Loctite 270) sui fori filettati.

Lasciare agire il frenafiletti per un'ora prima di ultimare l'installazione.

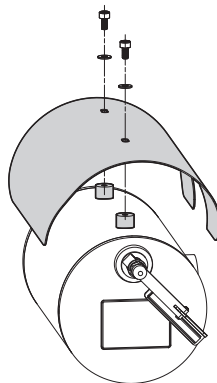


Fig. 10

⚠ Prestare attenzione durante il fissaggio.
Coppia di serraggio: 2Nm.

7 Installazione



Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo "Norme di sicurezza" presente nel manuale del prodotto.

VIDEOTECH raccomanda di testare la configurazione e le prestazioni dell'apparecchio prima di collocarlo nel sito di installazione definitivo.

7.1 Messa a terra

7.1.1 Collegamento equipotenziale di terra

Il collegamento equipotenziale di terra deve essere effettuato tramite un cavo esterno con una sezione minima di 4mm² (11AWG).

Connettere il cavo per il collegamento equipotenziale di terra con il terminale ad occhiello fornito in dotazione (adatto per cavi con sezione da 4mm² (11AWG) fino a 6mm² (9AWG)).

Fissare l'occhiello usando la vite M5 e la rondella dentellata fornite in dotazione.

Caratteristiche della vite M5:

- Materiale: A4 Classe 70
- Testa della vite: ISO 4762
- Lunghezza: 8mm

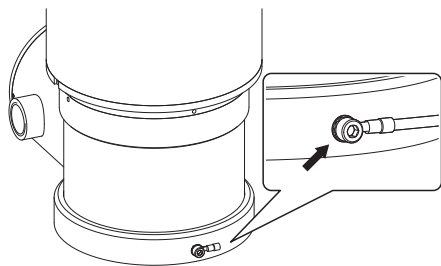


Fig. 11

7.1.2 Collegamento della messa a terra di protezione

È necessario collegare il cavo di messa a terra di protezione al connettore interno (J1, 7.3 Descrizione della scheda connettori, pagina 25).

7.2 Apertura del vano connessioni



Il grano di sicurezza è utilizzato per impedire lo svitamento del coperchio filettato dal vano connessioni. Rimuovere il grano di sicurezza prima di svitare il coperchio filettato.

Nella base dell'unità sono presenti n°2 ingressi cavo da 3/4" NPT (oppure M25 versione speciale).

Per effettuare i collegamenti rimuovere il grano di sicurezza (01) con una chiave esagonale maschio da 1.5mm, il coperchio filettato (02) (dado esagonale da 30mm) e i tappi in plastica (03).

I tappi in plastica sono utilizzati solo per la spedizione e non possono essere utilizzati per il funzionamento.

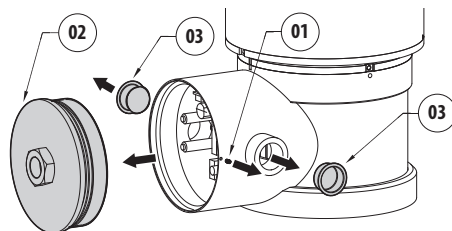


Fig. 12

Svitando il coperchio filettato si accede ai connettori.

7.3 Descrizione della scheda connettori

DESCRIZIONE DELLA SCHEDA		
Connettore	Funzione	Morsetti - Sezione nominale dei cavi utilizzabili
J1	Linea di alimentazione	da 0.2mm ² (24AWG) fino a 2.5mm ² (13AWG)
J6	Allarmi, reset remoto e linea seriale	da 0.2mm ² (24AWG) fino a 1.0mm ² (17AWG)
J8	Relé	da 0.2mm ² (24AWG) fino a 1.0mm ² (17AWG)
F1	Fusibile	-
F2	Fusibile	-
P1	Pulsante di reset	-
RJ45	Connettore Ethernet	-
SFP	Connettore SFP	-

Tab. 8

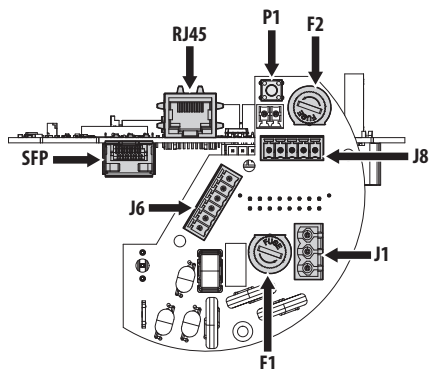


Fig. 13

7.4 Collegamento della linea di alimentazione

A seconda della versione, al dispositivo possono essere fornite diverse tensioni di alimentazione. Il valore di tensione di alimentazione è riportato nell'etichetta identificativa del prodotto

! Il cavo di terra deve essere più lungo degli altri due di circa 10mm per prevenirne il distacco accidentale a causa dello stiramento.

! Il cavo di alimentazione deve essere coperto con la guaina siliconica (01) presente nella dotazione. La guaina siliconica deve essere fissata con l'apposita fascetta (02). Per installazioni secondo gli standard UL/CSA, far passare il cavo di alimentazione attraverso l'ingresso cavi di sinistra (03), come indicato in figura.

i Nel caso di utilizzo del cavo multipolare VIDEOTEC e di un cavo in fibra ottica, si consiglia di utilizzare l'ingresso cavi a sinistra (03) per il cavo multipolare e l'ingresso cavi a destra (04) per la fibra ottica.

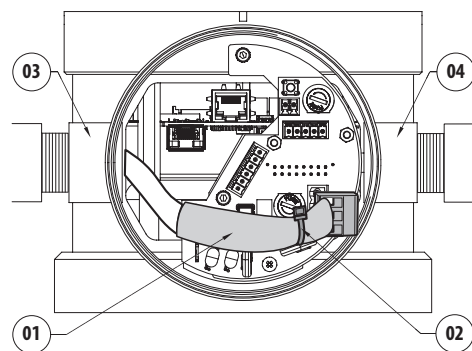


Fig. 14

i Il conduttore di messa a terra di protezione dovrà avere sezione uguale o maggiore a quella dei cavi di alimentazione.

Estrarre dalla scheda connettori il connettore rimovibile della linea di alimentazione (J1, 7.3 Descrizione della scheda connettori, pagina 25).

Collegare i cavi elettrici di alimentazione come indicato nella relativa tabella (Tab. 9, pagina 26).

COLLEGAMENTO DELLA LINEA DI ALIMENTAZIONE	
Colore	Morsetti
Alimentazione 24Vac	
Definito dall'installatore	N (Neutro)
Definito dall'installatore	L (Fase)
Giallo/Verde	⊕
Alimentazione 230Vac	
Blu	N (Neutro)
Marrone	L (Fase)
Giallo/Verde	⊕
Alimentazione 120Vac	
Blu	N (Neutro)
Marrone	L (Fase)
Giallo/Verde	⊕

Tab. 9

7.5 Collegamento degli allarmi, del reset remoto e dei relè

⚠ Tutti i cavi di segnale devono essere raggruppati con una fascetta.

COLLEGAMENTO DEGLI INGRESSI DI ALLARME E DEI RELÈ		
Connettori	Morsetti	Descrizione
J6	AL1, COM	Ingresso di allarme auto-alimentato riferito al morsetto comune
	RST, RST	Reset remoto
J8	RL1A, RL1B	Contatti puliti di uscita attivabili da allarme o da comando utente
	RL2A, RL2B	Contatto per l'attivazione della pompa lavavetro

Tab. 10

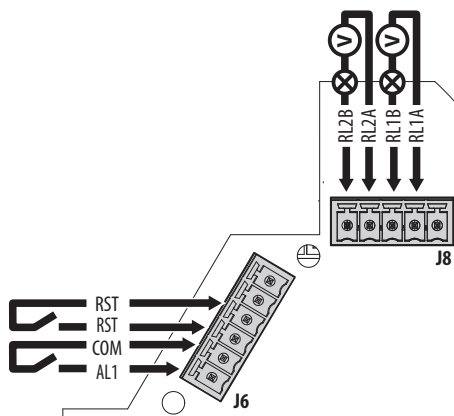


Fig. 15

7.5.1 Installazioni secondo standard UL/CSA

! Fare attenzione a non rovinare i conduttori e le schede.

Per le installazioni secondo lo standard UL/CSA i cavi ethernet, allarmi reset, relè e le fibre ottiche, vanno inseriti attraverso l'ingresso cavi a destra come indicato nella seguente figura (Fig. 16, pagina 27).

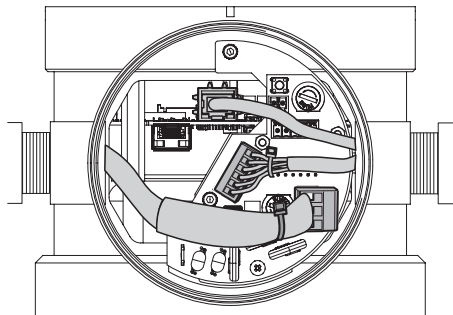


Fig. 16

Nelle installazioni secondo gli standard UL/CSA è obbligatorio installare la barriera di separazione fornita in dotazione.

Dopo aver inserito tutti i connettori e prima di alimentare il dispositivo, installare la barriera di separazione fornita in dotazione.

Fissare la barriera (01) con le apposite viti e rondelle (02) ai distanziali predisposti (03) (Fig. 17, pagina 27 ed Fig. 18, pagina 27).

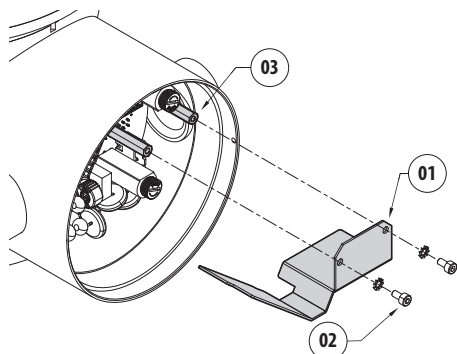


Fig. 17

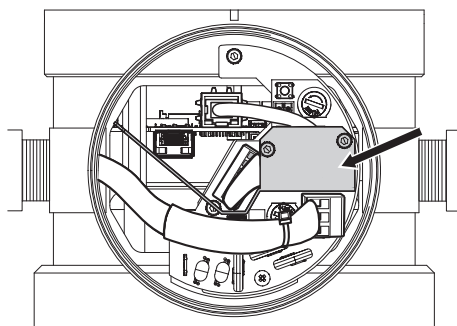


Fig. 18

7.5.2 Collegamento allarme con contatto pulito

Collegare i morsetti AL1 e COM sul connettore J6 come illustrato in figura (Fig. 15, pagina 26).

Lunghezza massima dei cavi di allarme: 200m.

Effettuare il collegamento con un cavo schermato.

7.5.3 Collegamento del reset remoto

Collegare i due morsetti RST sul connettore J6 come illustrato in figura (Fig. 15, pagina 26).

Lunghezza massima dei cavi: 200m.

Consultare il capitolo Factory Default per l'utilizzo del reset remoto (11.2.3 Factory Default, pagina 32).

7.5.4 Collegamento dei relè

i **Tensione e corrente massima dei relè: consultare i dati tecnici presenti nel relativo capitolo (15 Dati tecnici, pagina 35).**

Collegare i morsetti RL1A, RL1B, RL2A, RL2B sul connettore J8 come illustrato in figura (Fig. 15, pagina 26).

Il dispositivo può essere dotato di impianto di lavaggio come accessorio. Utilizzare i morsetti RL2A e RL2B per comandare l'impianto di lavaggio.

7.6 Collegamento Ethernet

Il prodotto è dotato di uno switch Ethernet integrato che gestisce una porta RJ45 e uno slot per moduli SFP.

7.6.1 Collegamento tramite RJ45

i **Effettuare i collegamenti in accordo con lo standard: TIA/EIA-568-B.**

Collegare il cavo Ethernet nella porta RJ45 (7.3 Descrizione della scheda connettori, pagina 25).

Si raccomanda l'utilizzo di cavi Ethernet con le seguenti caratteristiche:

- STP (schermato)
- Categoria 5E o categoria 6

Utilizzare un connettore RJ45 di tipo schermato su entrambe le estremità del cavo. Lo schermo del cavo Ethernet (lato utilizzatore) deve sempre essere collegato a terra tramite il connettore.

7.6.2 Collegamento tramite SFP

i **I moduli ottici conformi allo standard SFP (Small Form-factor Pluggable) sono dispositivi di conversione del segnale elettrico in ottico e del segnale ottico in elettrico.**

Il modulo SFP è utilizzato per la connessione con la fibra ottica. Il modulo SFP dovrà essere idoneo all'impianto di installazione.

Consultare il manuale del modulo SFP per le relative specifiche.

! **Il modulo SFP (non fornito da VIDEOTEC) deve rispettare i seguenti requisiti:**

- Laser: Class 1, conforme a EN60825-1
- Certificazione UL/IEC 60950-1 o UL/IEC 62368-1

i **Lo switch dell'utente, collegato tramite modulo SFP, deve funzionare alla velocità di 100Mbps. Verificare le impostazioni dello switch a cui è collegato il prodotto.**

i **VIDEOTEC ha testato diverse tipologie di moduli SFP. Per ulteriori informazioni contattare il centro di assistenza VIDEOTEC.**

Inserire il modulo SFP (non fornito) nello slot SFP (7.3 Descrizione della scheda connettori, pagina 25).

7.7 Chiusura del vano connessioni

⚠ Se non si riesce ad avvitare manualmente il tappo filettato prima che l'O-ring raggiunga il tubo del vano connessioni, ciò significa che sulle filettature è presente della sporcizia o residui o che il tappo non è ben allineato. Questa condizione potrebbe danneggiare gravemente le filettature. Svitare il tappo e controllare l'allineamento e/o pulire le filettature.

⚠ Per non danneggiare la filettatura, non forzare mai la rotazione del tappo filettato prima che l'O-ring abbia raggiunto il vano connessioni.

⚠ Se si sospettano danni alle filettature, sospendere l'installazione. L'apparecchio potrebbe non essere più adatto all'installazione sicura in un'atmosfera potenzialmente esplosiva. In questo caso rivolgersi al servizio tecnico di VIDEOTEC.

⚠ Prima di chiudere il coperchio verificare l'integrità della guarnizione o-ring. Nel caso la guarnizione sia danneggiata sostituirla con quella fornita in dotazione (11.1.2 Sostituzione della guarnizione, pagina 31).

Verificare che non vi sia la presenza di sporcizia o residui.

Lubrificare i filetti con un grasso conforme alla IEC/EN60079-14 al fine di agevolare l'avvitamento del coperchio.

Sistemare i cavi in maniera che non ci siano interferenze durante la chiusura del tappo filettato del vano connessioni.

Avvitare manualmente il tappo filettato nel vano connessioni finché la guarnizione non abbia raggiunto l'estremità del tubo.

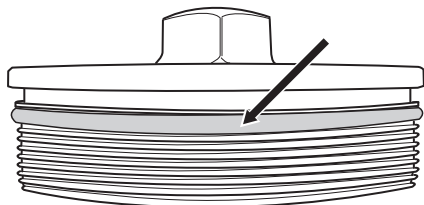


Fig. 19

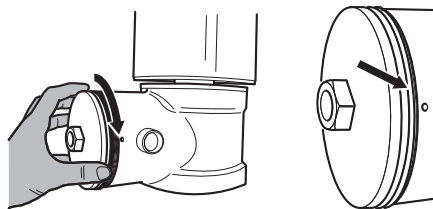


Fig. 20

Serrare il tappo filettato del vano connessioni con una chiave da 30mm. Dopo la chiusura, assicurarsi che non vi sia spazio tra il tappo filettato e il tubo del vano connessioni.

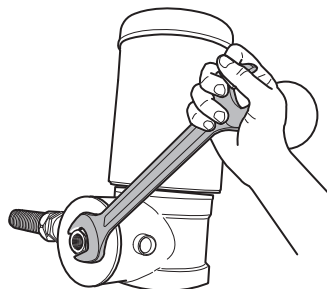


Fig. 21

Il fissaggio del grano di sicurezza è necessario per completare la chiusura del prodotto, per prevenire lo svitamento non desiderato del tappo filettato.

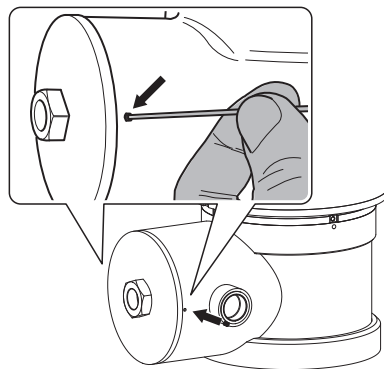


Fig. 22

8 Accensione



Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo "Norme di sicurezza" presente nel manuale del prodotto.



La procedura di preriscaldamento automatico (De-Ice) si potrebbe attivare tutte le volte che il dispositivo viene acceso ad una temperatura ambiente inferiore a -10°C. La procedura serve a garantire la corretta funzionalità del dispositivo anche alle basse temperature. La durata varia a seconda delle condizioni climatiche (da 60 minuti fino a 120 minuti).

Collegare l'alimentazione elettrica per accendere l'unità.

Dopo l'accensione, l'unità necessita di alcuni minuti per essere completamente operativa.

Scollegare l'alimentazione elettrica per spegnere l'unità.

9 Configurazione

9.1 Indirizzo IP di default



L'unità è configurata per ottenere l'indirizzo IP da un server DHCP.

L'indirizzo IP acquisito via DHCP è visibile nel file log del server DHCP.

Se il server DHCP non è disponibile, l'unità si configura automaticamente con un indirizzo IP autogenerato nella sottorete 169.254.x.x/16. Configurare l'indirizzo IP del PC come appartenente alla stessa sottorete (esempio: indirizzo IP: 169.254.1.1, subnet mask: 255.255.0.0).

Per ricercare l'indirizzo IP del dispositivo usare un VMS compatibile ONVIF o un network sniffer (IP scan utility).

9.2 Interfaccia web



Browser supportati (ultima versione):
Microsoft Edge, Google Chrome, Mozilla Firefox.

9.2.1 Primo accesso alle pagine web

La prima operazione per configurare il dispositivo consiste nel connettersi alla sua interfaccia web.

Per accedere all'interfaccia web del prodotto sarà sufficiente collegarsi con un browser all'indirizzo http://indirizzo_ip.

Al primo accesso sarà visualizzata la pagina di Home.

Per la configurazione dell'interfaccia web consultare il manuale relativo alla versione firmware installata, disponibile nella pagina web del prodotto nel sito www.videotec.com.

10 Istruzioni di funzionamento ordinario

! Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo "Norme di sicurezza" presente nel manuale del prodotto.

! Non utilizzare il tergicristallo se la temperatura ambiente è inferiore a 0°C o in presenza di ghiaccio.

i Il tergicristallo si disattiva in modo automatico se lasciato acceso.

Il controllo del dispositivo può essere effettuato con diverse modalità.

- Tramite i controlli utente dell'interfaccia web (9.2 Interfaccia web, pagina 30).
- Tramite Video Management Software (VMS) che supporta il protocollo ONVIF. In questo caso i Comandi speciali vengono implementati mediante gli auxiliary command del protocollo ONVIF.
- Tramite il software PTZ Assistant (il software PTZ Assistant è disponibile per il download nella pagina web del prodotto nel sito www.videotec.com).

11 Manutenzione

! Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo Norme di sicurezza presente nel manuale del prodotto.

Quando viene contattato il servizio tecnico di VIDEOTEC è necessario fornire il numero di serie unitamente al codice di identificazione del modello. Utilizzare solo ricambi originali VIDEOTEC.

11.1 Manutenzione ordinaria (da eseguire periodicamente)

11.1.1 Controllo dei cavi

I cavi non devono presentare segni di usura o deterioramento tali da creare situazioni di pericolo. In questo caso si deve eseguire una manutenzione straordinaria.

11.1.2 Sostituzione della guarnizione

Sostituire la guarnizione del coperchio del vano connessioni utilizzando quella fornita in dotazione.

Aprire e chiudere il vano connessioni come descritto nei precedenti capitoli.

Sostituire la guarnizione prestando attenzione a posizionarla correttamente.

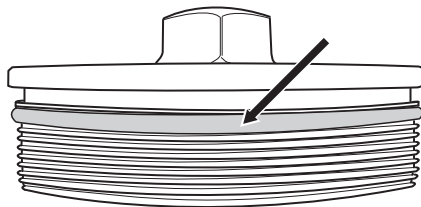


Fig. 23

11.2 Manutenzione straordinaria (da eseguire solo in casi particolari)

11.2.1 Sostituzione del fusibile

In caso di necessità sostituire i fusibili illustrati in figura (7.3 Descrizione della scheda connettori, pagina 25).

SOSTITUZIONE DEI FUSIBILI		
Tensione di alimentazione	Fusibile (F1)	Fusibile (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Tab. 11

11.2.2 Sostituzione della spazzola del tergicristallo

Nei modelli che sono dotati di tergicristallo è possibile effettuare la sostituzione delle spazzole usurate.

Svitare il dado cieco che fissa la spazzola e rimuoverlo assieme alle rondelle. Sostituire la spazzola usurata con una nuova. Applicare una buona quantità di frenafletti (Loctite 270), riposizionare il dado cieco e le rondelle regolando il fissaggio fino a quando la spazzola aderirà correttamente al vetro. Azionare il tergicristallo per verificare la corretta regolazione della spazzola.

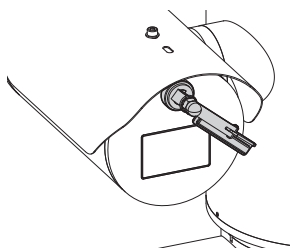


Fig. 24

11.2.3 Factory Default

⚠ Se la password di accesso non è più disponibile, è possibile ripristinare le impostazioni di fabbrica tramite la procedura di reset.

Il risultato della procedura di Factory Default è lo stesso ottenuto tramite interfaccia web (pulsante Hard Reset).

Per ripristinare le impostazioni di fabbrica relative alla rete, all'accesso utenti e alla configurazione della camera seguire la procedura:

- Spegnere l'unità.
- Aprire il vano connessioni.
- Tenere premuto il pulsante di reset (P1, 7.3 Descrizione della scheda connettori, pagina 25).
- Alimentare l'unità.
- Attendere 30 secondi.
- Rilasciare il pulsante di reset.
- Attendere 2 minuti.
- Spegner l'unità.
- Chiudere il vano connessioni.
- Alimentare l'unità.

È possibile effettuare il reset anche da remoto. Seguire la seguente procedura:

- Spegnere l'unità.
- Collegare insieme i contatti RST del connettore J6 (7.3 Descrizione della scheda connettori, pagina 25).
- Alimentare l'unità.
- Attendere 30 secondi.
- Scollegare i contatti RST.
- Attendere 2 minuti.
- Spegner l'unità.
- Alimentare l'unità.

i Una volta terminata la procedura di factory default è necessario configurare l'unità come descritto nel relativo capitolo (9.1 Indirizzo IP di default, pagina 30).

12 Pulizia

! Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo "Norme di sicurezza" presente nel manuale del prodotto.

i La frequenza degli interventi dipende dalla tipologia dell'ambiente in cui è utilizzato il prodotto.

12.1 Pulizia ordinaria (da eseguire periodicamente)

12.1.1 Pulizia della finestra in vetro

La pulizia deve essere effettuata con sapone neutro diluito con acqua.

12.1.2 Pulizia della finestra in germanio

! Pulire la finestra prestando attenzione a non graffiare o rigare la superficie esterna trattata con carbon coating. Danneggiando tale rivestimento c'è il rischio di compromettere la trasparenza all'infrarosso della superficie.

La pulizia deve essere effettuata con sapone neutro diluito con acqua.

Togliere la griglia protettiva e il distanziale, svitando le viti a testa svasata presenti sul frontale della custodia, utilizzando una chiave esagonale anticiscintilla da 2mm.

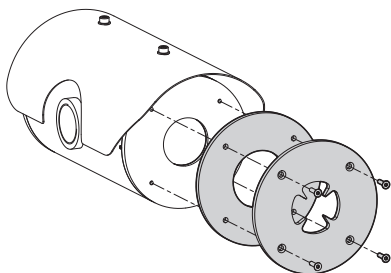


Fig. 25

Una volta eseguita la pulizia rimontare il distanziale e la griglia di protezione.

12.1.3 Pulizia del prodotto

! Sulla superficie esterna del prodotto non deve mai essere presente un accumulo di polvere superiore a 5mm.

i La pulizia del prodotto va effettuata seguendo le indicazioni riportate in questo capitolo al fine di impedire l'accumulo di cariche elettrostatiche.

La pulizia deve essere effettuata con un panno umido e senza l'utilizzo di aria compressa.

13 Informazioni sullo smaltimento e il riciclo

La Direttiva Europea 2012/19/UE sui Rifiuti di Apparecchiature Elettriche ed Elettroniche (RAEE) prevede che questi apparecchi non debbano essere smaltiti nel normale flusso dei rifiuti solidi urbani, ma che vengano raccolti separatamente per ottimizzare il flusso di recupero e riciclaggio dei materiali che li compongono ed impedire potenziali danni per la salute e per l'ambiente dovuti alla presenza di sostanze potenzialmente pericolose.



Il simbolo del bidone barrato è riportato su tutti i prodotti per ricordarlo.

I rifiuti possono essere conferiti agli appositi centri di raccolta, oppure, possono essere consegnati gratuitamente al distributore dove è stata acquistata l'apparecchiatura all'atto di acquisto di una nuova equivalente o senza obbligo di un acquisto nuovo per le apparecchiature di dimensioni minori di 25cm.

Per ulteriori informazioni sulla corretta dismissione di questi apparecchi ci si può rivolgere al servizio pubblico preposto.

14 Risoluzione dei problemi



Prima di effettuare qualsiasi tipo di intervento leggere attentamente il capitolo "Norme di sicurezza" presente nel manuale del prodotto.



Per qualunque problematica non descritta o se i problemi elencati di seguito dovessero persistere, contattare il centro di assistenza autorizzato.

PROBLEMA	Il prodotto non si accende.
CAUSA	Errato cablaggio, rottura dei fusibili.
SOLUZIONE	Verificare la corretta esecuzione delle connessioni. Verificare la continuità dei fusibili e, in caso di guasto, sostituirli con i modelli indicati.
PROBLEMA	L'area ripresa non corrisponde alla posizione di preset richiamata.
CAUSA	Perdita del riferimento di posizione assoluto.
SOLUZIONE	Resettare l'apparecchiatura spegnendo e riaccendendo.
PROBLEMA	Il dispositivo non si muove durante la fase di startup.
CAUSA	La temperatura ambiente è troppo bassa.
SOLUZIONE	Attendere il termine della procedura di preriscaldamento. Nella pagina web è visualizzato il seguente messaggio: procedura di De-Ice in corso.

15 Dati tecnici

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 Generale

Costruzione in acciaio Inox AISI 316L

Superfici esterne micropallinate ed elettrolucidate

Sistema dinamico di controllo della posizione

15.1.2 Meccanica

Ingressi cavi: 2 x 3/4" NPT

Assenza di gioco meccanico

Rotazione orizzontale: 360°, rotazione continua

Rotazione verticale: da -90° fino a +90°

Velocità orizzontale (variabile): da 0.1° fino a 100°/s

Velocità verticale (variabile): da 0.1° fino a 100°/s

Accuratezza del richiamo delle posizioni di preset: 0.02°

Tergicristallo integrato

Finestra in vetro temprato extrachiaro: spessore 12mm

Peso unitario: 26.5kg

15.1.3 Elettrico

Tensione di alimentazione/Corrente assorbita:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Potenza assorbita:

- 120W max

15.1.4 Rete

Porta RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Connessione Ethernet: 100BASE-FX
- Tensione di alimentazione: 3.3V
- Standard: conforme MSA

Il modulo SFP (non fornito da VIDEOTEC) deve rispettare i seguenti requisiti:

- Laser: Class 1, conforme a EN60825-1
- Certificazione: UL/IEC 60950-1 oppure UL/IEC 62368-1

15.1.5 Interfaccia I/O

Ingresso per reset remoto: 1

Ingressi allarmi: 1

Uscite relè: 1+1 (1 relè riservato alla pompa lavavetro e uno configurabile, 1A, 30Vac/60Vdc max)

15.1.6 Video analisi

Algoritmi molto robusti di detection e auto-tracking, specifici per il controllo perimetrale outdoor.

Classificazione target: Persone, veicoli, oggetto generico

Regole impostabili per l'analisi video, VIDEOTEC ANALYTICS (tramite un'intuitiva interfaccia di gestione, è possibile configurare in modo rapido fino a dieci regole per ogni preset)

- Line crossing: il target genera allarme se attraversa la linea in una o entrambe le direzioni
- Entering/leaving area: il target genera allarme se entra o esce nell'area configurata
- Appearing in area: il target genera allarme se appare all'interno dell'area configurata
- Loitering: il target genera allarme se rimane all'interno dell'area configurata oltre il tempo definito

Funzione di Detection Mask: disabilita l'attività di detection in una porzione dell'immagine per evitare falsi allarmi

Funzione di Video Tampering Detection: si genera un allarme specifico ONVIF se viene ostruita la visuale alla telecamera (es. spray)

15.1.7 Telecamere

Day/Night Full HD 30x DELUX

Risoluzione: Full HD 1080p (1920x1080)

Sensore di immagine: 1/2.8" Exmor™ R CMOS sensor

Pixel Effettivi: appross. 2.38 Megapixel

Illuminazione Minima:

- Colore: 0.006lx (F1.6, 30 IRE)
- B/W: 0.0006lx (F1.6, 30 IRE)

Lunghezza focale: da 4.5mm (wide) fino a 135mm (tele)

Zoom: 30x (480x con zoom digitale)

Iris: da F1.6 fino a F9.6 (Auto, Manuale)

Campo visivo orizzontale: da 61.6° (wide end) fino a 2.50° (tele end)

Campo visivo verticale: da 37.07° (wide end) fino a 1.44° (tele end)

Velocità dell'otturatore: da 1/1s fino a 1/10000s (Auto, Manuale)

Bilanciamento del bianco: Auto, Manuale

Guadagno: da 0dB fino a 100dB (Auto, Manuale)

Wide Dynamic Range: 120dB

Sistema Focus: Auto, Manuale, Trigger

Effetti immagine: E-flip, Miglioramento del colore

Riduzione del rumore: 2D (3 livelli), 3D (3 livelli)

Controllo Esposizione: Auto, Manuale, Priorità (Priorità Iris, Priorità Shutter), Luminosità, Custom

De-fog: On/Off

Mascheratura delle zone di privacy (massimo 8 maschere impostabili)

Indoor Flicker Reduction

Auto Slowshutter: Off, On (da 1/30s fino a 1/1s)

Compensazione esposizione: Off, On (da livello 0 fino a livello 14)

Nitidezza: da livello 0 fino a livello 3

SONY FCB-EV7520 Day/Night Full HD 30x

Risoluzione: Full HD 1080p (1920x1080)

Sensore di immagine: 1/2.8" Exmor™ R CMOS sensor

Pixel Effettivi: appross. 2.13 Megapixel

Illuminazione Minima:

- Colore: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Lunghezza focale: da 4.3mm (wide) fino a 129mm (tele)

Zoom: 30x (360x con zoom digitale)

Iris: da F1.6 fino a F14 (Auto, Manuale)

Campo visivo orizzontale: da 63.7° (wide end) fino a 2.3° (tele end)

Campo visivo verticale: da 38.5° (wide end) fino a 1.3° (tele end)

Velocità dell'otturatore: da 1/1s fino a 1/10000s (Auto, Manuale)

Bilanciamento del bianco: Auto, Auto Tracing, Indoor, Outdoor, Manuale, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Guadagno: da 0dB fino a 50.0dB (Auto, Manuale)

Wide Dynamic Range: 120dB

Sistema Focus: Auto (PTZ Trigger, Full Auto), Manuale

Effetti immagine: E-flip

Riduzione del rumore (2D, 3D): Off, On (da livello 1 fino a livello 5)

Controllo Esposizione: Auto, Manuale, Priorità (Priorità diaframma, Priorità otturatore, Priorità luminosità)

De-fog: Off, Low, Mid, High

Mascheratura dinamica delle zone di privacy: massimo 24 maschere impostabili, massimo 8 visualizzabili contemporaneamente

Indoor Flicker Reduction

Limite Guadagno: da 10.7dB fino a 50dB

High sensitivity: On/Off

Compensazione Backlight: On/Off

Auto Slowshutter: On/Off

Compensazione esposizione: Off, On (da -10.5dB fino a +10.5dB)

Nitidezza: da livello 0 fino a livello 15

High Light Compensation (HLC): Off, Low, Mid, High, Livello Mascheratura (Off, On, da livello 1 fino a livello 15)

Stabilizzazione immagine digitale: On/Off

15.1.8 Ambiente

Installazione per interni ed esterni

Temperatura di certificazione: da -40°C fino a +80°C

Temperatura di esercizio:

- Funzionamento continuo: da -40°C fino a +65°C (fino a +50°C per versioni con VIDEOTEC ANALYTICS)
- Test di temperatura conforme NEMA-TS 2-2003 (R2008) par. 2.1.5.1, profilo di test fig. 2-1 (da -34°C fino a +74°C) (non valido per versioni con video analisi integrata, VIDEOTEC ANALYTICS)
- Intervento della funzione de-icing (avviamento a freddo): da -40°C fino a -10°C

Resistenza al vento

- PTZ a riposo: 230km/h max.
- PTZ in movimento alla massima velocità: 210km/h max.

Umidità relativa: da 5% fino a 95%

15.1.9 Certificazioni

Sicurezza elettrica (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilità elettromagnetica (CE): EN50130-4, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Installazione all'esterno (CE): EN60950-22, IEC60950-22

Test vibrazioni: EN50130-5, EN60068-2-6

Certificazione UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (non disponibile per le versioni in 100Vac e 220Vac): cULus Listed

Compatibilità elettromagnetica (Nord America) (non disponibile per le versioni in 100Vac e 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

Grado di protezione IP (EN/IEC60529): IP66, IP67, IP68, IP69

Grado di protezione Type (UL50E) (non disponibile per le versioni in 100Vac e 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

Certificazione KC (certificazione valida solo per il codice MPXHD51A001C)

15.1.10 Certificazioni - Applicazioni antideflagranti

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (non disponibile per le versioni in 100Vac e 220Vac)

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) (non disponibile per le versioni in 100Vac e 220Vac)

EAC Ex (TR CU 012/2011) (non disponibile per le versioni in 100Vac e 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (non disponibile per le versioni in 100Vac e 220Vac)

KCs (Employment and labor department 2020-33)

15.1.11 Certificazioni - Applicazioni marine

Certificazione Lloyd's Register Marine Type Approval (con communication box MAXIMUS MBX oppure con il filtro FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilità elettromagnetica: EN60945

Resistenza alla nebbia salina: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 Generale

Costruzione in acciaio Inox AISI 316L

Superfici esterne micropallinate ed elettrolucidate

Sistema dinamico di controllo della posizione

Analisi radiometrica:

- sui 4 pixel centrali, in caso di telecamera termica con funzioni radiometriche
- definizione di un'area specifica, in caso di telecamera termica con funzioni radiometriche avanzate

Attivazione allarme radiometrico: Se la temperatura è al di sopra della soglia impostata, al di sotto della soglia impostata, compresa tra due soglie impostate o al di fuori delle due soglie impostate.

Azioni su allarme: Attivazione uscita digitale, richiamo preset tour, richiamo posizione di home, richiamo posizione di preset e http get request.

15.2.2 Meccanica

Ingressi cavi: 2 x 3/4" NPT

Assenza di gioco meccanico

Rotazione orizzontale: 360°, rotazione continua

Rotazione verticale: da -90° fino a +90°

Velocità orizzontale (variabile): da 0.1°/s fino a 100°/s

Velocità verticale (variabile): da 0.1°/s fino a 100°/s

Accuratezza del richiamo delle posizioni di preset: 0.02°

Peso unitario: 26.5kg

15.2.3 Finestre per custodia

Finestra in germanio

- Spessore: 8mm
- Trattamento esterno: antigraffio (Hard Carbon Coating - DLC), antiriflesso
- Trattamento interno: antiriflesso
- Range spettrale: da 7.5µm fino a 14µm
- Trasmittanza media (da 7.5µm fino a 11.5µm): 87.5%
- Trasmittanza media (da 11.5µm fino a 14µm): 72.1%

15.2.4 Elettrico

Tensione di alimentazione/Corrente assorbita:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Potenza assorbita:

- 120W max

15.2.5 Rete

Porta RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Connessione Ethernet: 100BASE-FX
- Tensione di alimentazione: 3.3V
- Standard: conforme MSA

Il modulo SFP (non fornito da VIDEOTEC) deve rispettare i seguenti requisiti:

- Laser: Class 1, conforme a EN60825-1
- Certificazione: UL/IEC 60950-1 oppure UL/IEC 62368-1

15.2.6 Interfaccia I/O

Ingresso per reset remoto: 1

Ingressi allarme: 1

Uscite relè: 1 (1A, 30Vac/60Vdc max)

15.2.7 Telecamere Termiche

TELECAMERE TERMICHE (RISOLUZIONE 336X256)							
	Obiettivo 9mm	Obiettivo 13mm	Obiettivo 19mm	Obiettivo 25mm	Obiettivo 35mm	Obiettivo 50mm	Obiettivo 60mm
Sensore di immagine	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)
Risoluzione interpolata	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensioni pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Risposta spettrale - Infrarossi onda lunga (LWIR)	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm
Otturatore interno (solo per compensazione sensore)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digitale	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Frequenza di aggiornamento immagine	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequenza di aggiornamento immagine	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamma scena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamma scena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo visione orizzontale	35°	25°	17°	13°	9,3°	6,5°	5,5°
Campo visione verticale	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche avanzate	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Uomo (rilevamento / riconoscimento / identificazione)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Veicolo (rilevamento / riconoscimento / identificazione)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 12

TELECAMERE TERMICHE (RISOLUZIONE 640X512)							
	Obiettivo 9mm	Obiettivo 13mm	Obiettivo 19mm	Obiettivo 25mm	Obiettivo 35mm	Obiettivo 50mm	Obiettivo 60mm
Sensore di immagine	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)
Risoluzione interpolata	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensioni pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Risposta spettrale - Infrarossi onda lunga (LWIR)	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm
Otturatore interno (solo per compensazione sensore)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digitale	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Frequenza di aggiornamento immagine	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequenza di aggiornamento immagine	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamma scena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamma scena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo visione orizzontale	69°	45°	32°	25°	18°	12.4°	10.4°
Campo visione verticale	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche avanzate	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Uomo (rilevamento / riconoscimento / identificazione)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Veicolo (rilevamento / riconoscimento / identificazione)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 13

15.2.8 Ambiente

Installazione per interni ed esterni

Temperatura di certificazione: da -40°C fino a +80°C

Temperatura di esercizio:

- Funzionamento continuo: da -40°C fino a +65°C
- Test di temperatura conforme NEMA-TS 2-2003 (R2008) par. 2.1.5.1, profilo di test fig. 2-1 (da -34°C fino a +74°C)
- Intervento della funzione de-icing (avviamento a freddo): da -40°C fino a -10°C

Resistenza al vento

- PTZ a riposo: 230km/h max.
- PTZ in movimento alla massima velocità: 210km/h max.

Umidità relativa: da 5% fino a 95%

15.2.9 Certificazioni

Sicurezza elettrica (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilità elettromagnetica (CE): EN50130-4, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Installazione all'esterno (CE): EN60950-22, IEC60950-22

Test vibrazioni: EN50130-5, EN60068-2-6

Certificazione UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (non disponibile per le versioni in 100Vac e 220Vac): cULus Listed

Compatibilità elettromagnetica (Nord America) (non disponibile per le versioni in 100Vac e 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

Grado di protezione IP (EN/IEC60529): IP66, IP67, IP68, IP69

Grado di protezione Type (UL50E) (non disponibile per le versioni in 100Vac e 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 Certificazioni - Applicazioni antideflagranti

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (non disponibile per le versioni in 100Vac e 220Vac)

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) (non disponibile per le versioni in 100Vac e 220Vac)

EAC Ex (TR CU 012/2011) (non disponibile per le versioni in 100Vac e 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (non disponibile per le versioni in 100Vac e 220Vac)

KCs (Employment and labor department 2020-33)

15.2.11 Certificazioni - Applicazioni marine

Certificazione Lloyd's Register Marine Type Approval (con communication box MAXIMUS MBX oppure con il filtro FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilità elettromagnetica: EN60945

Resistenza alla nebbia salina: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 Generale

Costruzione in acciaio Inox AISI 316L

Superfici esterne micropallinate ed elettrolucidate

Sistema dinamico di controllo della posizione

Analisi radiometrica:

- sui 4 pixel centrali, in caso di telecamera termica con funzioni radiometriche
- definizione di un'area specifica, in caso di telecamera termica con funzioni radiometriche avanzate

Attivazione allarme radiometrico: Se la temperatura è al di sopra della soglia impostata, al di sotto della soglia impostata, compresa tra due soglie impostate o al di fuori delle due soglie impostate.

Azioni su allarme: Attivazione uscita digitale, richiamo preset tour, richiamo posizione di home, richiamo posizione di preset e http get request.

15.3.2 Meccanica

Ingressi cavi: 2 x 3/4" NPT

Assenza di gioco meccanico

Rotazione orizzontale: 360°, rotazione continua

Rotazione verticale: da -90° fino a +90°

Velocità orizzontale (variabile): da 0.1°/s fino a 100°/s

Velocità verticale (variabile): da 0.1°/s fino a 100°/s

Accuratezza del richiamo delle posizioni di preset: 0.02°

Tergicristallo integrato

Peso unitario: 31kg

15.3.3 Finestre per custodia

Finestra in vetro temprato extrachiaro

- Spessore: 12mm

Finestra in germanio

- Spessore: 8mm
- Trattamento antigraffio (Hard Carbon Coating - DLC)
- Trattamento antiriflesso
- Range spettrale: da 7.5µm fino a 14µm
- Trasmissione media (da 7.5µm fino a 11.5µm): 87.5%
- Trasmissione media (da 11.5µm fino a 14µm): 72.1%

15.3.4 Elettrico

Tensione di alimentazione/Corrente assorbita:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Potenza assorbita:

- 120W max

15.3.5 Rete

Porta RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Connessione Ethernet: 100BASE-FX
- Tensione di alimentazione: 3.3V
- Standard: conforme MSA

Il modulo SFP (non fornito da VIDEOTEC) deve rispettare i seguenti requisiti:

- Laser: Class 1, conforme a EN60825-1
- Certificazione: UL/IEC 60950-1 oppure UL/IEC 62368-1

15.3.6 Interfaccia I/O

Ingresso per reset remoto: 1

Ingressi allarme: 1

Uscite relè: 1+1 (1A, 30Vac/60Vdc max, un relè riservato alla pompa lavavetro e uno configurabile)

15.3.7 Telecamere Day/Night

SONY FCB-EV7520 Day/Night Full HD 30x

Risoluzione: Full HD 1080p (1920x1080)

Sensore di immagine: 1/2.8" Exmor™ R CMOS sensor

Pixel Effettivi: appross. 2.13 Megapixel

Illuminazione Minima:

- Colore: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Lunghezza focale: da 4.3mm (wide) fino a 129mm (tele)

Zoom: 30x (360x con zoom digitale)

Iris: da F1.6 fino a F14 (Auto, Manuale)

Campo visivo orizzontale: da 63.7° (wide end) fino a 2.3° (tele end)

Campo visivo verticale: da 38.5° (wide end) fino a 1.3° (tele end)

Velocità dell'otturatore: da 1/1s fino a 1/10000s (Auto, Manuale)

Bilanciamento del bianco: Auto, Auto Tracing, Indoor, Outdoor, Manuale, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Guadagno: da 0dB fino a 50.0dB (Auto, Manuale)

Wide Dynamic Range: 120dB

Sistema Focus: Auto (PTZ Trigger, Full Auto), Manuale
Effetti immagine: E-flip

Riduzione del rumore (2D, 3D): Off, On (da livello 1 fino a livello 5)

Controllo Esposizione: Auto, Manuale, Priorità (Priorità diaframma, Priorità otturatore, Priorità luminosità)

De-fog: Off, Low, Mid, High

Mascheratura dinamica delle zone di privacy: massimo 24 maschere impostabili, massimo 8 visualizzabili contemporaneamente

Indoor Flicker Reduction

Limite Guadagno: da 10.7dB fino a 50dB

High sensitivity: On/Off

Compensazione Backlight: On/Off

Auto Slowshutter: On/Off

Compensazione esposizione: Off, On (da -10.5dB fino a +10.5dB)

Nitidezza: da livello 0 fino a livello 15

High Light Compensation (HLC): Off, Low, Mid, High, Livello Mascheratura (Off, On, da livello 1 fino a livello 15)

Stabilizzazione immagine digitale: On/Off

15.3.8 Telecamere Termiche

TELECAMERE TERMICHE (RISOLUZIONE 336X256)							
	Obiettivo 9mm	Obiettivo 13mm	Obiettivo 19mm	Obiettivo 25mm	Obiettivo 35mm	Obiettivo 50mm	Obiettivo 60mm
Sensore di immagine	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)
Risoluzione interpolata	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensioni pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Risposta spettrale - Infrarossi onda lunga (LWIR)	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm
Otturatore interno (solo per compensazione sensore)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digitale	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Frequenza di aggiornamento immagine	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequenza di aggiornamento immagine	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamma scena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamma scena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo visione orizzontale	35°	25°	17°	13°	9,3°	6,5°	5,5°
Campo visione verticale	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche avanzate	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Uomo (rilevamento / riconoscimento / identificazione)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Veicolo (rilevamento / riconoscimento / identificazione)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 14

TELECAMERE TERMICHE (RISOLUZIONE 640X512)							
	Obiettivo 9mm	Obiettivo 13mm	Obiettivo 19mm	Obiettivo 25mm	Obiettivo 35mm	Obiettivo 50mm	Obiettivo 60mm
Sensore di immagine	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)	Microbolometro non raffreddato (VOx)
Risoluzione interpolata	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensioni pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Risposta spettrale - Infrarossi onda lunga (LWIR)	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm	da 7.5µm a 13.5µm
Otturatore interno (solo per compensazione sensore)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digitale	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Frequenza di aggiornamento immagine	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequenza di aggiornamento immagine	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamma scena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamma scena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo visione orizzontale	69°	45°	32°	25°	18°	12.4°	10.4°
Campo visione verticale	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0	< 50mK a f/1.0
Sensibilità termica (NETD), Telecamera termica con funzioni radiometriche avanzate	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Uomo (rilevamento / riconoscimento / identificazione)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Veicolo (rilevamento / riconoscimento / identificazione)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 15

15.3.9 Ambiente

Installazione per interni ed esterni

Temperatura di certificazione: da -40°C fino a +80°C

Temperatura di esercizio:

- Funzionamento continuo: da -40°C fino a +65°C
- Test di temperatura conforme NEMA-TS 2-2003 (R2008) par. 2.1.5.1, profilo di test fig. 2-1 (da -34°C fino a +74°C)
- Intervento della funzione de-icing (avviamento a freddo): da -40°C fino a -10°C

Resistenza al vento

- PTZ a riposo: 230km/h max.
- PTZ in movimento alla massima velocità: 210km/h max.

Umidità relativa: da 5% fino a 95%

15.3.10 Certificazioni

Sicurezza elettrica (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilità elettromagnetica (CE): EN50130-4, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Installazione all'esterno (CE): EN60950-22, IEC60950-22

Test vibrazioni: EN50130-5, EN60068-2-6

Certificazione UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (non disponibile per le versioni in 100Vac e 220Vac): cULus Listed

Compatibilità elettromagnetica (Nord America) (non disponibile per le versioni in 100Vac e 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

Grado di protezione IP (EN/IEC60529): IP66, IP67, IP68, IP69

Grado di protezione Type (UL50E) (non disponibile per le versioni in 100Vac e 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 Certificazioni - Applicazioni antideflagranti

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (non disponibile per le versioni in 100Vac e 220Vac)

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) (non disponibile per le versioni in 100Vac e 220Vac)

EAC Ex (TR CU 012/2011) (non disponibile per le versioni in 100Vac e 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (non disponibile per le versioni in 100Vac e 220Vac)

KCs (Employment and labor department 2020-33)

15.3.12 Certificazioni - Applicazioni marine

Certificazione Lloyd's Register Marine Type Approval (con communication box MAXIMUS MBX oppure con il filtro FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilità elettromagnetica: EN60945

Resistenza alla nebbia salina: EN60068-2-52

16 Disegni tecnici

i Le misure indicate sono espresse in millimetri.

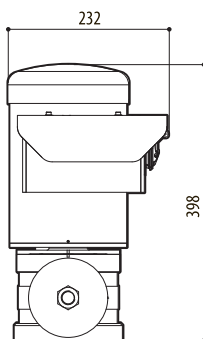
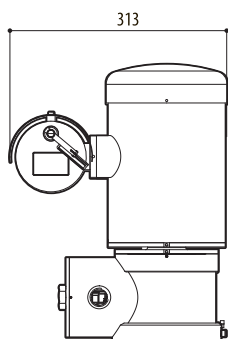
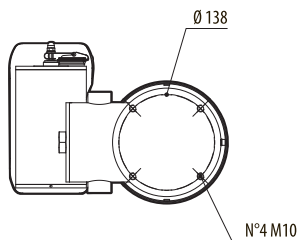


Fig. 26 MAXIMUS MPX SERIES2.

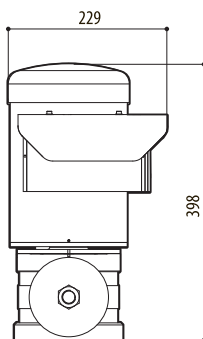
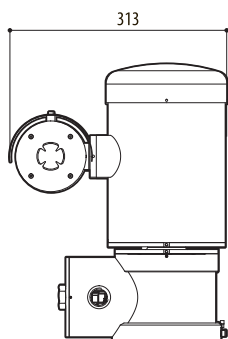
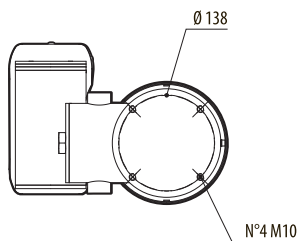


Fig. 27 MAXIMUS MPXR SERIES2.

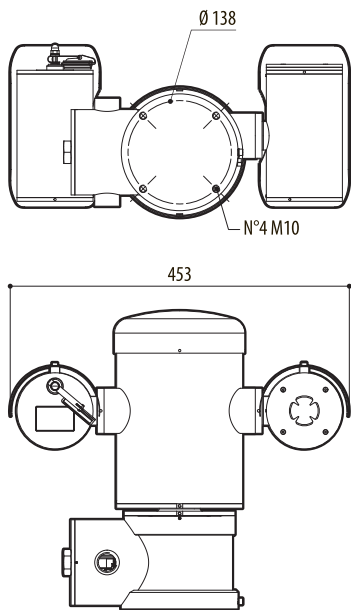
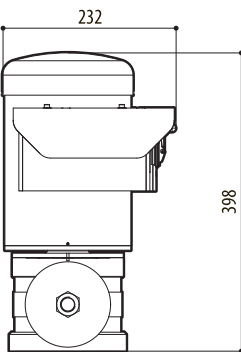


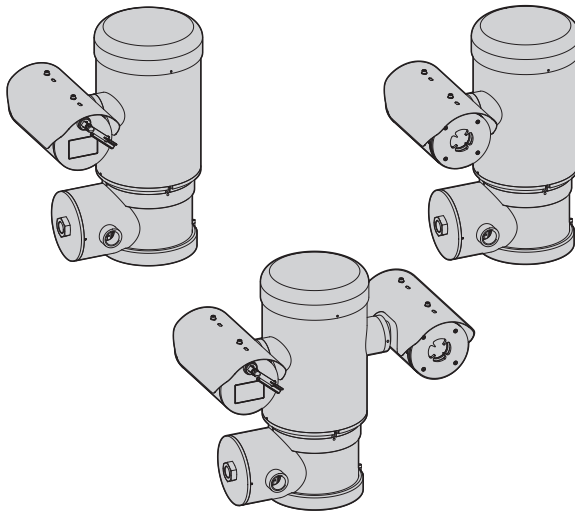
Fig. 28 MAXIMUS MPXT SERIES2.



Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

MAXIMUS MPX SERIES2 (MPXHD)
MAXIMUS MPXR SERIES2 (MPXR)
MAXIMUS MPXT SERIES2 (MPXT)

Caméra PTZ anti-déflagrante



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1 À propos de ce mode d'emploi

Avant d'installer et d'utiliser ce produit, lire attentivement toute la documentation fournie. Garder le manuel à portée de main pour des consultations successives.

1.1 Conventions typographiques



DANGER!

Danger d'explosion.

Lire avec attention pour éviter tout risque d'explosion.



DANGER!

Risque élevé.

Risque de choc électrique. Sauf indication contraire, sectionner l'alimentation avant de procéder à toute opération.



ATTENTION!

Risque moyen.

Opération extrêmement importante en vue d'un fonctionnement correct du système. Lire avec attention les opérations indiquées et s'y conformer rigoureusement.



REMARQUE

Description des caractéristiques du système.

Il est conseillé de procéder à une lecture attentive pour une meilleure compréhension des phases suivantes.

Titres soulignés

Les informations sont conditionnées par les certifications.

2 Notes sur le copyright et informations sur les marques de commerce

Les noms de produit ou de sociétés cités sont des marques de commerce ou des marques de commerce enregistrées.

3 Normes de sécurité



DANGER!

Danger d'explosion.

Lire avec attention pour éviter tout risque d'explosion.

- L'installation et l'entretien de l'appareil doivent être effectués par un personnel technique spécialisé conformément aux normes de référence applicables EN/IEC 60079-14, EN/IEC 60079-17 et aux normes nationales.
- Ne pas ouvrir le dispositif s'il est alimenté et en présence d'atmosphère explosive.
- Effectuer l'installation à l'aide d'outils appropriés. Le lieu d'installation du dispositif peut toutefois exiger l'utilisation d'outils spécifiques.
- Effectuer tous les branchements, les interventions d'installation et d'entretien dans une atmosphère non explosive.
- Le branchement équipotentiel est obligatoire pour éviter tout risque d'amorçage des produits installés dans des environnements potentiellement explosifs.
- L'appareil doit être branché à un conducteur de terre (mise à terre de protection). Ce branchement doit être exécuté uniquement à travers le connecteur de la ligne d'alimentation. Les connexions équipotentielles externes doivent être effectuées seulement là où les normes ou les codes locaux prévoient l'exécution de connexions supplémentaires à terre.
- Avant d'alimenter le produit en atmosphère à risque d'explosion, s'assurer que le couvercle du compartiment branchements est correctement fermé.
- La température des surfaces de l'appareil augmente en cas d'exposition directe à la lumière solaire. La classe de température à la surface de l'appareil a été calculée seulement à température ambiante, sans tenir compte de l'exposition directe à la lumière solaire.
- S'assurer que tous les appareils soient homologués pour l'utilisation dans le milieu dans lequel ils seront installés.
- Toute modification non approuvée expressément par le fabricant entraînera l'annulation de la garantie.

**DANGER!****Risque élevé.****Risque de choc électrique. Sauf indication contraire, sectionner l'alimentation avant de procéder à toute opération.**

- Procéder à l'installation et à l'entretien avec l'alimentation électrique coupée et avec le dispositif de sectionnement ouvert.
- L'installation électrique doit être équipée d'un sectionneur de réseau facile à reconnaître et à utiliser en cas de nécessité.
- Le circuit électrique auquel l'unité est reliée doit être équipé d'un interrupteur de protection bipolaire automatique de 16A max. La distance minimale entre les de l'interrupteur de protection contacts doit être de 3mm. L'interrupteur doit être équipé de protection contre le courant de défaut vers la terre (différentiel) et le surintensité (magnétothermique).
- L'appareil n'est considéré comme désactivé que quand l'alimentation est enlevée et les câbles de branchement avec d'autres dispositifs ont été enlevés.
- Ne pas utiliser de câbles usés ou endommagés.
- Tous les câbles doivent être conformes aux normes IEC60332-1-2, IEC 60332-1-3 et IEC/EN60079-14.
- Contrôler que les sources d'alimentation et les câbles de branchement sont en mesure de supporter la consommation du système.
- Pour assurer la protection contre le risque d'incendie, remplacer les fusibles avec le même type et valeur. Les fusibles doivent être remplacés seulement par un personnel qualifié.
- Le dispositif n'est pas prévu pour un usage en lieux susceptibles d'accueillir des enfants.

**ATTENTION!****Risque moyen.****Opération extrêmement importante en vue d'un fonctionnement correct du système. Lire avec attention les opérations indiquées et s'y conformer rigoureusement.**

- S'assurer que l'installation soit conforme aux normes locales.
- Effectuer les branchements et les essais en atelier avant l'installation sur site.
- Vérifier que la source et le câble d'alimentation sont adéquatement dimensionnés.
- Utiliser des câbles adaptés pour supporter les températures de fonctionnement.
- Tous les câbles débranchés doivent être isolés électriquement.
- L'unité ne peut être installée que dans la position standard ou inversée (montage au plafond).
- Avant d'alimenter l'appareil, s'assurer qu'il est solidement fixé.
- Lors de la mise en marche, le système effectue une série de mouvements d'étalonnages automatiques: ne pas stationner près de l'appareil au moment de l'allumage.
- Le fabricant décline toute responsabilité en cas de dommage, de tous les appareils mentionnés dans ce manuel, dérivant d'une manipulation, de l'utilisation de pièces détachées non originales, d'installation, de manutention ou d'entretien effectué par un personnel non qualifié.
- Pour les interventions de l'assistance techniques, s'adresser exclusivement à du personnel technique agréé.
- La réparation de ce produit doit être exécutée par du personnel adéquatement formé ou sous la supervision du personnel VIDEOTEC conformément aux normes prévues: IEC/ EN60079-19.
- Utiliser uniquement des pièces de rechange originales VIDEOTEC. Suivre à la lettre les instructions d'entretien qui accompagne chaque kit de rechange.

**REMARQUE****Description des caractéristiques du système.****Il est conseillé de procéder à une lecture attentive pour une meilleure compréhension des phases suivantes.**

- Etant donné le poids considérable de l'appareil, utiliser un système de transport et de manutention adéquat. Le personnel préposé doit effectuer la manutention du produit dans le respect des normes communes de prévention contre les accidents.
- Avant de procéder à l'installation, contrôler que le matériel fourni correspond à la commande et examiner les étiquettes de marquage.
- Les matériels sont destinés à être installés dans des EMPLACEMENTS À ACCÈS RESTREINT.
- Le fabricant décline toute responsabilité pour les dommages éventuels dus à une utilisation non appropriée des appareils mentionnés dans ce manuel. On réserve en outre le droit d'en modifier le contenu sans préavis. La documentation contenue dans ce manuel a été rassemblée et vérifiée avec le plus grand soin. Le fabricant, cependant, ne peut assumer aucune responsabilité dérivant de l'emploi de celle là. La même chose vaut pour chaque personne ou société impliquées dans la création et la production de ce manuel.
- Etant donné que l'utilisateur est responsable du choix de la surface de fixation, le fabricant ne fournit pas dans la livraison les dispositifs de fixation de l'unité à la surface. L'installateur est responsable de choisir des dispositifs adaptés à la surface à disposition. Il est conseillé d'utiliser des méthodes et des matériaux en mesure de supporter un poids au moins 4 fois supérieur à celui de l'appareil.
- Contacter le constructeur pour des informations sur les dimensions du joint antidéflagration.
- Nous conseillons, pour n'importe quelle intervention de maintenance, de rapporter le produit en laboratoire pour effectuer les opérations nécessaires.
- L'appareil est contrôlé à distance et peut donc changer de position à tout moment. Installer l'appareil de façon à éviter les accidents causés par le contact avec des parties en mouvement, en faisant en sorte que ces parties ne se heurtent pas à d'autres objets, créant des situations dangereuses.
- Ce produit appartient à la Classe A. Dans un milieu résidentiel ce produit peut être la cause de radioperturbations. Dans ce cas il est préférable de prendre des mesures appropriées.
- Pour être conforme aux règlements sur les chutes et les coupures de tension d'alimentation, veuillez utiliser un onduleur (UPS) approprié pour alimenter l'appareil.

4 Identification

4.1 Description et désignation du produit

La série MAXIMUS MPX est une catégorie de caméras PTZ pour installations en atmosphères potentiellement explosives, réalisée en acier inoxydable AISI 316L électropoli.

La série MAXIMUS MPX est équipée d'une entrée pour câbles NPT ou métrique en fonction du modèle.

La série MAXIMUS MPX présente un niveau de protection IP66/IP68/IP69 et peut être installée en lieux à températures de -40°C à +80°C (vérifier le marquage pour chaque modèle disponible).

Il existe des versions avec caméra visible, caméra thermique, caméra visible et thermique.

4.2 Champ d'utilisation

L'emploi de l'unité est définie pour l'utilisation sur poste fixe pour la surveillance de zones avec atmosphère potentiellement explosive classées 1-21 ou 2-22.

L'unité est construite et certifiée conformément à la directive 2014/34/UE et aux standards internationaux IECEx qui en définissent le champ d'application et les conditions minimales de sécurité.

4.3 Conditions particulières d'utilisation

Contactez le constructeur pour des informations sur les dimensions du joint antidéflagration.

Température ambiante et température superficielle - voir les instructions.

Veillez à éviter l'accumulation de charges électrostatiques. Lisez les instructions d'installation.

L'unité ne peut être installée que dans la position standard ou inversée.

4.4 Groupes Gaz, Groupe Poussières et Températures

Le dispositif est certifié pour le groupe IIC (Gaz) et le groupe IIIC (poussières).

La classe de température, la température superficielle maximale et la température de l'entrée câbles dépendent des caractéristiques des dispositifs installables (puissance dissipée, Watts) et de la température ambiante.

Ces caractéristiques sont spécifiées pour chaque modèle aux chapitres spécifiques.

4.5 Caractéristiques des dispositifs installables

Tous les composants internes doivent être installés à l'intérieur par le fabricant.

4.6 Entrée câbles

Le produit est fourni avec des bouchons en plastique pour protéger l'entrée des câbles. Ils sont inutilisables pour l'installation.

Les entrées des câbles non utilisées doivent être fermées au moyen de dispositifs de blocage appropriés certifiés Ex avec un type de protection résistant aux explosions « db » et « tb », adaptés aux conditions d'utilisation et installés correctement.

Tous les presse-étoupes non utilisés doivent être opportunément certifiés Ex, avec un type de protection résistant aux explosions « db », et « tb », adaptés aux conditions d'utilisation et correctement installés.

En cas d'utilisation du conduit, un raccord de blocage adéquat certifié Ex est nécessaire, avec un type de protection résistant aux explosions « db » et « tb », adapté aux conditions d'utilisation et correctement installé.

Le raccord de blocage doit être placé à 50mm (1.97in) au plus du dispositif.

Les températures d'entrée des câbles sont indiquées sur le marquage.

Pour conserver le degré IP du produit, utiliser des presse-étoupes à degré de protection adéquat et appliquer aux filetages un produit d'étanchéité conforme à la norme IEC/EN60079-14.

4.6.1 Bouchon d'étanchéité (stopping plug)



Le dispositif de blocage (stopping plug) fourni n'est pas certifié KC.

Le produit est livré avec un dispositif de blocage (stopping plug) certifié Ex avec type de protection contre les explosions « db » et « tb ». Il s'accompagne également d'un agent d'étanchéité pour filetages, conforme à la norme IEC/EN60079-14, l'utilisation garantit le degré IP.

Les instructions d'installation du bouchon d'étanchéité (stopping plug) sont disponibles sur <https://peppers.co.uk/useful-documents/>.

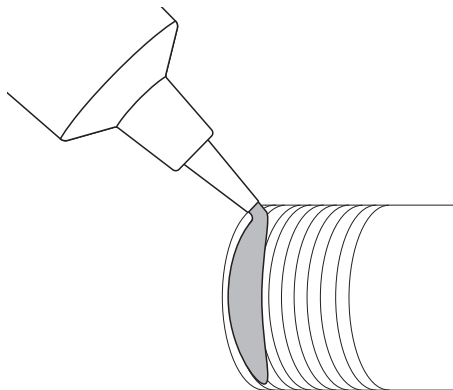


Fig. 1

4.7 Marquage du produit

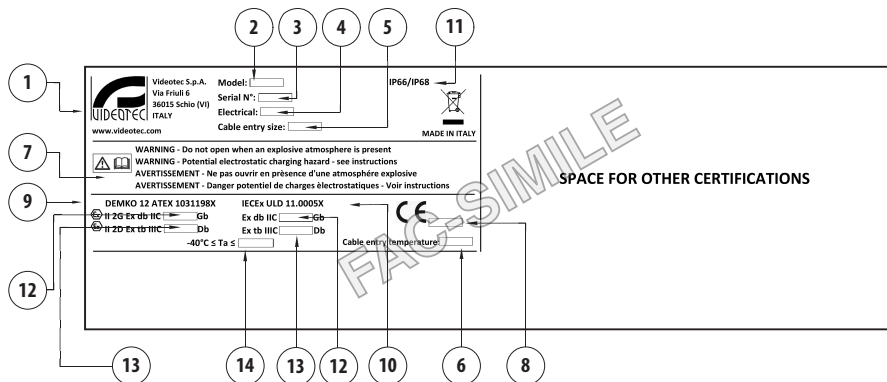


Fig. 1

- Nom et adresse du fabricant.
- Modèles.
- Le numéro de série se compose de 12 caractères numériques, le deuxième et le troisième chiffre définissent les deux numéros de l'année de fabrication.
- Caractéristiques électriques (tension V, fréquence Hz, courant A, puissance W).
- Nombre, dimension et type d'entrées câble.
- Température d'entrée câbles.
- Mises en garde.
- Numéro de l'organisme accrédité qui fournit l'évaluation de la qualité.
- Marquage ATEX. La classe de température dépend de l'électronique installée à l'intérieur et de la température ambiante.
- Marquage IECEx. La classe de température dépend de l'électronique installée à l'intérieur et de la température ambiante.
- Degré de protection IP.
- T Class (Tx or Tx...Tx).
- Température superficielle maximale (Tx°C or Tx°C...Tx°C).
- Température ambiante ($-40^{\circ}\text{C} \leq \text{Ta} \leq +\text{TX}^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq \text{Ta} \leq \text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$).

Exemple de marquage:

DONNÉES INDICATIVES				
Puissance dissipée dans caisson (W)	T Class	Température superficielle maximale	Température d'entrée câbles	Température ambiante
7	T4	T135°C	90°C	$-40^{\circ}\text{C} \leq \text{Ta} \leq 80^{\circ}\text{C}$
	T6...T5	T85°C...T100°C	80°C	$-40^{\circ}\text{C} \leq \text{Ta} \leq 60^{\circ}\text{C}$ or 70°C
	T6...T4	T85°C...T135°C	90°C	$-40^{\circ}\text{C} \leq \text{Ta} \leq 60^{\circ}\text{C}$ or 70°C or 80°C

Tab. 1

4.8 Uniquement pour la référence UL/CSA standard



Les joints antidéflagrants ne sont pas destinés à être réparés.



ATTENTION! Parties mobiles dangereux. Ne pas approcher les doigts ou d'autres parties du corps.



L'appareil comprend des parties mobiles. S'assurer que l'unité est positionnée dans une zone non accessible pendant le fonctionnement. Appliquer l'étiquette fournie avec l'appareil près de l'objet et en position visible.



Fig. 2



Aux États-Unis, le National Electrical Code (NEC) et au Canada le Canadian Electrical Code (CEC) s'appliquent aux équipements électriques utilisés en milieux industriels dangereux.



Les versions 100Vac et 220Vac des produits ne sont pas certifiées UL

Instructions de sécurité importantes

WARNING: DO NOT OPEN WHEN AN 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.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L'ENTRÉE DU CONDUIT DU CAISSON.

Dans les installations selon les normes UL/CSA, le séparateur fourni doit impérativement être installé, comme indiqué au chapitre correspondant (7.5.1 Installations selon normes UL/CSA, page 27).

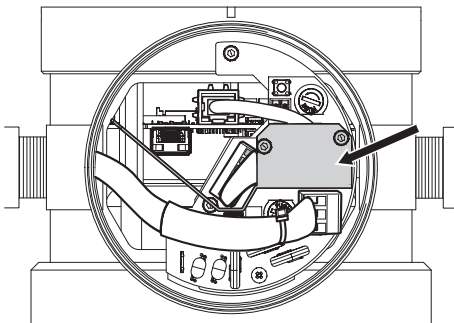


Fig. 3

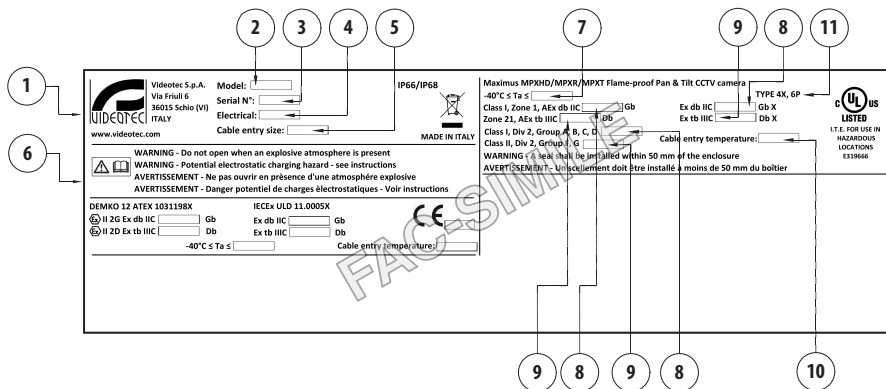


Fig. 4

1. Nom et adresse du fabricant.
2. Modèles.
3. Le numéro de série se compose de 12 caractères numériques, le deuxième et le troisième chiffre définissent les deux numéros de l'année de fabrication.
4. Caractéristiques électriques (tension V, fréquence Hz, courant A, puissance W).
5. Nombre, dimension et type d'entrées câble.
6. Mises en garde.
7. Température ambiante ($-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$).
8. T Class (T_x or $T_x...T_x$).
9. Température superficielle maximale ($T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}...T_x^{\circ}\text{C}$).
10. Température d'entrée câbles.
11. Degré de protection Type.

Connexions



Le choix de la connexion doit être conforme aux normes locales en vigueur.

Presse-étoupes: sélectionner un presse-étoupe conforme à UL2225 ayant la protection suivante AEx db IIC et/ou AEx tb IIC et C22.2 ayant la protection suivante Ex db IIC et/ou Ex tb IIC conformément au marquage du produit.

Conduit: il est nécessaire d'installer un dispositif d'étanchéité dans les 50 mm à compter de l'entrée du produit quand on utilise le conduit.

Références de normes:

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”

5 Versions

5.1 Caméra Day/Night

MAXIMUS MPX SERIES2 - CHOIX DES CONFIGURATIONS											
	Tension	Caméra	Classe de température et température ambiante	Analyses vidéo	Profil ONVIF						
MPXHD	1	230Vac	1	Caméra à très faible luminosité jour/nuit, FULL HD 1080p, 30x, de technologie DELUX	A	T6...T5 -40°C/+60°C or +70°C	0	Sans fonctions de analyses vidéo intégrées (sans VIDEO-TEC ANALYTICS)	00	Conforme à ONVIF, Profil Q, Profil S et Profil T	C
	2	24Vac	2	Caméra SONY FCB-EV7520, FULL HD 1080p, 30x	D	T4 -40°C/+80°C	V	Avec fonctions de analyses vidéo intégrées (VIDEOTEC ANALYTICS)	01	Conforme à ONVIF, Profil S et Profil T	
	3	120Vac			C	T5...T4 -40°C/+55°C or +60°C					
	5	220Vac									
	6	100Vac									

Tab. 2

MAXIMUS MPX SERIES2 - CERTIFICATIONS ET MARQUAGES				
Références	Certification	Marquage	Température ambiante	Température d'entrée des câbles
MPXHD1**A0**C, MPXHD2**A0**C, MPXHD3**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1 Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			
MPXHD5**A0**C, MPXHD6**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db		80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXHD1**D0**C, MPXHD2**D0**C, MPXHD3**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1 Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD5**D0**C, MPXHD6**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db		
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD1**CV**C, MPXHD2**CV**C, MPXHD3**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
MPXHD5**CV**C, MPXHD6**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		

Tab. 3

5.2 Caméra thermique

MAXIMUS MPXR SERIES2 - CHOIX DES CONFIGURATIONS									
	Tension		Caméra Thermique	Classe de temperature	Radiométrie	Profil ONVIF			Fréquence
MPXR	1	230Vac	A Caméra thermique 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Caméra thermique avec fonctions radiométriques	0 Conforme à ONVIF, Profil Q, Profil S et Profil T	C	-	7.5Hz
	2	24Vac	B Caméra thermique 25mm, 336x256	D T4 -40°C/+80°C	OR Caméra thermique avec fonctions radiométriques avancées	1 Conforme à ONVIF, Profil S et Profil T		H	30Hz
	3	120Vac	V Caméra thermique 19mm, 336x256						
	5	220Vac	F Caméra thermique 13mm, 336x256						
	6	100Vac	C Caméra thermique 9mm, 336x256						
			D Caméra thermique 35mm, 640x512						
			E Caméra thermique 25mm, 640x512						
			U Caméra thermique 19mm, 640x512						

Tab. 4

MAXIMUS MPXR SERIES2 - CERTIFICATIONS ET MARQUAGES				
Références	Certification	Marquage	Température ambiante	Température d'entrée des câbles
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEx	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6... T5 Gb Zone 21, AEx tb IIIC T85°C... T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEx	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEx	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEx	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 5

5.3 Dual Vision avec caméra Day/Night et thermique

MAXIMUS MPXT SERIES2 - CHOIX DES CONFIGURATIONS									
	Tension		Caméra Day/Night	Caméra Thermique	Classe de température	Radiométrie	Profil ONVIF		Fréquence
MPXT	1	230Vac	2 Caméra SONY FCB-EV7520, FULL HD 1080p, 30x	A Caméra thermique 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Caméra thermique avec fonctions radiométriques	0 Conforme à ONVIF, Profil Q, Profil S et Profil T	C	- 7.5Hz
	2	24Vac		B Caméra thermique 25mm, 336x256	D T4 -40°C/+80°C	0R Caméra thermique avec fonctions radiométriques avancées	1 Conforme à ONVIF, Profil S et Profil T		H 30Hz
	3	120Vac		V Caméra thermique 19mm, 336x256					
	5	220Vac		F Caméra thermique 13mm, 336x256					
	6	100Vac		C Caméra thermique 9mm, 336x256					
				D Caméra thermique 35mm, 640x512					
				E Caméra thermique 25mm, 640x512					
				U Caméra thermique 19mm, 640x512					

Tab. 6

MAXIMUS MPXT SERIES2 - CERTIFICATIONS ET MARQUAGES				
Références	Certification	Marquage	Température ambiante	Température d'entrée des câbles
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx tb IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 7

6 Préparation du produit en vue de l'utilisation



Avant tout type d'intervention, lire avec attention le chapitre « Règles de sécurité » dans le manuel du produit.

6.1 Déballage

Lors de la livraison du produit, vérifier que l'emballage est en bon état et l'absence de tout signe évident de chute ou d'abrasion.

En cas de dommages évidents, contacter immédiatement le fournisseur.

En cas de retour du produit défectueux, il est conseillé d'utiliser l'emballage original pour le transport.

Conserver l'emballage en cas de nécessité d'expédition du produit pour réparation.

6.2 Contenu

Contrôler que le contenu correspond à la liste matériel indiquée ci-dessous:

- Caméra PTZ anti-déflagrante
- Double toit (2 par MAXIMUS MPXT)
- Gaine en silicone
- Kit de rechange O-ring, goujons de sécurité
- Dispositif de blocage (stopping plug)
- Le produit d'étanchéité
- Colliers
- Barrière de séparation pour installations selon les normes UL/CSA
- Manuel d'instructions

6.3 Élimination sans danger des matériaux d'emballage

Le matériel d'emballage est entièrement composé de matériaux recyclables. Le technicien chargé de l'installation est tenu de l'éliminer conformément aux dispositions en matière de collecte sélective et selon les normes en vigueur dans le pays d'utilisation.

6.4 Opérations à effectuer avant l'installation

L'unité peut être installée avec différents étriers et supports.

Il est conseillé d'utiliser exclusivement des étriers et des accessoires approuvés pour l'installation.

6.4.1 Méthodes d'installation

L'unité ne peut être installée que dans la position standard ou inversée (montage au plafond). Si elle est installée dans cette dernière position, la reconfiguration des fonctions d'orientation et de contrôle de la caméra a lieu à l'aide du logiciel de système.

Le fonctionnement en position inversée n'exige aucune modification du matériel hardware.

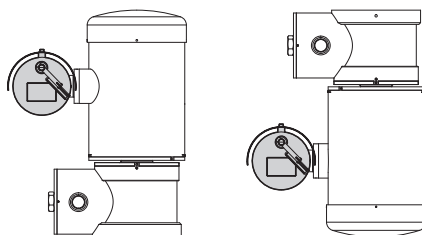


Fig. 5

6.4.2 Fixation sur parapet ou plafond

Fixer l'adaptateur (01) au fond de l'unité à l'aide des 4 vis à tête fraisée plane (02) à six pans creux M10x20mm en acier inox (A4 classe 70) fournies.

S'assurer qu'il n'y ait pas de saleté ou de résidus dans les taraudages.

Appliquer une bonne quantité de colle frein filet (Loctite 270) sur les 4 trous taraudés présents sur le fond de la base de l'appareil.

⚠ Faire attention pendant la fixation. Couple de serrage: 35Nm.

Laisser agir la colle frein filet pendant une heure avant de terminer l'installation.

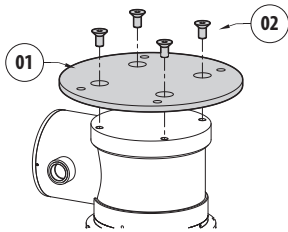


Fig. 6

Fixer l'unité assemblée au parapet ou au plafond en se servant des trous externes de l'adaptateur. Utiliser des vis pouvant soutenir un poids au moins 4 fois supérieur à celui de l'unité.

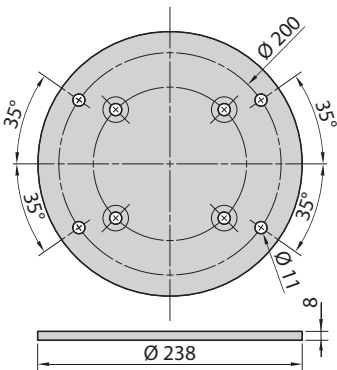


Fig. 7

6.4.3 Fixation avec étrier

Le support peut être fixé directement sur un mur vertical. Utiliser des vis et des dispositifs de fixation murale pouvant soutenir un poids au moins 4 fois supérieur à celui de l'unité.

Pour fixer le dispositif à l'étrier, utiliser les 4 rondelle plates, 4 rondelles élastiques en inox et 4 vis à tête hexagonale en acier inox (A4 classe 70) fournies (M10x20mm).

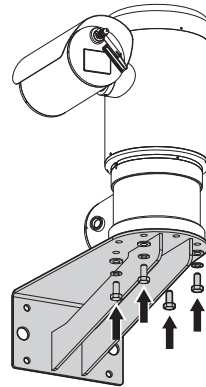


Fig. 8

S'assurer qu'il n'y ait pas de saleté ou de résidus dans les taraudages.

Appliquer une bonne quantité de colle frein filet (Loctite 270) sur les 4 vis.

Serrer les vis.

⚠ Faire attention pendant la fixation. Couple de serrage: 35Nm.

Laisser agir la colle frein filet pendant une heure avant de terminer l'installation.

6.4.4 Fixation avec module adaptateur angulaire ou pour mât

Pour installer le produit sur le module adaptateur angulaire ou pour mât, fixer avant tout l'étrier de support.

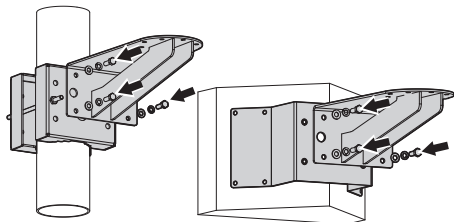


Fig. 9

Pour fixer l'étrier de support mural, utiliser 4 rondelle plates, 4 rondelles élastiques en inox et 4 vis à tête hexagonale en acier inox (A4 classe 70) M10x30mm fournies.

S'assurer qu'il n'y ait pas de saleté ou de résidus dans les taraudages.

Appliquer une bonne quantité de produit de freinage du filetage (Loctite 270) sur les 4 trous filetés présents sur le module adaptateur.

Serrer les vis.

⚠ Faire attention pendant la fixation. Couple de serrage: 35Nm.

Laisser agir la colle frein filet pendant une heure avant de terminer l'installation.

Pour fixer le dispositif à l'étrier, consulter le chapitre correspondant (6.4.3 Fixation avec étrier, page 22).

6.4.5 Fixation du toit pare-soleil

i Avant de fixer le toit du caisson, enlever le film de protection (si présent).

Fixez le toit pare-soleil sur le caisson à l'aide de vis et de rondelles vissées sur la partie supérieure du corps du caisson.

Appliquer une bonne quantité de colle frein filet (Loctite 270) sur les trous taraudés.

Laisser agir la colle frein filet pendant une heure avant de terminer l'installation.

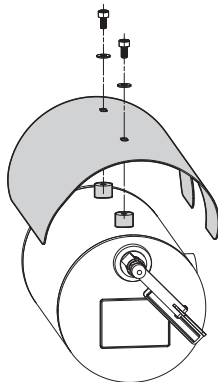


Fig. 10

⚠ Faire attention pendant la fixation. Couple de serrage: 2Nm.

7 Installation



Avant tout type d'intervention, lire avec attention le chapitre « Règles de sécurité » dans le manuel du produit.

VIDEOTEC conseille de tester la configuration et les performances de l'appareils avant de placer celui-ci sur le lieu d'installation définitive.

7.1 Mise à terre

7.1.1 Branchement équipotentiel de mise à la terre

Le branchement équipotentiel de mise à la terre doit être effectué avec un câble externe d'une section minimale 4mm^2 (11AWG).

Connecter le câble pour le branchement équipotentiel de terre avec la borne à œillet fournie (adaptée aux câbles de section 4mm^2 (11AWG) à 6mm^2 (9AWG)).

Fixer l'œillet à l'aide de la vis M5 et de la rondelle dentelée fournies.

Caractéristiques de la vis M5:

- Matériau: A4 Classe 70
- Tête de la vis: ISO 4762
- Longueur: 8mm

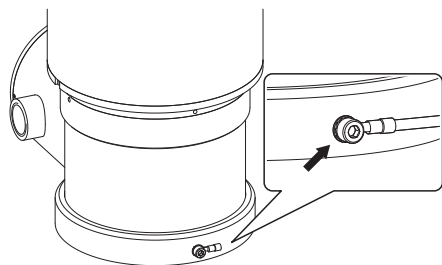


Fig. 11

7.1.2 Branchement de la terre de protection

Le câble de mise à la terre de protection doit être branché au connecteur intérieur (J1, 7.3 Description de la carte de connexion, page 25).

7.2 Ouverture du compartiment des branchements



La vis sans tête de sécurité est utilisée pour empêcher le dévissage du couvercle fileté du compartiment des connexions. Enlever la vis sans tête de sécurité avant de dévisser le couvercle fileté.

Dans la base de l'unité se trouvent 2 entrées de câble de $3/4"$ NPT (ou M25 version spéciale).

Pour effectuer les branchements, enlever la vis sans tête de sécurité (01) avec une clé hexagonale mâle de 1.5mm, le couvercle fileté (02) (écrou hexagonal de 30mm) et les bouchons en plastique (03).

Les bouchons en plastique sont utilisés uniquement pour l'expédition et ne peuvent pas être utilisés pour le fonctionnement.

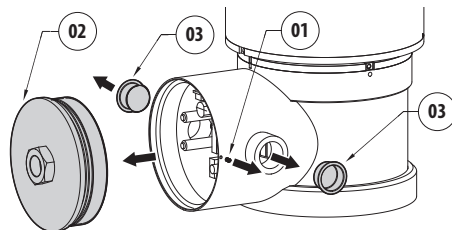


Fig. 12

Pour accéder aux connecteurs, dévisser le couvercle fileté.

7.3 Description de la carte de connexion

DESCRIPTION DE LA CARTE		
Connecteur	Fonction	Bornes - Section nominale des câbles utilisés
J1	Ligne d'alimentation	de 0.2mm ² (24AWG) jusqu'à 2.5mm ² (13AWG)
J6	Alarmes, réinitialisation à distance et ligne série	de 0.2mm ² (24AWG) jusqu'à 1.0mm ² (17AWG)
J8	Relais	de 0.2mm ² (24AWG) jusqu'à 1.0mm ² (17AWG)
F1	Fusible	-
F2	Fusible	-
P1	Bouton de réinitialisation	-
RJ45	Connecteur Ethernet	-
SFP	Connecteur SFP	-

Tab. 8

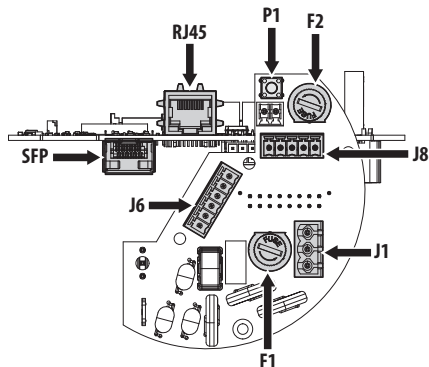


Fig. 13

7.4 Connexion de la ligne d'alimentation

Selon la version, différentes tensions d'alimentation peuvent être fournies au dispositif. La valeur de tension d'alimentation est reportée sur l'étiquette d'identification du produit



Le câble de terre doit être plus long des deux autres d'environ 10mm pour éviter tout détachement accidentel.



Le câble d'alimentation doit en outre être couvert de la gaine en silicone (01) fournie. La gaine en silicone doit être fixée au moyen du collier prévu (02). Pour les installations selon les normes UL/CSA, faire passer le câble d'alimentation à travers l'entrée de câbles à gauche (03), comme indiqué en figure.



En cas d'utilisation du câble multipolaire VIDEOTEC et d'un câble en fibre optique, il est conseillé de se servir de l'entrée câbles à gauche (03) pour le câble multipolaire et de l'entrée câbles à droite (04) pour la fibre optique.

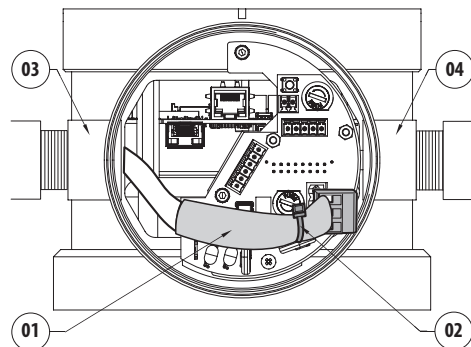


Fig. 14



Le conducteur de mise à la terre de protection devra être de section au moins égale à celle des câbles d'alimentation.

Extraire de la carte des connecteurs le connecteur amovible de la ligne d'alimentation (J1, 7.3 Description de la carte de connexion, page 25).

Brancher les câbles électriques d'alimentation de la façon indiquée dans le tableau correspondant (Tab. 9, page 26).

CONNEXION DE LA LIGNE D'ALIMENTATION	
Couleur	Bornes
Alimentation 24Vac	
Défini par l'installateur	N (Neutre)
Défini par l'installateur	L (Phase)
Jaune/Vert	⊕
Alimentation 230Vac	
Bleue	N (Neutre)
Marron	L (Phase)
Jaune/Vert	⊕
Alimentation 120Vac	
Bleue	N (Neutre)
Marron	L (Phase)
Jaune/Vert	⊕

Tab. 9

7.5 Branchement des alarmes, de la réinitialisation à distance et des relais

⚠ Tous les câbles de signalisation doivent également être regroupés avec un collier.

CONNEXION DES ENTRÉES D'ALARME ET DES RELAIS		
Connecteurs	Bornes	Description
J6	AL1, COM	Entrée d'alarme à alimentation automatique se rapportant à la borne commune
	RST, RST	Réinitialisation à distance
J8	RL1A, RL1B	Contacts secs de sortie activantes par alarme ou commande utilisateur
	RL2A, RL2B	Contact pour l'activation de la pompe lave-vitre

Tab. 10

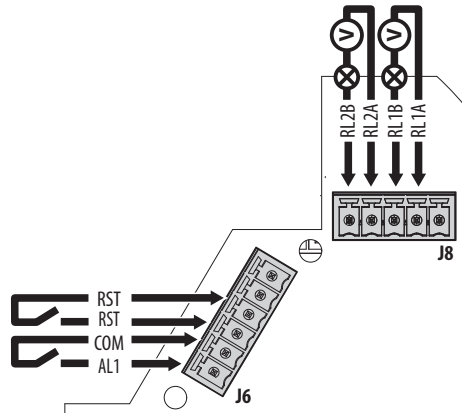


Fig. 15

7.5.1 Installations selon normes UL/CSA

⚠ Prendre garde à ne pas abîmer les conducteurs et les cartes.

Pour les installations selon les normes UL/CSA, les câbles Ethernet, alarmes reset, relais et fibres optiques doivent être insérés dans l'entrée câbles à droite, comme indiqué dans la figure ci-après (Fig. 16, page 27).

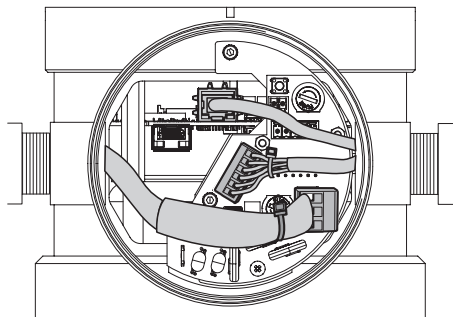


Fig. 16

Dans les installations selon les normes UL/CSA, la barrière de séparation fournie doit impérativement être installée.

Après avoir inséré tous les connecteurs et avant d'alimenter le dispositif, installer la barrière de séparation fournie.

Fixer la barrière (01) avec les vis et rondelles (02) aux entretoises prévues (03) (Fig. 17, page 27 et Fig. 18, page 27).

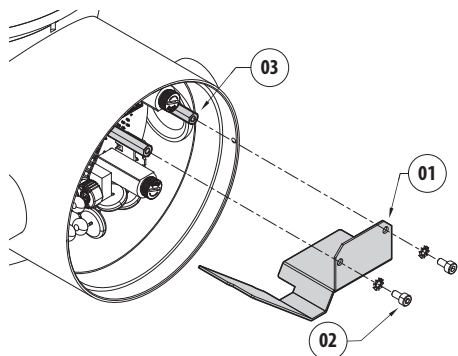


Fig. 17

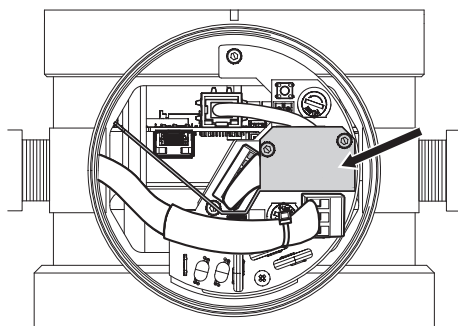


Fig. 18

7.5.2 Branchement d'alarme avec contact sec

Brancher les bornes AL1 et COM au connecteur J6 comme illustré en figure (Fig. 15, page 26).

Longueur maximale des câbles d'alarme: 200m.

Effectuer le branchement avec un câble blindé.

7.5.3 Branchement de la réinitialisation à distance

Brancher les deux bornes RST au connecteur J6 comme illustré en figure (Fig. 15, page 26).

Longueur maximum des câbles: 200m.

Consulter le chapitre Factory Default pour l'utilisation de la réinitialisation à distance (11.2.3 Factory Default, page 32).

7.5.4 Branchement des relais

i Tension et courant maximum des relais : consulter les caractéristiques techniques au chapitre correspondant (15 Données techniques, page 35).

Brancher les bornes RL1A, RL1B, RL2A, RL2B au connecteur J8 comme illustré en figure (Fig. 15, page 26).

Le dispositif peut être équipé d'une installation de lavage comme accessoire. Utiliser les bornes RL2A et RL2B pour commander l'installation de lavage.

7.6 Connexion Ethernet

Le produit est équipé d'un interrupteur Ethernet intégré qui gère un port RJ45 et d'un slot pour modules SFP.

7.6.1 Connexion par RJ45

i Procéder aux branchements conformément à la norme : TIA/EIA-568-B.

Brancher le câble Ethernet au port RJ45 (7.3 Description de la carte de connexion, page 25).

Nous recommandons l'utilisation de câbles Ethernet ayant les caractéristiques suivantes:

- STP (blindé)
- Catégorie 5E ou catégorie 6

Utiliser un connecteur RJ45 de type blindé aux deux extrémités du câble. Le blindage du câble Ethernet (côté utilisateur) doit toujours être branché à la terre à travers le connecteur.

7.6.2 Connexion par SFP

i Les modules conformes à la norme SFP (Small Form Factor Pluggable) sont des dispositifs de conversion du signal électrique en optique et du signal optique en électrique.

Le module SFP est utilisé pour la connexion à la fibre optique. Le module SFP devra être adéquat pour le système d'installation.

Consulter le manuel du module SFP pour les spécificités correspondantes.

! Le module SFP (non fourni par VIDEOTEC) doit répondre aux exigences ci-après :

- Laser: Class 1, conforme à la norme EN60825-1
- Certification UL/IEC 60950-1 ou UL/IEC 62368-1

i L'interrupteur de l'utilisateur, raccordé au moyen d'un module SFP, doit fonctionner à la vitesse de 100Mbps. Vérifier les paramètres de l'interrupteur auquel est raccordé le produit.

i VIDEOTEC a testé diverses typologies de modules SFP. Pour toute information supplémentaire contacter le centre d'assistance VIDEOTEC.

Insérer le module SFP (non fourni) dans le slot SFP (7.3 Description de la carte de connexion, page 25).

7.7 Fermeture du compartiment des connexions

⚠ S'il n'est pas possible de visser manuellement le bouchon taraudé avant que le joint torique atteigne le tube du compartiment des connexions, cela signifie qu'il y a de la saleté ou des résidus sur les taraudages, ou que le bouchon n'est pas bien aligné. Ceci pourrait endommager gravement les taraudages. Dévisser le bouchon et contrôler l'alignement et/ou nettoyer les taraudages.

⚠ Pour ne pas abîmer le taraudage, ne jamais forcer la rotation du bouchon taraudé avant que le joint torique n'ait atteint le compartiment des connexions.

⚠ Si des dommages aux taraudages sont soupçonnés, interrompre l'installation. L'appareil pourrait ne plus être adapté à une installation sûre dans une atmosphère potentiellement explosive. Dans ce cas, s'adresser au service technique de VIDEOTEC.

⚠ Avant de fermer le couvercle, vérifier l'intégrité du joint torique. Si le joint est endommagé, il devra être remplacé par le joint fourni (11.1.2 Remplacement du joint, page 31).

Vérifier l'absence de saleté ou de résidus.

Lubrifier le filetage avec une graisse conforme à la norme IEC/EN60079-14 afin de faciliter le vissage du couvercle.

Placer les câbles de façon à ce qu'il n'y ait pas de perturbations pendant la fermeture du bouchon taraudé du compartiment des connexions.

Visser à la main le bouchon taraudé dans le compartiment des connexions jusqu'à ce que le joint ait atteint l'extrémité du tube.

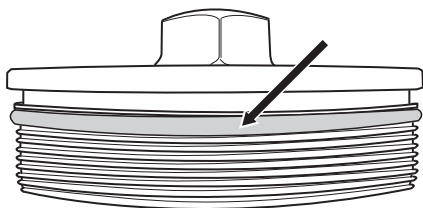


Fig. 19

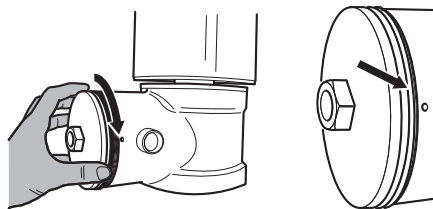


Fig. 20

Serrer le bouchon taraudé du compartiment des connexions avec une clé de 30mm. Après la fermeture, s'assurer qu'il n'y ait pas d'espace entre le bouchon taraudé et le tube du compartiment des connexions.

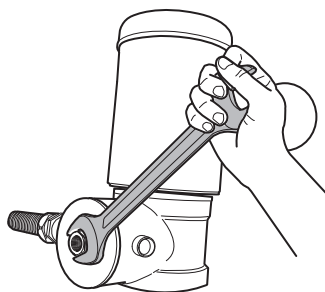


Fig. 21

La fixation de la vis sans tête de sécurité est nécessaire pour achever la fermeture du produit, afin d'éviter un dévissage indésirable du bouchon fileté.

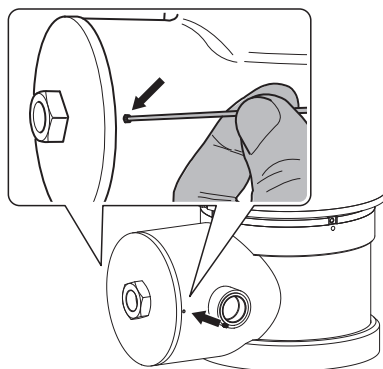


Fig. 22

8 Allumage



Avant tout type d'intervention, lire avec attention le chapitre « Règles de sécurité » dans le manuel du produit.



La procédure de préchauffage automatique (De-Ice) peut être activée chaque fois que le dispositif est mis en fonction à une température ambiante inférieure à -10°C. La procédure permet de garantir un fonctionnement correct du dispositif également à basse température. La durée varie en fonction des conditions climatiques (de 60 minutes jusqu'à 120 minutes).

Il suffit de brancher l'alimentation électrique pour allumer l'unité.

Après la mise en marche, l'unité nécessite quelques minutes pour être totalement opérationnelle.

Débrancher l'alimentation électrique pour éteindre l'unité.

9 Configuration

9.1 Adresse IP par défaut



L'appareil est configuré pour obtenir l'adresse IP depuis un serveur DHCP.

L'adresse IP acquise via DHCP est visible dans le fichier journal du serveur DHCP.

En cas d'indisponibilité du serveur DHCP, l'appareil se configure automatiquement avec une adresse IP autogénérée dans le sous-réseau 169.254.x.x/16. Configurez l'adresse IP du PC comme appartenant au même sous-réseau (exemple: adresse IP: 169.254.1.1, subnet mask: 255.255.0.0).

Pour rechercher l'adresse IP du dispositif, utiliser un VMS compatible ONVIF ou un renifleur de réseau (IP scan utility).

9.2 Interface web



Logiciels de navigation supportés (la dernière version): Microsoft Edge, Google Chrome, Mozilla Firefox.

9.2.1 Premier accès aux pages web

La première opération pour configurer le dispositif consiste en la connexion à son interface web.

Pour accéder à l'interface Web du produit, il suffit de se connecter avec un navigateur à l'adresse : `http://indirizzo_ip`.

La page d'accueil sera affichée au premier accès.

Pour la configuration de l'interface Web, consulter le manuel de la version du firmware installé, disponible sur la page web du produit, sur le site null.

10 Instructions de fonctionnement courant

⚠ Avant tout type d'intervention, lire avec attention le chapitre « Règles de sécurité » dans le manuel du produit.

⚠ Ne pas utiliser l'essuie-glace si la température ambiante est inférieure à 0°C ou en présence de glace.

i L'essuie-glace est exclu de façon automatique si on le laisse allumé.

Le contrôle du dispositif peut être effectué selon différentes modalités.

- À l'aide des contrôles utilisateur de l'interface web (9.2 Interface web, page 30).
- À l'aide du Video Management Software (VMS) qui supporte le protocole ONVIF. Dans ce cas, les Commandes spéciales sont implémentées à l'aide des commandes auxiliaires du protocole ONVIF.
- À l'aide du logiciel PTZ Assistant (le logiciel PTZ Assistant peut être téléchargé librement sur la page web du produit, sur le site www.videotec.com).

11 Entretien

⚠ Avant tout type d'intervention, lire avec attention le chapitre Règles de sécurité dans le manuel du produit.

Lorsque vous contactez le service technique de VIDEOTEC, il est nécessaire de fournir le numéro de série et le code d'identification du modèle.

Utiliser uniquement des pièces détachées VIDEOTEC.

11.1 Maintenance ordinaire (à exécuter périodiquement)

11.1.1 Contrôle des câbles

Les câbles ne doivent présenter aucun signe d'usure ou d'endommagement pouvant entraîner des situations de danger. Le cas échéant, effectuer une intervention d'entretien correctif.

11.1.2 Remplacement du joint

Remplacer le joint du couvercle du compartiment branchements par le joint fourni.

Ouvrir et fermer le compartiment branchements de la façon décrite aux chapitres précédents.

Remplacez le joint en veillant à le positionner correctement.

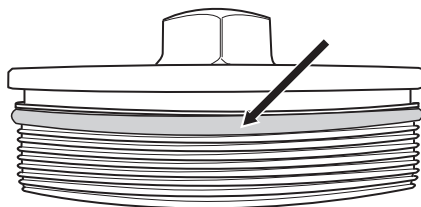


Fig. 23

11.2 Entretien extraordinaire (cas spécifiques uniquement)

11.2.1 Substitution du fusible

En cas de nécessité remplacer les fusibles illustrés sur la figure (7.3 Description de la carte de connexion, page 25).

REPLACEMENT DES FUSIBLES		
Tension d'alimentation	Fusible (F1)	Fusible (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Tab. 11

11.2.2 Remplacement du balai de l'essuie-glace

Sur les modèles équipés d'essuie-glace, les balais usagés peuvent être changés.

Dévisser l'écrou borgne de fixation de la brosse et l'enlever avec les rondelles. Remplacer le balai usagé par un neuf. Appliquer une bonne quantité de frein-filet (Loctite 270), repositionner l'écrou borgne et les rondelles en réglant la fixation jusqu'à ce que la brosse adhère correctement au verre. Actionner l'essuie-glace pour s'assurer du bon réglage du balai.

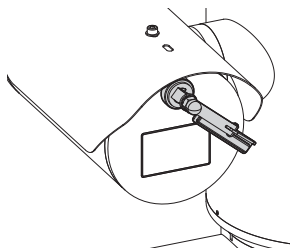


Fig. 24

11.2.3 Factory Default



Si le mot de passe d'accès n'est plus disponible, il est possible de rétablir les programmations d'usine à travers une procédure de réinitialisation.

Le résultat de la procédure de Standard d'usine est le même que celui obtenu par interface web (bouton Hard Reset).

Pour restaurer les configurations d'usine relatives au réseau, à l'accès utilisateurs et à la configuration de la chambre, suivre la procédure:

- Éteindre l'unité.
- Ouvrir le compartiment des connexions.
- Maintenir la pression sur le bouton de réinitialisation (P1, 7.3 Description de la carte de connexion, page 25).
- Allumer l'unité.
- Attendre 30 secondes.
- Relâcher le bouton de réinitialisation.
- Attendre 2 minutes.
- Éteindre l'unité.
- Fermer le compartiment des connexions.
- Allumer l'unité.

On peut effectuer la réinitialisation même à distance. Exécuter la procédure suivante:

- Éteindre l'unité.
- Brancher ensemble les contacts RST du connecteur J6 (7.3 Description de la carte de connexion, page 25).
- Allumer l'unité.
- Attendre 30 secondes.
- Débrancher les contacts RST.
- Attendre 2 minutes.
- Éteindre l'unité.
- Allumer l'unité.



Une fois la procédure de standard usine terminée, il faut configurer l'unité selon la description du chapitre correspondant (9.1 Adresse IP par défaut, page 30).

12 Nettoyage

! Avant tout type d'intervention, lire avec attention le chapitre « Règles de sécurité » dans le manuel du produit.

i La fréquence des interventions dépend du type d'environnement dans lequel le caisson est utilisé.

12.1 Nettoyage ordinaire (à exécuter périodiquement)

12.1.1 Nettoyage de la fenêtre en verre

Le nettoyage doit être fait avec du savon neutre dilué avec de l'eau.

12.1.2 Nettoyage de la fenêtre en germanium

! Nettoyer la fenêtre en ayant soin de ne pas rayer ni érafler l'enduit protecteur de carbone externe. L'endommagement du revêtement risque de compromettre la transparence à l'infrarouge de la surface.

Le nettoyage doit être fait avec du savon neutre dilué avec de l'eau.

Enlever la grille de protection et l'entretoise, en dévissant les vis à tête fraisée qui se trouvent sur la façade du caisson, à l'aide d'une clé hexagonale anti-étincelle de 2mm.

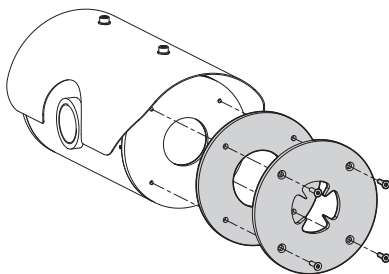


Fig. 25

Une fois le nettoyage effectué, remonter l'entretoise et la grille de protection.

12.1.3 Nettoyage du produit

! Sur la surface extérieure du produit il ne faut jamais avoir une quantité de poussière supérieure à 5mm.

i Le nettoyage du produit est réalisé en suivant les indications décrites dans le présent chapitre, afin d'empêcher l'accumulation de charges électrostatiques.

Effectuer le nettoyage avec un chiffon humide et ne pas utiliser d'air comprimé.

13 Informations sur l'élimination et le recyclage

La Directive Européenne 2012/19/UE sur les déchets d'équipements électriques et électroniques (DEEE) exige que ces dispositifs ne doivent pas être éliminés dans le flux normal de déchets solides municipaux, mais ils doivent être collectés séparément afin d'optimiser le flux de récupération et de recyclage des matériaux qu'ils contiennent et pour réduire l'impact sur la santé humaine et l'environnement en raison de la présence de substances potentiellement dangereuses.



Le symbole de la poubelle sur roues barrée d'une croix figure sur tous les produits pour le rappeler.

Les déchets peuvent être livrés aux centres de collecte appropriés ou peuvent être livrés gratuitement au distributeur où vous avez acheté l'équipement, au moment de l'achat d'un nouvel appareil équivalent ou sans obligation d'achat pour un équipement de taille inférieure de 25cm.

Pour plus d'informations sur l'élimination correcte de ces dispositifs, vous pouvez contacter le service public responsable.

14 Dépannage



Avant tout type d'intervention, lire avec attention le chapitre « Règles de sécurité » dans le manuel du produit.



Pour toute problématique que ce soit non décrite ou si les problèmes énumérés ci-après persistent, contacter le centre d'assistance autorisé.

PROBLÈME	Le produit ne s'allume pas.
CAUSE	Câblage incorrect, rupture des fusibles.
SOLUTION	Vérifier les connexions. Vérifier la continuité des fusibles et les remplacer avec les modèles indiqués en cas de panne.
PROBLÈME	L'aire filmée ne correspond pas à la position de preset rappelée.
CAUSE	Perte de référence de position absolue.
SOLUTION	Remettre l'appareil à zéro en l'éteignant et en le rallumant.
PROBLÈME	Le dispositif ne bouge pas durant la phase de démarrage.
CAUSE	La température ambiante est trop basse.
SOLUTION	Attendre la fin de la procédure de préchauffage. Sur la page, on voit apparaître le message suivant: procédure de De-Ice en cours.

15 Données techniques

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 Généralités

Construction en acier inox AISI 316L

Surfaces externes micro-grenailées et électropolies

Système dynamique de contrôle de la position

15.1.2 Mécanique

Entrées de câbles: 2 x 3/4" NPT

Aucun jeu mécanique

Rotation horizontale: 360°, rotation continue

Rotation verticale: de -90° jusqu'à +90°

Vitesse horizontale (variable): de 0.1° jusqu'à 100°/s

Vitesse verticale (variable): de 0.1° jusqu'à 100°/s

Précision du rappel des positions de preset: 0.02°

Essuie-glace intégré

Fenêtre avec verre trempé extra-transparent: épaisseur 12mm

Poids net: 26.5kg

15.1.3 Électrique

Tension d'alimentation/Courant absorbé:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Puissance absorbée:

- 120W max

15.1.4 Réseau

Port RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Connexion Ethernet: 100BASE-FX
- Tension d'alimentation: 3.3V
- Standard: conforme MSA

Le module SFP (non fourni par VIDEOTEC) doit répondre aux exigences ci-après :

- Laser: Class 1, conforme à la norme EN60825-1
- Certification: UL/IEC 60950-1 ou UL/IEC 62368-1

15.1.5 Interface I/O

Entrée pour réinitialisation à distance: 1

Entrées alarmes: 1

Sorties relais: 1+1 (1 relais réservé à la pompe du lave-glace et une configurable, 1A, 30Vac/60Vdc max)

15.1.6 Analyses vidéo

Algorithmes de détection et de suivi automatique très robustes, spécifiques au contrôle du périmètre extérieur.

Classification cibles: Personnes, véhicules, objet générique

Règles à configurer pour l'analyse vidéo, VIDEOTEC ANALYTICS (grâce à une interface de gestion intuitive, vous pouvez rapidement configurer jusqu'à dix règles pour chaque préréglage)

- Line crossing: la cible génère une alarme si une personne franchit la ligne dans une ou les deux directions
- Entering/leaving area: la cible génère une alarme si une personne entre ou sort de la zone configurée
- Appearing in area: la cible génère une alarme si une personne apparaît dans la zone configurée
- Loitering: la cible génère une alarme si une personne reste dans la zone configurée au-delà du temps défini

Fonction du Masque de Détection: désactive l'activité de détection dans une partie de l'image pour éviter les fausses alarmes

Fonction de Détection de Sabotage Vidéo: une alarme ONVIF spécifique est générée si la vue de la caméra est obstruée (par ex. pulvérisation)

15.1.7 Caméras

Day/Night Full HD 30x DELUX

Résolution: Full HD 1080p (1920x1080)

Capteur d'image: 1/2.8" Exmor™ R CMOS sensor

Pixels effectifs: environ 2.38 Megapixels

Éclairage minimum:

- Couleur: 0.006lx (F1.6, 30 IRE)
- B/W: 0.0006lx (F1.6, 30 IRE)

Longueur focale: de 4.5mm (wide) jusqu'à 135mm (télé)

Zoom: 30x (480x avec le zoom numérique)

Iris: de F1.6 jusqu'à F9.6 (Auto, Manuel)

Angle de vision horizontal: de 61.6° (wide end) jusqu'à 2.50° (tele end)

Angle de vision vertical: de 37.07° (wide end) jusqu'à 1.44° (tele end)

Vitesse d'obturation: de 1/1s jusqu'à 1/10000s (Auto, Manuel)

Équilibrage du blanc: Auto, Manuel

Gain: de 0dB jusqu'à 100dB (Auto, Manuel)

Wide Dynamic Range: 120dB

Système Focus: Auto, Manuel, Trigger

Effets Image: E-flip, Renforcement Couleur

Réduction du bruit: 2D (3 niveaux), 3D (3 niveaux)

Contrôle Exposition: Auto, Manuel, Priorité (Priorité Iris, Priorité Shutter), Luminosité, Custom

De-fog: On/Off

Masquage des zones de confidentialité (maximum 8 masques configurables)

Indoor Flicker Reduction

Auto Slowshutter: Off, On (de 1/30s jusqu'à 1/1s)

Compensation exposition: Off, On (de niveau 0 jusqu'à niveau 14)

Netteté: de niveau 0 jusqu'à niveau 3

SONY FCB-EV7520 Day/Night Full HD 30x

Résolution: Full HD 1080p (1920x1080)

Capteur d'image: 1/2.8" Exmor™ R CMOS sensor

Pixels effectifs: environ 2.13 Megapixels

Éclairage minimum:

- Couleur: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Longueur focale: de 4.3mm (wide) jusqu'à 129mm (télé)

Zoom: 30x (360x avec le zoom numérique)

Iris: de F1.6 jusqu'à F14 (Auto, Manuel)

Angle de vision horizontal: de 63.7° (wide end) jusqu'à 2.3° (tele end)

Angle de vision vertical: de 38.5° (wide end) jusqu'à 1.3° (tele end)

Vitesse d'obturation: de 1/1s jusqu'à 1/10000s (Auto, Manuel)

Équilibrage du blanc: Auto, Auto Tracing, Indoor, Outdoor, Manuel, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: de 0dB jusqu'à 50.0dB (Auto, Manuel)

Wide Dynamic Range: 120dB

Système Focus: Auto (PTZ Trigger, Full Auto), Manuel

Effets Image: E-flip

Réduction du bruit (2D, 3D): Off, On (de niveau 1 jusqu'à niveau 5)

Contrôle Exposition: Auto, Manuel, Priorité (Priorité shutter, Priorité iris, Priorité à la luminosité)

De-fog: Off, Low, Mid, High

Masquage dynamique des zones de confidentialité: maximum 24 masques configurables, 8 affichables en simultané

Indoor Flicker Reduction

Limite du Gain: de 10.7dB jusqu'à 50dB

High sensitivity: On/Off

Compensation Backlight: On/Off

Auto Slowshutter: On/Off

Compensation exposition: Off, On (de -10.5dB jusqu'à +10.5dB)

Netteté: de niveau 0 jusqu'à niveau 15

High Light Compensation (HLC): Off, Low, Mid, High, Niveau de Masquage (Off, On, de niveau 1 jusqu'à niveau 15)

Stabilisation image digitale: On/Off

15.1.8 Environnement

Installation d'intérieur et d'extérieur

Température de certification: de -40°C jusqu'à +80°C

Température de fonctionnement:

- Fonctionnement continu : de -40°C jusqu'à +65°C (jusqu'à +50°C pour versions avec VIDEOTEC ANALYTICS)
- Essai de température conforme à NEMA-TS 2-2003 (R2008) paragr. 2.1.5.1, profil de test fig. 2-1 (de -34°C jusqu'à +74°C) (non valable pour les versions avec analyse vidéo intégrée, VIDEOTEC ANALYTICS)
- Intervention de la fonction de dégivrage (départ à froid): de -40°C jusqu'à -10°C

Résistance au vent

- PTZ à l'arrêt: 230km/h max.
- PTZ en mouvement à vitesse maximale: 210km/h max.

Humidité relative: de 5% jusqu'à 95%

15.1.9 Certifications

Sécurité électrique (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilité électromagnétique (CE): EN50130-4, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Installation à l'extérieur (CE): EN60950-22, IEC60950-22

Test des vibrations: EN50130-5, EN60068-2-6

Certification UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (non disponible pour les versions 100Vac et 220Vac): cULus Listed

Compatibilité électromagnétique (Amérique du Nord) (non disponible pour les versions 100Vac et 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

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

Degré de protection Type (UL50E) (non disponible pour les versions 100Vac et 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

Certification KC (certification valable uniquement pour le code MPXHD51A001C)

15.1.10 Certifications - Applications anti-déflagrations

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (non disponible pour les versions 100Vac et 220Vac)

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) (non disponible pour les versions 100Vac et 220Vac)

EAC Ex (TR CU 012/2011) (non disponible pour les versions 100Vac et 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (non disponible pour les versions 100Vac et 220Vac)

KCs (Employment and labor department 2020-33)

15.1.11 Certifications - Applications marines

Certification Lloyd's Register Marine Type Approval (avec boîtier de communication MAXIMUS MBX ou avec filtre FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilité électromagnétique: EN60945

Résistant à la brume saline: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 Généralités

Construction en acier inox AISI 316L

Surfaces externes micro-grenillées et électropolies

Système dynamique de contrôle de la position

Analyse radiométrique:

- sur les 4 pixels centraux, en cas de caméra thermique à fonctions radiométriques
- définition d'une zone spécifique, en cas de caméra thermique à fonctions radiométriques avancées

Activation alarme radiométrique: Si la température est supérieure au seuil défini, inférieure au seuil défini, comprise entre deux seuils définis ou hors des deux seuils définis.

Actions sur alarme: Activation sortie numérique, rappel preset tour, rappel position de home, rappel position de preset et http get request.

15.2.2 Mécanique

Entrées de câbles: 2 x 3/4" NPT

Aucun jeu mécanique

Rotation horizontale: 360°, rotation continue

Rotation verticale: de -90° jusqu'à +90°

Vitesse horizontale (variable): de 0.1°/s jusqu'à 100°/s

Vitesse verticale (variable): de 0.1°/s jusqu'à 100°/s

Précision du rappel des positions de preset: 0.02°

Poids net: 26.5kg

15.2.3 Fenêtres pour caisson

Fenêtre en germanium

- Épaisseur: 8mm
- Traitement extérieur: antirayures (Hard Carbon Coating - DLC), antireflets
- Traitement intérieur: antireflets
- Réponse spectrale: de 7.5µm jusqu'à 14µm
- Transmittance moyenne (de 7.5µm jusqu'à 11.5µm): 87.5%
- Transmittance moyenne (de 11.5µm jusqu'à 14µm): 72.1%

15.2.4 Électrique

Tension d'alimentation/Courant absorbé:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Puissance absorbée:

- 120W max

15.2.5 Réseau

Port RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Connexion Ethernet: 100BASE-FX
- Tension d'alimentation: 3.3V
- Standard: conforme MSA

Le module SFP (non fourni par VIDEOTEC) doit répondre aux exigences ci-après :

- Laser: Class 1, conforme à la norme EN60825-1
- Certification: UL/IEC 60950-1 ou UL/IEC 62368-1

15.2.6 Interface I/O

Entrée pour réinitialisation à distance: 1

Entrées d'alarme: 1

Sorties relais: 1 (1A, 30Vac/60Vdc max)

15.2.7 Caméras thermiques

CAMÉRAS THERMIQUES (RÉSOLUTION 336X256)							
	Objectif 9mm	Objectif 13mm	Objectif 19mm	Objectif 25mm	Objectif 35mm	Objectif 50mm	Objectif 60mm
Capteur d'image	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx
Résolution interpolée	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensions pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Réponse spectrale - Infrarouge onde longue (LWIR)	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm
Obturbateur interne (uniquement pour compensation senseur)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom numérique	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Fréquence de mise à jour d'image	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Haut fréquence de mise à jour d'image	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamme scène (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamme scène (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Champ de vision horizontal	35°	25°	17°	13°	9,3°	6,5°	5,5°
Champ de vision vertical	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques avancées	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0
Homme (détection / reconnaissance / identification)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Véhicule (détection / reconnaissance / identification)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 12

CAMÉRAS THERMIQUES (RÉSOLUTION 640X512)							
	Objectif 9mm	Objectif 13mm	Objectif 19mm	Objectif 25mm	Objectif 35mm	Objectif 50mm	Objectif 60mm
Capteur d'image	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx
Résolution interpolée	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensions pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Réponse spectrale - Infrarouge onde longue (LWIR)	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm
Obturateur interne (uniquement pour compensation senseur)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom numérique	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Fréquence de mise à jour d'image	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Haut fréquence de mise à jour d'image	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamme scène (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamme scène (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Champ de vision horizontal	69°	45°	32°	25°	18°	12.4°	10.4°
Champ de vision vertical	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques avancées	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0
Homme (détection / reconnaissance / identification)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Véhicule (détection / reconnaissance / identification)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 13

15.2.8 Environnement

Installation d'intérieur et d'extérieur

Température de certification: de -40°C jusqu'à +80°C

Température de fonctionnement:

- Fonctionnement continu : de -40°C jusqu'à +65°C
- Essai de température conforme à NEMA-TS 2-2003 (R2008) paragr. 2.1.5.1, profil de test fig. 2-1 (de -34°C jusqu'à +74°C)
- Intervention de la fonction de dégivrage (départ à froid): de -40°C jusqu'à -10°C

Résistance au vent

- PTZ à l'arrêt: 230km/h max.
- PTZ en mouvement à vitesse maximale: 210km/h max.

Humidité relative: de 5% jusqu'à 95%

15.2.9 Certifications

Sécurité électrique (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilité électromagnétique (CE): EN50130-4, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Installation à l'extérieur (CE): EN60950-22, IEC60950-22

Test des vibrations: EN50130-5, EN60068-2-6

Certification UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (non disponible pour les versions 100Vac et 220Vac): cULus Listed

Compatibilité électromagnétique (Amérique du Nord) (non disponible pour les versions 100Vac et 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

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

Degré de protection Type (UL50E) (non disponible pour les versions 100Vac et 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 Certifications - Applications anti-déflagrations

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (non disponible pour les versions 100Vac et 220Vac)

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) (non disponible pour les versions 100Vac et 220Vac)

EAC Ex (TR CU 012/2011) (non disponible pour les versions 100Vac et 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (non disponible pour les versions 100Vac et 220Vac)

KCs (Employment and labor department 2020-33)

15.2.11 Certifications - Applications marines

Certification Lloyd's Register Marine Type Approval (avec boîtier de communication MAXIMUS MBX ou avec filtre FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilité électromagnétique: EN60945

Résistant à la brume saline: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 Généralités

Construction en acier inox AISI 316L

Surfaces externes micro-grenailées et électropolies

Système dynamique de contrôle de la position

Analyse radiométrique:

- sur les 4 pixels centraux, en cas de caméra thermique à fonctions radiométriques
- définition d'une zone spécifique, en cas de caméra thermique à fonctions radiométriques avancées

Activation alarme radiométrique: Si la température est supérieure au seuil défini, inférieure au seuil défini, comprise entre deux seuils définis ou hors des deux seuils définis.

Actions sur alarme: Activation sortie numérique, rappel preset tour, rappel position de home, rappel position de preset et http get request.

15.3.2 Mécanique

Entrées de câbles: 2 x 3/4" NPT

Aucun jeu mécanique

Rotation horizontale: 360°, rotation continue

Rotation verticale: de -90° jusqu'à +90°

Vitesse horizontale (variable): de 0.1°/s jusqu'à 100°/s

Vitesse verticale (variable): de 0.1°/s jusqu'à 100°/s

Précision du rappel des positions de preset: 0.02°

Essuie-glace intégré

Poids net: 31kg

15.3.3 Fenêtres pour caisson

Fenêtre avec verre trempé extra-transparent

- Épaisseur: 12mm

Fenêtre en germanium

- Épaisseur: 8mm
- Traitement anti-rayures (Hard Carbon Coating - DLC)
- Traitement anti-reflets
- Réponse spectrale: de 7.5µm jusqu'à 14µm
- Transmittance moyenne (de 7.5µm jusqu'à 11.5µm): 87.5%
- Transmittance moyenne (de 11.5µm jusqu'à 14µm): 72.1%

15.3.4 Électrique

Tension d'alimentation/Courant absorbé:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Puissance absorbée:

- 120W max

15.3.5 Réseau

Port RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Connexion Ethernet: 100BASE-FX
- Tension d'alimentation: 3.3V
- Standard: conforme MSA

Le module SFP (non fourni par VIDEOTECH) doit répondre aux exigences ci-après :

- Laser: Class 1, conforme à la norme EN60825-1
- Certification: UL/IEC 60950-1 ou UL/IEC 62368-1

15.3.6 Interface I/O

Entrée pour réinitialisation à distance: 1

Entrées d'alarme: 1

Sorties relais: 1+1 (1A, 30Vac/60Vdc max, un relais réservé à la pompe du lave-glace et une configurable)

15.3.7 Caméras Jour / Nuit

SONY FCB-EV7520 Day/Night Full HD 30x

Résolution: Full HD 1080p (1920x1080)

Capteur d'image: 1/2.8" Exmor™ R CMOS sensor

Pixels effectifs: environ 2.13 Megapixels

Éclairage minimum:

- Couleur: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Longueur focale: de 4.3mm (wide) jusqu'à 129mm (télé)

Zoom: 30x (360x avec le zoom numérique)

Iris: de F1.6 jusqu'à F14 (Auto, Manuel)

Angle de vision horizontal: de 63.7° (wide end) jusqu'à 2.3° (tele end)

Angle de vision vertical: de 38.5° (wide end) jusqu'à 1.3° (tele end)

Vitesse d'obturation: de 1/1s jusqu'à 1/10000s (Auto, Manuel)

Équilibrage du blanc: Auto, Auto Tracing, Indoor, Outdoor, Manuel, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: de 0dB jusqu'à 50.0dB (Auto, Manuel)

Wide Dynamic Range: 120dB

Système Focus: Auto (PTZ Trigger, Full Auto), Manuel

Effets Image: E-flip

Réduction du bruit (2D, 3D): Off, On (de niveau 1 jusqu'à niveau 5)

Contrôle Exposition: Auto, Manuel, Priorité (Priorité shutter, Priorité iris, Priorité à la luminosité)

De-fog: Off, Low, Mid, High

Masquage dynamique des zones de confidentialité: maximum 24 masques configurables, 8 affichables en simultané

Indoor Flicker Reduction

Limite du Gain: de 10.7dB jusqu'à 50dB

High sensitivity: On/Off

Compensation Backlight: On/Off

Auto Slowshutter: On/Off

Compensation exposition: Off, On (de -10.5dB jusqu'à +10.5dB)

Netteté: de niveau 0 jusqu'à niveau 15

High Light Compensation (HLC): Off, Low, Mid, High, Niveau de Masquage (Off, On, de niveau 1 jusqu'à niveau 15)

Stabilisation image digitale: On/Off

15.3.8 Caméras thermiques

CAMÉRAS THERMIQUES (RÉSOLUTION 336X256)							
	Objectif 9mm	Objectif 13mm	Objectif 19mm	Objectif 25mm	Objectif 35mm	Objectif 50mm	Objectif 60mm
Capteur d'image	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx
Résolution interpolée	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensions pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Réponse spectrale - Infrarouge onde longue (LWIR)	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm
Obturbateur interne (uniquement pour compensation senseur)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom numérique	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Fréquence de mise à jour d'image	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Haut fréquence de mise à jour d'image	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamme scène (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamme scène (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Champ de vision horizontal	35°	25°	17°	13°	9,3°	6,5°	5,5°
Champ de vision vertical	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques avancées	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0
Homme (détection / reconnaissance / identification)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Véhicule (détection / reconnaissance / identification)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 14

CAMÉRAS THERMIQUES (RÉSOLUTION 640X512)							
	Objectif 9mm	Objectif 13mm	Objectif 19mm	Objectif 25mm	Objectif 35mm	Objectif 50mm	Objectif 60mm
Capteur d'image	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx	Microbolomètre non refroidi VOx
Résolution interpolée	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensions pixel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Réponse spectrale - Infrarouge onde longue (LWIR)	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm	de 7.5µm à 13.5µm
Obturbateur interne (uniquement pour compensation senseur)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom numérique	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Fréquence de mise à jour d'image	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Haut fréquence de mise à jour d'image	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gamme scène (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gamme scène (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Champ de vision horizontal	69°	45°	32°	25°	18°	12.4°	10.4°
Champ de vision vertical	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0	< 50mK avec f/1.0
Sensibilité thermique (NETD), Caméra thermique avec fonctions radiométriques avancées	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0	< 30mK avec f/1.0
Homme (détection / reconnaissance / identification)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Véhicule (détection / reconnaissance / identification)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 15

15.3.9 Environnement

Installation d'intérieur et d'extérieur

Température de certification: de -40°C jusqu'à +80°C

Température de fonctionnement:

- Fonctionnement continu : de -40°C jusqu'à +65°C
- Essai de température conforme à NEMA-TS 2-2003 (R2008) paragr. 2.1.5.1, profil de test fig. 2-1 (de -34°C jusqu'à +74°C)
- Intervention de la fonction de dégivrage (départ à froid): de -40°C jusqu'à -10°C

Résistance au vent

- PTZ à l'arrêt: 230km/h max.
- PTZ en mouvement à vitesse maximale: 210km/h max.

Humidité relative: de 5% jusqu'à 95%

15.3.10 Certifications

Sécurité électrique (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilité électromagnétique (CE): EN50130-4, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Installation à l'extérieur (CE): EN60950-22, IEC60950-22

Test des vibrations: EN50130-5, EN60068-2-6

Certification UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (non disponible pour les versions 100Vac et 220Vac): cULus Listed

Compatibilité électromagnétique (Amérique du Nord) (non disponible pour les versions 100Vac et 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

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

Degré de protection Type (UL50E) (non disponible pour les versions 100Vac et 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 Certifications - Applications anti-déflagrations

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (non disponible pour les versions 100Vac et 220Vac)

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) (non disponible pour les versions 100Vac et 220Vac)

EAC Ex (TR CU 012/2011) (non disponible pour les versions 100Vac et 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (non disponible pour les versions 100Vac et 220Vac)

KCs (Employment and labor department 2020-33)

15.3.12 Certifications - Applications marines

Certification Lloyd's Register Marine Type Approval (avec boîtier de communication MAXIMUS MBX ou avec filtre FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilité électromagnétique: EN60945

Résistant à la brume saline: EN60068-2-52

16 Dessins techniques

i Les tailles indiquées sont en millimètres.

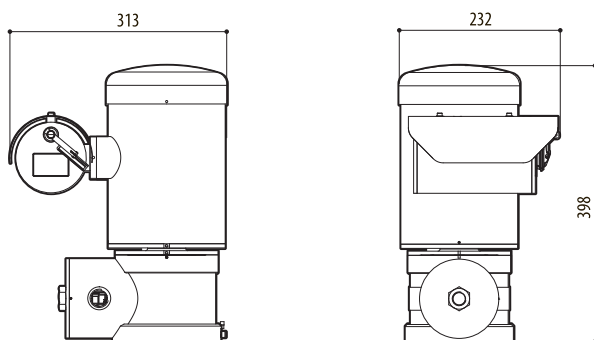
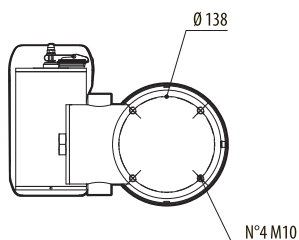


Fig. 26 MAXIMUS MPX SERIES2.

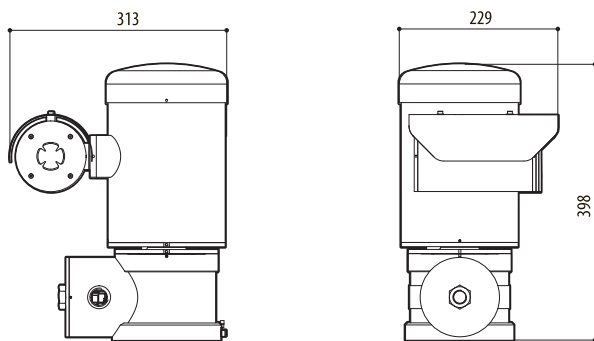
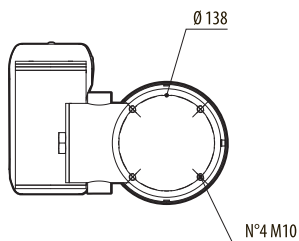


Fig. 27 MAXIMUS MPXR SERIES2.

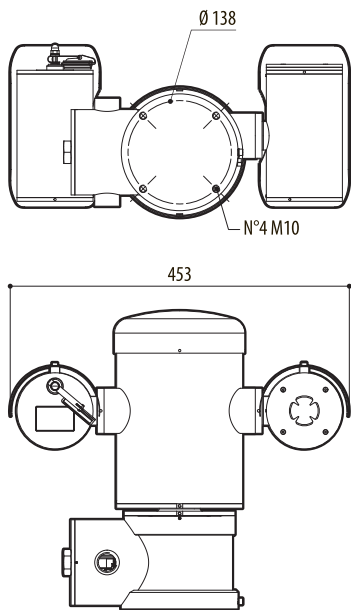


Fig. 28 MAXIMUS MPXT SERIES2.



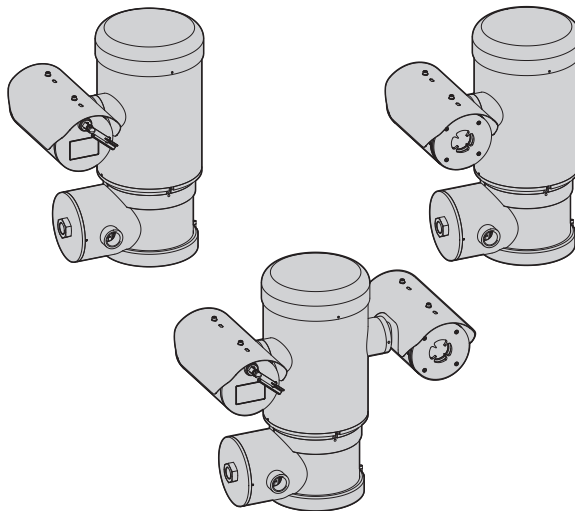
Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

MAXIMUS MPX SERIES2 (MPXHD)

MAXIMUS MPXR SERIES2 (MPXR)

MAXIMUS MPXT SERIES2 (MPXT)

Explosiongeschützte PTZ Kamera



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1 Allgemeines

Vor der Installation und Anwendung dieses Produkts ist die gesamte mitgelieferte Dokumentation aufmerksam zu lesen. Zum späteren Nachschlagen das Handbuch in Reichweite aufbewahren.

1.1 Schreibweisen



GEFAHR!

Explosionsgefahr.

Aufmerksam durchlesen, um Explosionsrisiken zu vermeiden.



GEFAHR!

Erhöhte Gefährdung.

Stromschlaggefahr. Falls nichts anderes angegeben, unterbrechen Sie die Stromversorgung, bevor die beschriebenen Arbeiten durchgeführt werden.



ACHTUNG!

Mittlere Gefährdung.

Der genannte Vorgang hat große Bedeutung für den einwandfreien Betrieb des Systems. Es wird gebeten, sich die Verfahrensweise durchzulesen und zu befolgen.



ANMERKUNG

Beschreibung der Systemmerkmale.

Eine sorgfältige Lektüre wird empfohlen, um das Verständnis der folgenden Phasen zu gewährleisten.

Unterstrichene Titel

Die Informationen werden von den Zertifizierungen eingeschränkt.

2 Anmerkungen zum Copyright und Informationen zu den Handelsmarken

Die angeführten Produkt- oder Firmennamen sind Handelsmarken oder eingetragene Handelsmarken.

3 Sicherheitsnormen



GEFAHR!

Explosionsgefahr.

Aufmerksam durchlesen, um Explosionsrisiken zu vermeiden.

- Die Geräteinstallation und -wartung muss von spezialisierten Technikern in Übereinstimmung mit dem Bezug nehmenden Code anwendbar mit EN/IEC 60079-14, EN/IEC 60079-17 und den nationalen Standards vorgenommen werden.
- Die Einrichtung nicht öffnen, wenn sie Spannung führt oder eine explosionsfähige Atmosphäre herrscht.
- Die Installation mit geeignetem Werkzeug durchführen. Es kann durchaus sein, dass an der Stelle, an dem das Gerät installiert wird, der Einsatz von spezifischem Werkzeug notwendig wird.
- Alle Anschlüsse, die Installations- und Wartungseingriffe in nicht explosionsgefährdeten Bereichen ausführen.
- Der Potenzialausgleich ist verpflichtend, um das Risiko eines Inbrandsetzens für die installierten Produkte in explosionsgefährdeten Umgebungen zu vermeiden.
- Das Gerät muss an einen Erdungsleiter angeschlossen werden (Schutzerdung). Dieser Anschluss darf nur über den Steckverbinder der Versorgungsleitung vorgenommen werden. Die äquipotenzialen Außenanschlüsse dürfen nur da ausgeführt werden, wo von der lokalen Gesetzgebung die Ausführung von zusätzlichen Erdungsanschlüssen vorgesehen ist.
- Sich vergewissern, bevor das Produkt in explosionsgefährdeter Atmosphäre mit Strom versorgt wird, dass der Deckel des Bereichs mit den Anschlüssen korrekt geschlossen ist.
- Die Oberflächentemperatur des Gerätes steigt im Falle direkter Sonnenbestrahlung an. Die Klasse der Oberflächentemperatur des Gerätes wurde nur bei Umgebungstemperatur berechnet, ohne die direkte Sonnenbestrahlung zu berücksichtigen.
- Sicherstellen, dass alle Geräte für den Gebrauch im Installationsraum zugelassen sind.
- Jede vom Hersteller nicht ausdrücklich genehmigte Veränderung führt zum Verfall der Gewährleistungsrechte.

**GEFAHR!**

**Erhöhte Gefährdung.
Stromschlaggefahr. Falls nichts anderes angegeben, unterbrechen Sie die Stromversorgung, bevor die beschriebenen Arbeiten durchgeführt werden.**

- Die Installation und die Wartung ohne Stromversorgung und mit dem Gerät mit offener Trennstelle durchführen.
- Die elektrische Anlage muss mit einem Netztrennschalter versehen sein, der im Bedarfsfall sofort erkannt und gebraucht werden kann.
- Die elektrische Anlage, an der die Einheit angeschlossen ist, muss mit einem automatischen zweipoligen Schutzschalter 16A max ausgestattet sein. Zwischen den Schutzschalter Kontakten muss mindestens ein Abstand von 3mm vorhanden sein. Der Schalter muss eine Schutzeinrichtung gegen Erde Fehlerstrom (Differenzial) und gegen Überstrom haben (magnetothermisch).
- Das Gerät ist nur als deaktiviert zu definieren, wenn die Versorgung abgetrennt ist und die Anschlusskabel an andere Vorrichtungen entfernt wurden.
- Es dürfen keine Kabel mit Verschleiß- oder Alterungsspuren verwendet werden.
- Alle Kabel müssen mit IEC60332-1-2, IEC 60332-1-3 und IEC/EN60079-14 übereinstimmen.
- Im Zuge der Installation ist zu prüfen, ob die Merkmale der von der Anlage bereitgestellten Versorgung mit den erforderlichen Merkmalen der Einrichtung übereinstimmen.
- Damit ein ständiger Brandschutz garantiert wird, sind die Sicherungen nur in dem gleichen Typ und Wert zu ersetzen. Die Sicherungen sind nur von Fachleuten zu ersetzen.
- Das Gerät ist für den Gebrauch in Bereichen, an denen sich Kinder aufhalten können, nicht geeignet.

**ACHTUNG!**

**Mittlere Gefährdung.
Der genannte Vorgang hat große Bedeutung für den einwandfreien Betrieb des Systems. Es wird gebeten, sich die Verfahrensweise durchzulesen und zu befolgen.**

- Sicherstellen, dass die Installation gemäß der lokalen Normen ausgeführt wurde.
- Die Anschlüsse und Labortests sind durchzuführen, bevor vor Ort zu Installation geschritten wird.
- Prüfen Sie, ob die Quelle und das Versorgungskabel sachgerecht bemessen sind.
- Verwenden Sie bitte Kabel, die den Betriebstemperaturen standhalten.
- Alle abgetrennten Kabel müssen elektrisch isoliert sein.
- Die Einheit kann nur in Standardposition oder invertiert (Deckenmontage) installiert werden.
- Vor dem Einschalten der Stromversorgung prüfen, dass das Gerät fest verankert ist.
- Beim Start führt das System eine Reihe von automatischen Kalibrierbewegungen aus: Halten Sie sich nicht in der Nähe des Gerätes auf, wenn es eingeschaltet wird.
- Der Hersteller lehnt jede Haftung für Schäden ab, die durch eigenmächtigen Zugriff, die Verwendung nicht originaler Ersatzteile sowie die Installation, Wartung oder Reparatur sämtlicher in diesem Handbuch genannter Geräte durch nicht fachkundige Personen entstehen.
- Für Kundendiensteingriffe wenden Sie sich ausschließlich an autorisiertes technisches Personal.
- Die Reparatur dieses Produktes muss vorschriftsgemäß von entsprechend ausgebildetem Personal oder unter der Aufsicht von Personal der Firma VIDEOTEC ausgeführt werden: IEC/EN60079-19.
- Nur Originalersatzteile VIDEOTEC verwenden. Den jedem Ersatzkit anhängenden Wartungsanweisungen strikt Folge leisten.



ANMERKUNG

Beschreibung der Systemmerkmale.

Eine sorgfältige Lektüre wird empfohlen, um das Verständnis der folgenden Phasen zu gewährleisten.

- Da das Gerät relativ schwer ist, muss man ein entsprechendes System für den Transport und das Handling verwenden. Der Umgang mit dem Produkt muss durch das zuständige Personal erfolgen. Dabei sind die üblichen Regeln zur Unfallvermeidung zu beachten.
- Vor der Installation ist anhand des Kennzeichnungsschildes nachzuprüfen, ob das gelieferte Material die gewünschten Eigenschaften.
- Das Gerät muss von technischen Fachleuten vorbehalten an einem Ort mit beschränktem Zugriff installiert werden.
- Der Hersteller lehnt jede Haftung für eventuelle Schäden ab, die aufgrund unsachgemäßer Anwendung der in diesem Handbuch erwähnten Geräte entstanden ist. Ferner behält er sich das Recht vor, den Inhalt ohne Vorkündigung abzuändern. Die Dokumentation in diesem Handbuch wurde sorgfältig ausgeführt und überprüft. Der Hersteller kann dennoch keine Haftung für die Verwendung übernehmen. Dasselbe gilt für jede Person oder Gesellschaft, die bei der Schaffung oder Produktion von diesem Handbuch miteinbezogen ist.
- Da der Benutzer für die Auswahl der Verankerungsoberfläche der Einheit verantwortlich ist, liefert der Hersteller die Befestigungsvorrichtungen für die Verankerung der Einheit auf der Oberfläche nicht mit. Der Installateur ist für die Auswahl der für die zur Verfügung stehende Oberfläche geeigneten Vorrichtungen verantwortlich. Wir empfehlen die Verwendung von Methoden und Materialien, die in der Lage sind, einem Gewicht standzuhalten, dass 4 Mal größer als das Gewicht des Gerätes ist.
- Für Informationen zu den Abmessungen des zünddurchschlagsicheren Spalt wenden Sie sich bitte an den Hersteller.
- Für jegliche Wartungsarbeiten wird empfohlen, das Produkt für die notwendigen Arbeiten in die Werkstatt zu bringen.
- Das Gerät wird ferngesteuert und kann daher in jedem Moment die Position ändern. Das Gerät so installieren, dass Unfälle durch den Kontakt mit den bewegten Teilen verhindert werden: sie dürfen nicht gegen andere Gegenstände stoßen und so Gefahrensituationen hervorrufen.
- Dies ist ein Produkt der Klasse A. Dieses Produkt kann im Wohnbereich Funkstörungen verursachen. In diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen.
- Um die Vorschriften über Spannungseinbrüche und -abschaltungen einzuhalten, benutzen Sie bitte eine unterbrechungsfreie Stromversorgung (UPS).

4 Identifizierung

4.1 Beschreibung und Bezeichnung des Produktes

Bei der Serie MAXIMUS MPX handelt es sich um eine Reihe von PTZ-Kameras aus electropoliertem Stahl AISI 316L für die Montage in explosionsgefährdeten Umgebungen.

Die Serie MAXIMUS MPX verfügt je nach Modell über einen Kabeingang NPT oder einen metrischen Kabeingang.

Die Serie MAXIMUS MPX verfügt über die Schutzart IP66/IP68/IP69 und kann in Umgebungen mit Temperaturen von -40°C bis +80°C installiert werden (die Kennzeichnung für jedes verfügbare Modell prüfen).

Es sind Ausführungen mit sichtbarer Kamera, Wärmebildkamera und sichtbarer Wärmebildkamera erhältlich.

4.2 Benutzerfeld

Die Einheit ist für den Gebrauch an einem festen Ort für die Überwachung eines potenziell explosionsgefährdeten Bereichs, 1-21 oder 2-22 klassifiziert, realisiert worden.

Die Einheit wurde gemäß der Richtlinie 2014/34/UE und den internationalen Standards IECEx, die den Anwendungsbereich und die Sicherheitsmindestanforderungen festsetzen, hergestellt und zertifiziert.

4.3 Spezifische Anwendungsbedingungen

Für Informationen zu den Abmessungen des zünddurchschlagsichereren Spalt wenden Sie sich bitte an den Hersteller.

Umgebungs- und Oberflächentemperatur - siehe Anleitungen.

Darauf achten, eine elektrostatische Aufladung vorzubeugen. Siehe Installationsanleitungen.

Die Einheit kann nur in Standardposition oder invertiert installiert werden.

4.4 Gasgruppen, Staub- und Temperaturgruppe

Das Gerät ist für die Gruppe IIC (Gas) und die Gruppe IIIC (Stäube) zertifiziert.

Die Temperaturklasse, die Oberflächentemperatur und die Kabeingangstemperatur hängen von den Eigenschaften der installierbaren Geräte (Ausgangsleistung, Watt) und der Umgebungstemperatur ab.

Diese Eigenschaften werden für jedes Modell in den spezifischen Kapiteln spezifiziert.

4.5 Eigenschaften der installierbaren Vorrichtungen

Alle internen Komponenten müssen im Inneren vom Hersteller installiert werden.

4.6 Kabeleingang

Das Produkt wird mit Plastikverschlüssen zum Schutz des Kabeleingangs geliefert. Sie sind für die Installation nicht verwendbar.

Die nicht verwendeten Kabeleingänge müssen geschlossen sein. Hierzu geeignete Blockier Vorrichtungen mit Ex-Zertifizierung mit einer explosionsgeschützten Schutzart "db" und "tb" verwenden, die sich für die Anwendungsbedingungen eignen und korrekt installiert sind.

Alle Kabel durchführungen müssen eine geeignete Ex-Zertifizierung haben. Sie müssen eine explosionsgeschützte Schutzart "db" und "tb" haben, für den Gebrauch geeignet und korrekt installiert sein.

Wenn die Leitung gebraucht wird, muss ein Klemmverbindungsstück verwendet werden, das eine geeignete Ex-Zertifizierung hat. Es muss eine explosionsgeschützte Schutzart "db" und "tb" haben, für den Gebrauch geeignet und korrekt installiert sein.

Der Sperranschluss darf nicht weiter als 50mm (1.97in) von der Vorrichtung angebracht sein.

Die Kabeleingangstemperaturen werden bei der Kennzeichnung spezifiziert.

Um die IP-Schutzart des Produkts beizubehalten, Kabel durchführungen mit geeigneter Schutzart verwenden und an den Gewinden eine Dichtungsmasse in Übereinstimmung mit IEC/EN60079-14 verwenden.

4.6.1 Verschlussstopfen (stopping plug)



Die Blockier Vorrichtung, die mit dem Produkt mitgeliefert wird, darf nicht verwendet werden, sollte die KCS-Zertifizierung angefragt sein.

Zusammen mit dem Produkt wird eine Blockier Vorrichtung (stopping plug) mit Ex-Zertifizierung mit explosionsgeschützter Schutzart „db“ und „tb“ geliefert. Zudem wird auch eine Dichtungsmasse für Gewinde in Übereinstimmung mit IEC/EN60079-14 mitgeliefert, Die Verwendung garantiert den IP-Grad.

Die Installationsanweisungen für den Verschlussstopfen (stopping plug) finden Sie unter <https://peppers.co.uk/useful-documents/>.

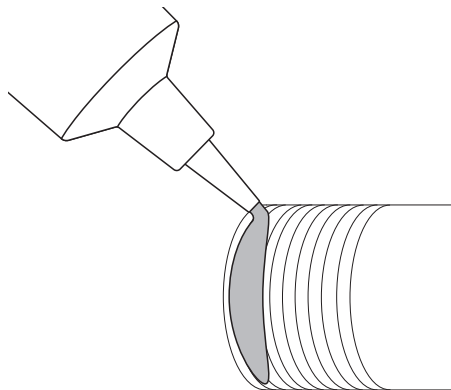


Abb. 1

4.7 Kennzeichnung des Produkts

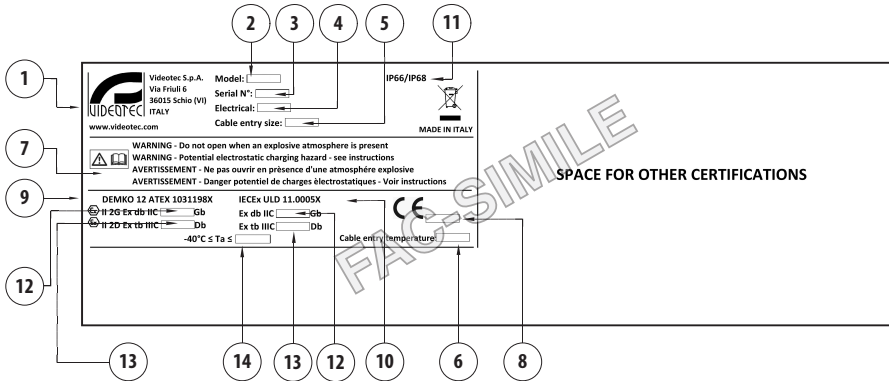


Abb. 1

- Name und Adresse des Herstellers.
- Modelle.
- Die Seriennummer setzt sich aus 12 numerischen Zeichen zusammen. Die zweite und dritte Ziffer bestimmen die letzten beiden Zahlen des Baujahrs.
- Elektrische Eigenschaften (Spannung V, Frequenz Hz, Strom A, Leistung W).
- Nummer, Abmessung und Kabeleingangstyp.
- Kabeleingangstemperatur.
- Hinweis.
- Nummer der akkreditierten Stelle, die die Bewertung der Qualität liefert.
- Kennzeichnung ATEX. Die Temperaturklasse ist abhängig von der im Inneren installierten Elektronik und der Umgebungstemperatur.
- IECEx-Kennzeichnung. Die Temperaturklasse ist abhängig von der im Inneren installierten Elektronik und der Umgebungstemperatur.
- Schutzart IP.
- T Class (Tx or Tx...Tx).
- Oberflächentemperatur ($T_{x^{\circ}\text{C}}$ or $T_{x^{\circ}\text{C}} \dots T_{x^{\circ}\text{C}}$).
- Umgebungstemperatur ($-40^{\circ}\text{C} \leq T_{a} \leq +\text{TX}^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_{a} \leq \text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$ or $\text{TX}^{\circ}\text{C}$).

Beispiel für die Kennzeichnung:

BEISPIELDATEN				
Ausgangsleistung im Gehäuse (W)	T Class	Maximale Oberflächentemperatur	Kabeleingangstemperatur	Umgebungstemperatur
7	T4	T135°C	90°C	$-40^{\circ}\text{C} \leq T_{a} \leq 80^{\circ}\text{C}$
	T6...T5	T85°C...T100°C	80°C	$-40^{\circ}\text{C} \leq T_{a} \leq 60^{\circ}\text{C}$ or 70°C
	T6...T4	T85°C...T135°C	90°C	$-40^{\circ}\text{C} \leq T_{a} \leq 60^{\circ}\text{C}$ or 70°C or 80°C

Tab. 1

4.8 Nur für Standardbezugnahme auf UL/CSA



Die zünddurchschlagsicheren Spalte dürfen nicht repariert werden.



ACHTUNG! Gefährliche Loseile. Finger und andere Körperteile fernhalten.



Das Gerät umfasst bewegliche Teile. Stellen Sie sicher, dass die Einheit an einer Stelle positioniert wird, die unter normalen Betriebsbedingungen nicht zugänglich ist. Bringen Sie das im Lieferumfang des Gerätes enthaltene Schildchen in der Nähe des Objektes an gut sichtbarer Stelle an.



Abb. 2



In den Vereinigten Staaten wird der National Electrical Code (NEC) und in Kanada der Canadian Electrical Code (CEC) auf die in gefährlichen Industrieumgebungen verwendeten elektrischen Geräte angewandt.



Die 100Vac- und 220Vac-Versionen der Produkte sind nicht UL-zertifiziert

Wichtige Sicherheitshinweise

WARNING: DO NOT OPEN WHEN AN 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.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L'ENTRÉE DU CONDUIT DU CAISSON.

Bei den Installationen muss nach den Standards UL/CSA die mitgelieferte Trennstufe installiert werden, wie im entsprechenden Kapitel angegeben (7.5.1 Installationen nach den Standards UL/CSA, Seite 27).

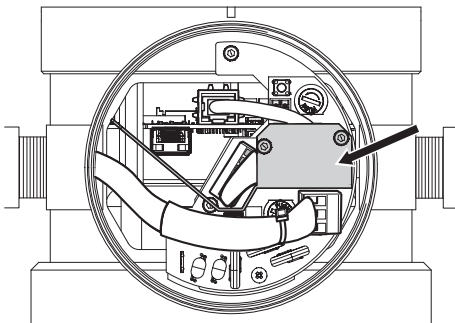


Abb. 3

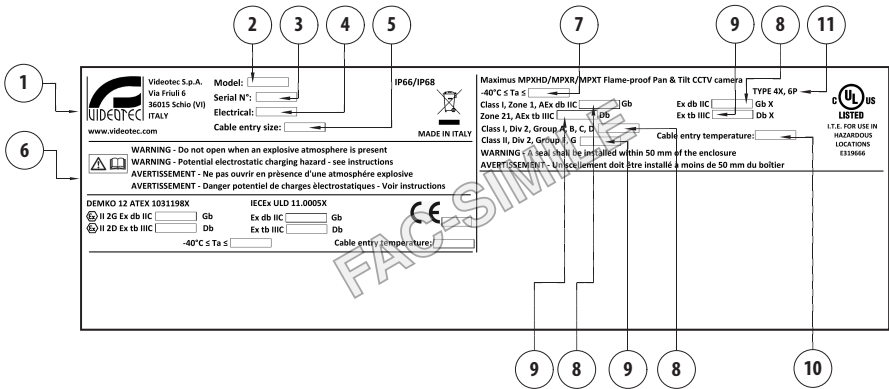


Abb. 4

1. Name und Adresse des Herstellers.
2. Modelle.
3. Die Seriennummer setzt sich aus 12 numerischen Zeichen zusammen. Die zweite und dritte Ziffer bestimmen die letzten beiden Zahlen des Baujahrs.
4. Elektrische Eigenschaften (Spannung V, Frequenz Hz, Strom A, Leistung W).
5. Nummer, Abmessung und Kabeleingangstyp.
6. Hinweis.
7. Umgebungstemperatur ($-40^{\circ}\text{C} \leq T_a \leq +\text{Tx}^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq \text{Tx}^{\circ}\text{C}$ or $\text{Tx}^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq \text{Tx}^{\circ}\text{C}$ or $\text{Tx}^{\circ}\text{C}$ or $\text{Tx}^{\circ}\text{C}$).
8. T Class (Tx or Tx...Tx).
9. Oberflächenhöchsttemperatur ($\text{Tx}^{\circ}\text{C}$ or $\text{Tx}^{\circ}\text{C} \dots \text{Tx}^{\circ}\text{C}$).
10. Kabeleingangstemperatur.
11. Schutzart Type.

Verbindungen



Die Wahl des Anschlusses muss mit den geltenden lokalen Normen übereinstimmen.

Kabelverschraubungen: Auswahl einer Kabeldurchführung in Übereinstimmung mit UL2225 mit folgender Schutzart AEx db IIC und / oder AEx tb IIIC und C22.2 mit folgender Schutzart Ex db IIC und / oder Ex tb IIIC in Übereinstimmung mit der Produktkennzeichnung.

Leitung: Es muss ein Gerät mit einer Undurchlässigkeit bis 50mm am Produkteingang installiert werden, wenn die Leitung verwendet wird.

Bezugsnormen:

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”

5 Versionen

5.1 Day/Night-Kamera

MAXIMUS MPX SERIES2 - KONFIGURATIONSOPTIONEN							
	Strom- Versorgung	Kamera	Temperaturklasse und Temperaturumgebung	Videoanalysen	Profil ONVIF		
MPXHD	1	230Vac	1 Kamera super low-light Day/ Night, FULL HD 1080p, 30x, mit DELUX-Technologie	A T6...T5 -40°C/+60°C or +70°C	0 Ohne integrierten Videoanalysefunktionen (ohne VIDEOTECH ANALYTICS)	00 In Übereinstimmung mit ONVIF, Profil Q, Profil S und Profil T	C
	2	24Vac	2 Kamera SONY FCB-EV7520, FULL HD 1080p, 30x	D T4 -40°C/+80°C	V Mit integrierten Videoanalysefunktionen (VIDEOTECH ANALYTICS)	01 In Übereinstimmung mit ONVIF, Profil S und Profil T	
	3	120Vac		C T5...T4 -40°C/+55°C or +60°C			
	5	220Vac					
	6	100Vac					

Tab. 2

MAXIMUS MPX SERIES2 - ZERTIFIZIERUNGEN UND KENNZEICHNUNGEN				
Artikelcode	Zertifizierung	Kennzeichnung	Umgebungstemperatur	Kabeleingangstemperatur
MPXHD1*A0**C, MPXHD2*A0**C, MPXHD3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1 Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			
MPXHD5*A0**C, MPXHD6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db		80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXHD1*D0**C, MPXHD2*D0**C, MPXHD3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1 Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD5*D0**C, MPXHD6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db		
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD1*CV**C, MPXHD2*CV**C, MPXHD3*CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4			
MPXHD5*CV**C, MPXHD6*CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		

Tab. 3

5.2 Wärmebildkamera

MAXIMUS MPXR SERIES2 - KONFIGURATIONSOPTIONEN													
	Strom- Versorgung		Wärmebildkamera		Temperaturklassen		Radiometrie		Profil ONVIF		Frequenz		
MPXR	1	230Vac	A	Wärmebildkamera 35mm, 336x256	A	T6...T5 -40°C/+60°C or +70°C	00	Wärmebildkamera mit radiometrischen Funktio- nen	0	In Übereinstimmung mit ONVIF, Profil Q, Profil S und Profil T	C	-	7.5Hz
	2	24Vac	B	Wärmebildkamera 25mm, 336x256	D	T4 -40°C/+80°C	0R	Wärmebildkamera mit erweiterten radiometri- schen Funktionen	1	In Übereinstimmung mit ONVIF, Profil S und Profil T		H	30Hz
	3	120Vac	V	Wärmebildkamera 19mm, 336x256									
	5	220Vac	F	Wärmebildkamera 13mm, 336x256									
	6	100Vac	C	Wärmebildkamera 9mm, 336x256									
			D	Wärmebildkamera 35mm, 640x512									
			E	Wärmebildkamera 25mm, 640x512									
			U	Wärmebildkamera 19mm, 640x512									

Tab. 4

MAXIMUS MPXR SERIES2 - ZERTIFIZIERUNGEN UND KENNZEICHNUNGEN				
Artikelcode	Zertifizierung	Kennzeichnung	Umgebungstemperatur	Kabeleingangstemperatur
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 5

5.3 Dual Vision mit Tag- und Nachtkamera und Wärmebildkamera

MAXIMUS MPXT SERIES2 - KONFIGURATIONSOPTIONEN										
	Strom- Versorgung		Day/Night-Kamera	Wärmebildkamera	Temperaturklassen	Radiometrie	Profil ONVIF			Frequenz
MPXT	1	230Vac	2 Kamera SONY FCB-EV7520, FULL HD 1080p, 30x	A Wärmebildkamera 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Wärmebildkamera mit radiometrischen Funktionen	0	In Übereinstimmung mit ONVIF, Profil Q, Profil S und Profil T	C	- 7.5Hz
	2	24Vac		B Wärmebildkamera 25mm, 336x256	D T4 -40°C/+80°C	0R Wärmebildkamera mit erweiterten radiometrischen Funktionen	1	In Übereinstimmung mit ONVIF, Profil S und Profil T		H 30Hz
	3	120Vac		V Wärmebildkamera 19mm, 336x256						
	5	220Vac		F Wärmebildkamera 13mm, 336x256						
	6	100Vac		C Wärmebildkamera 9mm, 336x256						
				D Wärmebildkamera 35mm, 640x512						
				E Wärmebildkamera 25mm, 640x512						
				U Wärmebildkamera 19mm, 640x512						

Tab. 6

MAXIMUS MPXT SERIES2 - ZERTIFIZIERUNGEN UND KENNZEICHNUNGEN				
Artikelcode	Zertifizierung	Kennzeichnung	Umgebungstemperatur	Kabeleingangstemperatur
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 7

6 Vorbereitung des Produktes auf den Gebrauch



Bevor Arbeiten durchgeführt werden, muss das Kapitel „Sicherheitsnormen“ im Handbuch des Produkts genau gelesen werden.

6.1 Entfernen der Verpackung

Bei der Lieferung des Produktes ist zu prüfen, ob die Verpackung intakt ist oder offensichtliche Anzeichen von Stürzen oder Abrieb aufweist.

Bei offensichtlichen Schadensspuren an der Verpackung muss umgehend der Lieferant verständigt werden.

Im Falle der Rückgabe des nicht korrekt funktionierenden Produktes empfiehlt sich die Verwendung der Originalverpackung für den Transport.

Bewahren Sie die Verpackung auf für den Fall, dass das Produkt zur Reparatur eingeschickt werden muss.

6.2 Inhalt

Prüfen Sie, ob der Inhalt mit der nachstehenden Materialliste übereinstimmt:

- Explosionsgeschützte PTZ Kamera
- Sonnenschutzdach (2 für MAXIMUS MPXT)
- Silikonummantelung
- Ersatzteilkit O-Ring, Sicherungsstifte
- Eine Blockiervorrichtung (stopping plug)
- Dichtmittel
- Kabelbinder
- Trennbarriere für die Montage nach den UL/CSA Standards
- Bedienungsanleitung

6.3 Sichere Entsorgung der Verpackungsmaterialien

Die Verpackungsmaterialien sind vollständig wiederverwertbar. Es ist Sache des Installationstechnikers, sie getrennt, auf jeden Fall aber nach den geltenden Vorschriften des Anwendungslandes zu entsorgen.

6.4 Auf die Installation vorbereitende Tätigkeiten

Die Einheit kann mit verschiedenen Bügeln und Halterungen installiert werden.

Wir empfehlen, ausschließlich Bügel und Zubehör zu verwenden, die für die Installation geeignet sind.

6.4.1 Installationsmethoden

Die Einheit kann nur in Standardposition oder invertiert (Deckenmontage) installiert werden. Wenn es in letzterer Position installiert wird, erfolgt die Neukonfiguration der Orientierungs- und Kontrollfunktionen der Videokamera über die Systemsoftware.

Der Betrieb in invertierter Position erfordert keinerlei Änderung der Hardware.

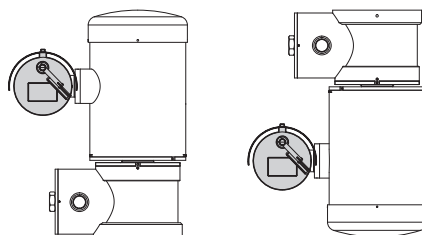


Abb. 5

6.4.2 Befestigung an der Brüstung oder an der Decke

Den Adapter (01) am Boden der Einheit befestigen. Hierzu die 4 flachen, mitgelieferten Senkschrauben (02) mit Innensechskant M10x20mm aus Edelstahl (A4 Klasse 70) verwenden.

Sicherstellen, dass die Gewinde ohne Schmutz und Rückstände sind.

Eine ausreichende Menge an Schraubensicherung (Loctite 270) von den 4 Gewindebohrungen unten am Geräteunterteil anbringen.

Auf die Befestigung achten.
Anzugsdrehmoment: 35Nm.

Die Schraubensicherung eine Stunde lang wirken lassen, dann die Installation beenden.

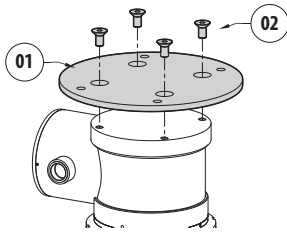


Abb. 6

Die zusammengebaute Einheit muss an die Brüstung oder an die Decke durch die externen Bohrungen vom Adapter befestigt werden. Schrauben verwenden, die einem Gewicht standhalten können, das mindestens 4 mal größer als das der Einheit ist.

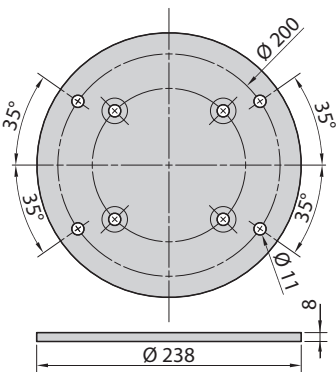


Abb. 7

6.4.3 Befestigung mit Bügel

Die Halterung kann direkt an einer vertikalen Wand befestigt werden. Schrauben und Wandbefestigungsvorrichtungen verwenden, die einem Gewicht standhalten können, das mindestens viermal größer als das der Einheit ist.

Zum Befestigen des Geräts am Bügel die im Lieferumfang enthaltenen 4 flachen Unterlegscheiben, die 4 Federringe aus Edelstahl und die 4 Sechskantschrauben aus Edelstahl (A4 Klasse 70) verwenden (M10x20mm).

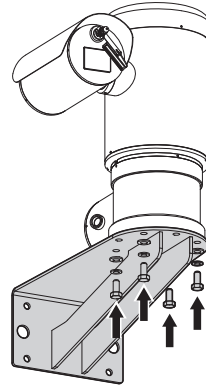


Abb. 8

Sicherstellen, dass die Gewinde ohne Schmutz und Rückstände sind.

Eine ausreichende Menge von Schraubensicherung (Loctite 270) an den 4 Schrauben anbringen.

Schrauben festziehen.

Auf die Befestigung achten.
Anzugsdrehmoment: 35Nm.

Die Schraubensicherung eine Stunde lang wirken lassen, dann die Installation beenden.

6.4.4 Befestigung mit Winkel- oder Stangenadaptermodul

Um das Produkt am Winkel- oder Stangenadaptermodul zu montieren, zuallererst die Bügelhalterung befestigen.

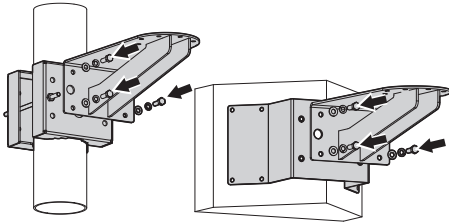


Abb. 9

Zum Befestigen der Bügelhalterung die im Lieferumfang enthaltenen 4 flachen Unterlegscheiben, die 4 Federringe aus Edelstahl und die 4 Sechskantschrauben aus Edelstahl (A4 Klasse 70) M10x30mm verwenden.

Sicherstellen, dass die Gewinde ohne Schmutz und Rückstände sind.

Reichlich Gewindesicherungsmittel (Loctite 270) auf die 4 Gewindeöffnungen des Adaptermoduls aufbringen.

Schrauben festziehen.

**⚠ Auf die Befestigung achten.
Anzugsdrehmoment: 35Nm.**

Die Schraubensicherung eine Stunde lang wirken lassen, dann die Installation beenden.

Zum Befestigen des Geräts am Bügel, siehe das entsprechende Kapitel (6.4.3 Befestigung mit Bügel, Seite 22).

6.4.5 Befestigung des Sonnenschutzdachs

ⓘ Bevor das Sonnenschutzdach des Gehäuses fixiert wird, ist die Schutzfolie abzuziehen (falls vorhanden).

Das Sonnenschutzdach am Gehäuse befestigen. Hierzu die Schrauben und Unterlegscheiben verwenden, die auf den oberen Gehäusekorpus geschraubt wurden.

Eine ausreichende Menge an Schraubensicherung (Loctite 270) an den Gewindebohrungen anbringen.

Die Schraubensicherung eine Stunde lang wirken lassen, dann die Installation beenden.

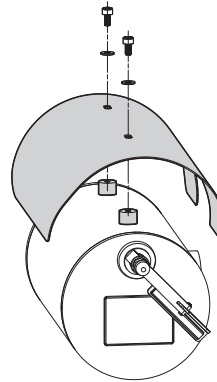


Abb. 10

**⚠ Auf die Befestigung achten.
Anzugsdrehmoment: 2Nm.**

7 Installation



Bevor Arbeiten durchgeführt werden, muss das Kapitel „Sicherheitsnormen“ im Handbuch des Produkts genau gelesen werden.

VIDEOTECH empfiehlt, vor der endgültigen Montage am Installationsort die Konfiguration und die Leistungen des Gerätes zu prüfen.

7.1 Erdung

7.1.1 Anschluss Erdpotenzialausgleich

Der Anschluss des Erdpotenzialausgleichs muss durch ein externes Kabel mit 4mm^2 (11AWG) Mindestquerschnitt vorgenommen werden.

Das Kabel für den Anschluss des Erdpotenzialausgleichs mit dem zum Lieferumfang gehörenden Ringkabelschuh verbinden (geeignet für Kabel mit einem Querschnitt von 4mm^2 (11AWG) bis 6mm^2 (9AWG)).

Die Öse mit der im Lieferumfang enthaltenen M5 Schraube und der gezahnten Unterlegscheibe befestigen.

Eigenschaften der Schraube M5:

- Material: A4 Klasse 70
- Schraubenkopf: ISO 4762
- Länge: 8mm

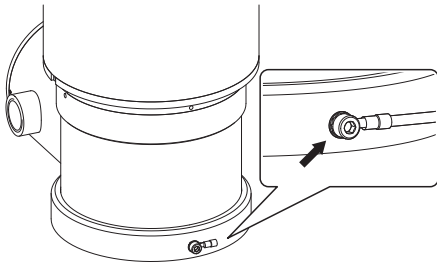


Abb. 11

7.1.2 Anschluss der Schutzerdung

Es ist notwendig, dass die Erdungskabel an den internen Steckverbinder angeschlossen werden (J1, 7.3 Beschreibung der Karte Anschlüsse, Seite 25).

7.2 Öffnen des Bereichs für die Anschlüsse



Der Sicherheitsgewindestift wird verwendet, um zu verhindern, dass sich der Gewindedeckel vom Bereich mit den Anschlüssen löst. Den Sicherheitsgewindestift entfernen, bevor der Gewindedeckel abgeschraubt wird.

An der Basis der Einheit sind 2 Kabeleingänge mit $3/4"$ NPT vorhanden (oder M25 Sonderausführung).

Für die Anschlüsse den Sicherheitsgewindestift (01) mit einem 1.5mm-Innensechskantschlüssel, den Gewindedeckel (02) (30mm-Sechskantmutter) und die Plastikverschlüsse (03) entfernen.

Die Plastikverschlüsse werden ausschließlich für den Versand benutzt und können für den Betrieb nicht verwendet werden.

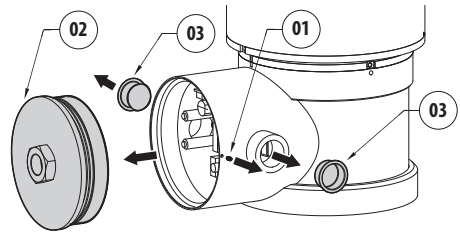


Abb. 12

Durch Lösen des Gewindedeckels erreicht man die Steckverbinder.

7.3 Beschreibung der Karte Anschlüsse

BESCHREIBUNG DER PLATINE		
Verbinder	Funktion	Klemmen - Nennquerschnitt der verwendeten Kabel
J1	Stromversorgung	von 0.2mm ² (24AWG) bis zu 2.5mm ² (13AWG)
J6	Alarmer, Reset von fern und serielle Leitung	von 0.2mm ² (24AWG) bis zu 1.0mm ² (17AWG)
J8	Relais	von 0.2mm ² (24AWG) bis zu 1.0mm ² (17AWG)
F1	Sicherung	-
F2	Sicherung	-
P1	Resetknopf	-
RJ45	Ethernet Verbinder	-
SFP	SFP-Steckverbinder	-

Tab. 8

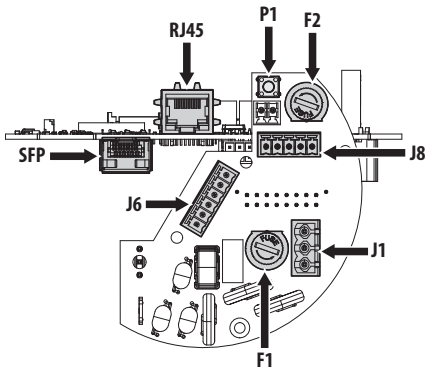


Abb. 13

7.4 Anschluss der Stromversorgung

Je nach Version kann die Vorrichtung mit unterschiedlichen Versorgungsspannungen geliefert werden. Der Wert der Versorgungsspannung ist auf dem Kenndatenschildchen des Produktes angegeben.

! Das Erdungskabel muss um etwa 10mm länger sein, als die anderen beiden Kabel, um das ungewollte Lösen durch Ziehen des Kabels zu verhindern.

! Ferner muss das Versorgungskabel von einer Silikonummantelung (01) überzogen sein, die im Lieferumfang enthalten ist. Die Silikonummantelung soll mit dem zugehörigen Binder fixiert werden (02). Für Installationen nach den Standards UL/CSA das Versorgungskabel über den linken Kabeleingang (03) durchführen, siehe Abbildung.

i Bei Verwendung des mehradrigen Kabels von VIDEOTEC und des Glasfaserkabels wird empfohlen, den linken Kabeleingang (03) für das mehradrige Kabel und den rechten Kabeleingang (04) für das Glasfaserkabel zu verwenden.

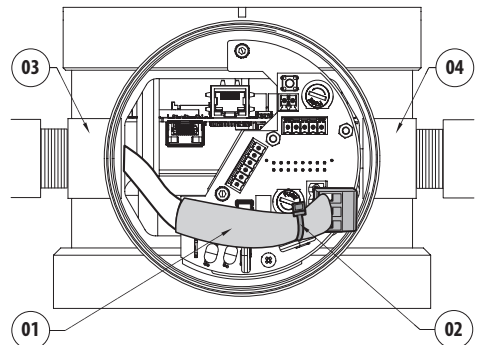


Abb. 14

i Der Querschnitt des Erdungsschutzleiters muss dem der Versorgungskabel entsprechen oder größer sein.

Den abnehmbaren Steckverbinder der Versorgungsleitung von der Platine mit den Steckverbindern abziehen (J1, 7.3 Beschreibung der Karte Anschlüsse, Seite 25).

Die Elektrokabel für die Stromversorgung anschließen, wie in der entsprechenden Tabelle angegeben (Tab. 9, Seite 26).

ANSCHLUSS DER STROMVERSORGUNG

Farbe	Klemmen
Netzteil 24Vac	
Vom Installateur festgelegt.	N (Nullleiter)
Vom Installateur festgelegt.	L (Phase)
Gelb/Grün	⊕
Netzteil 230Vac	
Blau	N (Nullleiter)
Braun	L (Phase)
Gelb/Grün	⊕
Netzteil 120Vac	
Blau	N (Nullleiter)
Braun	L (Phase)
Gelb/Grün	⊕

Tab. 9

7.5 Anschluss der Alarme, des Resets von fern und der Relais



Alle Signalkabel mit einem Kabelbinder müssen zusammengefasst werden.

ANSCHLUSS DER ALARMEINGÄNGE UND DER RELAIS.

Stecker	Klemmen	Beschreibung
J6	AL1, COM	Eigenbetriebener Alarmeingang in Bezug auf die gemeinsame Klemme
	RST, RST	Reset von fern
J8	RL1A, RL1B	Potentialfreie Ausgangskontakte, die durch Alarm oder Benutzerbefehl ansprechbar sind
	RL2A, RL2B	Kontakt für die Aktivierung der Scheibenwaschpumpe

Tab. 10

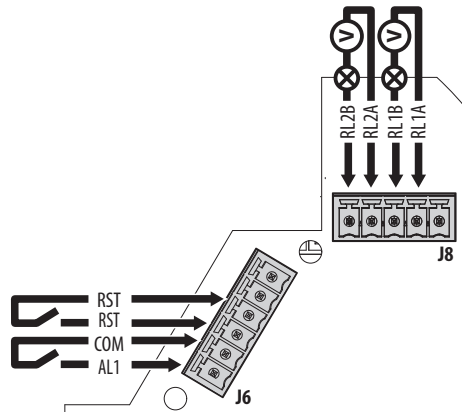


Abb. 15

7.5.1 Installationen nach den Standards UL/CSA



Darauf achten, die Leiter und die Platinen nicht zu beschädigen.

Für die Installationen nach dem Standard UL/CSA sind die Ethernet-, Alarmreset-, Relais- und Glasfaserkabel über den rechten Kabeleingang, wie in der folgenden Abbildung gezeigt, einzuführen (Abb. 16, Seite 27).

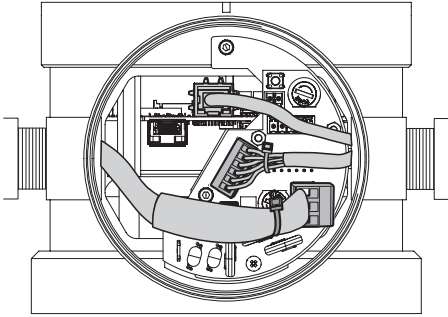


Abb. 16

Bei den Installationen muss nach den UL/CSA Standards die mitgelieferte Trennbarriere installiert werden.

Nachdem alle Steckverbinder eingeführt wurden und bevor das Gerät mit Strom versorgt wird, die mitgelieferte Trennbarriere installieren.

Die Barriere (01) mit den geeigneten Schrauben und Scheiben (02) an den vorgesehenen Abstandsstücken (03) befestigen (Abb. 17, Seite 27 und Abb. 18, Seite 27).

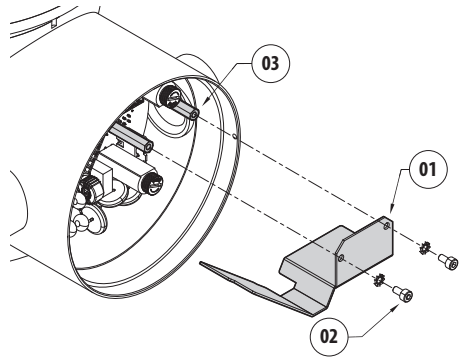


Abb. 17

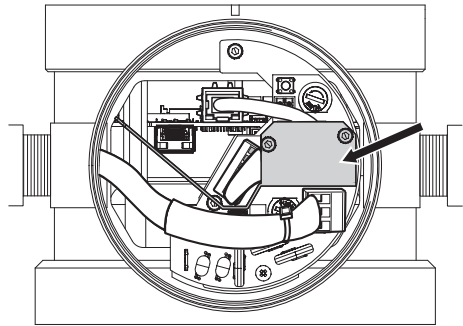


Abb. 18

7.5.2 Anschluss Alarm mit potenzialfreiem Kontakt

Die Klemmen AL1 und COM am Steckverbinder J6 anschließen, wie in der Abbildung angegeben (Abb. 15, Seite 26).

Die Höchstlänge der Alarmlabel: 200m.

Den Anschluss mit einem geschirmten Kabel vornehmen.

7.5.3 Resetanschluss von fern

Die zwei RST Klemmen am Steckverbinder J6 anschließen, siehe Abbildung (Abb. 15, Seite 26).

Maximale Kabellänge: 200m.

Für die Anwendung des Resets von fern im Kapitel Factory Default nachschlagen (11.2.3 Factory Default, Seite 32).

7.5.4 Anschluss der Relais

i **Höchstspannung und -strom der Relais: die im entsprechenden Kapitel vorhandenen technischen Daten einsehen (15 Technische Daten, Seite 35).**

Die Klemmen RL1A, RL1B, RL2A, RL2B an den Steckverbinder J8, wie in der Abbildung angegeben, anschließen (Abb. 15, Seite 26).

Das Gerät kann mit einer als Zubehör erhältlichen Scheibenwaschanlage ausgestattet werden. Die Klemmen RL2A und RL2B zum Bedienen der Waschanlage verwenden.

7.6 Ethernetanschluss

Das Produkt verfügt über einen eingebauten Ethernet-Switch, der einen RJ45-Port und einen Slot für SFP-Module verwaltet.

7.6.1 Anschluss über RJ45

i **Die Anschlüsse in Übereinstimmung mit dem Standard durchführen: TIA/EIA-568-B.**

Das Ethernetkabel mit dem RJ45-Port anschließen (7.3 Beschreibung der Karte Anschlüsse, Seite 25).

Empfohlen wird die Verwendung von Ethernetkabeln mit den folgenden Eigenschaften:

- STP (geschirmt)
- Kategorie 5E oder Kategorie 6

An beiden Kabelenden einen abgeschirmten Stecker vom Typ RJ45 verwenden. Der Bildschirm des Ethernetkabels (Benutzerseite) muss stets über den Steckverbinder geerdet sein.

7.6.2 Anschluss über SFP

i **Es handelt sich bei den optischen Modulen, die mit dem SFP-Standard (Small Form Factor Pluggable) übereinstimmen, um Einrichtungen, die das elektrische Signal in ein optisches Signal und das optische Signal in ein elektrisches Signal umwandeln.**

Das SFP-Modul wird für den Glasfaseranschluss verwendet. Das SFP-Modul muss für die Installationsanlage geeignet sein.

Das Handbuch des SFP-Moduls für die entsprechenden Spezifikationen heranziehen.

! **Das SFP Modul, das nicht von VIDEOTEC geliefert wird, muss folgenden Anforderungen nachkommen:**

- **Laser: Class 1, in Übereinstimmung mit EN60825-1**
- **UL/IEC 60950-1 oder UL/IEC 62368-1 Zertifizierung**

i **Der Switch des Nutzers, der mittels SFP-Modul verbunden ist, muss bei einer Geschwindigkeit von 100Mbps funktionieren. Die Einstellungen des Switches überprüfen, mit dem das Produkt verbunden ist.**

i **VIDEOTEC hat verschiedene SFP-Modultypologien getestet. Weitere Auskünfte erteilt das Kundendienstcenter von VIDEOTEC.**

Das SFP-Modul (nicht im Lieferumfang enthalten) in den SFP-Slot einführen (7.3 Beschreibung der Karte Anschlüsse, Seite 25).

7.7 Schließen des Anschlussfachs



Wenn man nicht in der Lage ist, den Gewindeverschluss manuell abzuschrauben, bevor der O-Ring das Rohr des Anschlussfachs erreicht, bedeutet das, dass an den Gewinden Schmutz oder Rückstände vorhanden sind, bzw. dass der Verschluss nicht korrekt ausgerichtet ist. Dieser Zustand könnte die Gewinde schwer beschädigen. Den Verschluss abschrauben und die Ausrichtung überprüfen und/oder die Gewinde reinigen.



Um das Gewinde nicht zu beschädigen, niemals die Rotation des Gewindeverschlusses zwangsweise herbeiführen, bevor der O-Ring das Anschlussfach erreicht hat.



Wenn man befürchtet, dass Schäden an den Gewinden vorliegen, muss die Installation eingestellt werden. Das Gerät könnte nicht für eine sichere Installation in einer potenziell explosionsgefährdeten Atmosphäre geeignet sein. Wenden Sie sich in diesem Fall an einen Techniker von VIDEOTEC.



Vor dem Schließen des Deckels die Intaktheit des O-Rings überprüfen. Sollte die Dichtung beschädigt sein, diese mit der im Lieferumfang enthaltenen Dichtung austauschen (11.1.2 Auswechseln der Dichtung, Seite 31).

Sicherstellen, dass kein Schmutz oder Rückstände vorhanden sind.

Die Gewinde mit einem Fett schmieren, das der Norm IEC/EN60079-14 entspricht, um das Anschrauben des Deckels zu erleichtern.

Die Kabel so anordnen, dass es während des Schließens des Gewindeverschlusses des Anschlussfachs nicht zu Interferenzen kommt.

Manuell den Gewindeverschluss im Anschlussfach auf Schrauben, bis die Dichtung den Anschlag am Rohr erreicht hat.

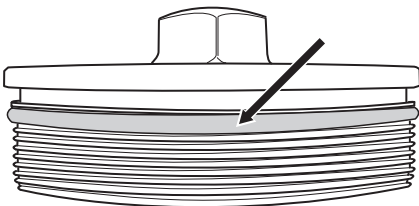


Abb. 19

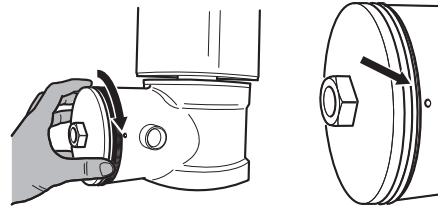


Abb. 20

Den Gewindeverschluss vom Anschlussfach mit einem Schlüssel 30mm entfernen. Nach dem Schließen sicherstellen, dass zwischen dem Gewindeverschluss und der Leitung des Anschlussfachs kein Freiraum vorliegt.

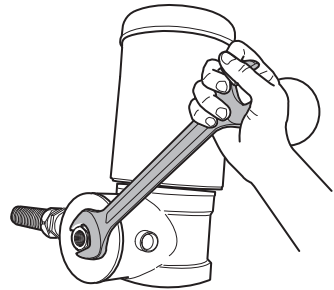


Abb. 21

Die Befestigung des Sicherheitsgewindestifts ist notwendig, um das Schließen des Produkts zu vervollständigen und das ungewollte Loslösen des Gewindeverschlusses zu vermeiden.

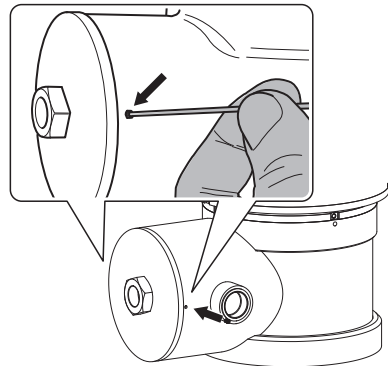


Abb. 22

8 Einschaltung



Bevor Arbeiten durchgeführt werden, muss das Kapitel „Sicherheitsnormen“ im Handbuch des Produkts genau gelesen werden.



Der automatische Vorheizvorgang (De-Ice) könnte immer dann aktiviert werden, wenn das Gerät bei einer Umgebungstemperatur von unter -10°C in Betrieb genommen wird. Dieser Vorgang ist notwendig, um die korrekte Funktionalität der Vorrichtung auch bei niedrigen Temperaturen zu gewährleisten. Die Dauer liegt je nach Wetterbedingungen (von 60 Minuten bis zu 120 Minuten).

Für das Einschalten der Einheit die elektrische Versorgung anzulegen.

Die Einheit benötigt nach dem Einschalten einige Minuten, um vollständig betriebsbereit zu sein.

Die elektrische Versorgung abtrennen, um die Einheit abzuschalten.

9 Konfiguration

9.1 Vorgegebene IP-Adresse



Die Einheit ist konfiguriert, um eine IP-Adresse von einem DHCP-Server zu erhalten.

Die über DHCP erhaltene IP-Adresse ist in der Logdatei des DHCP-Servers sichtbar.

Sollte der DHCP nicht verfügbar sein, dann nimmt die Einheit die Konfiguration automatisch mit einer selbst generierten IP-Adresse im Subnetz 169.254.x.x/16 vor. Die IP-Adresse des PC als zum selben Subnetz gehörend konfigurieren (Beispiel: IP-Adresse: 169.254.1.1, subnet mask: 255.255.0.0).

Zur erneuten Suche der IP-Adresse des Geräts ein mit ONVIF oder einem Netzwerk-Sniffer kompatibles VMS verwenden (IP scan utility).

9.2 Web-Schnittstelle



Unterstützte Browser (der letzten Version): Microsoft Edge, Google Chrome, Mozilla Firefox.

9.2.1 Erster Webseitenaufruf

Der erste Schritt zur Konfiguration der Einrichtung ist die Verbindung mit seiner Web-Schnittstelle.

Um auf die Webschnittstelle des Produkts zuzugreifen, genügt es, eine Verbindung über den Browser mit der Adresse http://indirizzo_ip herzustellen.

Beim ersten Zugriff wird die Startseite angezeigt.

Für die Konfiguration der Webschnittstelle das für die installierte Firmware-Version entsprechende Handbuch heranziehen. Es ist auf der Webseite des Produkts unter www.videotec.com erhältlich.

10 Anleitung für den normalen Betrieb

⚠ **Bevor Arbeiten durchgeführt werden, muss das Kapitel „Sicherheitsnormen“ im Handbuch des Produkts genau gelesen werden.**

⚠ **Den Scheibenwischer nicht verwenden, wenn die Umgebungstemperatur unter 0°C liegt oder wenn Eis vorhanden ist.**

i **Der Scheibenwischer schaltet sich automatisch aus, wenn er laufen gelassen wird.**

Die Gerätesteuerung kann über verschiedene Modi erfolgen.

- Über die Nutzersteuerung der Webschnittstelle (9.2 Web-Schnittstelle, Seite 30).
- Mit der Video Management Software (VMS), die das ONVIF-Protokoll unterstützt. In diesem Fall werden die Sonderbefehle mittels der Hilfsbefehle des ONVIF-Protokolls implementiert.
- Über die Software PTZ Assistant (die Software PTZ Assistant kann auf der Webseite des Produkts unter www.videotec.com heruntergeladen werden).

11 Wartung

⚠ **Bevor Arbeiten durchgeführt werden, muss das Kapitel Sicherheitsnormen im Handbuch des Produkts genau gelesen werden.**

Wenn der Kundendienst von VIDEOTEC kontaktiert wird, muss die Seriennummer zusammen mit dem Identifizierungscode des Modells.

Verwenden Sie nur Ersatzteile der Firma VIDEOTEC.

11.1 Übliche Wartung (regelmäßig auszuführen)

11.1.1 Überprüfung der Kabel

Die Kabel dürfen keine gefahrenträchtigen Verschleiß- oder Alterungsspuren zeigen. In diesem Fall ist eine außerordentliche Wartung fällig.

11.1.2 Auswechseln der Dichtung

Die Dichtung des Deckels des Bereichs mit den Anschlüssen mit der im Lieferumfang enthaltenen Dichtung ersetzen.

Den Bereich mit den Anschlüssen öffnen und schließen, wie in den vorangegangenen Kapiteln beschrieben.

Die Dichtung austauschen und dabei darauf achten, sie korrekt zu positionieren.

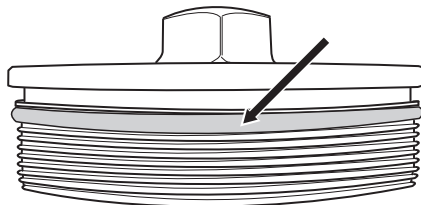


Abb. 23

11.2 Außerordentliche Wartung (nur bei besonderen Anlässen fällig)

11.2.1 Sicherung austauschen

Falls notwendig die abgebildeten Sicherungen austauschen (7.3 Beschreibung der Karte Anschlüsse, Seite 25).

WECHSEL DER SICHERUNGEN		
Versorgungsspannung	Sicherung (F1)	Sicherung (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Tab. 11

11.2.2 Austausch des Wischerblatts

Bei den mit einem Scheibenwischer ausgestatteten Modellen können die abgenutzten Wischerblätter ausgetauscht werden.

Die Kapselmutter, mit der das Wischerblatt befestigt ist, lösen und zusammen mit den Unterlegscheiben entfernen. Das abgenutzte Wischerblatt mit einem Neuen ersetzen. Reichlich Gewindegewindesicherungsmittel (Loctite 270) verwenden, die Kapselmutter und die Unterlegscheiben wieder ausrichten und die Befestigung so regulieren, bis das Wischerblatt korrekt an der Scheibe anliegt. Den Scheibenwischer betätigen, um die korrekte Einstellung des Wischerblatts zu überprüfen.

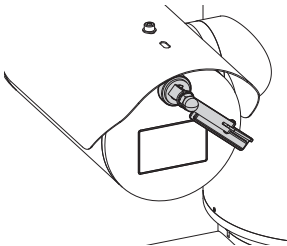


Abb. 24

11.2.3 Factory Default



Wenn das Zugangskennwort nicht mehr auffindbar ist, können die Werkseinstellungen über eine Rückstellungsprozedur wiederhergestellt werden.

Das Ergebnis der Factory-Default-Prozedur entspricht dem über die Webschnittstelle erhaltenem Ergebnis (Hard-Resetknopf).

Für den Reset der werkseitigen Einstellungen bezüglich Netz, Benutzerzugriff und Konfiguration der Kamera folgende Prozedur ausführen:

- Einheit abschalten.
- Den Bereich mit den Anschlüssen öffnen.
- Den Resetknopf gedrückt halten (P1, 7.3 Beschreibung der Karte Anschlüsse, Seite 25).
- Die Einheit mit Strom versorgen.
- 30 Sekunden lang warten.
- Den Resetknopf loslassen.
- 2 Minuten warten.
- Einheit abschalten.
- Den Bereich mit den Anschlüssen schließen.
- Die Einheit mit Strom versorgen.

Das Reset kann auch im Remote-Modus vorgenommen werden. Die folgende Prozedur befolgen:

- Einheit abschalten.
- Die RST-Kontakte des Steckverbinders J6 zusammen anschließen (7.3 Beschreibung der Karte Anschlüsse, Seite 25).
- Die Einheit mit Strom versorgen.
- 30 Sekunden lang warten.
- Die RST-Kontakte trennen.
- 2 Minuten warten.
- Einheit abschalten.
- Die Einheit mit Strom versorgen.



Wenn die Factory-Default-Prozedur einmal abgeschlossen ist, muss die Einheit wie im entsprechenden Kapitel beschrieben konfiguriert werden (9.1 Vorgegebene IP-Adresse, Seite 30).

12 Reinigung



Bevor Arbeiten durchgeführt werden, muss das Kapitel „Sicherheitsnormen“ im Handbuch des Produkts genau gelesen werden.



Die Häufigkeit der Eingriffe hängt von der Umgebung ab, in der die Einheit verwendet wird.

12.1 Übliche Reinigung (regelmäßig auszuführen)

12.1.1 Reinigung der Glasfensters

Die Reinigung sollte mit einer milden Seife mit Wasser verdünnt erfolgen.

12.1.2 Putzen des Germaniumfensters



Bei der Reinigung des Fensters ist darauf zu achten, dass die mit Carbon Coating behandelte Oberfläche nicht verkratzt oder gerillt wird. Wenn diese Beschichtung Schaden nimmt, besteht die Gefahr, dass die Durchlässigkeit der Oberfläche für Infrarotstrahlen beeinträchtigt wird.

Die Reinigung sollte mit einer milden Seife mit Wasser verdünnt erfolgen.

Das Schutzgitter und das Abstandsstück entfernen. Hierzu die Senkschrauben, die sich an der Gehäusevorderseite befinden, mit einem funkenfreien 2mm-Sechskantschlüssel lösen.

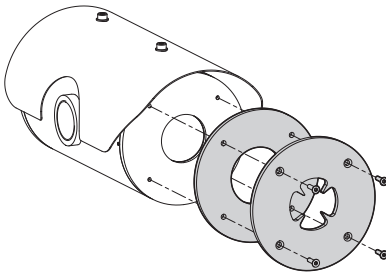


Abb. 25

Nach der Reinigung das Abstandsstück und das Schutzgitter wieder montieren.

12.1.3 Reinigung des Produktes



Auf der Außenfläche des Produkts darf niemals eine Staubschicht von mehr als 5 mm liegen.



Zur Vermeidung einer elektrostatischen Aufladung hat die Reinigung des Produkts nach den Angaben aus diesem Kapitel zu erfolgen.

Die Reinigung muss mit einem feuchten Tuch ohne Zuhilfenahme von Druckluft vorgenommen werden.

13 Informationen bezüglich Entsorgung und Recycling

Die EU-Richtlinie 2012/19/EU über Elektro- und Elektronik-Altgeräte (WEEE) verpflichtet, dass diese Geräte nicht zusammenn mit festen Haushaltsabfällen entsorgt werden sollten. Diese besonderen Abfällen müssen separat gesammelt werden, um den Rückgewinnungsstrom und das Recycling der darin enthaltenen Materialien zu optimieren, sowie zur Minderung der Einwirkung auf die menschliche Gesundheit und Umwelt aufgrund des Vorhandenseins von potentiell gefährlichen Stoffen.



Das Symbol des gekreuzten Mullbehälters ist auf allen Produkten markiert, um sich daran zu erinnern.

Die Abfälle dürfen an die ausgewiesenen Müllsammelstellen gebracht werden. Andernfalls darf man es kostenlos an den Vertragshändler bringen, bei dem das Gerät gekauft wurde. Das kann beim Einkauf von neuen gleichartigen Produkten passieren oder auch ohne Verpflichtung eines Neukaufes, falls die Größe des Gerätes kleiner als 25 cm ist.

Mehr Informationen über die korrekte Entsorgung dieser Geräte erhalten Sie bei der entsprechenden Behörde.

14 Problemlösung



Bevor Arbeiten durchgeführt werden, muss das Kapitel „Sicherheitsnormen“ im Handbuch des Produkts genau gelesen werden.



Kontaktieren Sie bitte das autorisierte Kundenzentrum bei jedem nicht beschriebenen Problem oder falls das aufgelistete Problem weiterhin bestehen sollte.

PROBLEM	Das Produkt lässt sich nicht einschalten.
URSACHE	Falsche Verkabelung, Schmelzsicherungen durchgebrannt.
LÖSUNG	Anschlüsse prüfen. Die Kontinuität der Sicherungen überprüfen und im Falle eines Defektes müssen sie durch die aufgeführten Modelle ersetzt werden.
PROBLEM	Der Bereich der Aufnahme stimmt mit der aufgerufenen Presetposition nicht überein.
URSACHE	Verlust der absoluten Referenzposition.
LÖSUNG	Das Gerät wird zurückgestellt, indem man es aus- und wieder einschaltet.
PROBLEM	Die Einrichtung bewegt sich während der Inbetriebnahme nicht.
URSACHE	Die Umgebungstemperatur ist zu niedrig.
LÖSUNG	Ende des Vorheizvorgangs abwarten. Auf der Webseite wird folgende Meldung gezeigt: De-Ice-Verfahren läuft.

15 Technische Daten

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 Allgemeines

Hergestellt aus rostfreiem Stahl AISI 316L

Oberflächen außen mikrogestrahlt und elektropoliert

Dynamisches Kontrollsystem der Positionierung

15.1.2 Mechanik

Kabeleingänge: 2 x 3/4" NPT

Kein mechanisches Spiel

Horizontale Drehung: 360°, kontinuierliche Drehung

Vertikale Drehung: von -90° bis zu +90°

Schwenkgeschwindigkeit rechts - links (einstellbar):
von 0.1° bis 100°/s

Neigeengeschwindigkeit Auf-Ab einstellbar (einstellbar):
von 0.1° bis 100°/s

Genauigkeit beim Aufruf der Preset- Positionen: 0.02°

Vorinstallierter Wischer

Fenster mit gehärtetem, extra-klarem Glas: Stärke
12mm

Einheitsgewicht: 26.5kg

15.1.3 Elektrik

Versorgungsspannung/Stromaufnahme:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Leistungsaufnahme:

- 120W max

15.1.4 Netzwerk

RJ45-Port

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet-Verbindung:100BASE-FX
- Versorgungsspannung: 3.3V
- Standard: MSA-konform

Das SFP Modul, das nicht von VIDEOTEC geliefert wird, muss folgenden Anforderungen nachkommen:

- Laser: Class 1, in Übereinstimmung mit EN60825-1
- Zertifizierung: UL/IEC 60950-1 oder UL/IEC 62368-1

15.1.5 I/O-Schnittstelle

Eingang zum Zurücksetzen von fern: 1

Alarমেingänge: 1

Relais-Ausgänge: 1+1 (1 Relais nur für die Scheibenwaschpumpe und ein konfigurierbares Relais, 1A, 30Vac/60Vdc max)

15.1.6 Videoanalysen

Äußerst robuste Erkennungsalgorithmen und Auto-Tracking, speziell für die perimetrische Outdoor-Kontrolle.

Klassifizierung Zielobjekt: Personen, Fahrzeuge, Allgemeine Objekte

Einstellbare Regeln für die Videoanalyse, VIDEOTEC ANALYTICS (über eine intuitive Management-Schnittstelle; man kann schnell bis zu zehn Regeln für jede Voreinstellung konfigurieren)

- Line crossing: Das Zielobjekt löst Alarm aus, sobald es in die eine oder andere Richtung über die Linie tritt
- Entering/leaving area: Das Zielobjekt löst Alarm aus, sobald es in den konfigurierten Bereich tritt oder ihn verlässt
- Appearing in area: Das Zielobjekt löst Alarm aus, sobald es innerhalb des konfigurierten Bereichs auftaucht
- Loitering: Das Zielobjekt löst Alarm aus, wenn es sich für eine bestimmte Zeit innerhalb des konfigurierten Bereichs aufhält

Funktion Detection Mask: Schaltet die Erkennung in einem Teil des Bildausschnitts ab, um Fehlalarme zu vermeiden

Funktion Video Tampering Detection: Es wird ein spezifischer ONVIF-Alarm ausgelöst, wenn die Sicht der Videokamera versperrt wird (z.B. mit Spray)

15.1.7 Kamera

Day/Night Full HD 30x DELUX

Auflösung: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effektive Pixel: ca. 2.38 Megapixels

Mindestbeleuchtung:

- Farbe: 0.006lx (F1.6, 30 IRE)
- B/W: 0.0006lx (F1.6, 30 IRE)

Brennweitenlänge: von 4.5mm (wide) bis zu 135mm (Tele)

Zoom: 30x (480x mit digitalem Zoom)

Iris: von F1.6 bis zu F9.6 (Auto, Manuell)

Horizontale Blickwinkel: von 61.6° (wide end) bis zu 2.50° (tele end)

Vertikale Bildwinkel: von 37.07° (wide end) bis zu 1.44° (tele end)

Verschlusszeit: von 1/1s bis zu 1/10000s (Auto, Manuell)

Weißabgleich: Auto, Manuell

Gain: von 0dB bis zu 100dB (Auto, Manuell)

Wide Dynamic Range: 120dB

Focus System: Auto, Manuell, Trigger

Bildeffekte: E-flip, Farbverbesserung

Verringerung des Bildrauschens: 2D (3 Stufen), 3D (3 Stufen)

Belichtungskontrolle: Auto, Manuell, Priorität (Priorität Iris, Priorität Shutter), Helligkeit, Custom

De-fog: On/Off

Maskierung der Privatbereiche (maximale 8 einstellbare Masken)

Indoor Flicker Reduction

Auto Slowshutter: Off, On (von 1/30s bis zu 1/1s)

Belichtung- korrektur: Off, On (von Stufe 0 bis zu Stufe 14)

Schärfe: von Stufe 0 bis zu Stufe 3

SONY FCB-EV7520 Day/Night Full HD 30x

Auflösung: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effektive Pixel: ca. 2.13 Megapixels

Mindestbeleuchtung:

- Farbe: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Brennweitenlänge: von 4.3mm (wide) bis zu 129mm (Tele)

Zoom: 30x (360x mit digitalem Zoom)

Iris: von F1.6 bis zu F14 (Auto, Manuell)

Horizontale Blickwinkel: von 63.7° (wide end) bis zu 2.3° (tele end)

Vertikale Bildwinkel: von 38.5° (wide end) bis zu 1.3° (tele end)

Verschlusszeit: von 1/1s bis zu 1/10000s (Auto, Manuell)

Weißabgleich: Auto, Auto Tracing, Indoor, Outdoor, Manuell, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: von 0dB bis zu 50.0dB (Auto, Manuell)

Wide Dynamic Range: 120dB

Focus System: Auto (PTZ Trigger, Full Auto), Manuell

Bildeffekte: E-flip

Verringerung des Bildrauschens (2D, 3D): Off, On (von Stufe 1 bis zu Stufe 5)

Belichtungskontrolle: Auto, Manuell, Priorität (Shutter Priority, Iris Priority, Priorität Helligkeit)

De-fog: Off, Low, Mid, High

Dynamische Maskierung der Privatbereiche: maximal 24 einstellbare Masken, maximal 8 gleichzeitig anzeigbare Masken

Indoor Flicker Reduction

Gain Limit: von 10.7dB bis zu 50dB

High sensitivity: On/Off

Backlight-Kompensation: On/Off

Auto Slowshutter: On/Off

Belichtung- korrektur: Off, On (von -10.5dB bis zu +10.5dB)

Schärfe: von Stufe 0 bis zu Stufe 15

High Light Compensation (HLC): Off, Low, Mid, High, Maskierungsstufe (Off, On, von Stufe 1 bis zu Stufe 15)

Digitale Bildstabilisierung: On/Off

15.1.8 Umgebung

Montage für den Innen- und Außenbereich

Zertifizierungstemperatur: von -40°C bis zu +80°C

Betriebstemperatur:

- Kontinuierlicher Betrieb: von -40°C bis zu +65°C (bis zu +50°C für Ausführungen mit VIDEOTEC ANALYTICS)
- Temperaturtest in Übereinstimmung mit NEMA-TS 2-2003 (R2008) Par. 2.1.5.1, Testprofil Abb. 2-1 (-34°C bis +74°C) (nicht gültig für Versionen mit integrierter Videoanalyse, VIDEOTEC ANALYTICS)
- Eingreifen der Enteisungsfunktion (Kaltstart): von -40°C bis zu -10°C

Windfestigkeit

- PTZ unbewegt: 230km/h max.
- PTZ-Einheit in Bewegung bei Höchstgeschwindigkeit: 210km/h max.

Relative Luftfeuchtigkeit: von 5% bis zu 95%

15.1.9 Zertifizierungen

Elektrische Sicherheit (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Elektromagnetische Verträglichkeit (CE): EN50130-4, EN55032 (Klasse A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Außeninstallation (CE): EN60950-22, IEC60950-22

Vibrationstest: EN50130-5, EN60068-2-6

UL- Zertifizierung (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (nicht verfügbar für 100Vac- und 220Vac-Versionen): cULus Listed

Elektromagnetische Verträglichkeit (Nordamerika) (nicht verfügbar für 100Vac- und 220Vac-Versionen): FCC part 15 (Klasse A), ICES-003 (Klasse A)

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

Schutzart Type (UL50E) (nicht verfügbar für 100Vac- und 220Vac-Versionen): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

KC-Zertifizierung (Zertifizierung nur gültig für Code MPXHD51A001C)

15.1.10 Zertifizierungen - Explosionsgeschützte Anwendungen

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

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) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

EAC Ex (TR CU 012/2011) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

KCs (Employment and labor department 2020-33)

15.1.11 Zertifizierungen - Marine-Anwendungen

Zertifizierung Lloyd's Register Marine Type Approval (mit Kommunikationsbox MAXIMUS MBX oder mit FM1010 Filter):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Elektromagnetische Verträglichkeit: EN60945

Salznebelbeständig: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 Allgemeines

Hergestellt aus rostfreiem Stahl AISI 316L

Oberflächen außen mikrogestrahlt und elektropoliert

Dynamisches Kontrollsystem der Positionierung

Radiometrische Analyse:

- bei den 4 zentralen Pixeln, bei einer Wärmebildkamera mit radiometrischen Funktionen
- Bestimmung eines spezifischen Bereichs, bei einer Wärmebildkamera mit erweiterten radiometrischen Funktionen

Aktivierung radiometrischer Alarm: Sollte die Temperatur über dem vorgegebenen Grenzwert, unter dem vorgegebenen Grenzwert, innerhalb zwei vorgegebener Grenzwerte oder außerhalb zwei vorgegebener Grenzwerte liegen.

Aktionen bei Alarm: Aktivierung Digitalausgang, Aufruf Preset Tour, Aufruf Position Home, Aufruf Position Preset und http get request.

15.2.2 Mechanik

Kabeleingänge: 2 x 3/4" NPT

Kein mechanisches Spiel

Horizontale Drehung: 360°, kontinuierliche Drehung

Vertikale Drehung: von -90° bis zu +90°

Schwenkgeschwindigkeit rechts - links (einstellbar): von 0.1°/s bis 100°/s

Neigegeschwindigkeit Auf-Ab einstellbar (einstellbar): von 0.1°/s bis 100°/s

Genauigkeit beim Aufruf der Preset- Positionen: 0.02°

Einheitsgewicht: 26.5kg

15.2.3 Fenster für Gehäuse

Fensterscheibe aus Germanium

- Stärke: 8mm
- Außenbehandlung: kratzfest (Hard Carbon Coating - DLC), entspiegelt
- Innenbehandlung: entspiegelt
- Spektralbereich: von 7.5µm bis zu 14µm
- Mittel Transmittanz (von 7.5µm bis zu 11.5µm): 87.5%
- Mittel Transmittanz (von 11.5µm bis zu 14µm): 72.1%

15.2.4 Elektrik

Versorgungsspannung/Stromaufnahme:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Leistungsaufnahme:

- 120W max

15.2.5 Netzwerk

RJ45-Port

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet-Verbindung: 100BASE-FX
- Versorgungsspannung: 3.3V
- Standard: MSA-konform

Das SFP Modul, das nicht von VIDEOTEC geliefert wird, muss folgenden Anforderungen nachkommen:

- Laser: Class 1, in Übereinstimmung mit EN60825-1
- Zertifizierung: UL/IEC 60950-1 oder UL/IEC 62368-1

15.2.6 I/O-Schnittstelle

Eingang zum Zurücksetzen von fern: 1

Alarめingänge: 1

Relais-Ausgänge: 1 (1A, 30Vac/60Vdc max)

15.2.7 Wärmebildkameras

WÄRMEBILDKAMERAS (AUFLÖSUNG 336X256)							
	Objektiv 9mm	Objektiv 13mm	Objektiv 19mm	Objektiv 25mm	Objektiv 35mm	Objektiv 50mm	Objektiv 60mm
Image Sensor	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)
Interpolierte Auflösung	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixelzahl	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spektrale Empfindlichkeit - langwellige Infrarotstrahlung (LWIR)	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm
Interne Blende (nur zur Sensor-Kompensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital-Zoom	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Bildwiederholfrequenz	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Hohe Bildwiederholfrequenz	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Szenebereich (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Szenebereich (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Horizontaler Sehbereich	35°	25°	17°	13°	9,3°	6,5°	5,5°
Vertikaler Sehbereich	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit radiometrischen Funktionen	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit erweiterten radiometrischen Funktionen	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0
Mensch (Erfassung / Erkennung / Identifizierung)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Auto (Erfassung / Erkennung / Identifizierung)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 12

WÄRMEBILDKAMERAS (AUFLÖSUNG 640X512)

	Objektiv 9mm	Objektiv 13mm	Objektiv 19mm	Objektiv 25mm	Objektiv 35mm	Objektiv 50mm	Objektiv 60mm
Image Sensor	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)
Interpolierte Auflösung	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixelzahl	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spektrale Empfindlichkeit - langwellige Infrarotstrahlung (LWIR)	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm
Interne Blende (nur zur Sensor-Kompensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital-Zoom	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Bildwiederholfrequenz	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Hohe Bildwiederholfrequenz	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Szenebereich (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Szenebereich (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Horizontaler Sehbereich	69°	45°	32°	25°	18°	12.4°	10.4°
Vertikaler Sehbereich	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit radiometrischen Funktionen	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit erweiterten radiometrischen Funktionen	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0
Mensch (Erfassung / Erkennung / Identifizierung)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Auto (Erfassung / Erkennung / Identifizierung)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 13

15.2.8 Umgebung

Montage für den Innen- und Außenbereich

Zertifizierungstemperatur: von -40°C bis zu +80°C

Betriebstemperatur:

- Kontinuierlicher Betrieb: von -40°C bis zu +65°C
- Temperaturtest in Übereinstimmung mit NEMA-TS 2-2003 (R2008) Par. 2.1.5.1, Testprofil Abb. 2-1 (-34°C bis +74°C)
- Eingreifen der Enteisungsfunktion (Kaltstart): von -40°C bis zu -10°C

Windfestigkeit

- PTZ unbewegt: 230km/h max.
- PTZ-Einheit in Bewegung bei Höchstgeschwindigkeit: 210km/h max.

Relative Luftfeuchtigkeit: von 5% bis zu 95%

15.2.9 Zertifizierungen

Elektrische Sicherheit (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Elektromagnetische Verträglichkeit (CE): EN50130-4, EN55032 (Klasse A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Außeninstallation (CE): EN60950-22, IEC60950-22

Vibrationstest: EN50130-5, EN60068-2-6

UL- Zertifizierung (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (nicht verfügbar für 100Vac- und 220Vac-Versionen): cULus Listed

Elektromagnetische Verträglichkeit (Nordamerika) (nicht verfügbar für 100Vac- und 220Vac-Versionen): FCC part 15 (Klasse A), ICES-003 (Klasse A)

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

Schutzart Type (UL50E) (nicht verfügbar für 100Vac- und 220Vac-Versionen): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 Zertifizierungen - Explosionsgeschützte Anwendungen

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

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) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

EAC Ex (TR CU 012/2011) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

KCs (Employment and labor department 2020-33)

15.2.11 Zertifizierungen - Marine-Anwendungen

Zertifizierung Lloyd's Register Marine Type Approval (mit Kommunikationsbox MAXIMUS MBX oder mit FM1010 Filter):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Elektromagnetische Verträglichkeit: EN60945

Salznebelbeständig: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 Allgemeines

Hergestellt aus rostfreiem Stahl AISI 316L

Oberflächen außen mikrogestrahlt und elektropliert

Dynamisches Kontrollsystem der Positionierung

Radiometrische Analyse:

- bei den 4 zentralen Pixeln, bei einer Wärmebildkamera mit radiometrischen Funktionen
- Bestimmung eines spezifischen Bereichs, bei einer Wärmebildkamera mit erweiterten radiometrischen Funktionen

Aktivierung radiometrischer Alarm: Sollte die Temperatur über dem vorgegebenen Grenzwert, unter dem vorgegebenen Grenzwert, innerhalb zwei vorgegebener Grenzwerte oder außerhalb zwei vorgegebener Grenzwerte liegen.

Aktionen bei Alarm: Aktivierung Digitalausgang, Aufruf Preset Tour, Aufruf Position Home, Aufruf Position Preset und http get request.

15.3.2 Mechanik

Kabeleingänge: 2 x 3/4" NPT

Kein mechanisches Spiel

Horizontale Drehung: 360°, kontinuierliche Drehung

Vertikale Drehung: von -90° bis zu +90°

Schwenkgeschwindigkeit rechts - links (einstellbar): von 0.1°/s bis 100°/s

Neigegeschwindigkeit Auf-Ab einstellbar (einstellbar): von 0.1°/s bis 100°/s

Genauigkeit beim Aufruf der Preset- Positionen: 0.02°

Vorinstallierter Wischer

Einheitsgewicht: 31kg

15.3.3 Fenster für Gehäuse

Fenster mit gehärtetem, extra-klaarem Glas

- Stärke: 12mm

Fensterscheibe aus Germanium

- Stärke: 8mm
- Kratzfestes Finish (Hard Carbon Coating - DLC)
- Entspiegelte behandlung
- Spektralbereich: von 7.5µm bis zu 14µm
- Mittel Transmittanz (von 7.5µm bis zu 11.5µm): 87.5%
- Mittel Transmittanz (von 11.5µm bis zu 14µm): 72.1%

15.3.4 Elektrik

Versorgungsspannung/Stromaufnahme:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Leistungsaufnahme:

- 120W max

15.3.5 Netzwerk

RJ45-Port

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet-Verbindung: 100BASE-FX
- Versorgungsspannung: 3.3V
- Standard: MSA-konform

Das SFP Modul, das nicht von VIDEOTECH geliefert wird, muss folgenden Anforderungen nachkommen:

- Laser: Class 1, in Übereinstimmung mit EN60825-1
- Zertifizierung: UL/IEC 60950-1 oder UL/IEC 62368-1

15.3.6 I/O-Schnittstelle

Eingang zum Zurücksetzen von fern: 1

Alarめingänge: 1

Relais-Ausgänge: 1+1 (1A, 30Vac/60Vdc max, Ein Relais nur für die Scheibenwaschpumpe und ein konfigurierbares Relais)

15.3.7 Tag- und Nachtkamera

SONY FCB-EV7520 Day/Night Full HD 30x

Auflösung: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effektive Pixel: ca. 2.13 Megapixels

Mindestbeleuchtung:

- Farbe: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Brennweitenlänge: von 4.3mm (wide) bis zu 129mm (Tele)

Zoom: 30x (360x mit digitalem Zoom)

Iris: von F1.6 bis zu F14 (Auto, Manuell)

Horizontale Blickwinkel: von 63.7° (wide end) bis zu 2.3° (tele end)

Vertikale Bildwinkel: von 38.5° (wide end) bis zu 1.3° (tele end)

Verschlusszeit: von 1/1s bis zu 1/10000s (Auto, Manuell)

Weißabgleich: Auto, Auto Tracing, Indoor, Outdoor, Manuell, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: von 0dB bis zu 50.0dB (Auto, Manuell)

Wide Dynamic Range: 120dB

Focus System: Auto (PTZ Trigger, Full Auto), Manuell

Bildeffekte: E-flip

Verringerung des Bildrauschens (2D, 3D): Off, On (von Stufe 1 bis zu Stufe 5)

Belichtungskontrolle: Auto, Manuell, Priorität (Shutter Priority, Iris Priority, Priorität Helligkeit)

De-fog: Off, Low, Mid, High

Dynamische Maskierung der Privatbereiche: maximal 24 einstellbare Masken, maximal 8 gleichzeitig anzeigbare Masken

Indoor Flicker Reduction

Gain Limit: von 10.7dB bis zu 50dB

High sensitivity: On/Off

Backlight-Kompensation: On/Off

Auto Slowshutter: On/Off

Belichtung- korrektur: Off, On (von -10.5dB bis zu +10.5dB)

Schärfe: von Stufe 0 bis zu Stufe 15

High Light Compensation (HLC): Off, Low, Mid, High, Maskierungsstufe (Off, On, von Stufe 1 bis zu Stufe 15)

Digitale Bildstabilisierung: On/Off

15.3.8 Wärmebildkameras

WÄRMEBILDKAMERAS (AUFLÖSUNG 336X256)

	Objectiv 9mm	Objectiv 13mm	Objectiv 19mm	Objectiv 25mm	Objectiv 35mm	Objectiv 50mm	Objectiv 60mm
Image Sensor	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)
Interpolierte Auflösung	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixelzahl	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spektrale Empfindlichkeit - langwellige Infrarotstrahlung (LWIR)	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm
Interne Blende (nur zur Sensor-Kompensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital-Zoom	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Bildwiederholfrequenz	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Hohe Bildwiederholfrequenz	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Szenebereich (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Szenebereich (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Horizontaler Sehbereich	35°	25°	17°	13°	9,3°	6,5°	5,5°
Vertikaler Sehbereich	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit radiometrischen Funktionen	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit erweiterten radiometrischen Funktionen	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0
Mensch (Erfassung / Erkennung / Identifizierung)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Auto (Erfassung / Erkennung / Identifizierung)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 14

WÄRMEBILDKAMERAS (AUFLÖSUNG 640X512)							
	Objektiv 9mm	Objektiv 13mm	Objektiv 19mm	Objektiv 25mm	Objektiv 35mm	Objektiv 50mm	Objektiv 60mm
Image Sensor	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)	Ungekühltes Vanadiumoxid-Mikrobolometer (VOx)
Interpolierte Auflösung	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Pixelzahl	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Spektrale Empfindlichkeit - langwellige Infrarotstrahlung (LWIR)	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm	von 7.5µm bis 13.5µm
Interne Blende (nur zur Sensor-Kompensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Digital-Zoom	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Bildwiederholfrquenz	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Hohe Bildwiederholfrquenz	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Szenebereich (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Szenebereich (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Horizontaler Sehbereich	69°	45°	32°	25°	18°	12.4°	10.4°
Vertikaler Sehbereich	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit radiometrischen Funktionen	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0	< 50mK bei f/1.0
Thermische Empfindlichkeit (NETD), Wärmebildkamera mit erweiterten radiometrischen Funktionen	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0	< 30mK bei f/1.0
Mensch (Erfassung / Erkennung / Identifizierung)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Auto (Erfassung / Erkennung / Identifizierung)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 15

15.3.9 Umgebung

Montage für den Innen- und Außenbereich

Zertifizierungstemperatur: von -40°C bis zu +80°C

Betriebstemperatur:

- Kontinuierlicher Betrieb: von -40°C bis zu +65°C
- Temperaturtest in Übereinstimmung mit NEMA-TS 2-2003 (R2008) Par. 2.1.5.1, Testprofil Abb. 2-1 (-34°C bis +74°C)
- Eingreifen der Enteisungsfunktion (Kaltstart): von -40°C bis zu -10°C

Windfestigkeit

- PTZ unbewegt: 230km/h max.
- PTZ-Einheit in Bewegung bei Höchstgeschwindigkeit: 210km/h max.

Relative Luftfeuchtigkeit: von 5% bis zu 95%

15.3.10 Zertifizierungen

Elektrische Sicherheit (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Elektromagnetische Verträglichkeit (CE): EN50130-4, EN55032 (Klasse A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Außeninstallation (CE): EN60950-22, IEC60950-22

Vibrationstest: EN50130-5, EN60068-2-6

UL- Zertifizierung (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (nicht verfügbar für 100Vac- und 220Vac-Versionen): cULus Listed

Elektromagnetische Verträglichkeit (Nordamerika) (nicht verfügbar für 100Vac- und 220Vac-Versionen): FCC part 15 (Klasse A), ICES-003 (Klasse A)

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

Schutzart Type (UL50E) (nicht verfügbar für 100Vac- und 220Vac-Versionen): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 Zertifizierungen - Explosionsgeschützte Anwendungen

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

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) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

EAC Ex (TR CU 012/2011) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (nicht verfügbar für 100Vac- und 220Vac-Versionen)

KCs (Employment and labor department 2020-33)

15.3.12 Zertifizierungen - Marine-Anwendungen

Zertifizierung Lloyd's Register Marine Type Approval (mit Kommunikationsbox MAXIMUS MBX oder mit FM1010 Filter):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Elektromagnetische Verträglichkeit: EN60945

Salznebelbeständig: EN60068-2-52

16 Technische Zeichnungen

i Die Maße sind in Millimetern angegeben.

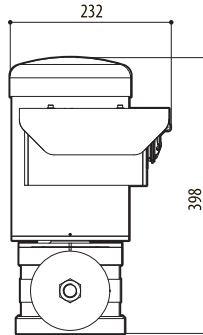
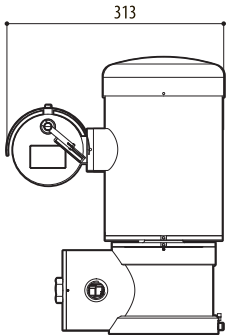
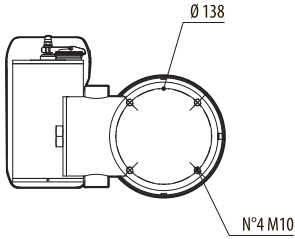


Abb. 26 MAXIMUS MPX SERIES2.

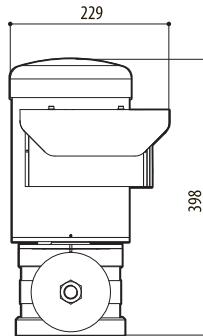
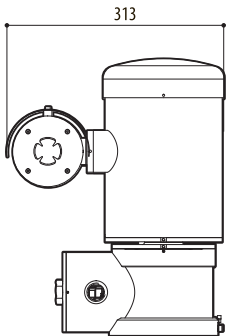
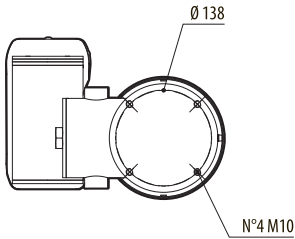


Abb. 27 MAXIMUS MPXR SERIES2.

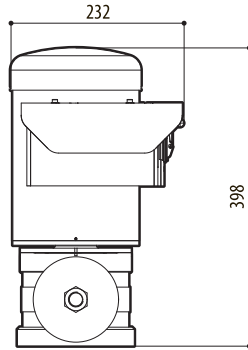
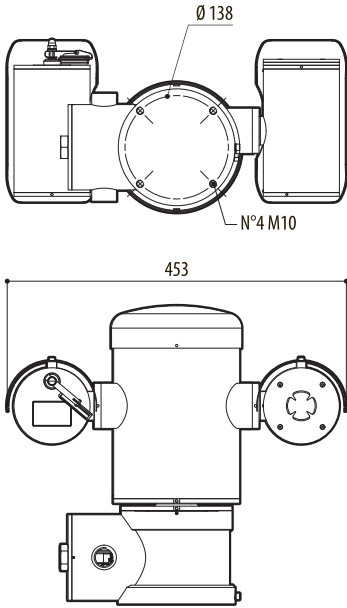


Abb. 28 MAXIMUS MPXT SERIES2.



Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

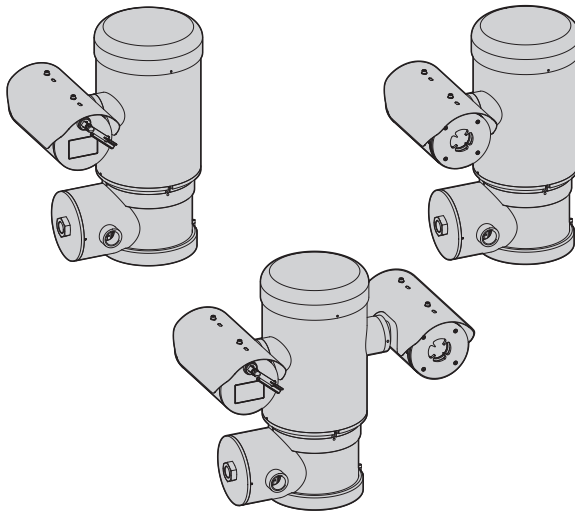


MAXIMUS MPX SERIES2 (MPXHD)

MAXIMUS MPXR SERIES2 (MPXR)

MAXIMUS MPXT SERIES2 (MPXT)

Взрывобезопасная PTZ-камера



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1 О настоящем руководстве

Перед установкой и использованием этого изделия внимательно прочтите всю предоставленную документацию. Всегда держите руководство под рукой, чтобы им можно было воспользоваться в будущем.

1.1 Типографские условные обозначения



ОПАСНОСТЬ!

**Опасность взрыва.
Внимательно прочитайте указания,
чтобы избежать опасности взрыва.**



ОПАСНОСТЬ!

**Высокий уровень опасности.
Риск поражения электрическим
током. При отсутствии иных указаний
отключите питание устройства, перед
тем как приступить к выполнению любой
операции.**



ПРЕДУПРЕЖДЕНИЕ!

**Средний уровень опасности.
Данная операция крайне важна
для обеспечения надлежащего
функционирования системы.
Внимательно ознакомьтесь с
описанием процедуры и выполните
ее в соответствии с приведенными
указаниями.**



INFO

**Описание характеристик системы.
Рекомендуем внимательно ознакомиться с
содержанием этого раздела, для того
чтобы понять следующие этапы.**

Подчеркнутые названия

Информация приведена в соответствии с сертификатами.

2 Примечания в отношении авторского права и информация о торговых марках

Названия устройств или компаний, упоминаемые в настоящем документе, являются торговыми марками или зарегистрированными торговыми знаками соответствующих компаний.

3 Правила техники безопасности



ОПАСНОСТЬ!

**Опасность взрыва.
Внимательно прочитайте указания,
чтобы избежать опасности взрыва.**

- Установка и обслуживание устройства должны проводиться квалифицированным техническим персоналом в соответствии с нормативными положениями EN/IEC 60079-14, EN/IEC 60079-17 и национальными стандартами.
- Не открывайте устройство при включенном питании и эксплуатации во взрывоопасной атмосфере.
- При установке должен использоваться соответствующий инструмент. Ввиду особенностей места установки устройства может потребоваться специальный инструмент.
- Выполняйте все операции по подключению, установке и техническому обслуживанию во взрывобезопасной атмосфере.
- Эквипотенциальное подключение обязательно для предотвращения риска возгорания устройств, установленных в потенциально взрывоопасных условиях.
- Данное устройство должно быть подключено к проводу заземления (защитное заземление). Это подключение осуществляется только через разъем линии питания. Внешние эквипотенциальные соединения выполняются только в случае, если они предусмотрены местными нормами или требованиями местных органов управления для дополнительных подключений к заземлению.
- Перед включением изделия во взрывоопасной среде убедитесь, что крышка отсека для подключения кабелей закрыта должным образом.
- Температура поверхности устройства повышается, если оборудование находится под прямыми солнечными лучами. Температурный класс поверхности устройства определен только в соответствии с температурой окружающей среды без учета воздействия прямых солнечных лучей.
- Убедитесь, что все оборудование сертифицировано для использования в тех условиях, в которых оно будет установлено.
- Любое изменение, которое выполняется без разрешения, явным образом предоставленного производителем, аннулирует гарантию.

**ОПАСНОСТЬ!**

**Высокий уровень опасности.
Риск поражения электрическим током. При отсутствии иных указаний отключите питание устройства, перед тем как приступить к выполнению любой операции.**

- Проводите установку или техническое обслуживание при отключенном источнике питания и разомкнутом выключателе сети.
- Электрическая система оснащается выключателем питания, который можно легко найти и использовать в случае необходимости.
- Система электропитания, к которой подключается устройство, должна иметь автоматический двухполюсный выключатель цепи при номинальном токе 16A max. Минимальное расстояние между контактами автоматического выключателя цепи должно составлять 3mm. Выключатель цепи должен иметь защиту от тока КЗ на землю (дифференциальная защита) и защиту от перегрузки по току (термомагнитная защита).
- Устройство считается выключенным только при отключении источника питания и отсоединении кабелей, ведущих к другим устройствам.
- Не используйте кабели, которые кажутся изношенными или старыми.
- Все кабели должны соответствовать IEC60332-1-2, IEC 60332-1-3 и IEC/EN60079-14.
- Перед началом монтажа убедитесь в том, что характеристики источника питания соответствуют характеристикам устройства.
- Для обеспечения постоянной защиты от риска возгорания при замене предохранителей следует использовать предохранители того же типа и номинала. Только обслуживающий персонал может проводить замену предохранителей.
- Устройство не годно для использования в местах где могут находиться дети.

**ПРЕДУПРЕЖДЕНИЕ!**

**Средний уровень опасности.
Данная операция крайне важна для обеспечения надлежащего функционирования системы. Внимательно ознакомьтесь с описанием процедуры и выполните ее в соответствии с приведенными указаниями.**

- Убедитесь в том, что порядок установки соответствует местным нормативным требованиям и спецификациям.
- Выполнить подключения и лабораторные испытания, перед установкой на месте применения.
- Проверьте соответствие размеров гнезда питания и кабеля.
- Используйте подходящие кабели, способные выдержать рабочую температуру.
- Все неподключенные кабели должны быть изолированы.
- Прибор может быть установлен только в стандартном или обратном положении (установка на потолок).
- Пред тем как включить питание, убедитесь в том, что устройство надежно зафиксировано.
- При запуске система выполняет ряд автоматических действий калибровки: отойдите от устройства после его включения.
- Производитель снимает с себя всю ответственность за повреждения любых перечисленных в настоящем документе устройств, которые связаны с небрежным обращением, использованием неоригинальных запасных частей, а также случаями проведения установки и технического обслуживания и ремонта неуполномоченными сотрудниками и сотрудниками, не имеющими необходимых навыков.
- Техническое обслуживание должно проводиться только уполномоченным техническим персоналом.
- Ремонт этого устройства может выполняться только прошедшими надлежащее обучение сотрудниками или под наблюдением сотрудников компании VIDEOTEC в соответствии с существующими условиями: IEC/EN60079-19.
- Используйте только оригинальные запасные части VIDEOTEC. Неукоснительно следуйте инструкциям по обслуживанию, прилагаемым к каждому ремонтному комплекту.



INFO

**Описание характеристик системы.
Рекомендуем внимательно ознакомиться с содержанием этого раздела, для того чтобы понять следующие этапы.**

- Поскольку система имеет значительный вес, используйте соответствующее подъемно-транспортное оборудование. Персонал обязан работать с устройством в соответствии с общими правилами для предотвращения несчастных случаев.
- Перед монтажом проверьте соответствие поставленных материалов спецификациям заказа, сверив идентификационные ярлыки.
- Установка оборудования, предназначенного для использования в зонах с ограниченным доступом, должна осуществляться только квалифицированным техническим персоналом.
- Производитель не несет ответственности за любые повреждения, возникающие в результате неправильного использования указанного в настоящем руководстве оборудования. Помимо этого, производитель сохраняет за собой право изменять содержание руководства без предварительного уведомления. Представленная в настоящем руководстве документация прошла тщательную проверку. Однако производитель не несет ответственности за ее использование. Аналогичные условия предусмотрены в отношении любого лица или компании, привлеченных для составления и создания данного руководства.
- Поскольку пользователь самостоятельно выбирает поверхность, на которой будет закреплено устройство, мы не предоставляем крепежные приспособления для надежной фиксации оборудования на определенной поверхности. За выбор крепежных приспособлений, подходящих для соответствующей поверхности, отвечает установщик. Рекомендуется использовать методы и материалы, которые способны выдерживать вес, превышающий вес устройства минимум в 4 раза.
- Для получения информации по размерам взрывозащищенного соединения следует обратиться к производителю.
- При необходимости проведения технического обслуживания рекомендуется направить изделие в лабораторию, сотрудники которой выполняют все требуемые операции.
- Данное устройство предоставляет возможность дистанционного управления и может менять положение в любой момент. Устройство необходимо устанавливать таким образом, чтобы избежать нанесения травм движущимися частями оборудования. Также при установке следует проверить, чтобы движущиеся части не задевали другие предметы и не создавали опасные ситуации.
- Это устройство Класса А. При установке в жилых помещениях данное устройство может вызывать радиопомехи. В таком случае пользователю может потребоваться предпринять соответствующие меры.
- Устройство следует подключать через соответствующий источник бесперебойного питания (ИБП) в целях компенсации кратковременной посадки напряжения или кратковременного нарушения электроснабжения.

4 Обозначение

4.1 Описание и обозначение типа устройства

Серия MAXIMUS MPX - это семейство PTZ-камер из электрополированной стали AISI 316L для установки в потенциально взрывоопасных средах.

Устройства серии MAXIMUS MPX оснащены кабельными вводами с резьбой NPT или метрического типа в зависимости от модели.

Устройства серии MAXIMUS MPX имеют уровень защиты IP66 /IP68/IP69 и могут быть установлены в средах с температурой от -40 °C до + 80 °C (проверьте маркировку каждой доступной модели).

Доступны версии с камерой, чувствительной к видимому свету, или тепловизором, или одновременно с двумя данными режимами.

4.2 Область применения

Устройство создано для работы в фиксированном положении и обеспечения наблюдения в зонах класса 1-21 или 2-22 с потенциально взрывоопасной средой.

Устройство изготовлено и сертифицировано в соответствии с директивой 2014/34/UE, а также международными стандартами IECEx, определяющими область его применения и минимальные требования безопасности.

4.3 Особые условия использования

Для получения информации по размерам взрывозащищенного соединения следует обратиться к производителю.

Информацию о температуре окружающей среды и температуре поверхности можно найти в инструкции.

Избегайте накопления электростатических зарядов. См. указания по установке.

Прибор может быть установлен только в стандартном или обратном положении.

4.4 Газовая группа, пылевая группа и температура

Устройство сертифицировано для группы IIC (газ) и группы IIIC (пыль).

Температурный класс, максимальная температура поверхности и температура кабельного ввода зависят от характеристик устанавливаемых устройств (рассеиваемой мощности, ватт) и от температуры окружающей среды.

Данные функции указаны для каждой модели в соответствующих главах.

4.5 Характеристики устанавливаемых устройств

Все внутренние компоненты должны быть установлены внутри производителем.

4.6 Ввод кабелей

Изделие поставляется с пластиковыми вставками для защиты кабельного ввода. Их нельзя использовать для установки.

Неиспользуемые кабельные вводы должны быть закрыты при помощи соответствующих блокирующих приспособлений, прошедших сертификацию на взрывозащиту, имеющих класс взрывозащиты db и tb, подходящих для условий эксплуатации и установленных надлежащим образом..

Все кабельные муфты должны обладать сертифицированной взрывозащищенностью (Ex) типа «db» и «tb», кроме того они должны быть пригодны для условий эксплуатации и быть правильно установлены.

В случае использования кабелепровода, необходимо использовать блокирующее соединение с сертифицированной взрывозащищенностью (Ex) типа «db» и «tb», которое должно быть пригодно для условий эксплуатации и быть правильно установлено.

Заглушка устанавливается на расстоянии не более 50mm от стенки корпуса устройства.

Температура кабельного ввода указана на маркировке.

Для поддержания уровня IP продукта используйте кабельные вводы с соответствующим уровнем IP и нанесите на резьбу герметик, соответствующий стандарту IEC / EN60079-14.

4.6.1 Заглушка (stopping plug)



Поставляемую с изделием заглушку нельзя использовать, если требуется сертификация KCS.

В комплектацию изделия входит заглушка (stopping plug), обладающая сертификатом взрывозащищенности (Ex) с защитой от взрыва типа «db» и «tb». Резьбовой герметик также поставляется в соответствии с IEC / EN60079-14, использование гарантирует степень защиты IP.

Инструкции по установке заглушка (stopping plug) доступны на <https://peppers.co.uk/useful-documents/>.

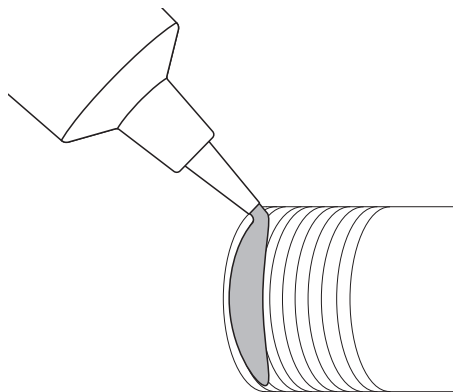


Рис. 1

4.7 Маркировка изделия

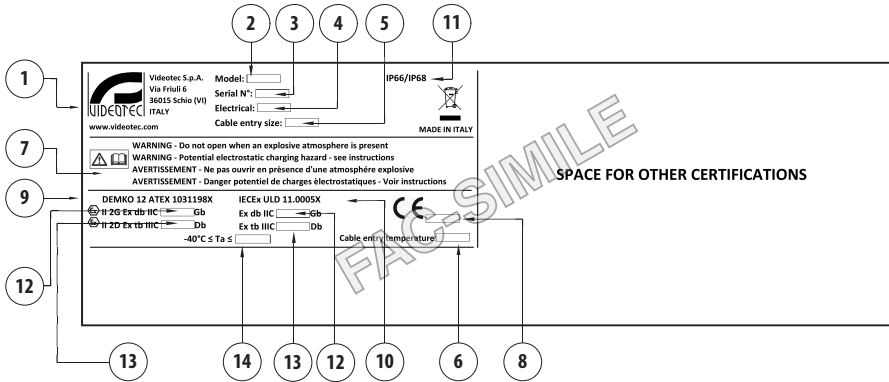


Рис. 1

1. Наименование и адрес производителя.
2. Модели.
3. Серийный номер состоит из 12 цифровых знаков, второй и третий знак - это последние две цифры года производства.
4. Электрические характеристики (напряжение V, частота Hz, сила тока A, энергопотребление W).
5. Количество, размеры и типы кабельных вводов.
6. Температура кабельного ввода.
7. Меры предосторожности.
8. Номер аккредитованного органа, обеспечивающего оценку качества.
9. Маркировка ATEX. Температурный класс зависит от установленной внутри электроники и от температуры окружающей среды.
10. Маркировка IECEx. Температурный класс зависит от установленной внутри электроники и от температуры окружающей среды.
11. Степень защиты IP.
12. T Class (Tx or Tx...Tx).
13. Максимальная температура поверхности (Tx°C или Tx°C...Tx°C).
14. Температура окружающей среды ($-40^{\circ}\text{C} \leq T_a \leq +T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}$).

Пример маркировки:

ДАННЫЕ, ПРИВЕДЕННЫЕ В КАЧЕСТВЕ ПРИМЕРА				
Рассеиваемая мощность в кожухе (ватт)	T Class	Максимальная температура поверхности	Температура кабельного ввода	Температура окружающей среды
7	T4	T135°C	90°C	$-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
	T6...T5	T85°C...T100°C	80°C	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ or 70°C
	T6...T4	T85°C...T135°C	90°C	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ or 70°C or 80°C

Табл. 1

4.8 Применимо только для стандарта UL / CSA.



Взрывозащищенные соединения не подлежат ремонту.



ПРЕДУПРЕЖДЕНИЕ! Опасные движущиеся детали. Следите за тем, чтобы пальцы и другие части тела были на безопасном расстоянии.



Оборудование включает движущиеся детали. Убедитесь, что устройство расположено в недоступном при нормальном режиме работы месте. Разместите предупреждающую этикетку, предоставленную вместе с оборудованием, рядом с устройством так, чтобы она была хорошо заметна.



Рис. 2



В США электрическое оборудование, используемое в опасных промышленных условиях, должно отвечать требованиям Национального электротехнического кодекса (NEC), в Канаде - Канадского электротехнического кодекса (CEC).



Версии продуктов на 100 и 220 В переменного тока не сертифицированы UL.

Важные инструкции по технике безопасности

WARNING: DO NOT OPEN WHEN AN 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 ELECTROSTATIQUES - VOIR INSTRUCTIONS.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L'ENTRÉE DU CONDUIT DU CAISSON.

При установке в соответствии со стандартами UL / CSA следует в обязательном порядке, как указано в соответствующей главе, установить сепаратор, входящий в комплект. (7.5.1 Установка в соответствии со стандартами UL/CSA, страница 27).

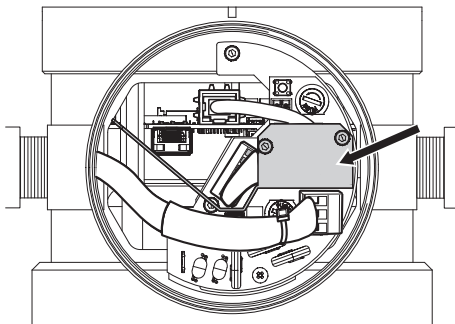


Рис. 3

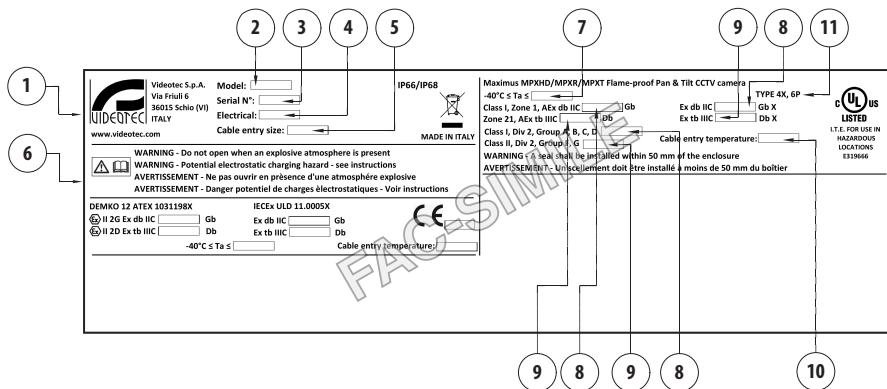


Рис. 4

1. Наименование и адрес производителя.
2. Модели.
3. Серийный номер состоит из 12 цифровых знаков, второй и третий знак - это последние две цифры года производства.
4. Электрические характеристики (напряжение V, частота Hz, сила тока A, энергопотребление W).
5. Количество, размеры и типы кабельных вводов.
6. Меры предосторожности.
7. Температура окружающей среды ($-40^{\circ}\text{C} \leq T_a \leq +T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}$).
8. T Class (Tx or Tx...Tx).
9. Максимальная температура поверхности ($T_x^{\circ}\text{C}$ или $T_x^{\circ}\text{C}...T_x^{\circ}\text{C}$).
10. Температура кабельного ввода.
11. Степень защиты Тип.

Соединения



Соединения должны выбираться в соответствии с действующими местными нормами..

Кабельные муфты: подберите кабельный ввод, соответствующий UL2225 со следующей защитой AEx db IIC / / или AEx tb IIC и C22.2 со следующей защитой Ex db IIC и / или Ex tb IIC в зависимости от маркировки изделия.

Кабелепровод: при использовании кабелепровода необходимо установить уплотнитель, закрывающий пространство в 50 мм от входного отверстия изделия.

Нормативные ссылки:

- 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”

5 Модели

5.1 Камера Day/Night

MAXIMUS MPX SERIES2 - ОПЦИИ КОНФИГУРАЦИЙ						
	Напряжение	Камера	Класс температуры и температуры окружающей среды	Видеоанализ	ONVIF-профили	
MPXHD	1 230Vac	1 Камера для сверхнизкого освещения, дневной/ночной режим, FULL HD 1080p, 30x, с технологией DELUX	A T6...T5 -40°C/+60°C or +70°C	0 Без встроенной функции анализа видеоданных (Без VIDEOTEC ANALYTICS)	00 Соответствие стандарту ONVIF, Профилю Q, Профилю S и Профилю T	C
	2 24Vac	2 Камера SONY FCB-EV7520, FULL HD 1080p, 30x	D T4 -40°C/+80°C	V Со встроенной функцией анализа видеоданных (VIDEOTECH ANALYTICS)	01 Соответствие стандарту ONVIF, Профилю S и Профилю T	
	3 120Vac		C T5...T4 -40°C/+55°C or +60°C			
	5 220Vac					
	6 100Vac					

Табл. 2

MAXIMUS MPX SERIES2 - СЕРТИФИКАТЫ И МАРКИРОВКА				
Номер изделия	Сертификаты	Маркировка	Температура окружающей среды	Температура ввода кабелей
MPXHD1**A0**C, MPXHD2**A0**C, MPXHD3**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXHD5**A0**C, MPXHD6**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db		80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXHD1**D0**C, MPXHD2**D0**C, MPXHD3**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD5**D0**C, MPXHD6**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db		
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXHD1**CV**C, MPXHD2**CV**C, MPXHD3**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4		
MPXHD5**CV**C, MPXHD6**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db		
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C		

Табл. 3

5.2 Тепловизор

MAXIMUS MPXR SERIES2 - ОПЦИИ КОНФИГУРАЦИЙ											
	Напряжение		Тепловизор	Температурный класс		Радиометрия		ONVIF-профили		Частота	
MPXR	1	230Vac	A Тепловизор 35mm, 336x256	A	T6...T5 -40°C/+60°C or +70°C	00	Тепловизионная камера с радиометрическими функциями	0	Соответствие стандарту ONVIF, Профилю Q, Профилю S и Профилю T	C	- 7.5Hz
	2	24Vac	B Тепловизор 25mm, 336x256	D	T4 -40°C/+80°C	0R	Тепловизионная камера с расширенными радиометрическими функциями	1	Соответствие стандарту ONVIF, Профилю S и Профилю T	H	30Hz
	3	120Vac	V Тепловизор 19mm, 336x256								
	5	220Vac	F Тепловизор 13mm, 336x256								
	6	100Vac	C Тепловизор 9mm, 336x256								
			D Тепловизор 35mm, 640x512								
			E Тепловизор 25mm, 640x512								
			U Тепловизор 19mm, 640x512								

Табл. 4

MAXIMUS MPXR SERIES2 - СЕРТИФИКАТЫ И МАРКИРОВКА				
Номер изделия	Сертификаты	Маркировка	Температура окружающей среды	Температура ввода кабелей
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Табл. 5

5.3 Двойное изображение благодаря режимам Day/Night («день-ночь») и тепловизора

MAXIMUS MPXT SERIES2 - ОПЦИИ КОНФИГУРАЦИЙ									
	Напряжение		Камера Day/Night	Тепловизор	Температурный класс	Радиометрия	ONVIF-профили		Частота
MPXT	1	230Vac	2 Камера SONY FCB-EV7520, FULL HD 1080p, 30x	A Тепловизор 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Тепловизионная камера с радиометрическими функциями	0 Соответствие стандарту ONVIF, Профилю Q, Профилю S и Профилю T	C	- 7.5Hz
	2	24Vac		B Тепловизор 25mm, 336x256	D T4 -40°C/+80°C	0R Тепловизионная камера с расширенными радиометрическими функциями	1 Соответствие стандарту ONVIF, Профилю S и Профилю T		H 30Hz
	3	120Vac		V Тепловизор 19mm, 336x256					
	5	220Vac		F Тепловизор 13mm, 336x256					
	6	100Vac		C Тепловизор 9mm, 336x256					
				D Тепловизор 35mm, 640x512					
				E Тепловизор 25mm, 640x512					
				U Тепловизор 19mm, 640x512					

Табл. 6

MAXIMUS MPXT SERIES2 - СЕРТИФИКАТЫ И МАРКИРОВКА				
Номер изделия	Сертификаты	Маркировка	Температура окружающей среды	Температура ввода кабелей
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Табл. 7

6 Подготовка устройства к использованию



Перед выполнением любых операций внимательно прочитайте раздел «Правила техники безопасности» в руководстве по эксплуатации устройства.

6.1 Распаковка

При получении устройства убедитесь, что упаковка не повреждена и не имеет явных признаков падения или царапин.

В случае наличия видимых повреждений незамедлительно свяжитесь с поставщиком.

В случае возврата неисправного устройства мы рекомендуем использовать оригинальную упаковку для транспортировки.

Сохраняйте упаковку на случай, если потребуется отправить устройство на ремонт.

6.2 Комплект оборудования

Проверьте комплект оборудования на соответствие представленному ниже списку материалов:

- Взрывобезопасная PTZ-камера
- Солнцезащитный козырек (2 для MAXIMUS MPXT)
- Силиконовая оболочка
- Комплект запасных уплотнительных колец, предохранительные штифты
- заглушка (stopping plug)
- Герметик
- Кабельные стяжки
- Разделительный барьер для установки в соответствии со стандартами UL/CSA
- Руководство по эксплуатации

6.3 Безопасная утилизация упаковочных материалов

Упаковочные материалы могут подвергаться переработке. Технический специалист установщика отвечает за сортировку материалов для переработки, а также за соблюдение требований законодательства, действующего в месте установки устройства.

6.4 Подготовительные работы перед установкой

Устройство может быть установлено с помощью нескольких кронштейнов.

При установке настоятельно рекомендуется использовать только разрешенные кронштейны и комплектующие.

6.4.1 Способы установки

Прибор может быть установлен только в стандартном или обратном положении (установка на потолок). При установке в настоящей позиции, реконфигурация функций направления и контроля телекамеры, выполняется программой системы.

Для работы в перевернутом положении не требуется проводить корректировку оборудования.

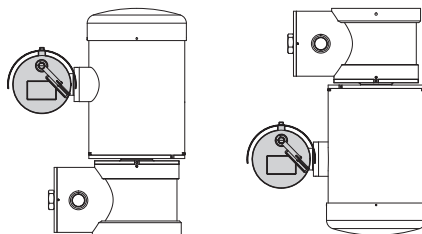


Рис. 5

6.4.2 Крепление к парапету или на потолок

Прикрепите адаптер (01) к днищу устройства, используя 4 прилагаемых болта с плоской потайной головкой (02) с шестигранным шлицем из нержавеющей стали M10x20mm (A4 класс 70).

Убедитесь, что на резьбе нет грязи.

Нанесите большое количество герметика для резьбовых соединений (Loctite 270) на 4 резьбовых отверстия в основании устройства.

**⚠ Будьте внимательны при монтаже.
Момент затяжки: 35Nm.**

Оставьте герметик застывать в течение одного часа; не забудьте выждать указанное количество времени до завершения установки.

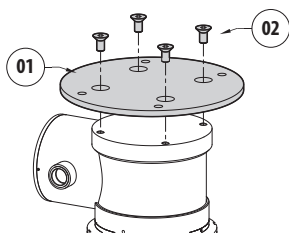


Рис. 6

Используйте внешние отверстия в адаптере, чтобы закрепить собранное устройство на парапете или потолке. Используйте винты, которые способны удерживать вес, превышающий вес устройства не менее чем в 4 раза.

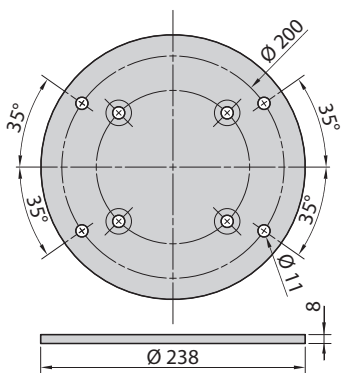


Рис. 7

6.4.3 Крепление с помощью кронштейна

Кронштейн может быть закреплен на вертикальной стене. Используйте винты и приспособления для крепления на стене, которые способны выдержать вес, превышающий вес устройства не менее чем в 4 раза.

Для крепления устройства к кронштейну используйте 4 плоские шайбы, 4 пружинные шайбы из нержавеющей стали и 4 болта с шестигранной головкой из нержавеющей стали (A4 класс 70), входящие в комплектацию (M10x20mm).

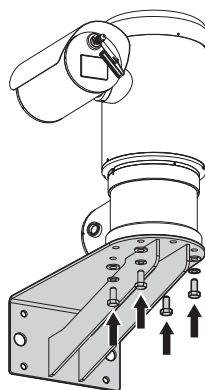


Рис. 8

Убедитесь, что на резьбе нет грязи.

Нанесите на поверхность 4 винтов толстый слой герметика для резьбовых соединений (Loctite 270).

Затяните винты.

**⚠ Будьте внимательны при монтаже.
Момент затяжки: 35Nm.**

Оставьте герметик застывать в течение одного часа; не забудьте выждать указанное количество времени до завершения установки.

6.4.4 Установка на угловой адаптер или стойку

Перед установкой изделия на угловой адаптер или стойку сначала закрепите опорный кронштейн.

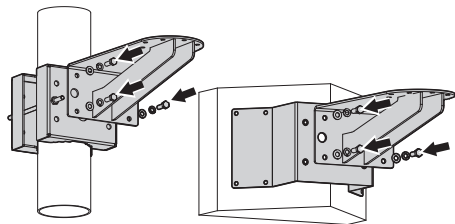


Рис. 9

Закрепите опорный кронштейн при помощи 4 плоских шайб, 4 эластичных шайб из нержавеющей стали и 4 винтов с шестигранной головкой из нержавеющей стали (A4 класс 70) M10x30мм, которые входят в комплект.

Убедитесь, что на резьбе нет грязи.

Нанесите большое количество герметика для резьбовых соединений (Loctite 270) на 4 резьбовых отверстия адаптера.

Затяните винты.

**⚠ Будьте внимательны при монтаже.
Момент затяжки: 35Nm.**

Оставьте герметик застывать в течение одного часа; не забудьте выждать указанное количество времени до завершения установки.

Информацию о креплении устройства к кронштейну см. в соответствующем разделе (6.4.3 Крепление с помощью кронштейна, страница 22).

6.4.5 Установка солнцезащитного козырька

i **Перед тем как установить солнцезащитный козырек (при его наличии), снимите (защитную пленку).**

Прикрепите козырек к кожуху, используя винты и шайбы, привинченные к верхней части кожуха.

Нанесите толстый слой герметика для резьбовых соединений (Loctite 270) на поверхность резьбовых отверстий в основании устройства.

Оставьте герметик застывать в течение одного часа; не забудьте выждать указанное количество времени до завершения установки.

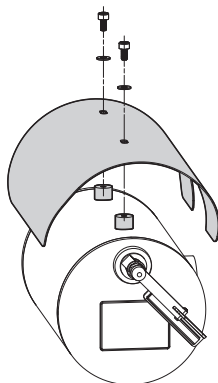


Рис. 10

**⚠ Будьте внимательны при монтаже.
Момент затяжки: 2Nm.**

7 Монтаж

! Перед выполнением любых операций внимательно прочитайте раздел «Правила техники безопасности» в руководстве по эксплуатации устройства.

VIDEOTEC настоятельно рекомендует проверить конфигурацию и эксплуатационные характеристики устройства перед его окончательной установкой в соответствующем месте.

7.1 Подключение заземления

7.1.1 Подключение эквипотенциального заземления

Эквипотенциальное заземление должно быть выполнено с использованием внешнего кабеля с минимальным сечением 4 мм² (11AWG).

Подключите кабель для эквипотенциального заземления с помощью прилагаемой клеммы-проушины (подходит для кабелей сечением от 4 мм² (11AWG) до 6 мм² (9AWG)).

Закрепите клемму-проушину с помощью винта M5 и зубчатой шайбы, которые входят в комплект.

Характеристики винта M5:

- Материал: A4 Класс 70
- Головка винта: ISO 4762
- Длина: 8mm

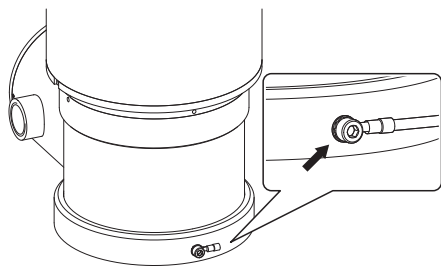


Рис. 11

7.1.2 Подключение защитного заземления

Необходимо подключить заземляющий провод к внутреннему разъему (J1, 7.3 Описание платы разъемов, страница 25).

7.2 Открытие отсека для подключения кабелей

i Используется предохранительный винт с плоским концом и шестигранным углублением под ключ. Данный винт не позволяет снять крышку с резьбой с соединительного отсека. Перед тем как выкрутить крышку с резьбой, извлеките защитный винт с плоским концом.

На основании устройства есть 2 кабельных ввода 3/4 " с резьбой NPT. (или M25 специальная версия).

Для подключения извлеките предохранительные штифты (01), используя шестигранный ключ на 1.5mm, резьбовую крышку (02) (шестигранная гайка 30mm) и пластмассовые заглушки (03).

Пластиковые заглушки используются только для транспортировки, а не работы устройства.

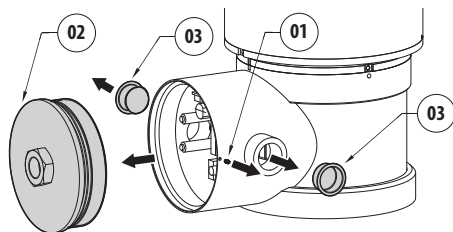


Рис. 12

Выкрутив крышку с резьбой, вы получите доступ к отсеку для подключения кабелей.

7.3 Описание платы разъемов

ОПИСАНИЕ ПЛАТЫ		
Разъем	Функция	Клеммы - Номинальное сечение используемых кабелей
J1	Линия электропитания	от 0.2mm ² (24AWG) до 2.5mm ² (13AWG)
J6	Аварийные сигналы (Alarms), Удаленный сброс и последовательная линия	от 0.2mm ² (24AWG) до 1.0mm ² (17AWG)
J8	Реле (Relay)	от 0.2mm ² (24AWG) до 1.0mm ² (17AWG)
F1	Предохранитель	-
F2	Предохранитель	-
P1	Кнопка сброса	-
RJ45	Разъём Ethernet	-
SFP	Разъем SFP	-

Табл. 8

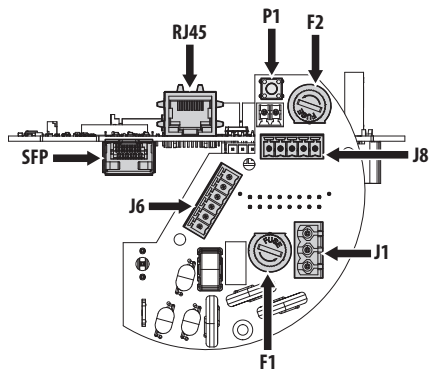


Рис. 13

7.4 Подключение линии питания

В зависимости от модели на устройство может подаваться разное напряжение сети питания. Значение напряжения сети указано на идентификационной этикетке устройства.



Кабель заземления должен быть длиннее двух других кабелей примерно на 10mm, чтобы предотвратить его случайное отсоединение при натягивании.



Силовой кабель необходимо закрыть силиконовой оболочкой (01), входящей в комплект оборудования. Силиконовая оболочка крепится с помощью соответствующей кабельной стяжки (02). Для установки в соответствии со стандартами UL/CSA вставьте кабель питания в кабельный ввод слева (03), как показано на рисунке..



В случае использования многожильного и оптоволоконного кабелей компании VIDEOTEC, рекомендуется подсоединять многожильный кабель к левому кабельному вводу (03), а оптоволоконный - к правому (04).

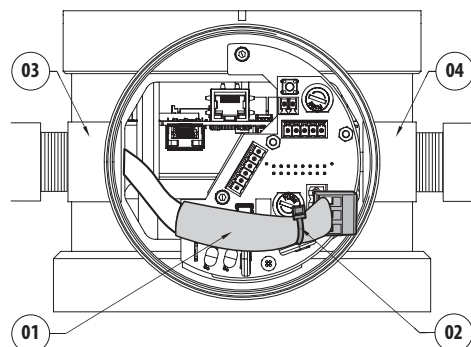


Рис. 14



Сечение провода защитного заземления должно быть не меньше сечения силовых кабелей.

Отсоедините от платы подключения съемный разъем линии питания (J1, 7.3 Описание платы разъемов, страница 25).

Подключите силовые кабели, как указано в соответствующей таблице (Табл. 9, страница 26).

ПОДКЛЮЧЕНИЕ ЛИНИИ ПИТАНИЯ	
Цвет	Клеммы
Источник питания 24Vac	
Определяется установщиком	N (Нейтраль)
Определяется установщиком	L (Фаза)
Желтый/Зеленый	⊕
Источник питания 230Vac	
Синий	N (Нейтраль)
Коричневый	L (Фаза)
Желтый/Зеленый	⊕
Источник питания 120Vac	
Синий	N (Нейтраль)
Коричневый	L (Фаза)
Желтый/Зеленый	⊕

Табл. 9

7.5 Подключение кабелей для передачи сигналов тревоги, удаленного сброса и реле



Все сигнальные кабели необходимо собрать в пучок с помощью кабельной стяжки.

ПОДКЛЮЧЕНИЕ ВХОДОВ СИГНАЛА ТРЕВОГИ И РЕЛЕ		
Разъемы	Клеммы	Описание
J6	AL1, COM	Установленный на общей клемме вход для кабеля передачи сигналов тревоги с автономным питанием
	RST, RST	Удаленный сброс
J8	RL1A, RL1B	Сухие выходные контакты, активируемые сигналом тревоги или командой пользователя
	RL2A, RL2B	Контакт для активации насоса омывателя

Табл. 10

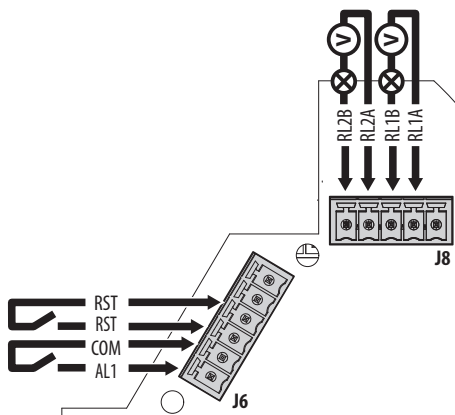


Рис. 15

7.5.1 Установка в соответствии со стандартами UL/CSA

⚠ Будьте осторожны и не повредите проводники и платы.

При установке в соответствии со стандартами UL/CSA кабели для Ethernet, аварийных сигналов сброса, реле, а также оптоволоконные кабели должны быть подсоединены к правому кабельному вводу, как показано на следующем рисунке (Рис. 16, страница 27).

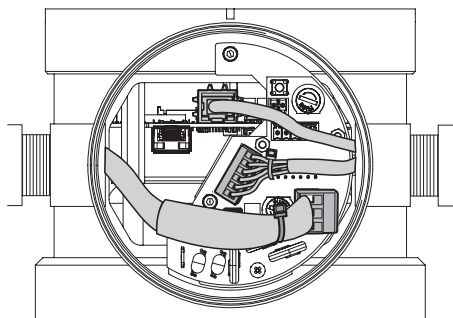


Рис. 16

При установке в соответствии со стандартами UL/CSA необходимо установить прилагаемый разделительный барьер.

После подсоединения ко всем разъемам и перед включением устройства установите разделительный барьер, входящий в комплект. Закрепите барьер (01) с помощью специальных винтов и шайб (02) к подготовленным разделителям (03) (Рис. 17, страница 27 и Рис. 18, страница 27).

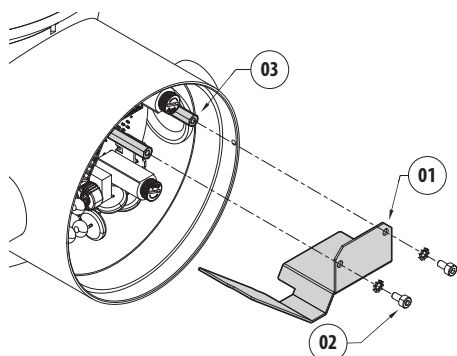


Рис. 17

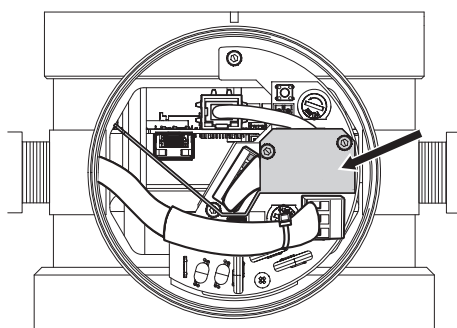


Рис. 18

7.5.2 Подключение аварийного сигнала к сухому контакту

Подключите клеммы AL1 и COM к разъему J6, как показано на рисунке (Рис. 15, страница 26).

Максимальная длина кабелей для передачи сигналов тревоги: 200m.

Для подключения используйте экранированный кабель.

7.5.3 Подключение кабеля для удаленного сброса

Подключите два штепселя RST к разъему J6, как показано на рисунке (Рис. 15, страница 26).

Максимальная длина кабеля: 200m.

Для ознакомления с информацией об удаленном сбросе откройте главу «Заводские настройки». (11.2.3 Factory Default, страница 32).

7.5.4 Подключение реле

Максимальное напряжение и ток реле: обратитесь к техническим данным в соответствующей главе (15 Технические характеристики, страница 35).

Подключите клеммы RL1A, RL1B, RL2A, RL2B к разъему J8, как показано на рисунке (Рис. 15, страница 26).

Устройство может быть оснащено омывателем. Для управления системой омывателя используйте клеммы RL2A и RL2B.

7.6 Подключение по Ethernet

Изделие оснащено встроенным Ethernet-коммутатором для управления портом RJ45 и слотом для модулей SFP.

7.6.1 Подключение по RJ45

Выполните подключение в соответствии со стандартом TIA/EIA-568-B.

Подключите Ethernet-кабель к порту RJ45 (7.3 Описание платы разъемов, страница 25).

Настоятельно рекомендуется использовать Ethernet-кабели со следующими характеристиками:

- STP (изолированный)
- Категория 5E или категория 6

С обоих концов кабеля установите экранированные разъемы RJ45. Экран Ethernet-кабеля (со стороны пользователя) должен быть постоянно заземлен с помощью соответствующего разъема.

7.6.2 Подключение по SFP

Оптические модули, соответствующие стандарту SFP (Small Form Factor Pluggable), являются устройствами, преобразующими электрический сигнал в оптический и оптический сигнал в электрический.

Модуль SFP используется для соединения с оптоволоком. Модуль SFP должен быть совместим с устанавливаемым оборудованием.

Для ознакомления с соответствующими характеристиками откройте руководство по эксплуатации модуля SFP.

Модуль SFP (не поставляется VIDEOTEC) должен отвечать следующим требованиям:


- Лазер: Class 1, отвечает требованиям EN60825-1
- Сертификация согласно UL/IEC 60950-1 или UL/IEC 62368-1


Коммутатор пользователя, подключенный при помощи модуля SFP, должен работать со скоростью 100Mbps. Проверьте настройки коммутатора, к которому подключено изделие.


VIDEOTEC протестировал различные типы SFP-модулей. Для получения дополнительной информации обратитесь в сервисный центр VIDEOTEC.


Вставьте модуль SFP (не входит в комплект) в SFP-слот (7.3 Описание платы разъемов, страница 25).

7.7 Закрытие отсека подключений

 Если не получается прикрутить крышку с резьбой вручную, так чтобы уплотнительное кольцо доставало до отсека подключений, это означает, что на резьбе присутствует грязь или крышка смещена. В этом случае возникает существенная опасность повреждения резьбы. Снимите крышку и проверьте ее положение и/или очистите резьбу.

 Чтобы не повредить резьбу, не следует прикручивать с силой крышку с резьбой, если уплотнительное кольцо не достает до отсека подключений.

 Если вы полагаете, что резьба каким бы то ни было образом повреждена, прекратите установку. Устройство может больше не подходить для безопасной установки в потенциально взрывоопасной среде. В таком случае обратитесь за технической поддержкой VIDEOTEC.

 Перед закрытием крышки убедитесь, что уплотнительное кольцо не повреждено. В случае если прокладка повреждена, замените ее на прилагаемую (11.1.2 Замена прокладки, страница 31).

Убедитесь в отсутствии грязи и инородных частиц.

Нанесите на резьбу смазку, соответствующую IEC / EN60079-14, чтобы облегчить завинчивание крышки.

Расположите кабели так, чтобы они не мешали при закрытии крышки с резьбой отсека подключений.

Прикрутите вручную крышку с резьбой отсека подключений, таким образом чтобы уплотнительное кольцо доставало до трубы.

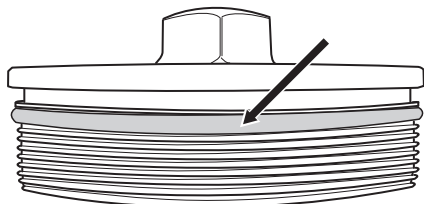


Рис. 19

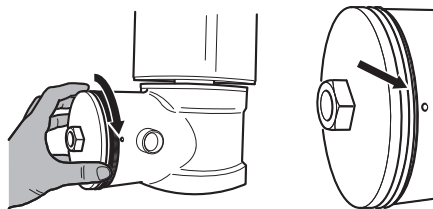


Рис. 20

Герметично закрутите крышку с резьбой отсека подключений с помощью ключа 30mm. После того как вы зафиксировали крышку, убедитесь, что крышка с резьбой плотно прилегает к трубе отсека подключений.

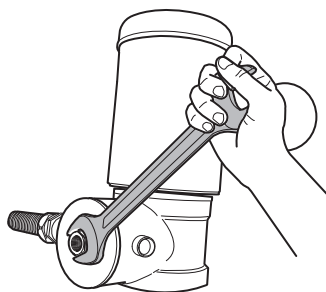


Рис. 21

Фиксация предохранительного штифта необходима для завершения закрытия изделия, чтобы предотвратить нежелательное отвинчивание резьбовой пробки.

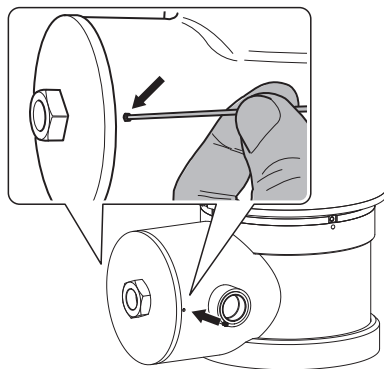


Рис. 22

8 Включение



Перед выполнением любых операций внимательно прочитайте раздел «Правила техники безопасности» в руководстве по эксплуатации устройства.



Процесс автоматического предварительного подогрева (De-Ice) активируется при каждом включении устройства, если температура окружающей среды ниже -10°C . Данный процесс служит для обеспечения правильного функционирования устройства даже при низких температурах. Продолжительность процесса зависит от условий окружающей среды (от 60 минут до 120 минут).

Для того чтобы включить устройство, подключите источник питания.

После включения устройству требуется несколько минут, чтобы быть полностью готовым для использования.

Для того чтобы выключить устройство, отключите источник питания.

9 Конфигурация

9.1 IP-адрес по умолчанию



Устройство настроено таким образом, чтобы получить IP-адрес от сервера DHCP.

IP-адрес, полученный через DHCP, можно посмотреть в файле журнала сервера DHCP.

Если сервер DHCP недоступен, устройство настраивается автоматически, используя самостоятельно сгенерированный IP-адрес в подсети 169.254.x.x/16. Настройка IP-адреса компьютера в той же подсети (пример: IP-адрес: 169.254.1.1, subnet mask: 255.255.0.0).

Для поиска IP-адреса устройства используйте совместимую с ONVIF программу управления видео (VMS) или сетевой анализатор пакетов (сниффер). (Программа сканирования IP).

9.2 Веб-интерфейс



Поддерживаемые браузеры (последняя версия): Microsoft Edge, Google Chrome, Mozilla Firefox.

9.2.1 Первый вход на веб-страницу


Первое действие по настройке конфигурации устройства заключается в подключении к веб-интерфейсу.


Чтобы войти в веб-интерфейс устройства, просто используйте браузер для подключения к адресу `http://ip_address`.


При первом входе будет отображаться Главная страница.

Для настройки веб-интерфейса ознакомьтесь с инструкцией для установленной версии ПО; инструкция доступна на веб-странице изделия на сайте www.videotec.com.

10 Инструкции по работе в нормальном режиме

 **Перед выполнением любых операций внимательно прочитайте раздел «Правила техники безопасности» в руководстве по эксплуатации устройства.**


 **Не используйте стеклоочиститель, если температура окружающей среды ниже 0°C или при наличии льда.**

 **Если оставить стеклоочиститель во включенном состоянии, он автоматически выключится.**

Управление устройством может осуществляться различными способами.

- Через пользовательские элементы управления в веб-интерфейсе (9.2 Веб-интерфейс, страница 30).
- С помощью Программы управления видео (VMS), поддерживающей протокол ONVIF. В этом случае Специальные элементы управления включаются с помощью вспомогательных команд протокола ONVIF.
- Через программное обеспечение PTZ Assistant (Для скачивания с веб-страницы изделия на сайте www.videotec.com доступен ПО-помощник PTZ Assistant.).

11 Техническое обслуживание

 **Перед выполнением любых операций внимательно прочитайте главу «Правила техники безопасности» в руководстве по эксплуатации устройства.**

При обращении за поддержкой в компанию VIDEOTEC предоставьте серийный номер и идентификационный код модели.

Используйте только запчасти компании VIDEOTEC.

11.1 Плановое техническое обслуживание (производится регулярно)

11.1.1 Проверка кабелей

На кабелях не должно быть признаков повреждения или износа, способных привести к опасным ситуациям. В случае их обнаружения необходимо провести внеочередное техническое обслуживание.

11.1.2 Замена прокладки

Замените прокладку крышки отсека для подключения кабелей, используя прокладку из комплекта.

Откройте и закройте отсек для подключения кабелей, как указано в предыдущих главах.

Замените прокладку, убедившись в том, что она расположена правильно.

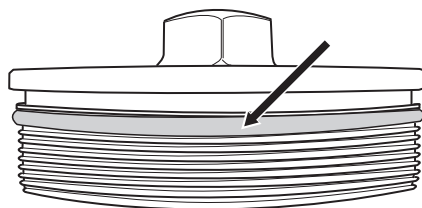


Рис. 23

11.2 Внеочередное обслуживание (выполняется только в особых случаях)

11.2.1 Замена предохранителя

При необходимости замените предохранители, показанные на рисунке (7.3 Описание платы разъемов, страница 25).

ЗАМЕНА ПРЕДОХРАНИТЕЛЕЙ		
Напряжение сети питания	Предохранитель (F1)	Предохранитель (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Табл. 11

11.2.2 Замена щетки стеклоочистителя

В моделях, оснащенных стеклоочистителями, можно заменить изношенные щетки.

Открутите глухую гайку, которая крепит щетку, и извлеките ее вместе с шайбами. Замените изношенную щетку на новую. Нанесите достаточное количество фиксатора резьбы (Loctite 270), установите глухую гайку и шайбы обратно, отрегулировав крепление так, чтобы щетка правильно прилегала к стеклу. Включите стеклоочиститель, чтобы проверить, правильно ли установлена щетка.

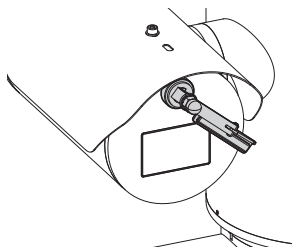


Рис. 24

11.2.3 Factory Default

! Если пароль доступа уже недействителен, выполните процедуру возврата к заводским настройкам.

Результат заводских настроек эквивалентен результату настроек через программное обеспечение (кнопка сброса настроек Hard Reset).

Чтобы восстановить заводские настройки, относящиеся к сети, доступу пользователя и конфигурации камеры, выполните следующие действия:

- Отключите устройство.
- Откройте отсек подключений.
- Удерживайте кнопку сброса в нажатом положении (P1, 7.3 Описание платы разъемов, страница 25).
- Подключите устройство к сети электропитания.
- Подождите 30 секунд.
- Отпустите кнопку сброса.
- Подождите 2 минуты.
- Отключите устройство.
- Закройте отсек подключений.
- Подключите устройство к сети электропитания.

Также можно сбросить настройки в дистанционном режиме. Выполните следующие действия:

- Отключите устройство.
- Соедините провода RST разъема J6 (7.3 Описание платы разъемов, страница 25).
- Подключите устройство к сети электропитания.
- Подождите 30 секунд.
- Разъедините провода RST.
- Подождите 2 минуты.
- Отключите устройство.
- Подключите устройство к сети электропитания.

i После установки заводских настроек устройство должно быть настроено так, как описано в соответствующей главе (9.1 IP-адрес по умолчанию, страница 30).

12 Очистка

! Перед выполнением любых операций внимательно прочитайте раздел «Правила техники безопасности» в руководстве по эксплуатации устройства.

i Частота операций зависит от среды эксплуатации изделия.

12.1 Плановое уборка (производится регулярно)

12.1.1 Очистка стеклянного окна

Очистку следует выполнять с помощью мягкого мыльного раствора.

12.1.2 Очистка германиевого окна

! При выполнении очистки постарайтесь не поцарапать и не повредить внешнюю поверхность окна с графитовым покрытием. Повреждение покрытия может негативно отразиться на проницаемости поверхности для инфракрасного излучения.

Очистку следует выполнять с помощью мягкого мыльного раствора.

Извлеките защитную вставку и разделитель, открутив винты с потайной головкой на лицевой стороне кожуха при помощи искрозащищенного шестигранного ключа 2 мм.

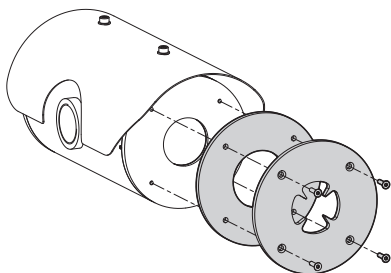


Рис. 25

После завершения очистки установите на место прокладку и защитную сетку.

12.1.3 Очистка устройства

! Толщина слоя пыли на внешней поверхности устройства не должна превышать 5mm.

i Очистку устройства необходимо производить согласно указаниям, представленным в данной главе, для предотвращения накопления электростатических зарядов.

Очистку устройства необходимо выполнять с помощью влажной ткани; не следует использовать сжатый воздух.

13 Информация об утилизации и переработке

Европейская директива 2012/19/ЕС Об Отходах Электрического и Электронного оборудования (RAEE) предписывает, что данные устройства не следует утилизировать вместе с твердыми бытовыми отходами; их сбор осуществляется отдельно для оптимизации потока их утилизации и переработки содержащихся в них материалов, а также снижения воздействия на здоровье людей и окружающую среду в связи с присутствием потенциально опасных веществ.



Значок с изображением зачеркнутого мусорного контейнера присутствует на всей продукции для напоминания об указанном требовании.

Отходы могут доставляться в соответствующие центры по сбору отходов или бесплатно передаваться дистрибьютору, у которого было куплено оборудование, в момент покупки новой аналогичной продукции или без обязательства совершить новую покупку в случае оборудования, чей размер не превышает 25см.

Для получения более подробной информации о надлежащей утилизации данных устройств вы можете обратиться в уполномоченную государственную организацию.

14 Поиск и устранение неисправностей



Перед выполнением любых операций внимательно прочитайте раздел «Правила техники безопасности» в руководстве по эксплуатации устройства.



В том случае, если перечисленные ниже проблемы не удается устранить или если вы столкнулись с другими проблемами, описание которых здесь не представлено, обратитесь в авторизованный сервисный центр.

НЕИСПРАВНОСТЬ Устройство не включается.

ПРИЧИНА	Неправильный монтаж проводки, сгоревший предохранитель.
РЕШЕНИЕ	Убедитесь в том, что соединения выполнены надлежащим образом. Проверьте правильность работы предохранителей, и при выходе предохранителей из строя замените их на предохранители указанных моделей.

НЕИСПРАВНОСТЬ Область наблюдения не соответствует выбранному предварительно настроенному положению.

ПРИЧИНА	Потеряны опорные параметры абсолютного положения.
РЕШЕНИЕ	Перезагрузите устройство, выключив и включив его.

НЕИСПРАВНОСТЬ Устройство не двигается на этапе запуска.

ПРИЧИНА	Слишком низкая температура окружающей среды.
РЕШЕНИЕ	Дождитесь окончания процедуры предварительного подогрева. На веб-странице отображается следующее сообщение: Выполняется процедура De-Ice.

15 Технические характеристики

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 Общие сведения

Конструкция из нержавеющей стали марки AISI 316L

Наружные поверхности подвергнуты микродробеструйной обработке и электрополировке

Система управления динамическим позиционированием

15.1.2 Механические хар.

Кабельные входы: 2 x 3/4" NPT

Нулевой зазор

Вращение по горизонтали: 360°, постоянным вращение

Вертикальное перемещение: от -90° до +90°

Скорость горизонтального движения (регулируется): от 0,1° до 100°/с

Скорость вертикального перемещения (регулируется): от 0,1 до 100°/с

Точность предварительно установленных положений: 0.02°

Встроенный стеклоочиститель

Окно с закаленным сверхпрозрачным стеклом: толщина 12mm

Вес устройства: 26.5kg

15.1.3 Электрические хар.

Напряжение сети питания/Потребляемый ток:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Энергопотребление:

- 120W max

15.1.4 Сеть

Порт RJ45

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

SFP-слот (SMALL FORM-FACTOR PLUGGABLE - компактный приемопередатчик)

- Ethernet подключение: 100BASE-FX
- Напряжение сети питания: 3.3V
- Стандарт (Standard): Соответствует MSA

Модуль SFP (не поставляется VIDEOTEC) должен отвечать следующим требованиям:

- Лазер: Class 1, отвечает требованиям EN60825-1
- Сертификаты: UL/IEC 60950-1 или UL/IEC 62368-1

15.1.5 Интерфейс ввода-вывода

Вход для дистанционного сброса: 1

Входы для аварийных сигналов: 1

Выходы реле: 1+1 (1 реле для насоса омывателя и одно настраиваемое, 1A, 30Vac/60Vdc max)

15.1.6 Видеоанализ

Высококачественные алгоритмы обнаружения и автоматического слежения, в особенности для наружного наблюдения за периметром.

Targets Classification: Люди, Транспортные средства, Объекты, относящиеся к определенной группе

Программируемые параметры функции анализа видеоданных компании Videotec, VIDEOTEC ANALYTICS (можно быстро настроить до десяти параметров для каждой предварительной установки с помощью интуитивного интерфейса управления)

- Line crossing: сигнал тревоги подается, если объект наблюдения пересекает линию в одном или двух направлениях
- Entering/leaving area: сигнал тревоги подается, если объект наблюдения входит в определенную зону или выходит из нее
- Appearing in area: сигнал тревоги подается, если объект наблюдения появляется в определенной зоне
- Loitering: сигнал тревоги подается, если объект наблюдения находится в определенной зоне дольше заданного времени

Маскировка: функция обнаружения в указанной части изображения отключается, чтобы предотвратить ложное срабатывание

Обнаружение умышленного нарушения работы камеры: подается особый сигнал тревоги по протоколу ONVIF, если зона обзора видеокамеры закрыта (например, с помощью аэрозольной краски)

15.1.7 Камеры

Day/Night Full HD 30x DELUX

Разрешение: Full HD 1080p (1920x1080)

Датчик изображения: 1/2.8" Exmor™ R CMOS sensor

Эффективные пиксели: приблизительно 2.38 Мегapixel

Минимальное освещение:

- Цвет: 0.006lx (F1.6, 30 IRE)
- В/В: 0.0006lx (F1.6, 30 IRE)

Фокусное расстояние: от 4.5mm (wide) до 135mm (теле)

Zoom: 30x (480x с цифровым масштабированием)

Диафрагма: от F1.6 до F9.6 (Auto, Ручной)

Горизонтальный угол обзора: от 61.6° (wide end) до 2.50° (tele end)

Вертикальное поле обзора: от 37.07° (wide end) до 1.44° (tele end)

Скорость затвора: от 1/1s до 1/10000s (Auto, Ручной)

Баланс белого (White Balance): Auto, Ручной

Усиление: от 0dB до 100dB (Auto, Ручной)

Широкий динамический диапазон (Wide Dynamic Range): 120dB

Система фокусировки: Auto, Ручной, Триггер (Trigger)

Эффекты отображения: E-flip, Улучшение цвета

Снижение шума: 2D (3 уровня), 3D (3 уровня)

Управление экспозицией: Auto, Ручной, Уровень приоритетности (Iris Priority, Shutter Priority), Яркость (Brightness), Пользовательская конфигурация (Custom)

De-fog: On/Off (Вкл./Выкл.)

Маскировка частных зон (максимум 8 настраиваемых масок)

Indoor Flicker Reduction

Автоматическое замедление затвора (Auto Slowshutter): Off, On (от 1/30s до 1/1s)

Компенсация экспозиции: Off, On (от уровень 0 до уровень 14)

Резкость: от уровень 0 до уровень 3

SONY FCB-EV7520 Day/Night Full HD 30x

Разрешение: Full HD 1080p (1920x1080)

Датчик изображения: 1/2.8" Exmor™ R CMOS sensor

Эффективные пиксели: приблизительно 2.13 Megapixels

Минимальное освещение:

- Цвет: 0.0013lx (50 IRE, High sensitivity on)
- В/В: 0.0008lx (30 IRE, High sensitivity on)

Фокусное расстояние: от 4.3mm (wide) до 129mm (теле)

Zoom: 30x (360x с цифровым масштабированием)

Диафрагма: от F1.6 до F14 (Auto, Ручной)

Горизонтальный угол обзора: от 63.7° (wide end) до 2.3° (tele end)

Вертикальное поле обзора: от 38.5° (wide end) до 1.3° (tele end)

Скорость затвора: от 1/1s вплоть до 1/10000s (Auto, Ручной)

Баланс белого (White Balance): Auto, Auto Tracing, Indoor, Outdoor, Ручной, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Усиление: от 0dB до 50.0dB (Auto, Ручной)

Широкий динамический диапазон (Wide Dynamic Range): 120dB

Система фокусировки: Auto (PTZ Trigger, Full Auto), Ручной

Эффекты отображения: E-flip

Снижение шума (2D, 3D): Off, On (от уровень 1 до уровень 5)

Управление экспозицией: Auto, Ручной, Уровень приоритетности (Приоритет затвора, Приоритет диафрагмы, Приоритет яркости)

De-fog: Off, Low, Mid, High

Динамическая маскировка конфиденциальных зон: максимум 24 регулируемые маски, максимум 8 отображаемых одновременно

Indoor Flicker Reduction

Предел усиления: от 10.7dB до 50dB

High sensitivity: On/Off (Вкл./Выкл.)

Компенсация встречной засветки (Backlight Compensation): On/Off (Вкл./Выкл.)

Автоматическое замедление затвора (Auto Slowshutter): On/Off (Вкл./Выкл.)

Компенсация экспозиции: Off, On (от -10.5dB до +10.5dB)

Резкость: от уровень 0 до уровень 15

High Light Compensation (HLC): Off, Low, Mid, High, Уровень маскировки (Off, On, от уровень 1 до уровень 15)

Стабилизация цифрового изображения: On/Off (Вкл./Выкл.)

15.1.8 Окружающая среда

Для установки внутри помещений и наружной установки

Температура согласно сертификату: от -40°C до +80°C

Рабочая температура:

- Непрерывная работа: от -40°C до +65°C (до +50°C для версий с системой VIDEOTEC ANALYTICS)
- Проведены испытания на воздействие температуры в соответствии с NEMA-TS 2-2003 (R2008) п. 2.1.5.1, профиль испытания рис. 2-1 (от -34 °C до + 74 °C) (не подходит для версий со встроенным анализом видео, VIDEOTEC ANALYTICS)
- Срабатывание функции защиты от обледенения (холодный запуск): от -40°C до -10°C

Устойчивость к ветру

- PTZ устройство остановлено: 230km/h макс.
- PTZ-камера, работающая на максимальной скорости: 210km/h макс.

Относительная влажность: от 5% до 95%

15.1.9 Сертификаты

Электробезопасность (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Электромагнитная совместимость (CE): EN50130-4, EN55032 (Класс А), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Наружная установка (CE): EN60950-22, IEC60950-22

Испытание на виброустойчивость: EN50130-5, EN60068-2-6

Сертификат UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (не доступно для версий 100 В переменного тока и 220 В переменного тока): cULus Listed

Электромагнитная совместимость (Северная Америка) (не доступно для версий 100 В переменного тока и 220 В переменного тока): FCC part 15 (Класс А), ICES-003 (Класс А)

Степень защиты IP (EN/IEC60529): IP66, IP67, IP68, IP69

Степень защиты Тип (UL50E) (не доступно для версий 100 В переменного тока и 220 В переменного тока): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

Сертификат KC (сертификация действительна только для кода MPXHD51A001C)

15.1.10 Сертификаты - Взрывобезопасное применение

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

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) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

EAC Ex (TR CU 012/2011) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

KCs (Employment and labor department 2020-33)

15.1.11 Сертификаты - Морское применение

Сертификат соответствия требованиям Lloyd's Register Marine Type Approval (с блоком связи MAXIMUS MBX или с фильтром FM1010): Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Электромагнитная совместимость: EN60945

Защита от солевого тумана: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 Общие сведения

Конструкция из нержавеющей стали марки AISI 316L

Наружные поверхности подвергнуты микродробеструйной обработке и электрополировке

Система управления динамическим позиционированием

Радиометрический анализ:

- на 4 центральных пикселях, в случае тепловизионной камеры с радиометрическими функциями
- выбор определенной области, в случае тепловизионной камеры с расширенными радиометрическими функциями

Активация радиометрической тревоги: Если температура выше заданного порога, ниже заданного порога, находится между двумя заданными порогами или за пределами двух заданных порогов.

Действия в случае тревоги: Активация цифрового выхода, выполнение предустановленной траектории, установка в исходное положение, установка в предустановленное положение и http get request.

15.2.2 Механические хар.

Кабельные входы: 2 x 3/4" NPT

Нулевой зазор

Вращение по горизонтали: 360°, постоянным вращение

Вертикальное перемещение: от -90° до +90°

Скорость горизонтального движения (регулируется): от 0.1°/s до 100°/s

Скорость вертикального перемещения (регулируется): от 0.1°/s до 100°/s

Точность предварительно установленных положений: 0.02°

Вес устройства: 26.5kg

15.2.3 Окно кожуха

Германиевое окно

- Толщина: 8mm
- Обработка внешней поверхности: защита от царапин (Высокопрочное углеродное покрытие (DLC)), антибликовое покрытие
- Обработка внутренней поверхности: антибликовое покрытие
- Спектральный диапазон: от 7.5µm до 14µm
- Средний коэффициент пропускания (от 7.5µm до 11.5µm): 87.5%
- Средний коэффициент пропускания (от 11.5µm до 14µm): 72.1%

15.2.4 Электрические хар.

Напряжение сети питания/Потребляемый ток:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Энергопотребление:

- 120W max

15.2.5 Сеть

Порт RJ45

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

SFP-слот (SMALL FORM-FACTOR PLUGGABLE - компактный приемопередатчик)

- Ethernet подключение: 100BASE-FX
- Напряжение сети питания: 3.3V
- Стандарт (Standard): Соответствует MSA

Модуль SFP (не поставляется VIDEOTEC) должен отвечать следующим требованиям:

- Лазер: Class 1, отвечает требованиям EN60825-1
- Сертификаты: UL/IEC 60950-1 или UL/IEC 62368-1

15.2.6 Интерфейс ввода-вывода

Вход для дистанционного сброса: 1

Входы аварийных сигналов: 1

Выходы реле: 1 (1A, 30Vac/60Vdc max)

15.2.7 Тепловые телекамеры

ТЕПЛОВИЗОРЫ (РАЗРЕШЕНИЕ 336X256)							
	Объектив 9mm	Объектив 13mm	Объектив 19mm	Объектив 25mm	Объектив 35mm	Объектив 50mm	Объектив 60mm
Датчик изображения	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)
Интерполированное разрешение	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Размеры пикселя	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Спектральная чувствительность - длинноволновая ИК-область спектра (LWIR)	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm
Внутренний затвор (только для компенсации датчика)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Цифровое улучшение деталей изображения (DDE)	√	√	√	√	√	√	√
Цифровое масштабирование (Digital Zoom)	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Частота обновления изображения	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Высокая частота обновления изображения	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Область наблюдения (с большим усилением)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Область наблюдения (с малым усилением)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Горизонтальное поле обзора	35°	25°	17°	13°	9,3°	6,5°	5,5°
Вертикальное поле обзора	27°	19°	13°	10°	7,1°	5°	4,2°
F-число	F/1.25	F/1.25	F/1.25	F/1,1	F/1,2	F/1,2	F/1.25
Температурная чувствительность (NETD), Тепловизионная камера с радиометрическими функциями	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0
Температурная чувствительность (NETD), Тепловизионная камера с расширенными радиометрическими функциями	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0
Обнаружение / распознавание / идентификация людей	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Автомобиль (обнаружение / распознавание / идентификация)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Табл. 12

ТЕПЛОВИЗОРЫ (РАЗРЕШЕНИЕ 640X512)

	Объектив 9mm	Объектив 13mm	Объектив 19mm	Объектив 25mm	Объектив 35mm	Объектив 50mm	Объектив 60mm
Датчик изображения	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)
Интерполированное разрешение	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Размеры пикселя	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Спектральная чувствительность - длинноволновая ИК-область спектра (LWIR)	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm
Внутренний затвор (только для компенсации датчика)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Цифровое улучшение деталей изображения (DDE)	√	√	√	√	√	√	√
Цифровое масштабирование (Digital Zoom)	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Частота обновления изображения	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Высокая частота обновления изображения	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Область наблюдения (с большим усилением)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Область наблюдения (с малым усилением)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Горизонтальное поле обзора	69°	45°	32°	25°	18°	12,4°	10,4°
Вертикальное поле обзора	56°	37°	26°	20°	14°	9,9°	8,3°
F-число	F/1,4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Температурная чувствительность (NETD), Тепловизионная камера с радиометрическими функциями	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0
Температурная чувствительность (NETD), Тепловизионная камера с расширенными радиометрическими функциями	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0
Обнаружение / распознавание / идентификация людей	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Автомобиль (обнаружение / распознавание / идентификация)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Табл. 13

15.2.8 Окружающая среда

Для установки внутри помещений и наружной установки

Температура согласно сертификату: от -40°C до +80°C

Рабочая температура:

- Непрерывная работа: от -40°C до +65°C
- Проведены испытания на воздействие температуры в соответствии с NEMA-TS 2-2003 (R2008) п. 2.1.5.1, профиль испытания рис. 2-1 (от -34 °C до + 74 °C)
- Срабатывание функции защиты от обледенения (холодный запуск): от -40°C до -10°C

Устойчивость к ветру

- PTZ устройство остановлено: 230km/h макс.
- PTZ-камера, работающая на максимальной скорости: 210km/h макс.

Относительная влажность: от 5% до 95%

15.2.9 Сертификаты

Электробезопасность (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Электромагнитная совместимость (CE): EN50130-4, EN55032 (Класс А), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Наружная установка (CE): EN60950-22, IEC60950-22

Испытание на виброустойчивость: EN50130-5, EN60068-2-6

Сертификат UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (не доступно для версий 100 В переменного тока и 220 В переменного тока): cULus Listed

Электромагнитная совместимость (Северная Америка) (не доступно для версий 100 В переменного тока и 220 В переменного тока): FCC part 15 (Класс А), ICES-003 (Класс А)

Степень защиты IP (EN/IEC60529): IP66, IP67, IP68, IP69

Степень защиты Тип (UL50E) (не доступно для версий 100 В переменного тока и 220 В переменного тока): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 Сертификаты - Взрывобезопасное применение

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

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) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

EAC Ex (TR CU 012/2011) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

KCs (Employment and labor department 2020-33)

15.2.11 Сертификаты - Морское применение

Сертификат соответствия требованиям Lloyd's Register Marine Type Approval (с блоком связи MAXIMUS MBX или с фильтром FM1010): Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Электромагнитная совместимость: EN60945

Защита от солевого тумана: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 Общие сведения

Конструкция из нержавеющей стали марки AISI 316L

Наружные поверхности подвергнуты микродробеструйной обработке и электрополировке

Система управления динамическим позиционированием

Радиометрический анализ:

- на 4 центральных пикселях, в случае тепловизионной камеры с радиометрическими функциями
- выбор определенной области, в случае тепловизионной камеры с расширенными радиометрическими функциями

Активация радиометрической тревоги: Если температура выше заданного порога, ниже заданного порога, находится между двумя заданными порогами или за пределами двух заданных порогов.

Действия в случае тревоги: Активация цифрового выхода, выполнение предустановленной траектории, установка в исходное положение, установка в предустановленное положение и http get request.

15.3.2 Механические хар.

Кабельные входы: 2 x 3/4" NPT

Нулевой зазор

Вращение по горизонтали: 360°, постоянным вращение

Вертикальное перемещение: от -90° до +90°

Скорость горизонтального движения (регулирует ся): от 0.1°/s до 100°/s

Скорость вертикального перемещения (регулируе тся): от 0.1°/s до 100°/s

Точность предварительно установленных положений: 0.02°

Встроенный стеклоочиститель

Вес устройства: 31kg

15.3.3 Окно кожуха

Окно с закаленным сверхпрозрачным стеклом

- Толщина: 12mm

Германиевое окно

- Толщина: 8mm
- Устойчивое к царапинам покрытие (Высокопрочное углеродное покрытие (DLC))
- Антибликовое покрытие
- Спектральный диапазон: от 7.5µm до 14µm
- Средний коэффициент пропускания (от 7.5µm до 11.5µm): 87.5%
- Средний коэффициент пропускания (от 11.5µm до 14µm): 72.1%

15.3.4 Электрические хар.

Напряжение сети питания/Потребляемый ток:

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

Энергопотребление:

- 120W max

15.3.5 Сеть

Порт RJ45

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

SFP-слот (SMALL FORM-FACTOR PLUGGABLE - компактный приемопередатчик)

- Ethernet подключение: 100BASE-FX
- Напряжение сети питания: 3.3V
- Стандарт (Standard): Соответствует MSA

Модуль SFP (не поставляется VIDEOTEC) должен отвечать следующим требованиям:

- Лазер: Class 1, отвечает требованиям EN60825-1
- Сертификаты: UL/IEC 60950-1 или UL/IEC 62368-1

15.3.6 Интерфейс ввода-вывода

Вход для дистанционного сброса: 1

Входы аварийных сигналов: 1

Выходы реле: 1+1 (1A, 30Vac/60Vdc max, одно реле для насоса омывателя и одно свободно)

15.3.7 Камеры с дневным/ночным режимом

SONY FCB-EV7520 Day/Night Full HD 30x

Разрешение: Full HD 1080p (1920x1080)

Датчик изображения: 1/2.8" Exmor™ R CMOS sensor

Эффективные пиксели: приблизительно 2.13 Megapixels

Минимальное освещение:

- Цвет: 0.0013lx (50 IRE, High sensitivity on)
- В/Н: 0.0008lx (30 IRE, High sensitivity on)

Фокусное расстояние: от 4.3mm (wide) до 129mm (теле)

Zoom: 30x (360x с цифровым масштабированием)

Диафрагма: от F1.6 до F14 (Auto, Ручной)

Горизонтальный угол обзора: от 63.7° (wide end) до 2.3° (tele end)

Вертикальное поле обзора: от 38.5° (wide end) до 1.3° (tele end)

Скорость затвора: от 1/1s вплоть до 1/10000s (Auto, Ручной)

Баланс белого (White Balance): Auto, Auto Tracing, Indoor, Outdoor, Ручной, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Усиление: от 0dB до 50.0dB (Auto, Ручной)

Широкий динамический диапазон (Wide Dynamic Range): 120dB

Система фокусировки: Auto (PTZ Trigger, Full Auto), Ручной

Эффекты отображения: E-flip

Снижение шума (2D, 3D): Off, On (от уровень 1 до уровень 5)

Управление экспозицией: Auto, Ручной, Уровень приоритетности (Приоритет затвора, Приоритет диафрагмы, Приоритет яркости)

De-fog: Off, Low, Mid, High

Динамическая маскировка конфиденциальных зон: максимум 24 регулируемые маски, максимум 8 отображаемых одновременно

Indoor Flicker Reduction

Предел усиления: от 10.7dB до 50dB

High sensitivity: On/Off (Вкл./Выкл.)

Компенсации встречной засветки (Backlight Compensation): On/Off (Вкл./Выкл.)

Автоматическое замедление затвора (Auto Slowshutter): On/Off (Вкл./Выкл.)

Компенсация экспозиции: Off, On (от -10.5dB до +10.5dB)

Резкость: от уровень 0 до уровень 15

High Light Compensation (HLC): Off, Low, Mid, High, Уровень маскировки (Off, On, от уровень 1 до уровень 15)

Стабилизация цифрового изображения: On/Off (Вкл./Выкл.)

15.3.8 Тепловые телекамеры

ТЕПЛОВИЗОРЫ (РАЗРЕШЕНИЕ 336X256)

	Объектив 9mm	Объектив 13mm	Объектив 19mm	Объектив 25mm	Объектив 35mm	Объектив 50mm	Объектив 60mm
Датчик изображения	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)
Интерполированное разрешение	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Размеры пикселя	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Спектральная чувствительность - длинноволновая ИК-область спектра (LWIR)	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm
Внутренний затвор (только для компенсации датчика)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Цифровое улучшение деталей изображения (DDE)	√	√	√	√	√	√	√
Цифровое масштабирование (Digital Zoom)	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Частота обновления изображения	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Высокая частота обновления изображения	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Область наблюдения (с большим усилением)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Область наблюдения (с малым усилением)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Горизонтальное поле обзора	35°	25°	17°	13°	9,3°	6,5°	5,5°
Вертикальное поле обзора	27°	19°	13°	10°	7,1°	5°	4,2°
F-число	F/1.25	F/1.25	F/1.25	F/1,1	F/1,2	F/1,2	F/1.25
Температурная чувствительность (NETD), Тепловизионная камера с радиометрическими функциями	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0
Температурная чувствительность (NETD), Тепловизионная камера с расширенными радиометрическими функциями	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0
Обнаружение / распознавание / идентификация людей	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Автомобиль (обнаружение / распознавание / идентификация)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Табл. 14

ТЕПЛОВИЗОРЫ (РАЗРЕШЕНИЕ 640X512)

	Объектив 9mm	Объектив 13mm	Объектив 19mm	Объектив 25mm	Объектив 35mm	Объектив 50mm	Объектив 60mm
Датчик изображения	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)	Неохлаждаемый микроболометр (на оксиде ванадия - VOx)
Интерполированное разрешение	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Размеры пикселя	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Спектральная чувствительность - длинноволновая ИК-область спектра (LWIR)	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm	от 7.5µm до 13.5µm
Внутренний затвор (только для компенсации датчика)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Цифровое улучшение деталей изображения (DDE)	√	√	√	√	√	√	√
Цифровое масштабирование (Digital Zoom)	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Частота обновления изображения	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Высокая частота обновления изображения	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Область наблюдения (с большим усилением)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Область наблюдения (с малым усилением)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Горизонтальное поле обзора	69°	45°	32°	25°	18°	12,4°	10,4°
Вертикальное поле обзора	56°	37°	26°	20°	14°	9,9°	8,3°
F-число	F/1,4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Температурная чувствительность (NETD), Тепловизионная камера с радиометрическими функциями	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0	< 50mk при f/1.0
Температурная чувствительность (NETD), Тепловизионная камера с расширенными радиометрическими функциями	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0	< 30mK при f/1.0
Обнаружение / распознавание / идентификация людей	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Автомобиль (обнаружение / распознавание / идентификация)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Табл. 15

15.3.9 Окружающая среда

Для установки внутри помещений и наружной установки

Температура согласно сертификату: от -40°C до +80°C

Рабочая температура:

- Непрерывная работа: от -40°C до +65°C
- Проведены испытания на воздействие температуры в соответствии с NEMA-TS 2-2003 (R2008) п. 2.1.5.1, профиль испытания рис. 2-1 (от -34 ° C до + 74 ° C)
- Срабатывание функции защиты от обледенения (холодный запуск): от -40°C до -10°C

Устойчивость к ветру

- PTZ устройство остановлено: 230km/h макс.
- PTZ-камера, работающая на максимальной скорости: 210km/h макс.

Относительная влажность: от 5% до 95%

15.3.10 Сертификаты

Электробезопасность (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Электромагнитная совместимость (CE): EN50130-4, EN55032 (Класс А), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Наружная установка (CE): EN60950-22, IEC60950-22

Испытание на виброустойчивость: EN50130-5, EN60068-2-6

Сертификат UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (не доступно для версий 100 В переменного тока и 220 В переменного тока): cULus Listed

Электромагнитная совместимость (Северная Америка) (не доступно для версий 100 В переменного тока и 220 В переменного тока): FCC part 15 (Класс А), ICES-003 (Класс А)

Степень защиты IP (EN/IEC60529): IP66, IP67, IP68, IP69

Степень защиты Тип (UL50E) (не доступно для версий 100 В переменного тока и 220 В переменного тока): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 Сертификаты - Взрывобезопасное применение

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

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) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

EAC Ex (TR CU 012/2011) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (не доступно для версий 100 В переменного тока и 220 В переменного тока)

KCs (Employment and labor department 2020-33)

15.3.12 Сертификаты - Морское применение

Сертификат соответствия требованиям Lloyd's Register Marine Type Approval (с блоком связи MAXIMUS MBX или с фильтром FM1010): Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Электромагнитная совместимость: EN60945

Защита от солевого тумана: EN60068-2-52

16 Технические чертежи

i Размеры указаны в миллиметрах.

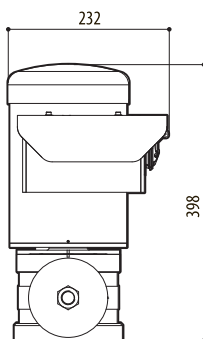
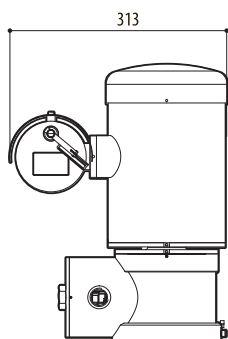
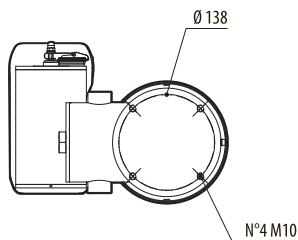


Рис. 26 MAXIMUS MPX SERIES2.

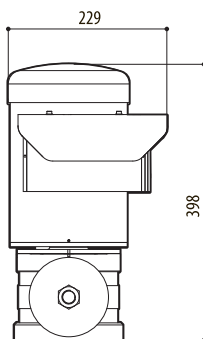
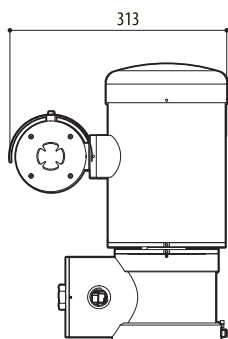
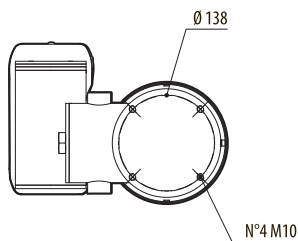


Рис. 27 MAXIMUS MPXR SERIES2.

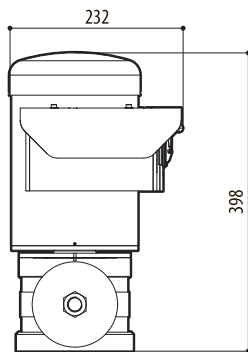
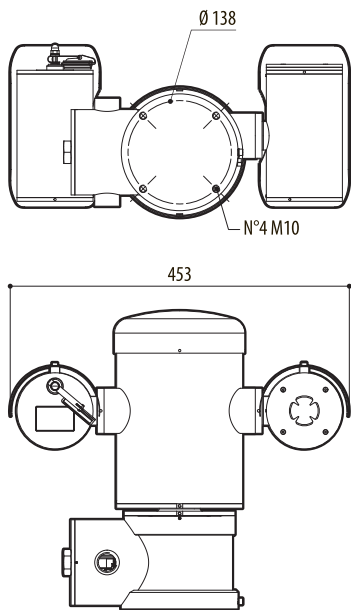


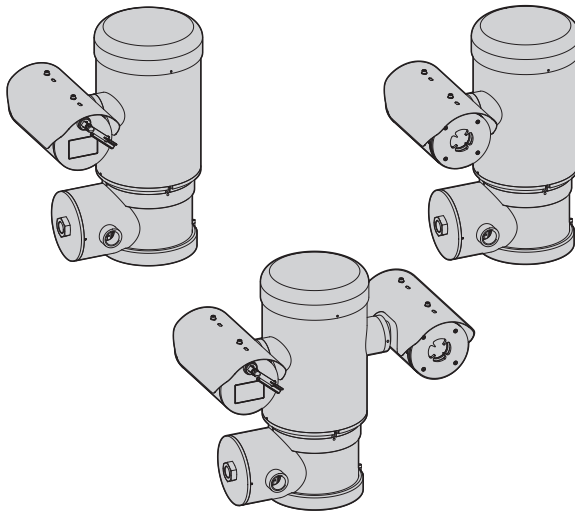
Рис. 28 MAXIMUS MPXT SERIES2.



Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

MAXIMUS MPX SERIES2 (MPXHD)
MAXIMUS MPXR SERIES2 (MPXR)
MAXIMUS MPXT SERIES2 (MPXT)

Câmera PTZ à prova de explosão



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1 Informações neste manual

Antes de instalar e utilizar este produto, leia com atenção toda a documentação fornecida. Manter o manual ao alcance da mão para consultas futuras.

1.1 Convenções tipográficas



DANGER!

Perigo de explosão.

Ler com cuidado para evitar o risco de explosão.



DANGER!

Periculosidade alta.

Risco de choque elétrico. Antes de fazer qualquer operação, certificar-se de desligar o produto, salvo indicação em contrário.



ATENÇÃO!

Periculosidade média.

A operação é muito importante para o funcionamento adequado do sistema. Por favor, ler com atenção os passos e executar na forma prescrita.



INFO

Descrição das características do sistema. Por favor, ler com atenção para compreender os próximos passos.

Títulos sublinhados

As informações estão vinculadas pelas certificações.

2 Direitos autorais e informações sobre marcas registradas

Os nomes dos produtos ou das empresas citadas são marcas comerciais ou marcas comerciais registradas pertencentes às respectivas sociedades.

3 Normas de segurança



DANGER!

Perigo de explosão.

Ler com cuidado para evitar o risco de explosão.

- A instalação e a manutenção do aparelho devem ser realizadas por técnicos especializados conforme o código de referência aplicável, EN/IEC 60079-14, EN/IEC 60079-17, e as normas nacionais.
- Não abrir o dispositivo se alimentado e na presença de atmosfera explosiva.
- Faça a instalação usando os utensílios adequados. O lugar em que o aparelho será instalado pode, contudo, exigir a utilização de utensílios específicos.
- Efetuar todas as ligações, as intervenções de instalação e manutenção em uma atmosfera não explosiva.
- A conexão equipotencial é obrigatória para evitar risco de ignição para produtos instalados em atmosferas potencialmente explosivas.
- O aparelho deve ser ligado a um condutor de terra (ligação à terra de proteção). Essa conexão deve ser realizada apenas através do conector da linha de alimentação. As conexões equipotenciais externas devem ser realizadas apenas quando os códigos locais ou normas preveem a execução de conexões de aterramento adicionais.
- Em atmosferas explosivas, antes de alimentar o produto, confirme que a tampa do compartimento de conexões esteja corretamente fechada.
- A temperatura da superfície do dispositivo aumenta, no caso da exposição direta à luz do sol. A classe da temperatura da superfície do dispositivo foi calculada apenas em temperatura ambiente, sem considerar a exposição direta à luz solar.
- Certifique-se de que todos os aparelhos sejam aprovados para a utilização no ambiente no qual serão instalados.
- A realização de alterações não aprovadas expressamente pelo fabricante invalidará a garantia.

**DANGER!****Periculosidade alta.****Risco de choque elétrico. Antes de fazer qualquer operação, certificar-se de desligar o produto, salvo indicação em contrário.****ATENÇÃO!****Periculosidade média.****A operação é muito importante para o funcionamento adequado do sistema. Por favor, ler com atenção os passos e executar na forma prescrita.**

- Faça instalação e manutenção sem alimentação e com o disjuntor aberto.
 - O sistema elétrico deve ser fornecido com um seccionador de rede facilmente identificável e útil, caso seja necessário.
 - O sistema elétrico ao qual está ligada a unidade deve ter um interruptor de proteção bipolar automática de 16A max. A distância mínima entre os contatos do interruptor de proteção deve ser de 3mm. O interruptor deve ter uma proteção contra a corrente de falha para terra (diferencial) e sobrecorrente (disjuntor).
 - O aparelho estará desativado apenas quando a alimentação não estiver inserida e os cabos de ligação com outros dispositivos forem retirados.
 - Não usar cabos com sinais de desgaste ou envelhecimento.
 - Todos os cabos seguem as normas IEC60332-1-2, IEC 60332-1-3 e IEC/EN60079-14.
 - No momento da instalação, controlar se as características de alimentação fornecidas pelo sistema correspondem àquelas solicitadas pelo dispositivo.
 - Para assegurar o tipo de proteção à prova de explosão, substituir os fusíveis por outros do mesmo tipo e valor. Os fusíveis devem ser substituídos somente por pessoal qualificado.
 - O aparelho não é adequado para o uso em locais em que é provável a presença de crianças.
-
- Garantir que a instalação esteja em conformidade com as normas locais.
 - Realizar conexões e testes de laboratório antes de instalação in loco.
 - Verificar que a fonte e o cabo de alimentação estejam dimensionados adequadamente.
 - Utilizar cabos apropriados para suportar as temperaturas de funcionamento.
 - Todos os cabos desligados devem ter isolamento elétrico.
 - A unidade só pode ser instalada na posição normal ou invertida (montagem no teto).
 - Antes do fornecimento de energia garantir que o aparelho seja firmemente ancorado.
 - Na reinicialização, o sistema executa uma série de movimentos de calibragem automática: não parar nas proximidades do aparelho durante o acendimento.
 - O fabricante exime-se de todas as responsabilidades por eventuais danos, de todos os aparelhos mencionados neste manual, derivados da violação, uso de peças de reposição não originais, instalações, manutenção e reparação efetuadas por pessoal não preparado.
 - Para ter a assistência técnica, entrar em contato com um profissional qualificado.
 - A reparação deste produto deve ser efetuada por pessoal treinado adequadamente ou com a supervisão do pessoal VIDEOTEC em conformidade com as normas previstas: IEC/EN60079-19.
 - Use somente peças de reposição VIDEOTEC originais. Siga atentamente as instruções de manutenção que acompanham cada kit de reposição.



INFO

Descrição das características do sistema. Por favor, ler com atenção para compreender os próximos passos.

- Dado o peso considerável do aparelho, utilizar um sistema de transporte e movimento adequado. Os profissionais responsáveis devem efetuar a movimentação do produto observando as normas comuns para prevenção de incidentes.
- Antes de prosseguir com a instalação, verificar se o material fornecido corresponde às necessidades específicas examinando as etiquetas de marcação.
- O aparelho é destinado para a instalação em uma Posição com Acesso Limitado efetuada por pessoal técnico especializado.
- O fabricante exime-se de todas as responsabilidades por eventuais danos derivados do uso impróprio dos aparelhos mencionados neste manual. Reserva-se, no entanto, o direito de modificar o conteúdo sem prévio aviso. A coleta e a verificação da documentação contida neste manual foram efetuadas com muito cuidado. O fabricante, contudo, não pode assumir alguma responsabilidade derivada da utilização da mesma. O mesmo aplica-se para cada pessoa ou sociedade envolvida na criação e produção deste manual.
- Dado que a responsabilidade da escolha da superfície de ancoragem da unidade recai sobre o usuário, o fabricante não fornece os dispositivos de fixagem para a ancoragem da unidade na superfície. O instalador é responsável pela seleção de dispositivos adequados para a superfície de que dispõe. Recomenda-se o uso de métodos e materiais capazes de suportar um peso de, pelo menos, 4 vezes maior do que a do aparelho.
- Contatar o fabricante para informações sobre as dimensões da junta antideflagrante.
- É aconselhável, em todos os eventos de manutenção, reconduzir o produto ao laboratório para realizar as operações necessárias.
- O aparelho é controlado à distância portanto, é possível mudar de posição a qualquer momento. Instalar o aparelho para evitar acidentes causados pelo contato com partes em movimento, fazendo que estes não batam contra outros objetos criando situações de perigo.
- Esse é um produto de Classe A. Em um ambiente residencial esse produto pode provocar perturbações rádio. Nesse caso pode ser pedido ao usuário de tomar as medidas adequadas.
- Para estar em conformidade com os requisitos da norma sobre os abaixamentos e as breves interrupções da tensão de alimentação, utilizar um adequado grupo de continuidade (UPS) para alimentar a unidade.

4 Identificação

4.1 Descrição e designação do produto

A série MAXIMUS MPX é uma família de câmeras de vídeo PTZ para instalação em ambientes potencialmente explosivos, construída em aço AISI 316L eletropolido.

A série MAXIMUS MPX é equipada com entrada de cabos NPT ou métricos, conforme o modelo.

A série MAXIMUS MPX tem um nível de proteção IP66/IP68/IP69 e pode ser instalada em ambientes com temperatura de -40°C/+80°C (verificar a marcação para cada modelo disponível).

Estão disponíveis versões com: câmera de vídeo visível, câmera de vídeo térmica, câmera de vídeo visível e térmica.

4.2 Campo de utilização

Usando a unidade está definida para a utilização em um local fixo para o monitoramento de áreas com atmosferas potencialmente explosivas classificadas 1-21 ou 2-22.

A unidade é construída e certificada de acordo com a Diretiva 2014/34/UE e padrões IECEx internacionais que definem o campo de aplicação e os requisitos mínimos de segurança.

4.3 Condições específicas de uso

Contatar o fabricante para informações sobre as dimensões da junta antideflagrante.

Temperatura ambiente e temperatura da superfície — ver as instruções.

Tome o cuidado de impedir o acúmulo de cargas eletrostáticas. Veja as instruções de instalação.

A unidade só pode ser instalada na posição normal ou invertida.

4.4 Grupo de gases, grupo de pós e temperaturas

O dispositivo é certificado para o grupo IIC (gás) e o grupo IIIC (pós).

A classe de temperatura, a temperatura da superfície máxima e a temperatura do cabo de entrada dependendo das características dos dispositivos instaláveis (potência dissipada, Watt) e da temperatura ambiente.

Essas características são especificadas para cada modelo nos respectivos capítulos.

4.5 Características dos dispositivos instaláveis

Todos os componentes internos devem ser instalados no interior pelo fabricante.

4.6 Entrada cabos

O produto é fornecido com tampas de plástico para a proteção do cabo de entrada. Não podem ser usados para a instalação.

As entradas de cabo não usadas devem ser fechadas usando os dispositivos de bloqueio apropriados, com certificação antiexplosão, com tipo de proteção à prova de explosão "db" e "tb", adaptados às condições de uso e instalados corretamente.

Todos os prensa-cabos devem ter certificação antiexplosão de maneira apropriada, com tipo de proteção e à prova de explosão "db" e "tb", adequados para as condições de utilização, e instalados corretamente.

Quando forem usados conduítes, também deve ser usada uma conexão de bloqueio com certificação antiexplosão, de maneira apropriada, com o tipo de proteção e à prova de explosão "db" e "tb", adequados para as condições de utilização e instalados corretamente.

A conexão de bloqueio deve ser colocada dentro de 50mm (1.97in) do dispositivo.

As temperaturas dos cabos de entrada são especificadas na marcação.

Para manter o grau IP do produto, use prensa-cabo com grau adequado de proteção e aplique às roscas lubrificante conforme a IEC/EN60079-14.

4.6.1 Tampão (stopping plug)



O dispositivo de bloqueio (stopping plug) ornecido não é certificado pela KCs.

Junto do produto é fornecido um dispositivo de bloqueio (stopping plug) certificado Ex, com tipo de proteção contra explosões "db" e "tb". O vedante de rosca também é fornecido, em conformidade com IEC / EN60079-14, o uso garante o grau de IP.

As instruções de instalação do tampão (stopping plug) estão disponíveis em <https://peppers.co.uk/useful-documents/>.

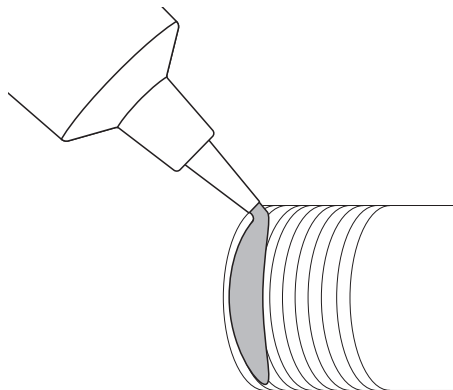


Fig. 1

4.7 Etiqueta do produto

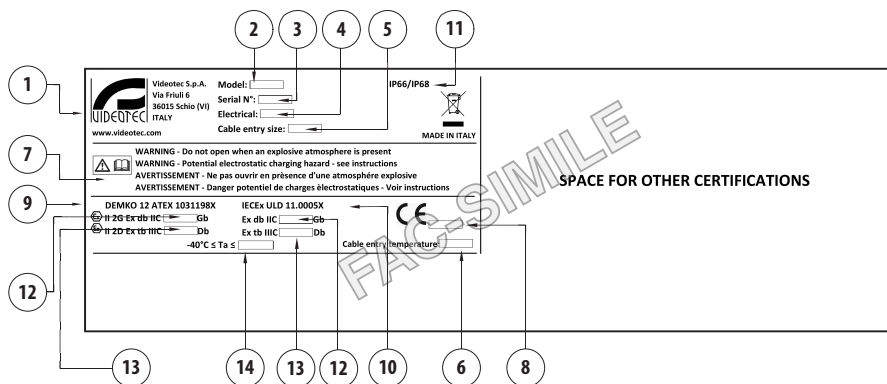


Fig. 1

- Nome e endereço do fabricante.
- Modelo.
- O número de série é composto por 12 algarismos, cujas segunda e terceira cifra definem os últimos dois números do ano de produção.
- Características elétricas (tensão V, frequência Hz, corrente A, potência W).
- Número, dimensão e tipo de cabos de entrada.
- Temperatura dos cabos de entrada.
- Advertências.
- Número do organismo acreditado que fornece a avaliação da qualidade.
- Marcação ATEX. A classe de temperatura depende dos componentes eletrônicos instalados no interior e da temperatura ambiente.
- Marcação IECEx. A classe de temperatura depende dos componentes eletrônicos instalados no interior e da temperatura ambiente.
- Grau de proteção IP.
- T Class (Tx or Tx...Tx).
- Temperatura de superfície máxima ($T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}...T_x^{\circ}\text{C}$).
- Temperatura ambiente ($-40^{\circ}\text{C} \leq T_a \leq \dots$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_a \leq T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$ or $T_x^{\circ}\text{C}$).

Exemplo de marcação:

DADOS DE EXEMPLO				
Potência dissipada na caixa (W)	T Class	Temperatura superficial máxima	Temperatura dos cabos de entrada	Temperatura ambiente
7	T4	T135°C	90°C	$-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
	T6...T5	T85°C...T100°C	80°C	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ or 70°C
	T6...T4	T85°C...T135°C	90°C	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ or 70°C or 80°C

Tab. 1

4.8 Apenas para referência norma UL/CSA



As junta antideflagrante não devem ser reparadas.



ATENÇÃO! Partes móveis perigosas. Não aproximar dedos e outras partes do corpo.



A aparelhagem contém partes móveis. Verificar que a unidade seja posicionada numa área não acessível durante as condições normais de funcionamento. Aplicar a etiqueta apropriada fornecida junto com o aparelho nas suas proximidades e de forma bem visível.



Fig. 2



Nos Estados Unidos, o National Electrical Code (NEC), e no Canadá, o Canadian Electrical Code (CEC), são aplicados aparelhos elétricos usados em ambientes industriais perigosos.



As versões 100Vac e 220Vac dos produtos não são certificadas UL

Instruções de segurança importantes

WARNING: DO NOT OPEN WHEN AN 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.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L'ENTRÉE DU CONDUIT DU CAISSON.

Nas instalações seguindo a norma UL/CSA, é obrigatório instalar o separador que acompanha o produto como indicado no capítulo relevante (7.5.1 Instalação segundo a norma UL/CSA, página 27).

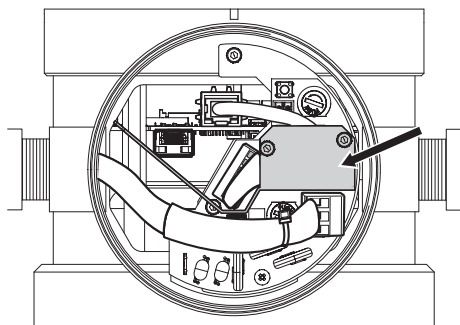


Fig. 3

5 Versões

5.1 Day/Night camera

MAXIMUS MPX SERIES2 - OPÇÕES DE CONFIGURAÇÃO						
	Tensão	Câmara	Classe de temperatura e temperatura ambiente	Análise vídeo	Perfis ONVIF	
MPXHD	1 230Vac	1 Câmera de vídeo luz super low-light Dia/Noite, FULL HD 1080p, 30x, com tecnologia DELUX	A T6...T5 -40°C/+60°C or +70°C	0 Sem análise de vídeo integrada (Sem VIDEOTEC ANALYTICS)	00 Em conformidade com ONVIF, Perfil Q, Perfil S e Perfil T	C
	2 24Vac	2 Câmera de vídeo SONY FCB-EV7520, FULL HD 1080p, 30x	D T4 -40°C/+80°C	V Com funções integradas de análise de vídeo (VIDEOTEC ANALYTICS)	01 Em conformidade com ONVIF, perfil S e perfil T	
	3 120Vac		C T5...T4 -40°C/+55°C or +60°C			
	5 220Vac					
	6 100Vac					

Tab. 2

MAXIMUS MPX SERIES2 - CERTIFICAÇÕES E MARCAÇÕES					
Código do produto	Certificado	Marcação	Temperatura ambiente	Temperatura de entrada dos cabos	
MPXHD1**A0**C, MPXHD2**A0**C, MPXHD3**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C	
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db			
	EAC Ex	1 Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X			
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db			
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C			
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			80°C com Ta = 69°C 81°C com Ta = 70°C
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			
MPXHD5**A0**C, MPXHD6**A0**C	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C	
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db			
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C			
MPXHD1**D0**C, MPXHD2**D0**C, MPXHD3**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C	
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db			
	EAC Ex	1 Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X			
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db			
	KCs	Ex d IIC T4 Ex tb IIIC T135°C			
MPXHD5**D0**C, MPXHD6**D0**C	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C	
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db			
	KCs	Ex d IIC T4 Ex tb IIIC T135°C			
MPXHD1**CV**C, MPXHD2**CV**C, MPXHD3**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db			
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C			
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 21, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4			-40°C ≤ Ta ≤ +50°C or +55°C
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4			
MPXHD5**CV**C, MPXHD6**CV**C	ATEX	⊕ II 2 G Ex db IIC T5...T4 Gb ⊕ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db			
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C			

Tab. 3

5.2 Câmera de vídeo térmica

MAXIMUS MPXR SERIES2 - OPÇÕES DE CONFIGURAÇÃO								
	Tensão		Câmera de vídeo térmica	Classe de temperatura	Radiometria	Perfis ONVIF		Frequência
MPXR	1	230Vac	A Câmera de vídeo térmica 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Câmera de vídeo térmica com função radiométrica	0 Em conformidade com ONVIF, Perfil Q, Perfil S e Perfil T	C	- 7.5Hz
	2	24Vac	B Câmera de vídeo térmica 25mm, 336x256	D T4 -40°C/+80°C	0R Câmera de vídeo térmica com função radiométrica avançada	1 Em conformidade com ONVIF, perfil S e perfil T		H 30Hz
	3	120Vac	V Câmera de vídeo térmica 19mm, 336x256					
	5	220Vac	F Câmera de vídeo térmica 13mm, 336x256					
	6	100Vac	C Câmera de vídeo térmica 9mm, 336x256					
			D Câmera de vídeo térmica 35mm, 640x512					
			E Câmera de vídeo térmica 25mm, 640x512					
			U Câmera de vídeo térmica 19mm, 640x512					

Tab. 4

MAXIMUS MPXR SERIES2 - CERTIFICAÇÕES E MARCAÇÕES				
Código do produto	Certificado	Marcação	Temperatura ambiente	Temperatura de entrada dos cabos
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6... T5 Gb Zone 21, AEx tb IIIC T85°C... T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 5

5.3 Dual Vision com câmera de vídeo dia/noite e térmica

MAXIMUS MPXT SERIES2 - OPÇÕES DE CONFIGURAÇÃO									
	Tensão		Day/Night camera	Câmera de vídeo térmica	Classe de temperatura	Radiometria	Perfis ONVIF		Frequência
MPXT	1	230Vac	2 Câmera de vídeo SONY FCB-EV7520, FULL HD 1080p, 30x	A Câmera de vídeo térmica 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 Câmera de vídeo térmica com função radiométrica	0 Em conformidade com ONVIF, Perfil Q, Perfil S e Perfil T	C	- 7.5Hz
	2	24Vac		B Câmera de vídeo térmica 25mm, 336x256	D T4 -40°C/+80°C	0R Câmera de vídeo térmica com função radiométrica avançada	1 Em conformidade com ONVIF, perfil S e perfil T		H 30Hz
	3	120Vac		V Câmera de vídeo térmica 19mm, 336x256					
	5	220Vac		F Câmera de vídeo térmica 13mm, 336x256					
	6	100Vac		C Câmera de vídeo térmica 9mm, 336x256					
				D Câmera de vídeo térmica 35mm, 640x512					
				E Câmera de vídeo térmica 25mm, 640x512					
				U Câmera de vídeo térmica 19mm, 640x512					

Tab. 6

MAXIMUS MPXT SERIES2 - CERTIFICAÇÕES E MARCAÇÕES				
Código do produto	Certificado	Marcação	Temperatura ambiente	Temperatura de entrada dos cabos
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	Ⓜ II 2 G Ex db IIC T6...T5 Gb Ⓜ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	Ⓜ II 2 G Ex db IIC T6...T5 Gb Ⓜ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	Ⓜ II 2G Ex db IIC T4 Gb Ⓜ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	Ⓜ II 2G Ex db IIC T4 Gb Ⓜ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

Tab. 7

6 Preparação do produto para o uso



Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo "Normas de segurança" constante do presente manual do produto.

6.1 Desembalagem

Na entrega do produto, verificar se a embalagem está íntegra e se possui sinais evidentes de quedas ou abrasões.

Em caso de sinais evidentes de dano à embalagem, contatar imediatamente o fornecedor.

Em caso de restituição do produto defeituoso é recomendada a utilização da embalagem original para o transporte.

Conservar a embalagem caso seja necessário enviar o produto em reparação.

6.2 Conteúdo

Controlar se o conteúdo corresponde à lista do material abaixo indicada:

- Câmera PTZ à prova de explosão
- Cobertura (2 por MAXIMUS MPXT)
- Bainha de silicone
- Kit de reposição do O-ring, parafusos de segurança
- Dispositivo de bloqueio (stopping plug)
- Selante
- Abraçadeiras
- Barreira de separação para instalação conforme norma UL/CSA
- Manual de instruções

6.3 Eliminação segura dos materiais de embalagem

Os materiais de embalagem são constituídos inteiramente por material reciclável. O técnico que fizer a instalação deve eliminá-los segundo as regras de coleta seletiva ou segundo as regras existentes no País de utilização.

6.4 Os trabalhos preparatórios antes da instalação

A unidade pode ser instalada com diferentes suportes e apoios.

Recomenda-se utilizar exclusivamente acessórios e suportes aprovados para a instalação.

6.4.1 Métodos de instalação

A unidade só pode ser instalada na posição normal ou invertida (montagem no teto). Se instalada na última posição, a reconfiguração das funções de orientação e controle da câmara são feitos através do software do sistema.

O funcionamento em posição invertida não pede nenhuma modificação do hardware.

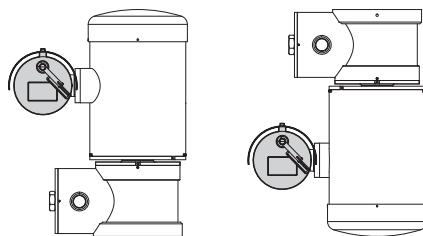


Fig. 5

6.4.2 Fixação ao parapeito ou ao teto

Fixe o adaptador (01) nos fundos da unidade usando 4 parafusos allen com cabeça chata cônica (02), M10x20mm, em aço inox (classe A4 70), que acompanham o produto.

Garantir que os fios sejam livres de sujeira e resíduos.

Aplicar uma boa quantidade de trava rosca (Loctite 270) sobre os 4 furos na base inferior do aparelho.

⚠ Prestar atenção durante a fixação. Torque de aperto: 35Nm.

Permitir a ação do trava rosca por uma hora antes de completar a instalação.

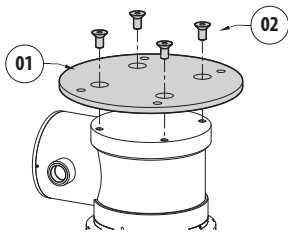


Fig. 6

Fixar a unidade montada ao teto ou ao parapeito se servindo dos furos externos do adaptador. Usar parafusos que podem suportar um peso de, pelo menos, 4 vezes maior do que da unidade.

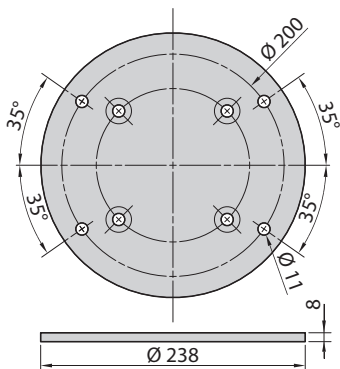


Fig. 7

6.4.3 Fixação com estribo

O suporte pode ser fixado diretamente em um muro vertical. Usar parafusos e elementos de fixação à parede, que pode suportar um peso de, pelo menos, 4 vezes maior do que da unidade.

Para fixar o dispositivo no suporte, use as 4 arruelas chatas, as 4 arruelas elásticas em aço inox e 4 parafusos com cabeça hexagonal em aço inox (classe A4 70) que acompanham o produto (M10x20mm).

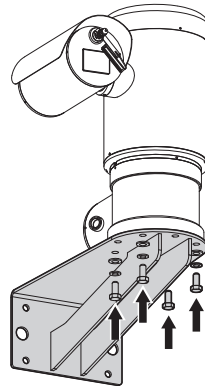


Fig. 8

Garantir que os fios sejam livres de sujeira e resíduos.

Aplicar uma boa quantidade de trava rosca (Loctite 270) sobre os 4 parafusos.

Apertar os parafusos.

⚠ Prestar atenção durante a fixação. Torque de aperto: 35Nm.

Permitir a ação do trava rosca por uma hora antes de completar a instalação.

6.4.4 Fixação com módulo adaptador angular ou em poste

Para instalar o produto no módulo adaptador angular ou em poste, fixe, antes de tudo, o suporte de apoio.

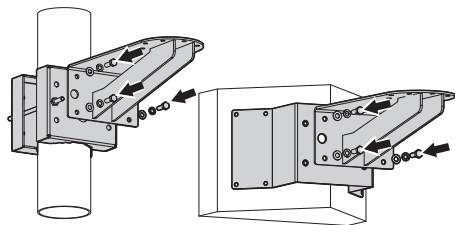


Fig. 9

Para fixar a suporte de apoio, use as 4 arruelas chatas, as 4 arruelas elásticas em aço inox e 4 parafusos com cabeça hexagonal em aço inox (classe A4 70), M10x30mm, que acompanham o produto.

Garantir que os fios sejam livres de sujeira e resíduos.

Aplicar uma boa quantidade de veda-rosca (Loctite 270) nos 4 furos com rosca presentes no módulo adaptador.

Apertar os parafusos.

⚠ Prestar atenção durante a fixação. Torque de aperto: 35Nm.

Permitir a ação do trava rosca por uma hora antes de completar a instalação.

Para fixar o aparelho no suporte, consulte o capítulo relevante (6.4.3 Fixação com estribo, página 22).

6.4.5 Fixação do teto

ⓘ Antes de fixar o teto da caixa remover a película protetora (se houver).

Fixe o teto na caixa usando os parafusos e arruelas parafusados no corpo superior da caixa.

Aplicar uma boa quantidade de trava rosca (Loctite 270) sobre os furos rosqueados.

Permitir a ação do trava rosca por uma hora antes de completar a instalação.

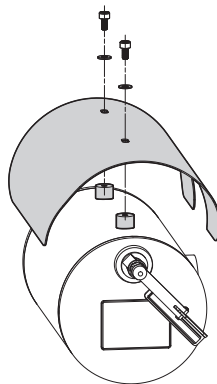


Fig. 10

⚠ Prestar atenção durante a fixação. Torque de aperto: 2Nm.

7 Instalação



Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo "Normas de segurança" constante do presente manual do produto.

VIDEOTEC recomenda testar a configuração e o desempenho do equipamento antes de colocar na área de instalação final.

7.1 Aterramento

7.1.1 Ligação equipotencial de terra

A ligação equipotencial de terra deve ser efetuada mediante um cabo externo com uma seção mínima de 4mm^2 (11AWG).

Conectar o cabo para a ligação equipotencial de terra com o terminal tipo ilhós que acompanham o produto (apropriado para cabos com seção de 4mm^2 (11AWG) até 6mm^2 (9AWG)).

Fixe o ilhó usando o parafuso M5 e a arruela dentada que acompanham o produto.

Características do parafuso M5:

- Material: A4 Classe 70
- Cabeça do parafuso: ISO 4762
- Comprimento: 8mm

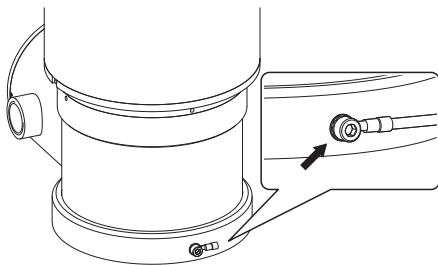


Fig. 11

7.1.2 Ligação do aterramento protetor

É necessário conectar o cabo de aterramento de proteção ao conector interno (J1, 7.3 Descrição da placa de conectores, página 25).

7.2 Abertura do compartimento de conexões



O prisioneiro de segurança é utilizado para impedir que se desparafuse a tampa com rosca do compartimento de conexões. Retire o prisioneiro de segurança antes de desparafusar a tampa rosçada.

Na base da unidade estão presentes 2 entradas de cabo de 3/4" NPT (ou M25 versão especial).

Para efetuar as conexões, retire o prisioneiro de segurança (01) com uma chave hexagonal macho de 1.5mm, a tampa com rosca (02) (porcas hexagonais de 30mm) e as tampas de plástico (03).

As tampas de plástico são utilizadas apenas para o despacho e não podem ser utilizadas para o funcionamento.

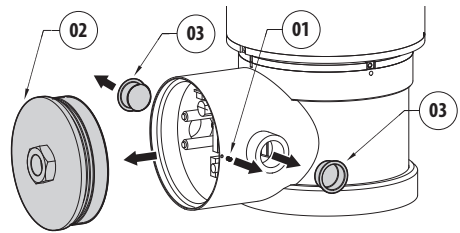


Fig. 12

Desparafusando a tampa filetada é possível acessar os conectores.

7.3 Descrição da placa de conectores

DESCRIÇÃO DA PLACA		
Conector	Função	Braçadeiras - Seção nominal dos cabos que podem ser usados
J1	Linha de Alimentação	de 0.2mm ² (24AWG) até 2.5mm ² (13AWG)
J6	Alarmes, Resete remoto e linha serial	de 0.2mm ² (24AWG) até 1.0mm ² (17AWG)
J8	Relé	de 0.2mm ² (24AWG) até 1.0mm ² (17AWG)
F1	Fusível	-
F2	Fusível	-
P1	Botão de reset	-
RJ45	Conector Ethernet	-
SFP	Conector SFP	-

Tab. 8

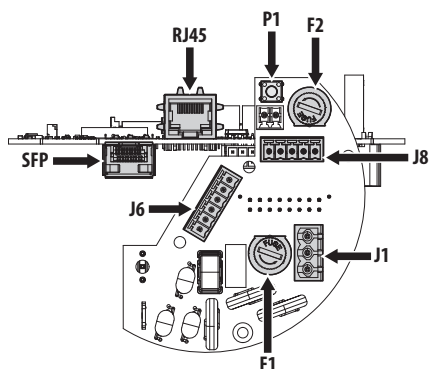


Fig. 13

7.4 Ligação da linha de alimentação

De acordo com a versão, podem ser fornecidas tensões diferentes de alimentação do dispositivo. O valor de tensão de alimentação está indicado na etiqueta de identificação do produto



O cabo de ligação à terra deve ser mais comprido que os outros dois em 10mm, aproximadamente, para prevenir o destacamento accidental por causa do estiramento.



O cabo de alimentação deve ser coberto com a bainha de silicone (01) presente no equipamento. A bainha de silicone deve ser fixada com a respectiva faixa (02). Para instalação conforme a norma UL/CSA, insira o cabo de alimentação no orifício de passagem do cabo à esquerda (03), como indicado na figura.



No caso de usar o cabo multipolar VIDEOTEC e um cabo de fibra óptica, é aconselhável usar a entrada de cabos à esquerda (03) para o cabo multipolar e a entrada de cabos à direita (04) para a fibra óptica.

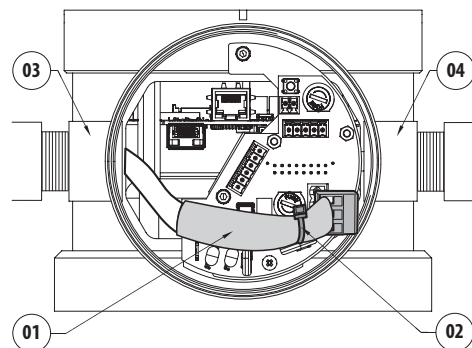


Fig. 14



O condutor do aterramento de proteção deve ter seção igual ou maior que a dos cabos de alimentação.

Extraír da placa de conectores o conector removível da linha de alimentação (J1, 7.3 Descrição da placa de conectores, página 25).

Conecte os cabos elétricos de alimentação como indicado na tabela relativa (Tab. 9, página 26).

LIGAÇÃO DA LINHA DE ALIMENTAÇÃO	
Cor	Braçadeiras
Alimentação 24Vac	
Definido pelo instalador	N (Neutro)
Definido pelo instalador	L (Fase)
Amarelo/Verde	⊕
Alimentação 230Vac	
Azul	N (Neutro)
Marrom	L (Fase)
Amarelo/Verde	⊕
Alimentação 120Vac	
Azul	N (Neutro)
Marrom	L (Fase)
Amarelo/Verde	⊕

Tab. 9

7.5 Conexão dos alarmes, do reset remoto e dos relés



Todos os cabos de sinal devem ser agrupados com uma faixa.

CONEXÃO DAS ENTRADAS DE ALARME E DOS RELÉS		
Conectores	Braçadeiras	Descrição
J6	AL1, COM	Entrada do alarme autoalimentado referente ao borne comum
	RST, RST	Reset remoto
J8	RL1A, RL1B	Contato limpo de saída ativável por alarmes o comandos do usuário
	RL2A, RL2B	Contato para ativação da bomba lava-vidros

Tab. 10

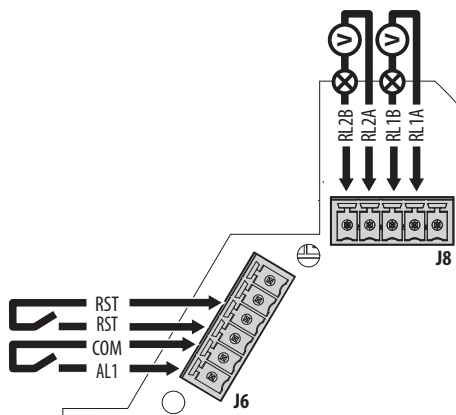


Fig. 15

7.5.1 Instalação segundo a norma UL/CSA

⚠ Preste atenção para não estragar os condutores e as placas.

Para instalações conforme a norma UL/CSA, os cabos ethernet, o alarme reset, os relés e as fibras ópticas são inseridos na entrada de cabos à direita, como indicado na figura abaixo (Fig. 16, página 27).

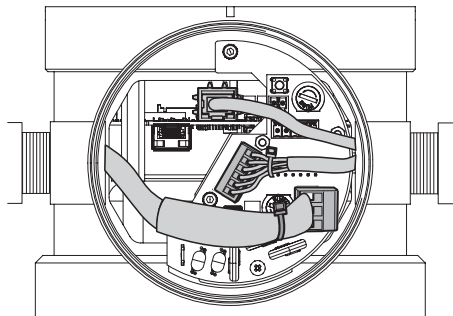


Fig. 16

Nas instalações seguindo a norma UL/CSA, é obrigatório instalar a barreira de separação que acompanha o produto.

Depois de inserir todos os conectores e antes de alimentar o dispositivo, instale a barreira de separação que acompanha o produto.

Fixe a barreira (01) com os parafusos e as arruelas (02) que acompanham o produto nos espaçadores pré-dispostos (03) (Fig. 17, página 27 e Fig. 18, página 27).

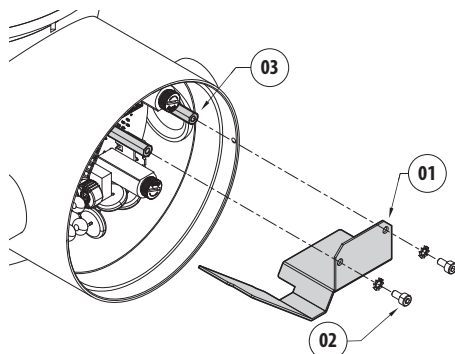


Fig. 17

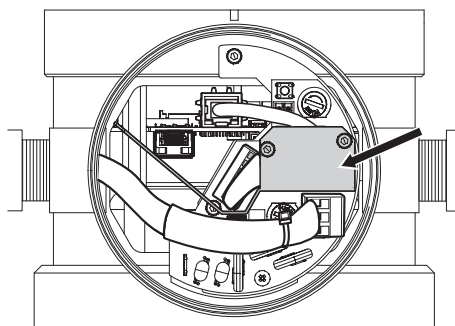


Fig. 18

7.5.2 Ligação alarme com contato limpo

Conecte os bornes AL1 e COM ao conector J6 como ilustrado na figura (Fig. 15, página 26).

O comprimento máximo dos cabos de alarme: 200m.
Efetuar a conexão com um cabo blindado.

7.5.3 Conexão do reset remoto

Conecte os dois bornes RST ao conector J6 como ilustrado na figura (Fig. 15, página 26).

Comprimento máximo dos cabos: 200m.

Consulte no capítulo Factory Default a utilização do reset remoto (11.2.3 Factory Default, página 32).

7.5.4 Ligação dos relés

i **Tensão e corrente máximas dos relés: consulte nos dados técnicos constantes dos capítulos relevantes (15 Dados técnicos, página 35).**

Conecte os bornes RL1A, RL1B, RL2A, RL2B ao conector J8, como ilustrado na figura (Fig. 15, página 26).

O dispositivo pode ser dotado de equipamento de lavagem como acessório. Use os bornes RL2A e RL2B para comandar o equipamento de lavagem.

7.6 Conexão Ethernet

O produto é dotado de um switch Ethernet integrado que gerencia uma porta RJ45 e um slot para módulos SFP.

7.6.1 Conexão mediante RJ45

i **Faça as conexões de acordo com a norma: TIA/EIA-568-B.**

Conecte o cabo Ethernet na porta RJ45 (7.3 Descrição da placa de conectores, página 25).

Recomenda-se a utilização de cabos Ethernet com as características a seguir:

- STP (blindado)
- Categoria 5E ou categoria 6

Utilizar um conector RJ45 do tipo blindado em ambas as extremidades do cabo. A proteção do cabo Ethernet (lado utilizador) deve ser sempre aterrada por meio do conector.

7.6.2 Conexão por SFP

i **Os módulos ópticos que seguem a norma SFP (Small Form Factor Pluggable) são dispositivos de conversão de sinal elétrico em óptico e de óptico em elétrico.**

O módulo SFP é usado para a conexão com a fibra óptica. O módulo SFP deve ser adequado ao equipamento de instalação.

Consulte no manual de instalação do módulo SFP as especificações relevantes.

⚠ **O módulo SFP (não fornecido pela VIDEOTEC) deve observar os seguintes requisitos:**


- Laser: Class 1, conforme a EN60825-1
- Certificações UL/IEC 60950-1 ou UL/IEC 62368-1

i **O switch do usuário, conectado por módulo SFP, deve funcionar na velocidade de 100Mbps. Verifique a configuração do switch a que o produto está conectado.**


i **VIDEOTEC testou vários tipos de módulos SFP. Para outras informações entrar em contato com o centro de assistência VIDEOTEC.**


Insira o módulo SFP (não acompanha) no slot SFP (7.3 Descrição da placa de conectores, página 25).

7.7 Fechamento do compartimento de conexões

 Se não consegue manualmente rosquear a tampa antes que o O-ring atinja o tubo do compartimento de conexão, isso significa que é presente sujeira ou resíduo nos filetes da rosca, ou que a tampa não está bem alinhada. Essa condição pode danificar gravemente os filetes. Desaparafusar a tampa e controlar o alinhamento e/ou limpar os filetes.

 A fim de não danificar a rosca, nunca forçar a rotação da tampa rosçada antes que o O-ring atinja o compartimento de ligação.

 Em caso de suspeitas de danos aos fios, suspender a instalação. O aparelho pode não ser mais adequado para a instalação segura em uma atmosfera potencialmente explosiva. Neste caso, entrar em contato com o serviço técnico de VIDEOTEC.

 Antes de fechar a tampa, verifique a integridade da guarnição O-ring. Se a guarnição estiver danificada, substituí-la com aquela que acompanha o produto (11.1.2 Substituição da guarnição, página 31).

Verificar se há sujeira ou detritos.

Lubrifique as roscas com graxa, conforme a IEC/ EN60079-14, para agilizar o aparafusamento da tampa.

Colocar os cabos de tal maneira que não haja interferências, durante o fechamento da tampa rosçada do compartimento de ligação.

Parafusar manualmente a tampa rosqueada no compartimento de conexões até que a junta não tenha atingido a extremidade do tubo.

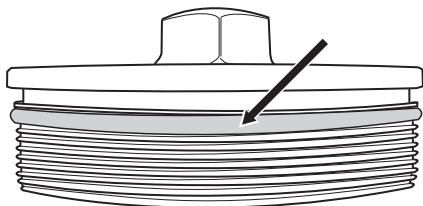


Fig. 19

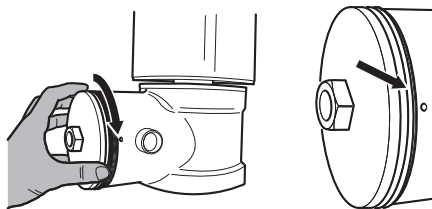


Fig. 20

Apertar a tampa rosçada do compartimento de conexão com uma chave de 30mm. Após o fechamento, certifique-se de que não haja espaço entre a tampa rosçada e o tubo do compartimento de conexão.

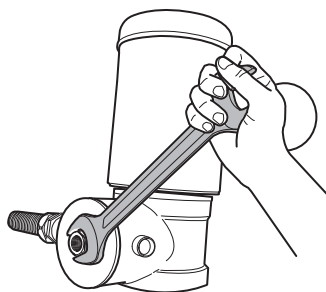


Fig. 21

A fixação do prisioneiro de segurança é necessária para concluir o fechamento do produto, para prevenir o desaparafusamento não desejado da tampa filetada.

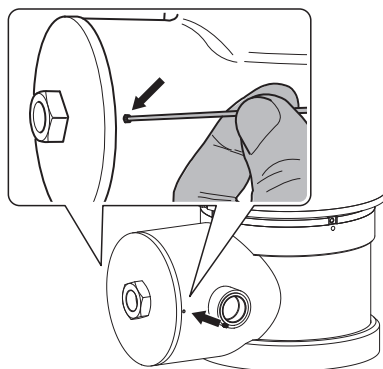


Fig. 22

8 Acendimento



Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo "Normas de segurança" constante do presente manual do produto.



O procedimento de preaquecimento automático (De-Ice) pode ser ativado sempre que o dispositivo estiver ligado em temperatura ambiente inferior a -10°C. O processo serve para garantir a funcionalidade correta do dispositivo também a baixas temperaturas. A duração varia dependendo das condições ambientais (de 60 minutos até 120 minutos).

Conectar a alimentação elétrica para ligar a unidade.

Depois da ativação, a unidade precisa de alguns minutos para estar completamente operacional.

Desligar a alimentação elétrica para desligar a unidade.

9 Configuração

9.1 Endereço IP padrão



A unidade é configurada para obter o endereço IP de um servidor DHCP.

O endereço IP adquirido via DHCP pode ser visto no arquivo log do servidor DHCP.

Se o servidor DHCP não estiver disponível, a unidade é configurada automaticamente com um endereço IP autogerado na sub-rede 169.254.x.x/16. Configure o endereço IP do PC conforme o pertinente à sub-rede (exemplo: endereço IP: 169.254.1.1, subnet mask: 255.255.0.0).

Para pesquisar o endereço IP do dispositivo, use um ONVIF compatível com VMS ou farejador de rede (IP scan utility).

9.2 Interface web



Navegadores suportados (versão mais recente): Microsoft Edge, Google Chrome, Mozilla Firefox.

9.2.1 Primeiro acesso às páginas da Web

O primeiro passo para configurar o dispositivo é ligá-lo à sua interface web.

Para acessar a interface web do produto bastará usar um navegador para ir ao endereço http://indirizzo_ip. No primeiro acesso será visualizada a Página Inicial.

Para a configuração da interface web, consulte o manual referente à versão do firmware instalada, disponível na página web do produto no site www.videotec.com.

10 Instruções de funcionamento ordinário



Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo "Normas de segurança" constante do presente manual do produto.



Não use o limpador se a temperatura ambiente for inferior a 0°C, ou se houver gelo.



O limpador de vidros desativa-se automaticamente se deixado ligado.

O controle do dispositivo pode ser realizado por diversas modalidades.

- Por meio do controle de usuário da interface web (9.2 Interface web, página 30).
- Por meio do Video Management Software (VMS) que suporta o protocolo ONVIF. Neste caso, os comandos especiais são implementados por meio do comando auxiliar do protocolo ONVIF.
- Por meio do software PTZ Assistant (o software PTZ Assistant está disponível para download na página web do produto no site www.videotec.com).

11 Manutenção



Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo Normas de segurança constante do presente manual do produto.

Quando for contactado o serviço técnico de VIDEOTEC é necessário fornecer o número de série juntamente com um código de identificação do aparelho.

Use peças de reposição somente da VIDEOTEC.

11.1 Manutenção ordinária (a efetuar periodicamente)

11.1.1 Controle dos cabos

Os cabos não devem apresentar sinais de desgaste ou deterioração que possam criar situações de perigo. Neste caso, deve ser feita uma manutenção extraordinária.

11.1.2 Substituição da guarnição

Substitua a guarnição tampa do compartimento de conexões usando a que acompanha o equipamento.

Abra e feche o compartimento de conexões como descrito nos capítulos anteriores.

Substitua a guarnição prestando atenção para posicioná-la corretamente.

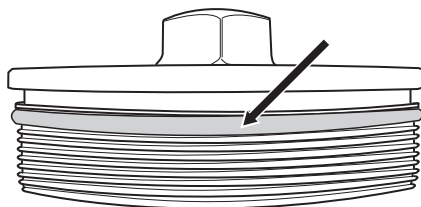


Fig. 23

11.2 Manutenção extraordinária (a ser feito apenas em casos especiais)

11.2.1 Substituição do fusível

No caso de necessidade substituir os fusíveis ilustrados na figura (7.3 Descrição da placa de conectores, página 25).

SUBSTITUIÇÃO DOS FUSÍVEIS		
Fonte de alimentação	Fusível (F1)	Fusível (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

Tab. 11

11.2.2 Substituição da palheta do limpador

Nos modelos dotados de limpador as palhetas gastas podem ser substituídas.

Desparafuse a porca-calota que fixa a palheta e retire-a junto com as arruelas. Substitua a palheta gasta por uma nova. Aplique uma boa quantidade de veda-rosca (Loctite 270), recoloque a porca-calota e as arruelas regulando a fixação até que a aderência da palheta ao vidro esteja correta. Acione o limpador para verificar se a regulagem da palheta está correta.

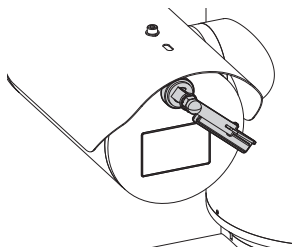


Fig. 24

11.2.3 Factory Default



Se a senha de acesso não está mais disponível, é possível restaurar as configurações de fábrica mediante um procedimento de reset.

O resultado do procedimento de Factory Default é igual ao obtido pela interface web (botão de Hard Reset).

Para restaurar as configurações de fábrica relativas à rede, ao acesso aos utilizadores e à configuração da câmara proceda da seguinte forma:

- Desligue a unidade.
- Abra o compartimento de conexões.
- Mantenha o botão de reiniciar pressionado (P1, 7.3 Descrição da placa de conectores, página 25).
- Ligue a unidade.
- Esperar 30 segundos.
- Solte o botão de reset.
- Aguarde 2 minutos.
- Desligue a unidade.
- Fechar o compartimento de conexões.
- Ligue a unidade.

É possível efetuar o reset também por remoto. Siga o seguinte procedimento:

- Desligue a unidade.
- Conecte os contatos RST do conector J6 (7.3 Descrição da placa de conectores, página 25).
- Ligue a unidade.
- Esperar 30 segundos.
- Desconecte os contato RST.
- Aguarde 2 minutos.
- Desligue a unidade.
- Ligue a unidade.



Depois de terminar o procedimento de restauração das configurações de fábrica (factory default), é necessário configurar a unidade como descrito no capítulo relevante (9.1 Endereço IP padrão, página 30).

12 Limpeza

! Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo "Normas de segurança" constante do presente manual do produto.

i A frequência das intervenções depende do tipo do ambiente no qual é utilizado o produto.

12.1 Limpeza ordinária (a efetuar periodicamente)

12.1.1 Limpeza da janela de vidro

A limpeza deve ser efetuada com sabão neutro diluído com água.

12.1.2 Limpeza da janela em vidro ao germânio

! Limpar a janela prestando atenção para não arranhar ou riscar a superfície externa tratada com revestimento de carbono. Danificando esse revestimento há o risco de comprometer a transparência ao infravermelho da superfície.

A limpeza deve ser efetuada com sabão neutro diluído com água.

Retire a grade protetora e o espaçador, soltando os parafusos allen presentes na parte frontal da caixa, usando uma chave hexagonal antifaísca de 2mm.

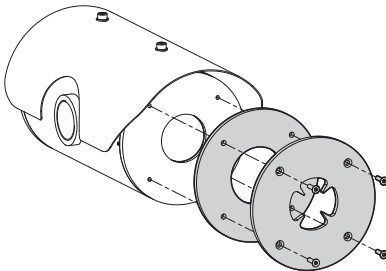


Fig. 25

Uma vez feita a limpeza remontar o espaçador e a grelha de proteção.

12.1.3 Limpeza do produto

! Na superfície externa do produto nunca deve estar presente um acumulo de poeira superior a 5mm.

i A limpeza do produto é realizada segundo das indicações mencionadas neste capítulo, a fim de impedir o acúmulo de carga eletrostática.

A limpeza deve ser efetuada com um pano úmido e sem a utilização de ar comprimido.

13 Informações sobre descarte e reciclagem

A Diretiva Europeia 2012/19/UE sobre Resíduos de equipamentos elétricos e eletrônicos (REEE) prevê que esses equipamentos não sejam descartados no fluxo normal dos resíduos sólidos urbanos, mas coletados separadamente para otimizar o fluxo de recuperação e reciclagem dos materiais componentes e impedir possíveis danos para a saúde e para o meio ambiente em razão da presença de substâncias potencialmente perigosas.



O símbolo da lixeira cruzada está presente em todos os produtos para lembrar.

Os resíduos podem ser entregues aos centros de coleta apropriados ou, gratuitamente, ao distribuidor de que o equipamento foi comprado quando da aquisição de um equivalente novo, ou, sem obrigação, da aquisição de um novo equipamento com dimensões inferiores a 25cm.

Para mais informações sobre o descarte correto destes equipamentos, entre em contato com o serviço público responsável.

14 Solução de problemas



Antes de realizar qualquer tipo de intervenção leia com atenção o capítulo "Normas de segurança" constante do presente manual do produto.



Para qualquer problemática não descrita ou se os problemas indicados a seguir porventura persistirem, entrar em contato com o centro de assistência autorizado.

PROBLEMA	O produto não se acende.
CAUSA	Fiação errada, ruptura dos fusíveis.
SOLUÇÃO	Verificar a correta execução das conexões. Controle a continuidade dos fusíveis e, em caso de avaria, substitua-os pelos modelos indicados.
PROBLEMA	A área gravada não corresponde à posição pré-definida desejada.
CAUSA	Referência da posição absoluta é perdida.
SOLUÇÃO	Desligue e religue o aparelho para reiniciá-lo.
PROBLEMA	O dispositivo não se mexe durante a fase de startup.
CAUSA	A temperatura ambiente é muito baixa.
SOLUÇÃO	Aguardar o final do processo de pré aquecimento. A seguinte mensagem é exibida na página da web: Procedimento De-Ice em andamento.

15 Dados técnicos

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 Geral

Fabricada em aço inox AISI 316L

Superfícies externas tratadas com microjato-percussão e eletropolimento

Sistema dinâmico de controle da posição

15.1.2 Mecânica

Entrada de cabos: 2 x 3/4" NPT

Ausência de folga mecânica

Rotação horizontal: 360°, rotação contínua

Rotação vertical: de -90° até +90°

Velocidade horizontal (variável): de 0.1° até 100°/s

Velocidade vertical (variável): de 0.1° até 100°/s

Precisão ao chamar posições preset: 0.02°

Limpador de vidro integrado

Janela em vidro temperado extraclaro: espessura 12mm

Peso da unidade: 26.5kg

15.1.3 Elétrico

Fonte de alimentação/Corrente absorvida:

- 230Vac \pm 10%, 0.5A, 50/60Hz
- 24Vac \pm 10%, 5A, 50/60Hz
- 120Vac \pm 10%, 1A, 50/60Hz
- 220Vac \pm 10%, 0,54A, 50/60Hz
- 100Vac \pm 10%, 1.2A, 50/60Hz

Potência absorvida:

- 120W max

15.1.4 Rede

Porta RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Conexão Ethernet:100BASE-FX
- Fonte de alimentação: 3.3V
- Standard: conforme MSA

O módulo SFP (não fornecido pela VIDEOTEC) deve observar os seguintes requisitos:

- Laser: Class 1, conforme a EN60825-1
- Certificado: UL/IEC 60950-1 ou UL/IEC 62368-1

15.1.5 Interface I/O

Entrada para reset remoto: 1

Entradas de alarme: 1

Sair relé: 1+1 (1 relé reservado para a bomba lava-vidros e um configurável, 1A, 30Vac/60Vdc max)

15.1.6 Análise vídeo

Algoritmos de detecção e auto-tracking muito robustos, específicos para controlo do perímetro exterior.

Targets Classification: People, vehicles, generic objects

Regras programáveis para análise de vídeo, VIDEOTEC ANALYTICS (é possível configurar rapidamente até dez regras para cada predefinição utilizando uma interface de gestão de controlo intuitiva)

- Line crossing: o alvo dispara um alarme se atravessar a linha em uma ou ambas as direcções
- Entering/leaving area: o alvo dispara um alarme se sair ou entrar na área configurada
- Appearing in area: o alvo dispara um alarme se aparecer dentro da área configurada
- Loitering: o alvo dispara um alarme se permanecer dentro da área configurada ao longo do tempo definido

Detection Mask: desactiva a actividade de detecção numa parte da imagem para evitar falsos alarmes

Video Tampering Detection: um alarme ONVIF específico é accionado se a vista da câmara de vídeo estiver obstruída (por exemplo, spray)

15.1.7 Câmaras

Day/Night Full HD 30x DELUX

Resolução: Full HD 1080p (1920x1080)

Sensor de imagem: 1/2.8" Exmor™ R CMOS sensor

Pixels Efetivos: aprox. 2.38 Megapixel

Iluminação mínima:

- Cor: 0.006lx (F1.6, 30 IRE)
- B/W: 0.0006lx (F1.6, 30 IRE)

Distância focal: de 4.5mm (wide) até 135mm (telas)

Zoom: 30x (480x com zoom digital)

Íris: de F1.6 até F9.6 (Auto, Manual)

Campo visual horizontal: de 61.6° (wide end) até 2.50° (tele end)

Campo visual vertical: de 37.07° (wide end) até 1.44° (tele end)

Velocidade do obturador: de 1/1s até 1/10000s (Auto, Manual)

Balanceamento do branco: Auto, Manual

Ganho: de 0dB até 100dB (Auto, Manual)

Wide Dynamic Range: 120dB

Sistema Foco: Auto, Manual, Trigger

Efeitos imagem: E-flip, Melhoria da cor

Redução do ruído: 2D (3 níveis), 3D (3 níveis)

Controle da Exposição: Auto, Manual, Prioridade (Prioridade Iris, Prioridade Obturador), Brilho, Custom

De-fog: On/Off

Maskin da zona de privacy (máximo 8 máscaras configuráveis)

Indoor Flicker Reduction

Auto Slowshutter: Off, On (de 1/30s até 1/1s)

Compensação exposição: Off, On (de nível 0 até nível 14)

Nitidez: de nível 0 até nível 3

SONY FCB-EV7520 Day/Night Full HD 30x

Resolução: Full HD 1080p (1920x1080)

Sensor de imagem: 1/2.8" Exmor™ R CMOS sensor

Pixels Efetivos: aprox. 2.13 Megapixels

Iluminação mínima:

- Cor: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Distância focal: de 4.3mm (wide) até 129mm (telas)

Zoom: 30x (360x com zoom digital)

Íris: de F1.6 até F14 (Auto, Manual)

Campo visual horizontal: de 63.7° (wide end) até 2.3° (tele end)

Campo visual vertical: de 38.5° (wide end) até 1.3° (tele end)

Velocidade do obturador: de 1/1s até 1/10000s (Auto, Manual)

Balanceamento do branco: Auto, Auto Tracing, Indoor, Outdoor, Manual, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Ganho: de 0dB até 50.0dB (Auto, Manual)

Wide Dynamic Range: 120dB

Sistema Foco: Auto (PTZ Trigger, Full Auto), Manual

Efeitos imagem: E-flip

Redução do ruído (2D, 3D): Off, On (de nível 1 até nível 5)

Controle da Exposição: Auto, Manual, Prioridade (Prioridade diafragma, Prioridade obturador, Prioridade luminosidade)

De-fog: Off, Low, Mid, High

Mascaramento dinâmico da zona de privacidade: máximo 24 máscaras configuráveis, máximo 8 visualizáveis ao mesmo tempo

Indoor Flicker Reduction

Limite do Ganho: de 10.7dB até 50dB

High sensitivity: On/Off

Compensação Backlight: On/Off

Auto Slowshutter: On/Off

Compensação exposição: Off, On (de -10.5dB até +10.5dB)

Nitidez: de nível 0 até nível 15

High Light Compensation (HLC): Off, Low, Mid, High, Nível Mascaramento (Off, On, de nível 1 até nível 15)

Estabilização de imagem digital: On/Off

15.1.8 Ambiente

Instalação para ambientes internos e externos

Temperatura de certificação: de -40°C até +80°C

Temperatura de operação:

- Funcionamento contínuo: de -40°C até +65°C (até +50°C para versões com VIDEOTEC ANALYTICS)
- Teste de temperatura conforme NEMA-TS 2-2003 (R2008) par. 2.1.5.1, perfil de teste fig. 2-1 (de -34 °C a +74 °C) (não válido para versões com análise de vídeo integrada, VIDEOTEC ANALYTICS)
- Intervenção da função descongelamento (inicialização a frio): de -40°C até -10°C

Resistência ao vento

- PTZ em repouso: 230km/h max.
- PTZ em movimento em velocidade máxima: 210km/h max.

Umidade relativa: de 5% até 95%

15.1.9 Certificações

Segurança elétrica (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilidade eletromagnética (CE): EN50130-5, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Instalação no lado externo (CE): EN60950-22, IEC60950-22

Teste de vibração: EN50130-5, EN60068-2-6

Certificação UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (não disponível para as versões 100Vac e 220Vac): cULus Listed

Compatibilidade eletromagnética (América do Norte) (não disponível para as versões 100Vac e 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

Grau de proteção IP (EN/IEC60529): IP66, IP67, IP68, IP69

Grau de proteção Tipo (UL50E) (não disponível para as versões 100Vac e 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

Certificado KC (certificação válida apenas para o código MPXHD51A001C)

15.1.10 Certificações - Aplicações à prova de explosões

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (não disponível para as versões 100Vac e 220Vac)

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) (não disponível para as versões 100Vac e 220Vac)

EAC Ex (TR CU 012/2011) (não disponível para as versões 100Vac e 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (não disponível para as versões 100Vac e 220Vac)

KCs (Employment and labor department 2020-33)

15.1.11 Certificações - Aplicações marinhas

Certificação do Lloyd's Register Marine Type Approval (com caixa de comunicação MAXIMUS MBX ou com o filtro FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilidade eletromagnética: EN60945

Resistente a névoa salina: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 Geral

Fabricada em aço inox AISI 316L

Superfícies externas tratadas com microjato-percussão e eletropolimento

Sistema dinâmico de controle da posição

Radiometric analysis:

- nos 4 pixels centrais, se a câmara térmica tiver funções radiométricas
- definição de uma área específica, se a câmara térmica tiver funções radiométricas avançadas

Activação de alarme radiométrico: Se a temperatura estiver acima do limiar estabelecido, abaixo do limiar estabelecido, entre ou fora dos dois limiares estabelecidos.

Ações de alarme: Activação da saída digital, recolha de dados pré-definidos, recolha de dados da posição de casa, recolha de dados da posição pré-definida e http receber pedido

15.2.2 Mecânica

Entrada de cabos: 2 x 3/4" NPT

Ausência de folga mecânica

Rotação horizontal: 360°, rotação contínua

Rotação vertical: de -90° até +90°

Velocidade horizontal (variável): de 0.1°/s até 100°/s

Velocidade vertical (variável): de 0.1°/s até 100°/s

Precisão ao chamar posições preset: 0.02°

Peso da unidade: 26.5kg

15.2.3 Janelas para caixa

Janela em germânio

- Espessura: 8mm
- Tratamento externo: anti-risco (Hard Carbon Coating - DLC), anti-reflexo
- Tratamento interno: anti-reflexo
- Faixa espectral: de 7.5µm até 14µm
- Transmitância média (de 7.5µm até 11.5µm): 87.5%
- Transmitância média (de 11.5µm até 14µm): 72.1%

15.2.4 Elétrico

Fonte de alimentação/Corrente absorvida:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Potência absorvida:

- 120W max

15.2.5 Rede

Porta RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Conexão Ethernet:100BASE-FX
- Fonte de alimentação: 3.3V
- Standard: conforme MSA

O módulo SFP (não fornecido pela VIDEOTEC) deve observar os seguintes requisitos:

- Laser: Class 1, conforme a EN60825-1
- Certificado: UL/IEC 60950-1 ou UL/IEC 62368-1

15.2.6 Interface I/O

Entrada para reset remoto: 1

Entradas alarme: 1

Sair relê: 1 (1A, 30Vac/60Vdc max)

15.2.7 Câmeras de vídeo térmicas

CÂMARAS TÉRMICAS (RESOLUÇÃO 336X256)							
	Objetivo 9 mm	Objetivo 13 mm	Objetivo 19 mm	Objetivo 25mm	Objetivo 35mm	Objetivo 50 mm	Objetivo 60 mm
Sensor de imagem	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento
Resolução interpolada	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensões píxel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Resposta espectral - infravermelho onda longa (LWIR)	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm
Obturador interno (somente para o sensor de compensação)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digital	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Frequência de atualização imagem	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequência de atualização imagem	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gama cena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gama cena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo de visão horizontal	35°	25°	17°	13°	9,3°	6,5°	5,5°
Campo de visão vertical	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica avançada	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Homem (vistoria) /reconhecimento / identificação)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Veículo (vistoria) /reconhecimento/ identificação)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 12

CÂMARAS TÉRMICAS (RESOLUÇÃO 640X512)							
	Objetivo 9 mm	Objetivo 13 mm	Objetivo 19 mm	Objetivo 25mm	Objetivo 35mm	Objetivo 50 mm	Objetivo 60 mm
Sensor de imagem	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento
Resolução interpolada	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensões píxel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Resposta espectral - infravermelho onda longa (LWIR)	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm
Obturador interno (somente para o sensor de compensação)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digital	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Frequência de atualização imagem	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequência de atualização imagem	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gama cena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gama cena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo de visão horizontal	69°	45°	32°	25°	18°	12.4°	10.4°
Campo de visão vertical	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica avançada	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Homem (vistoria / reconhecimento / identificação)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Veículo (vistoria / reconhecimento / identificação)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 13

15.2.8 Ambiente

Instalação para ambientes internos e externos

Temperatura de certificação: de -40°C até +80°C

Temperatura de operação:

- Funcionamento contínuo: de -40°C até +65°C
- Teste de temperatura conforme NEMA-TS 2-2003 (R2008) par. 2.1.5.1, perfil de teste fig. 2-1 (de -34 °C a +74 °C)
- Intervenção da função descongelamento (inicialização a frio): de -40°C até -10°C

Resistência ao vento

- PTZ em repouso: 230km/h max.
- PTZ em movimento em velocidade máxima: 210km/h max.

Umidade relativa: de 5% até 95%

15.2.9 Certificações

Segurança elétrica (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilidade eletromagnética (CE): EN50130-5, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Instalação no lado externo (CE): EN60950-22, IEC60950-22

Teste de vibração: EN50130-5, EN60068-2-6

Certificação UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (não disponível para as versões 100Vac e 220Vac): cULus Listed

Compatibilidade eletromagnética (América do Norte) (não disponível para as versões 100Vac e 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

Grau de proteção IP (EN/IEC60529): IP66, IP67, IP68, IP69

Grau de proteção Tipo (UL50E) (não disponível para as versões 100Vac e 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 Certificações - Aplicações à prova de explosões

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (não disponível para as versões 100Vac e 220Vac)

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) (não disponível para as versões 100Vac e 220Vac)

EAC Ex (TR CU 012/2011) (não disponível para as versões 100Vac e 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (não disponível para as versões 100Vac e 220Vac)

KCs (Employment and labor department 2020-33)

15.2.11 Certificações - Aplicações marinhas

Certificação do Lloyd's Register Marine Type Approval (com caixa de comunicação MAXIMUS MBX ou com o filtro FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilidade eletromagnética: EN60945

Resistente a névoa salina: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 Geral

Fabricada em aço inox AISI 316L

Superfícies externas tratadas com microjato-percussão e eletropolimento

Sistema dinâmico de controle da posição

Radiometric analysis:

- nos 4 pixels centrais, se a câmara térmica tiver funções radiométricas
- definição de uma área específica, se a câmara térmica tiver funções radiométricas avançadas

Activação de alarme radiométrico: Se a temperatura estiver acima do limiar estabelecido, abaixo do limiar estabelecido, entre ou fora dos dois limiares estabelecidos.

Ações de alarme: Activação da saída digital, recolha de dados pré-definidos, recolha de dados da posição de casa, recolha de dados da posição pré-definida e http receber pedido

15.3.2 Mecânica

Entrada de cabos: 2 x 3/4" NPT

Ausência de folga mecânica

Rotação horizontal: 360°, rotação contínua

Rotação vertical: de -90° até +90°

Velocidade horizontal (variável): de 0.1°/s até 100°/s

Velocidade vertical (variável): de 0.1°/s até 100°/s

Precisão ao chamar posições preset: 0.02°

Limpador de vidro integrado

Peso da unidade: 31kg

15.3.3 Janelas para caixa

Janela em vidro temperado extraclaro

- Espessura: 12mm

Janela em germânio

- Espessura: 8mm
- Tratamento antirrisco (Hard Carbon Coating - DLC)
- Tratamento antirreflexo
- Faixa espectral: de 7.5µm até 14µm
- Transmitância média (de 7.5µm até 11.5µm): 87.5%
- Transmitância média (de 11.5µm até 14µm): 72.1%

15.3.4 Elétrico

Fonte de alimentação/Corrente absorvida:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0,54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Potência absorvida:

- 120W max

15.3.5 Rede

Porta RJ45

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

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Conexão Ethernet: 100BASE-FX
- Fonte de alimentação: 3.3V
- Standard: conforme MSA

O módulo SFP (não fornecido pela VIDEOTEC) deve observar os seguintes requisitos:

- Laser: Class 1, conforme a EN60825-1
- Certificado: UL/IEC 60950-1 ou UL/IEC 62368-1

15.3.6 Interface I/O

Entrada para reset remoto: 1

Entradas alarme: 1

Sair relê: 1+1 (1A, 30Vac/60Vdc max, um relê reservado para a bomba lava-vidros e um configurável)

15.3.7 Câmera de vídeo dia/noite

SONY FCB-EV7520 Day/Night Full HD 30x

Resolução: Full HD 1080p (1920x1080)

Sensor de imagem: 1/2.8" Exmor™ R CMOS sensor

Pixels Efetivos: aprox. 2.13 Megapixels

Iluminação mínima:

- Cor: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Distância focal: de 4.3mm (wide) até 129mm (telas)

Zoom: 30x (360x com zoom digital)

Íris: de F1.6 até F14 (Auto, Manual)

Campo visual horizontal: de 63.7° (wide end) até 2.3° (tele end)

Campo visual vertical: de 38.5° (wide end) até 1.3° (tele end)

Velocidade do obturador: de 1/1s até 1/10000s (Auto, Manual)

Balanceamento do branco: Auto, Auto Tracing, Indoor, Outdoor, Manual, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Ganho: de 0dB até 50.0dB (Auto, Manual)

Wide Dynamic Range: 120dB

Sistema Foco: Auto (PTZ Trigger, Full Auto), Manual

Efeitos imagem: E-flip

Redução do rumor (2D, 3D): Off, On (de nível 1 até nível 5)

Controle da Exposição: Auto, Manual, Prioridade (Prioridade diafragma, Prioridade obturador, Prioridade luminosidade)

De-fog: Off, Low, Mid, High

Mascaramento dinâmico da zona de privacidade: máximo 24 máscaras configuráveis, máximo 8 visualizáveis ao mesmo tempo

Indoor Flicker Reduction

Limite do Ganho: de 10.7dB até 50dB

High sensitivity: On/Off

Compensação Backlight: On/Off

Auto Slowshutter: On/Off

Compensação exposição: Off, On (de -10.5dB até +10.5dB)

Nitidez: de nível 0 até nível 15

High Light Compensation (HLC): Off, Low, Mid, High, Nível Mascaramento (Off, On, de nível 1 até nível 15)

Estabilização de imagem digital: On/Off

15.3.8 Câmeras de vídeo térmicas

CÂMARAS TÉRMICAS (RESOLUÇÃO 336X256)							
	Objetivo 9 mm	Objetivo 13 mm	Objetivo 19 mm	Objetivo 25mm	Objetivo 35mm	Objetivo 50 mm	Objetivo 60 mm
Sensor de imagem	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento
Resolução interpolada	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensões píxel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Resposta espectral - infravermelho onda longa (LWIR)	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm
Obturador interno (somente para o sensor de compensação)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digital	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Frequência de atualização imagem	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequência de atualização imagem	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gama cena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gama cena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo de visão horizontal	35°	25°	17°	13°	9,3°	6,5°	5,5°
Campo de visão vertical	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica avançada	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Homem (vistoria) /reconhecimento / identificação)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
Veículo (vistoria/ reconhecimento/ identificação)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

Tab. 14

CÂMARAS TÉRMICAS (RESOLUÇÃO 640X512)							
	Objetivo 9 mm	Objetivo 13 mm	Objetivo 19 mm	Objetivo 25mm	Objetivo 35mm	Objetivo 50 mm	Objetivo 60 mm
Sensor de imagem	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento	Microbolômetro sem resfriamento
Resolução interpolada	720x480	720x480	720x480	720x480	720x480	720x480	720x480
Dimensões píxel	17µm	17µm	17µm	17µm	17µm	17µm	17µm
Resposta espectral - infravermelho onda longa (LWIR)	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm	de 7.5µm a 13.5µm
Obturador interno (somente para o sensor de compensação)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	√	√	√	√	√	√	√
Zoom digital	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Frequência de atualização imagem	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Alta frequência de atualização imagem	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Gama cena (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
Gama cena (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
Campo de visão horizontal	69°	45°	32°	25°	18°	12.4°	10.4°
Campo de visão vertical	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0	< 50mK em f / 1,0
Sensibilidade térmica (NETD), Câmera de vídeo térmica com função radiométrica avançada	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
Homem (vistoria / reconhecimento / identificação)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
Veículo (vistoria / reconhecimento / identificação)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

Tab. 15

15.3.9 Ambiente

Instalação para ambientes internos e externos

Temperatura de certificação: de -40°C até +80°C

Temperatura de operação:

- Funcionamento contínuo: de -40°C até +65°C
- Teste de temperatura conforme NEMA-TS 2-2003 (R2008) par. 2.1.5.1, perfil de teste fig. 2-1 (de -34 °C a +74 °C)
- Intervenção da função descongelamento (inicialização a frio): de -40°C até -10°C

Resistência ao vento

- PTZ em repouso: 230km/h max.
- PTZ em movimento em velocidade máxima: 210km/h max.

Umidade relativa: de 5% até 95%

15.3.10 Certificações

Segurança elétrica (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Compatibilidade eletromagnética (CE): EN50130-5, EN55032 (Classe A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

Instalação no lado externo (CE): EN60950-22, IEC60950-22

Teste de vibração: EN50130-5, EN60068-2-6

Certificação UL (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (não disponível para as versões 100Vac e 220Vac): cULus Listed

Compatibilidade eletromagnética (América do Norte) (não disponível para as versões 100Vac e 220Vac): FCC part 15 (Classe A), ICES-003 (Classe A)

Grau de proteção IP (EN/IEC60529): IP66, IP67, IP68, IP69

Grau de proteção Tipo (UL50E) (não disponível para as versões 100Vac e 220Vac): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 Certificações - Aplicações à prova de explosões

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (não disponível para as versões 100Vac e 220Vac)

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) (não disponível para as versões 100Vac e 220Vac)

EAC Ex (TR CU 012/2011) (não disponível para as versões 100Vac e 220Vac)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (não disponível para as versões 100Vac e 220Vac)

KCs (Employment and labor department 2020-33)

15.3.12 Certificações - Aplicações marinhas

Certificação do Lloyd's Register Marine Type Approval (com caixa de comunicação MAXIMUS MBX ou com o filtro FM1010):

Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Compatibilidade eletromagnética: EN60945

Resistente a névoa salina: EN60068-2-52

16 Desenhos técnicos

i As medidas indicadas estão expressas em milímetros.

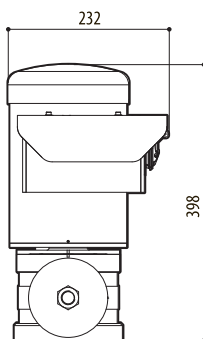
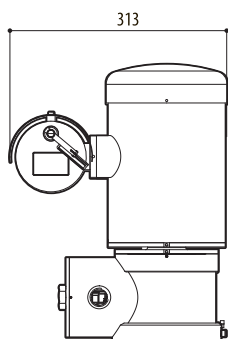
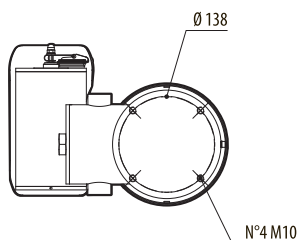


Fig. 26 MAXIMUS MPX SERIES2.

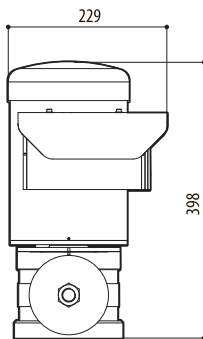
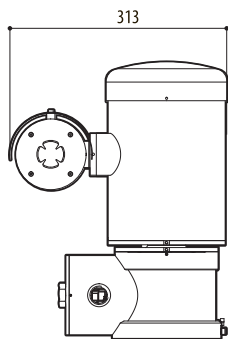
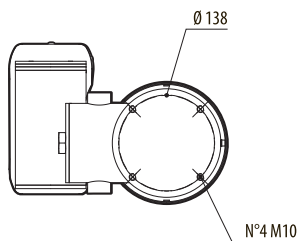


Fig. 27 MAXIMUS MPXR SERIES2.

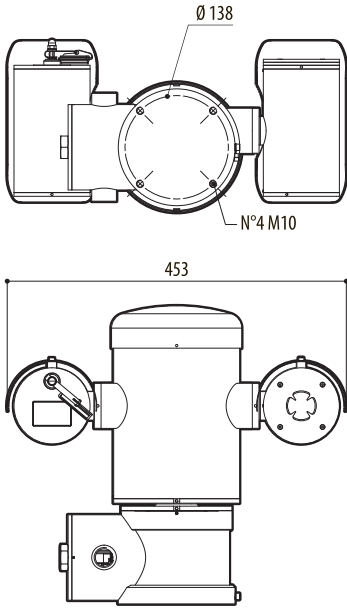
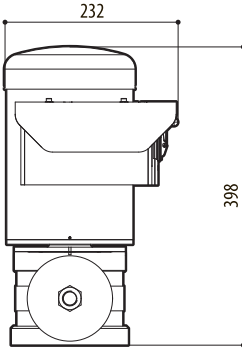


Fig. 28 MAXIMUS MPXT SERIES2.



Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com

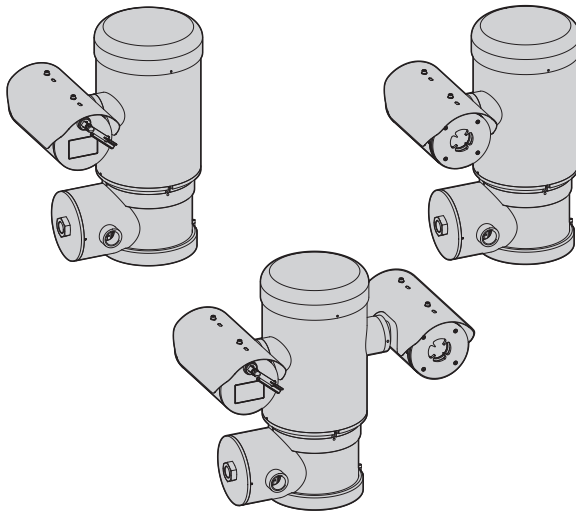


MAXIMUS MPX SERIES2 (MPXHD)

MAXIMUS MPXR SERIES2 (MPXR)

MAXIMUS MPXT SERIES2 (MPXT)

PTZ 방폭형 카메라



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1 설명서에 있는 정보들


이 제품을 설치 및 사용하기 전에 제공된 모든 문서를 주의 깊게 읽어 보십시오. 나중에 참조할 수 있도록 편리한 장소에 설명서를 보관하십시오.

1.1 인쇄합의

 **위험!**
폭발 위험.
 폭발의 위험을 피하려면 주의깊게 읽어 주십시오.

 **위험!**
높은 위험
전기 감전의 위험 모든 작업을 실행하기 전에 다른 지시를 제외하고 제품에 전압 분리를 확인합니다.

 **주의!**
중간 위험
작업은 시스템의 올바른 기능때문에 매우 중요합니다. 지시된 절차를 주의해서 읽고 예정된 방법에 따라서 절차를 실행하길 바랍니다.

 **INFO**
시스템의 특징들 설명
다음 단계들을 이해하기 위해서 주의하여 읽기를 권고합니다.


밀출 표시 제목

정보는 인증 대상입니다.

2 저작권 및 상표에 대한 정보들 주의사항

언급한 제품과 회사의 이름들은 상표이거나 관련된 회사에 속한 등록된 상표입니다.

3 안전규칙

 **위험!**
폭발 위험.
폭발의 위험을 피하려면 주의깊게 읽어 주십시오.

- 기기는 해당 규격 코드 EN/IEC 60079-14, EN/IEC 60079-17, 국가 표준에 따라 전문 기술 직원이 설치 및 유지관리해야 합니다.
- 전원이 공급되고 폭발성 대기에 있을 때 장치를 열지 마십시오.
- 설치는 적절한 도구를 이용해 실시하도록 합니다. 장치가 설치되는 장소에서 특정한 도구를 사용할 수도 있습니다.
- 비폭발성 환경에서 연결, 설치 및 유지보수 작업을 수행하십시오.
- 폭발 위험성이 있는 환경에 설치된 제품의 발화 위험성을 줄이려면 등전위 접속은 필수 사항입니다.
- 장치는 접지 도체에 연결되어야 합니다(보호용 접지). 이 연결은 전력선 커넥터를 통해서만 수행해야 함. 외부 등전위 본딩 연결도 또한 수행되어야 하지만, 접지에 대한 보조 본딩 연결에 대해서만 필요하고, 현지 규정이나 당국에 의해 요청되는 경우에 이루어져야 합니다.
- 폭발 가능성이 있는 대기에서 제품 전원을 켜기 전에 연결부 마개가 제대로 닫혀 있는지 확인하십시오.
- 장치의 표면 온도가 직접적인 햇빛 노출에 의해 증가되었습니다. 장치의 표면 온도 등급은 직사광선에 대한 고려 없이 주면 대기 온도만으로 판단됩니다.
- 모든 장치들이 해당 응용 프로그램과 설치되는 환경에 대해 인증되어 있는지 확인합니다.
- 제조업자에 의해서 승인되지 않은 모든 변경은 보증을 무효화합니다.



위험!

높은 위험
전기 감전의 위험 모든 작업을 실행하기 전에 다른 지시를 제외하고 제품에 전압 분리를 확인합니다.

- 회로 차단기가 열린 상태에서 설치하거나 유지관리를 수행할 때 전원이 꺼져 있는지 확인하십시오.
- 전원 차단 장치는 전기 설비에 포함되어야 하며, 매우 신속하게 인식가능하고 필요한 경우 동작해야 합니다.
- 장치가 연결된 전기 설비는 최대16A에 의한 자동 양극성의 보호 스위치가 구비되어야 합니다. 회로 차단기 접점 간의 최소 간격은 3mm(0.1인치)여야 합니다. 스위치는 접지로 향하는 손상된 전류(차이)와 과전류(회로차단기)에 대한 보호가 제공되어야 합니다.
- 전원 공급장치가 분리되고 다른 장치에 대한 연결 케이블이 제거된 경우에만 장치의 스위치를 끄는 것을 고려할 수 있습니다.
- 마모나 오래된 징후를 가진 케이블을 사용하지 마십시오.
- 모든 케이블은 IEC60332-1-2, IEC 60332-1-3 및 IEC/EN60079-14를 준수해야 합니다.
- 설치 작동 때 설비에서 제공되는 전원공급의 특성들과 장치에서 요구하는 전원공급의 특성이 일치하는지를 점검합니다.
- 화재의 위험에 대해 보호를 보장하기 위해서는 같은 유형과 가치를 가진 퓨즈로 교체합니다. 퓨즈들은 오직 자격을 갖춘 기술자들에 의해서만 교체되어야 합니다.
- 이 장비는 어린이가 있을 수 있는 위치에 사용하기 적합하지 않습니다.



주의!

중간 위험
작업은 시스템의 올바른 기능때문에 매우 중요합니다. 지시된 절차를 주의해서 읽고 예정된 방법에 따라서 절차를 실행하길 바랍니다.

- 설치가 현지 규정과 사양에 부합하는지 확인합니다.
- 연결 후 현장에서 설치하기 전에 실험실에서 시험하십시오.
- 전원 공급 장치 소켓과 케이블이 적절한 치수인지 점검합니다.
- 작동 온도를 견딜 수 있는 적절한 케이블을 사용하십시오.
- 분리된 모든 케이블은 전기적으로 절연 상태여야 합니다.
- 이 시스템은 표준 또는 반대 위치(천장 장착)에만 설치할 수 있습니다.
- 전원공급을 공급하기 전에 장치가 안전하게 고정되었는지 확인합니다.
- 시작시 시스템은 몇 가지 자동 보정 작업을 합니다. 전원이 공급된 경우 장치 가까이에서 있지 마십시오.
- 제조사는 무단 개조, 비순정 예비 부품 사용, 비공인, 비숙련 인력의 설치, 유지관리 및 수리로 발생한 이 핸드북에 언급된 기구의 손상에 대해 어떠한 책임도 지지 않습니다.
- 기술 서비스에 대해서는, 공인 기술자에게만 의뢰하십시오.
- 본 제품은 예상되는 약관에 따라 적절한 훈련을 받은 사람 또는 VIDEOTEC 직원의 감독 하에서만 수리해야 합니다: IEC/EN60079-19.
- 순정 VIDEOTEC 예비 부품만 사용하십시오. 각 교체 키트에 첨부된 유지관리 지침을 엄격히 준수하십시오.



INFO

**시스템의 특징들 설명
다음 단계들을 이해하기 위해서 주의하여
읽기를 권고합니다.**

- 시스템의 상당한 무게를 고려하여, 적절한 운반 및 취급 시스템을 사용하십시오. 직원은 제품 취급 시 일반적인 사고 예방 표준을 준수해야 합니다.
- 설치를 진행하기 전에 검인의 라벨을 검사하면서 제공된 재료들이 명시된 요구들과 일치하는지 확인합니다..
- 제한 접근 지역의 장비 설치는 전문 기술 인력이 수행합니다.
- 제조업체는 이 설명서에서 언급된 기기의 부적절한 사용으로 인해 발생하는 손상에 대한 모든 책임을 지지 않습니다. 언급이 없이 내용물을 변경에 대한 권리를 또한 보유하고 있습니다. 제조업자는 기기의 사용으로 인해 발생하는 어떤 책임을 지지 않을 수 있음에도 불구하고 각 관리는 이 설명서에서 포함된 서류의 수집과 평가에 배치되어 있습니다. 제조업자는 기기의 사용으로 인해 발생하는 어떤 책임을 지지 않을 수 있음에도 불구하고 각 관리는 이 설명서에서 포함된 서류의 수집과 평가에 배치되어 있습니다. 이 설명서의 생성과 생산에 관련된 모든 사람이나 회사의 경우에도 같습니다.
- 장치가 고정될 표면을 선택하는 것은 사용자의 책임이기 때문에, 해당 장치를 특정 표면에 부착하기 위한 고정 장치는 제공되지 않습니다. 설치자가 해당 특정 용도에 적합한 고정 장치를 선택할 책임이 있습니다. 적어도 장치의 무게보다 4배를 지탱할 수 있는 방법과 자재를 사용하십시오.
- 방폭 조인트 치수 정보는 제조사에 문의하십시오.
- 모든 유지관리 중재의 경우 실험실로 제품을 돌려보내 필요한 모든 작업을 수행할 것을 권장합니다.
- 이 장치는 원격으로 제어되며 언제라도 위치를 바꿀 수 있습니다. 움직이는 부품에 의해 다치는 사람이 없도록 설치되어야 합니다. 움직이는 부품이 다른 물체를 치거나 위험한 상황을 생성하지 않도록 설치되어야 합니다.
- 이것은 클래스 A 제품입니다. 주거환경에서 이 제품은 전파장애를 일으킬 수 있습니다. 이 경우, 적합한 방법을 가져오라고 사용자에게 요구되어질 수 있습니다.
- 낮추고 짧은 파워 브레이크 회로에 관한 시행되고 있는 법에 일치하려면 장치를 공급하기 위해 적절한 지속성 그룹 (UPS)를 사용하십시오.

4 식별

4.1 설명과 제품의 명시

MAXIMUS MPX 시리즈는 폭발 가능성이 있는 환경에 설치할 수 있는 전자 연마 AISI316L 스틸 PTZ 카메라 제품군입니다.

MAXIMUS MPX 시리즈에는 모델에 따라 NPT 또는 미터식 케이블 입력부가 장착되어 있습니다.

MAXIMUS MPX 시리즈는 IP66/IP68/IP69 보호 등급이 있으며 온도가 -40°C~+80°C인 환경에 설치할 수 있습니다(이용 가능한 각 모델의 표시 확인).

버전에는 가시광선 카메라, 열 카메라 또는 가시광선 및 열 카메라가 있는 이중 비전이 제공됩니다.

4.2 사용 범위

장치의 사용은 잠재적으로 폭발성 대기를 가진 1-21 구역이나 1-22구역으로 등급된 구역을 감독하기 위해서 고정 위치에서 사용에 대해 정의되어졌습니다.

본 장치는 응용 범위와 최소 안전 요건을 규정하는 지령 2014/34/UE 및 국제 표준 IECEx에 부합하여 제작되고 인증되었습니다.

4.3 특정 사용 조건

방폭 조인트 치수 정보는 제조사에 문의하십시오.

주변 온도 및 표면 온도 - 지침 참조.

정전기가 쌓이지 않도록 주의하십시오. 설치 지침을 참조하십시오.

이 시스템은 표준 또는 반대 위치(천장 장착)에만 설치할 수 있습니다.

4.4 가스 그룹, 먼지 그룹 및 온도

이 장치는 IIC 그룹(가스) 및 IIIC 그룹(먼지) 인증을 받았습니다.

온도 등급, 최대 표면 온도 및 케이블 입력 온도는 설치 가능 장치(소비 전력, 와트) 특성과 주변 온도에 따라 다릅니다.

이 특성은 특정 장애 모델별로 표시되어 있습니다.

4.5 설치 가능 장치의 특성

모든 내부 구성품은 제조사가 내부에 설치해야 합니다.

4.6 케이블 인입구

케이블 엔트리 보호를 위해 제품에 플라스틱 캡이 제공됩니다. 플라스틱 캡은 설치에 사용할 수 없습니다.

사용하지 않는 케이블 입력은 사용 조건에 적합하고 올바르게 설치된 "db" 및 "tb" 방폭 기능이 있는 적절한 Ex 인증 잠금 장치를 사용해 차단해야 합니다.

모든 케이블 그랜드는 해당되는 경우 사용 조건에 적합한 보호 형식 "db" 및 "tb" Ex 인증을 받아야 하며 올바르게 설치해야 합니다.

도관 사용 시에는 해당되는 경우 사용 조건에 적합한 보호 형식 "db" 및 "tb" Ex 인증 스톱핑 박스를 사용하고 올바르게 설치해야 합니다.

차단의 연결장치는 디바이스로부터 50mm (1.97in) 안으로 위치해 있어야 합니다.

케이블 입력부 온도는 표시판에 명시되어 있습니다.

제품의 IP 등급을 유지하려면 적합한 IP 등급의 케이블 그랜드를 사용하고 표준 IEC/EN60079-14를 준수하는 나사 밀봉제를 적용합니다.

4.6.1 방폭 플러그



KCS 인증이 요구되는 경우 제품과 함께 제공된 방폭 플러그를 사용해서는 안 됩니다..

"db" 및 "tb" 방폭형 보호 기능이 있는 Ex 인증 방폭 플러그는 제품과 함께 제공됩니다. 나사 실란트는 IEC / EN60079-14에 따라 공급되어 IP 등급을 보장합니다.

방폭 플러그 설치 지침은 <https://peppers.co.uk/useful-documents/>에 있습니다.

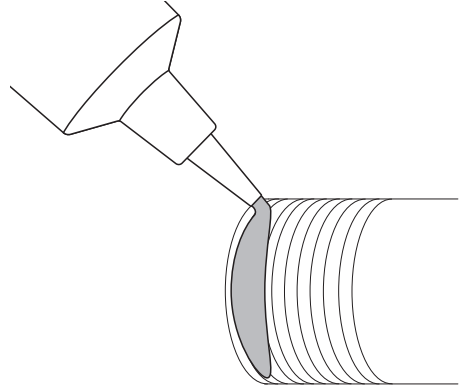


그림. 1

4.7 제품의 검인

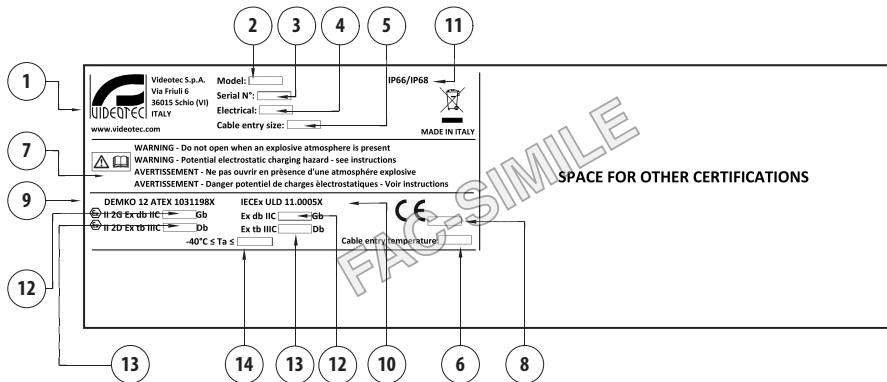


그림. 1

1. 제조업체의 이름 및 주소.
2. 모델.
3. 일련번호는 12자리 숫자로 구성되며, 두 번째와 세 번째 숫자가 제조 연도의 마지막 두 개 숫자입니다.
4. 전기적 특성 (전압 V, 주파수 Hz, 전류 A, 전원 W).
5. 케이블 입력 번호, 치수 및 유형.
6. 케이블 입력부 온도.
7. 경고.
8. 품질 평가를 제공하는 인증 기관 수.
9. ATEX 마킹. 등급 온도는 내부에 설치된 전자 장치 및 주변 온도에 따라 다릅니다.
10. IECEx 표시. 등급 온도는 내부에 설치된 전자 장치 및 주변 온도에 따라 다릅니다.
11. IP 보호 등급.
12. T Class (Tx or Tx...Tx).
13. 최대 표면 온도(Tx°C 또는 Tx°C...Tx°C).
14. 주변 온도(-40°C ≤ Ta ≤ +Tx°C, -40°C ≤ Ta ≤ Tx°C 또는 Tx°C, -40°C ≤ Ta ≤ Tx°C 또는 Tx°C 또는 Tx°C).


표시 예:

데이터				
하우징의 소비 전력(W)	T Class	최대 표면 온도	케이블 입력부 온도	환경 온도
7	T4	T135°C	90°C	-40°C ≤ Ta ≤ 80°C
	T6...T5	T85°C...T100°C	80°C	-40°C ≤ Ta ≤ 60°C or 70°C
	T6...T4	T85°C...T135°C	90°C	-40°C ≤ Ta ≤ 60°C or 70°C or 80°C

표 1

4.8 UL/CSA 표준 참조 전용.

 내염 방폭 조인트는 수리하지 않습니다.

 주의! 위험하게 움직이는 부품 손가락과 몸체의 다른 부위를 가까이 하지 마십시오.




 기기는 움직이는 부품들을 포함합니다. 장치가 작동의 정상 조건 동안 접근 할 수 없는 지역에 위치되었는지 확인합니다. 그 주변에 그리고 잘 보이게 제공한 전용 라벨을 기기에 적용합니다.



그림. 2

 미국에서는 미국 전기 규정(NEC), 캐나다에서는 캐나다 전기 규정(CEC)이 위험한 산업 구역에서 사용되는 전기 장비에 적용됩니다.

 제품의 100Vac 및 220Vac 버전은 UL 인증을받지 않았습니다.

중요 안전 지침

WARNING: DO NOT OPEN WHEN AN 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.

WARNING: CONDUITS MUST BE SEALED WITHIN 50MM OF CONDUIT ENTRANCE TO THE ENCLOSURE.

AVERTISSEMENT: LES CONDUITS DOIVENT ÊTRE SCELLES À DANS 50MM DE L' ENTRÉE DU CONDUIT DU CAISSON.

UL/CSA 표준에 따른 설치에서 설치하는 관련 장에 명시된 대로 제공된 분리기의 필수입니다 (7.5.1 UL/CSA 표준에 따른 설치, 페이지 27).

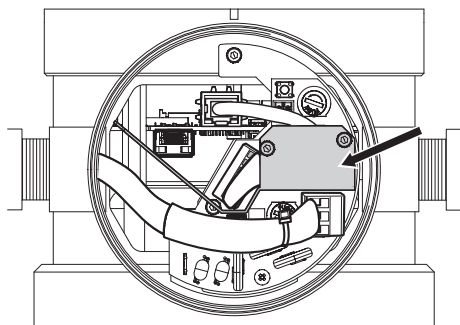


그림. 3

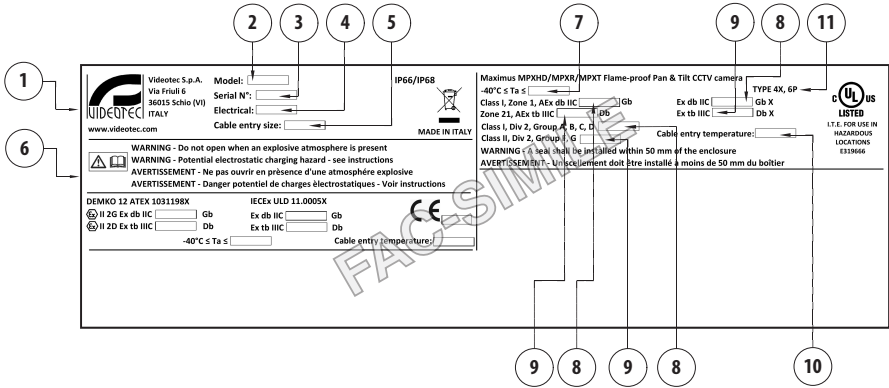


그림. 4

1. 제조업체의 이름 및 주소.
2. 모델.
3. 일련번호는 12자리 숫자로 구성되며, 두 번째와 세 번째 숫자가 제조 연도의 마지막 두 개 숫자입니다.
4. 전기적 특성 (전압 V, 주파수 Hz, 전류 A, 전원 W).
5. 케이블 입력 번호, 치수 및 유형.
6. 경고.
7. 주변 온도(-40°C ≤ Ta ≤ +Tx°C, -40°C ≤ Ta ≤ Tx°C 또는 Tx°C, -40°C ≤ Ta ≤ Tx°C 또는 Tx°C 또는 Tx°C).
8. T Class (Tx or Tx...Tx).
9. 최대 표면 온도(Tx°C 또는 Tx°C...Tx°C).
10. 케이블 입력부 온도.
11. 보호 수준 형식.

연결부

⚠️ 연결부 선택 시 현지 시행 중인 법률을 준수해야 합니다.

케이블 글랜드: 다음 AEx db IIC 및 / 또는 AEx tb IIIC 보호 등급인 UL2225 및 제품 표시판에 따라 다음 Ex db IIC 및 / 또는 Ex tb IIIC 보호 등급인 C22.2를 준수하는 케이블 글랜드를 선택하십시오.

도관: 도관 사용 시 제품 입력부 50mm 안에 밀봉 장치를 설치해야 합니다.

규정 참조:

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”

5 버전들

5.1 Day/Night camera

MAXIMUS MPX SERIES2 - 구성 옵션						
	전압	텔레카메라	온도 및 주변 온도 등급	비디오 분석	ONVIF 프로파일	
MPXHD	1 230Vac	1 초저조도 Day/Night 카메라, FULL HD 1080p, 30배, DELUX 기술 탑재	A T6...T5 -40°C/+60°C or +70°C	0 통합 비디오 분석 없음 (VIDEOTECH ANALYTICS없이)	00 ONVIF, 프로파일 Q, 프로파일 S 및 프로파일 T 준수	C
	2 24Vac	2 SONY FCB-EV7520 카메라, FULL HD 1080p, 30배	D T4 -40°C/+80°C	V 통합 비디오 분석 기능 (VIDEOTECH ANALYTICS)	01 ONVIF, 프로파일 S 및 프로파일 T 준수	
	3 120Vac		C T5...T4 -40°C/+55°C or +60°C			
	5 220Vac					
	6 100Vac					

MAXIMUS MPX SERIES2 - CERTIFICATIONS AND MARKINGS					
Part number	인증	마킹	환경 온도	케이블 엔트리 온도	
MPXHD1*A0**C, MPXHD2*A0**C, MPXHD3*A0**C	ATEX	Ⓜ II 2 G Ex db IIC T6...T5 Gb Ⓜ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C	
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db			
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X			
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db			
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C			
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 2I, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			80°C 사용 Ta = 69°C 81°C 사용 Ta = 70°C
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5			
MPXHD5*A0**C, MPXHD6*A0**C	ATEX	Ⓜ II 2 G Ex db IIC T6...T5 Gb Ⓜ II 2D Ex tb IIIC T85°C...T100°C Db		80°C	
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db			
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C			
MPXHD1*D0**C, MPXHD2*D0**C, MPXHD3*D0**C	ATEX	Ⓜ II 2G Ex db IIC T4 Gb Ⓜ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C	
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db			
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X			
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db			
	KCs	Ex d IIC T4 Ex tb IIIC T135°C			
MPXHD5*D0**C, MPXHD6*D0**C	ATEX	Ⓜ II 2G Ex db IIC T4 Gb Ⓜ II 2D Ex tb IIIC T135°C Db			
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db			
	KCs	Ex d IIC T4 Ex tb IIIC T135°C			
MPXHD1*CV**C, MPXHD2*CV**C, MPXHD3*CV**C	ATEX	Ⓜ II 2 G Ex db IIC T5...T4 Gb Ⓜ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C	80°C	
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db			
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C			
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T5...T4 Gb Zone 2I, AEx tb IIIC T100°C...T135°C Db Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4			-40°C ≤ Ta ≤ +50°C or +55°C
	UL Hazardous Location Canada	Ex db IIC T5...T4 Gb X Ex tb IIIC T100°C...T135°C Db X Class I, Div 2, Group A, B, C, D T5...T4 Class II, Div 2, Group F, G T5...T4			
MPXHD5*CV**C, MPXHD6*CV**C	ATEX	Ⓜ II 2 G Ex db IIC T5...T4 Gb Ⓜ II 2D Ex tb IIIC T100°C...T135°C Db	-40°C ≤ Ta ≤ +50°C or +60°C		
	IECEX	Ex db IIC T5...T4 Gb Ex tb IIIC T100°C...T135°C Db			
	KCs	Ex d IIC T5...T4 Ex tb IIIC T100°C...T135°C			

5.2 열 카메라

MAXIMUS MPXR SERIES2 - 구성 옵션								
	전압		열 카메라	온도 등급	방사 측정	ONVIF 프로파일		빈도
MPXR	1	230Vac	A 열 카메라 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 방사 측정 기능이 있는 열 화상 카메라	0 ONVIF, 프로파일 Q, 프로파일 S 및 프로파일 T 준수	C	- 7.5Hz
	2	24Vac	B 열 카메라 25mm, 336x256	D T4 -40°C/+80°C	0R 방사 측정 기능이 있는 고 급 열 화상 카메라	1 ONVIF, 프로파일 S 및 프로 파일 T 준수	H	30Hz
	3	120Vac	V 열 카메라 19mm, 336x256					
	5	220Vac	F 열 카메라 13mm, 336x256					
	6	100Vac	C 열 카메라 9mm, 336x256					
			D 열 카메라 35mm, 640x512					
			E 열 카메라 25mm, 640x512					
			U 열 카메라 19mm, 640x512					

MAXIMUS MPXR SERIES2 - CERTIFICATIONS AND MARKINGS

Part number	인증	마킹	환경 온도	케이블 엔트리 온도
MPXR1*A0**C*, MPXR2*A0**C*, MPXR3*A0**C*	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6... T5 Gb Zone 21, AEx tb IIIC T85°C... T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXR5*A0**C*, MPXR6*A0**C*	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +80°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXR1*D0**C*, MPXR2*D0**C*, MPXR3*D0**C*	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXR5*D0**C*, MPXR6*D0**C*	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

5.3 주야간 및 열 카메라가 있는 이중 비전

MAXIMUS MPXT SERIES2 - 구성 옵션									
	전압	Day/Night camera	열 카메라	온도 등급	방사 측정	ONVIF 프로파일		빈도	
MPXT	1	230Vac	2 SONY FCB-EV7520 카메라, FULL HD 1080p, 30배	A 열 카메라 35mm, 336x256	A T6...T5 -40°C/+60°C or +70°C	00 방사 측정 기능이 있는 열 화상 카메라	0 ONVIF, 프로파일 Q, 프로파일 S 및 프로파일 T 준수	C	- 7.5Hz
	2	24Vac		B 열 카메라 25mm, 336x256	D T4 -40°C/+80°C	0R 방사 측정 기능이 있는 고급 열 화상 카메라	1 ONVIF, 프로파일 S 및 프로파일 T 준수		H 30Hz
	3	120Vac		V 열 카메라 19mm, 336x256					
	5	220Vac		F 열 카메라 13mm, 336x256					
	6	100Vac		C 열 카메라 9mm, 336x256					
				D 열 카메라 35mm, 640x512					
				E 열 카메라 25mm, 640x512					
				U 열 카메라 19mm, 640x512					

MAXIMUS MPXT SERIES2 - CERTIFICATIONS AND MARKINGS

Part number	인증	마킹	환경 온도	케이블 엔트리 온도
MPXT1*A0**C, MPXT2*A0**C, MPXT3*A0**C	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	UL Hazardous Location America	Class I, Zone 1, AEx db IIC T6... T5 Gb Zone 21, AEx tb IIIC T85°C... T100°C Db Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
	UL Hazardous Location Canada	Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X Class I, Div 2, Group A, B, C, D T6...T5 Class II, Div 2, Group F, G T6...T5		
MPXT5*A0**C, MPXT6*A0**C	ATEX	Ⓢ II 2 G Ex db IIC T6...T5 Gb Ⓢ II 2D Ex tb IIIC T85°C...T100°C Db		80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
MPXT1*D0**C, MPXT2*D0**C, MPXT3*D0**C	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db	-40°C ≤ Ta ≤ +80°C	90°C
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
MPXT5*D0**C, MPXT6*D0**C	ATEX	Ⓢ II 2G Ex db IIC T4 Gb Ⓢ II 2D Ex tb IIIC T135°C Db		
	IECEX	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		

6 사전에 대한 제품 준비

! 모든 유형의 조정을 수행하기 전에 제품 설명서의 "안전 표준"장을 주의 깊게 읽어보십시오.

6.1 포장 풀기

제품을 납품할 때 포장이 완전하고 떨어지거나 찢어지지 않았는지 확인합니다.

포장에 손상의 흔적이 있는 경우 바로 제조업자에게 연락합니다.

고장난 제품의 반환의 경우에는 운송을 위해서 오리지널 포장을 사용하기를 권고합니다.

수리하기 위해 제품을 보내야 할 경우에 포장을 보관해야 합니다.

6.2 내용물

아래 목록 재료의 표와 내용물이 일치하는지 점검합니다:

- PTZ 방폭형 카메라
- 선 실드 (MAXIMUS MPXT용 2개)
- 실리콘 보호개
- O링 교체 부품 키트, 육각 소켓 세트 나사
- 정지 플러그 (stopping plug)
- 실란트
- 밴드
- UL/CSA 표준에 따른 설치용 분리 배리어
- 사용자 설명서

6.3 포장 재료의 안전한 폐기

포장의 재료들은 재활용 재료에 의해서 온전히 만들어졌습니다. 분리수거의 방법이나 사용 국가의 현 규범에 따라서 폐기처분하는 기술 설치자의 관리입니다.

6.4 설치 전에 준비 작업

여러 개의 브래킷으로 장치를 설치하는 것이 가능합니다.

설치 중에는 승인된 브래킷과 액세서리들만 사용할 것을 권장합니다.

6.4.1 설치 방법

이 시스템은 표준 또는 반대 위치(천장 장착)에만 설치할 수 있습니다. 반대 작동을 위한 설치 시, 일반 작동의 경우 시스템 소프트웨어를 통해 카메라 방향 및 컨트롤러 기능이 재구성됩니다.

반전 운용에 대해서는 하드웨어 조정이 요구되지 않습니다.

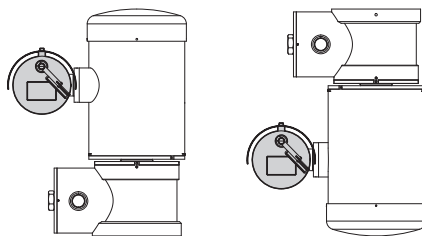


그림. 5

6.4.2 난간 또는 천장 장착 고정

제공된 스테인리스 스틸(A4 class 70)의 육각 소켓(M10x20mm)이 있는 4개의 평 접시 나사(02)를 사용해 어댑터(01)를 폴 장치 하단에 고정하십시오. 나사줄에 오물과 부스러기가 없는지 확인합니다. 장치의 받침에 있는 나사줄이 있는 구멍으로 나사줄 잠금 컴파운드(Loctite 270)를 넉넉히 도포합니다.

⚠ 고정동안 주의를 기울입니다. 조임 토크: 35Nm.

쓰레드 컴파운드는 한 시간 동안 굳어야 하며, 설치를 완료하기 전에 이 기간 동안 허용해야 합니다.

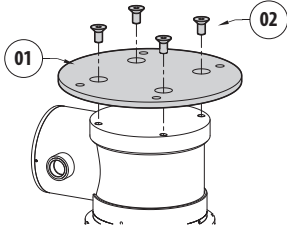


그림. 6

어댑터 외부 구멍을 사용하여 조립된 장치를 난간이나 천장에 고정합니다. 적어도 장치의 무게보다 4배를 견딜 수 있는 나사를 사용하십시오.

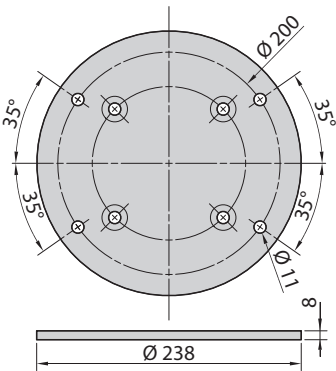


그림. 7

6.4.3 브래킷으로 고정하기

브래킷은 수직 벽면에 고정될 수 있습니다. 적어도 장치의 무게보다 4배를 견딜 수 있는 나사와 벽면 고정 장치를 사용하십시오.

그런 다음, 제공된 평 와셔 4개, 스테인리스 스틸의 스프링 와셔 4개와 스테인리스 스틸(A4 class 70)의 육각 헤드 나사 4개를 사용해 브래킷에 장치를 고정하십시오 (M10x20mm).

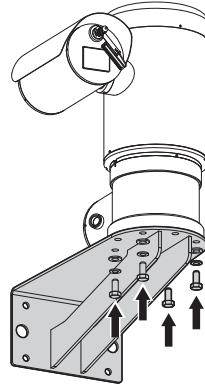


그림. 8

나사줄에 오물과 부스러기가 없는지 확인합니다.

4 개의 스크류 위에 잠금스레드의 충분한 양(Loctite 270)을 적용합니다.

스크류들을 잠급니다.

⚠ 고정동안 주의를 기울입니다. 조임 토크: 35Nm.

쓰레드 컴파운드는 한 시간 동안 굳어야 하며, 설치를 완료하기 전에 이 기간 동안 허용해야 합니다.

6.4.4 코너 어댑터 모듈 또는 폴을 사용해 고정

제품을 코너 어댑터 모듈 또는 폴에 설치하려면 먼저 지지 브래킷을 고정하십시오.

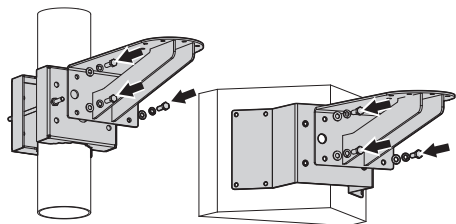


그림. 9

제공된 평 와셔 4개, 스테인리스 스틸의 고무 와셔 4개와 스테인리스 스틸(A4 class 70)의 육각 헤드 나사(M10x30mm) 4개를 사용해 지지 브래킷을 고정하십시오.

나사줄에 오물과 부스러기가 없는지 확인합니다.

어댑터 모듈에 있는 4개의 나사 구멍에 충분한 양의 나사고정제(Loctite 270)를 바릅니다.

스크류들을 잠급니다.

⚠️ 고정동안 주의를 기울입니다. 조임 토크: 35Nm.

쓰레드 컴파운드는 한 시간 동안 굳어야 하며, 설치를 완료하기 전에 이 기간 동안 허용해야 합니다.

장치를 브래킷에 고정하려면 관련 장을 참조하십시오 (6.4.3 브래킷으로 고정하기, 페이지 22).

6.4.5 선실드 장착

ⓘ 햇빛 가리개를 설치하기 전에 보호 필름을 제거하십시오 (있는 경우).

나사와 하우징의 상부에 나사로 고정된 와셔를 사용해 선실드를 하우징에 고정하십시오.

장치의 받침에 있는 나사줄이 있는 구멍으로 나사줄 잠금 컴파운드(Loctite 270)를 넉넉히 도포합니다.

쓰레드 컴파운드는 한 시간 동안 굳어야 하며, 설치를 완료하기 전에 이 기간 동안 허용해야 합니다.

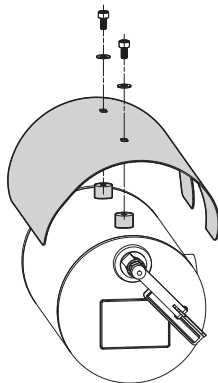


그림. 10

⚠️ 고정동안 주의를 기울입니다. 조임 토크: 2Nm.

7 설치

! 모든 유형의 조정을 수행하기 전에 제품 설명서의 "안전 표준"장을 주의 깊게 읽어보십시오.

VIDEOTEC은 장치를 최종 설치 장소에 설치하기 전에 및 성능을 시험해 볼 것을 강력히 권장합니다.

7.1 접지

7.1.1 접지 등전위 접속

등전위 접속은 반드시 최소 4mm² 단면의 외부 케이블 (11AWG)을 이용해 실시해야 합니다.

접지 등전위 접속에 사용할 케이블을 제공된 아일릿 터미널(4mm²(11AWG)~6mm²(9AWG) 단면의 케이블에 적합)에 연결하십시오.

제공된 M5 나사와 잠금 와셔를 사용해 아일릿을 고정하십시오.

M5 나사의 특성:

- 재료: A4 Class 70
- 나사 머리: ISO 4762
- 길이: 8mm

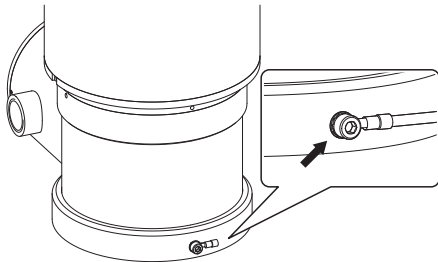


그림. 11

7.1.2 안전 접지의 접속

접지선을 내부 커넥터에 연결해야 합니다 (J1, 7.3 커넥터 색인카드의 기술, 페이지 25).

7.2 연결 부분 열기

i 안전 그레브 나사는 연결부의 돌림마개가 풀리는 것을 방지하기 위해 사용됩니다. 나사 마개를 풀기 전에 보안 그레브 나사를 제거하십시오.

장치 하단에는 no.2 3/4" NPT 케이بل 입력부가 있습니다 (혹은 M25 특별 버전).

연결부를 설치하려면 1.5mm 수 육각 키를 사용하여 안전 그레브 나사(01), 나사 마개(02)(30mm 육각 너트)와 플라스틱 플러그(03)를 제거합니다.

플라스틱 플러그는 배송 목적으로만 사용되며 작동 중에 사용해서는 안 됩니다.

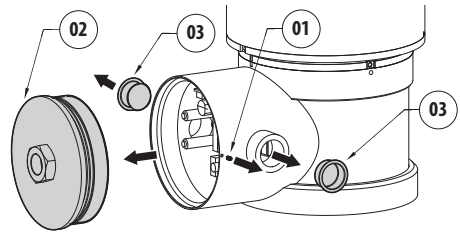


그림. 12

돌림마개를 풀기 전에 커넥터에 액세스합니다.

7.3 커넥터 색인카드의 기술

카드의 설명		
커넥터	기능	단자들 - 사용 케이블 공칭 구간
J1	전력 공급선	~로부터 0.2mm ² (24AWG) 까지 2.5mm ² (13AWG)
J6	알람, 원격 재설정 및 직렬선	~로부터 0.2mm ² (24AWG) 까지 1.0mm ² (17AWG)
J8	릴레이	~로부터 0.2mm ² (24AWG) 까지 1.0mm ² (17AWG)
F1	퓨즈	-
F2	퓨즈	-
P1	누름 버튼 재설정	-
RJ45	이더넷 커넥터	-
SFP	SFP 커넥터	-

표 8

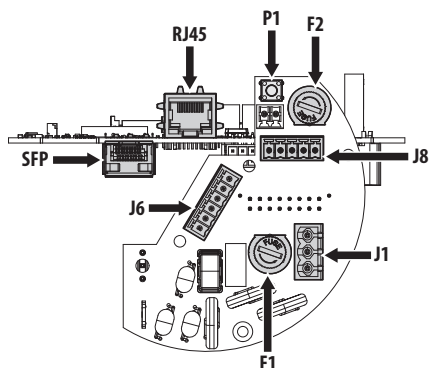


그림. 13

7.4 전원공급 라인 연결

버전에 따라서 장치에 다른 전원공급 전압이 제공되어 질 수 있습니다. 전원 공급 장치의 전압은 제품 식별 라벨에 표시되어 있습니다.

! 접지 케이블은 땀겨지는 원인으로 우연히 분리되어지는 것을 방지하기 위해서 약 10mm의 다른 두 케이블보다 길어야 합니다.

! 전원 케이블은 장치에 있는 실리콘 보호대 (01)로 덮혀 있어야 합니다. 실리콘 보호대는 전용밴드(02)으로 고정되어야 합니다. UL/CSA 표준에 따른 설치 시 그림에 명시된 대로 전원 공급장치 케이블을 왼쪽 케이블 입력부 (03)로 통과시키십시오.

i VIDEOTEC 다극 케이블과 광섬유 케이블을 사용하는 경우 다극 케이블은 왼쪽 케이블 입력 (03), 광섬유는 오른쪽 케이블 입력(04)을 사용하는 것이 권장됩니다.

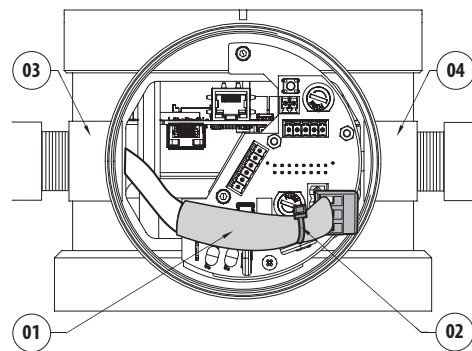


그림. 14

i 접지도체는 횡단면에서 전원 공급장치 케이블의 횡단면과 같거나 더 커야 합니다.

탈착식 전력선 커넥터를 커넥터 보드에서 뺍니다 (J1, 7.3 커넥터 색인카드의 기술, 페이지 25).

관련 표에 명시된 대로 전기 전원 케이블을 연결하십시오 (표 9, 페이지 26).

전원공급 라인 연결	
컬러	단자들
전원 24Vac	
설비자로부터의 정의	N (중립)
설비자로부터의 정의	L (단계)
노란색/초록색	⊕
전원 230Vac	
블루	N (중립)
갈색	L (단계)
노란색/초록색	⊕
전원 120Vac	
블루	N (중립)
갈색	L (단계)
노란색/초록색	⊕

표 9

7.5 알람, 원격 재설정 및 릴레이 연결



모든 시그널 케이블들은 밴드로 그룹지어져야 합니다.

알람 입력 및 릴레이 연결		
커넥터	단자들	설명
J6	AL1, COM	공통 터미널에 장착된 자체 전원 공급 알람 입력
	RST, RST	원격 재설정
J8	RL1A, RL1B	순수한 출력 접점, 알람 또는 사용자 제어로 활성화할 수 있음
	RL2A, RL2B	와셔 펌프 활성화용 접점

표 10

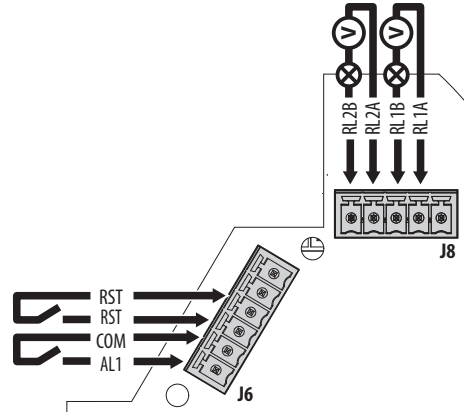


그림. 15

7.5.1 UL/CSA 표준에 따른 설치

⚠ 도체와 보드가 손상되지 않도록 주의하십시오.

UL/CSA 표준에 따른 설치 시 이더넷, 재설정 알람, 릴레이 및 광섬유용 케이블은 다음 그림에 명시된 대로 오른쪽 케이블 입력부에 삽입해야 합니다 (그림. 16, 페이지 27).

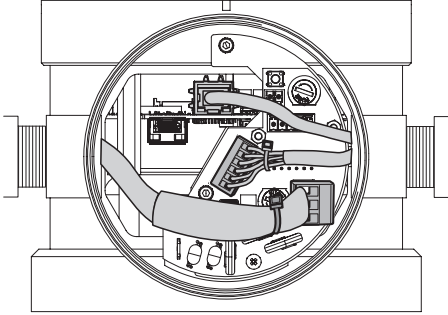


그림. 16

UL/CSA 표준에 따른 설치에서 설치하는 제공된 분리 배리어의 필수입니다.

모든 커넥터를 삽입했으면 장치에 전원을 공급하기 전에 제공된 분리 배리어를 설치하십시오.

특정 나사와 와셔(02)를 사용하여 배리어(01)를 준비된 스페이서(03)에 고정하십시오 (그림. 17, 페이지 27 및 그림. 18, 페이지 27).

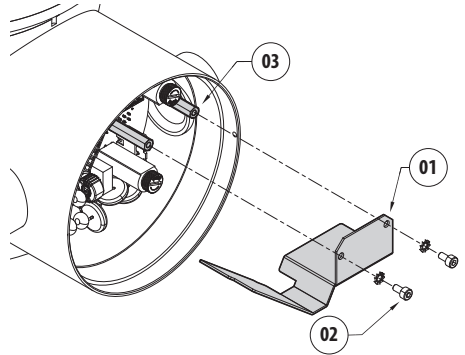


그림. 17

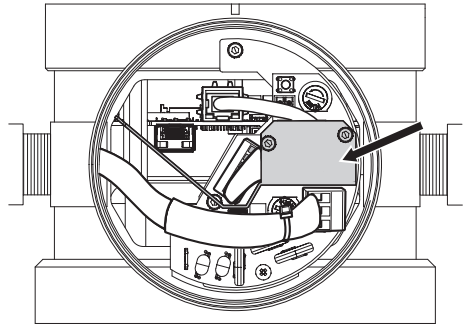


그림. 18

7.5.2 무전압 알람 연결

이미지에 표시된 대로 터미널 AL1과 COM을 커넥터 J6에 연결하십시오 (그림. 15, 페이지 26).

알람 케이블의 최대 길이: 200m.

연결하려면 차폐 케이블을 사용하십시오.

7.5.3 원격 재설정 연결

RST 터미널 두 개를 그림에 표시된 대로 J6 커넥터에 연결하십시오 (그림. 15, 페이지 26).

최대 케이블 길이: 200m.

원격 재설정을 사용하는 방법을 확인하려면 공장 기본 설정 장을 읽어보십시오 (11.2.3 Factory Default, 페이지 32).

7.5.4 릴레이 연결

i 최대 릴레이 전압 및 전류: 관련 장의 기술 데이터를 읽어보십시오 (15 기술 데이터, 페이지 35).

이미지에 표시된 대로 터미널 RL1A, RL1B, RL2A, RL2B를 커넥터 J8에 연결하십시오 (그림. 15, 페이지 26).

장치에 세척 시스템을 장착할 수 있습니다. 터미널 RL2A와 RL2B를 사용하여 세척 시스템을 제어하십시오.

7.6 이더넷 연결

RJ45 포트와 SFP 모듈용 슬롯을 관리할 수 있는 통합 이더넷 스위치가 장착되어 있습니다.

7.6.1 RJ45를 통한 연결

i TIA/EIA-568-B 표준에 따라 연결하십시오.

이더넷 케이블을 포트 RJ45에 연결 (7.3 컨넥터 색인카드의 기술, 페이지 25).

다음 특성을 가진 이더넷 케이블의 사용을 적극 권장함:

- STP(절연 상태)
- 카테고리 5E 또는 카테고리 6

케이블의 양 끝에 차폐 RJ45 커넥터를 사용하십시오. 이더넷 케이블 실드(사용자 측)는 항상 커넥터를 통해 접지되어야 합니다.

7.6.2 SFP를 통한 연결

i SFP(소형 폼 팩터 플러그형) 표준을 준수하는 광학 모듈은 전기 신호를 광신호로, 광신호를 전기 신호로 변환하는 변환 장치입니다.

SFP 모듈은 광섬유 연결에 사용됩니다. SFP 모듈은 설치 시스템에 적합해야 합니다.

관련 사양에 대한 SFP 모듈 설명서를 참조하십시오.

! SFP 모듈(VIDEOTEC에서 제공되지 않음)은 다음 요구 사항을 충족해야 합니다:


- : Class 1, EN60825-1
- UL/IEC 60950-1 UL/IEC 62368-1


i SFP 모듈을 통해 연결된 사용자 스위치는 100Mbps의 속도로 작동해야 합니다. 제품이 연결된 스위치 설정을 확인합니다.


i VIDEOTEC은(는) 다양한 유형의 SFP 모듈을 테스트했습니다. 자세한 내용에 대해서는 VIDEOTEC 서비스 센터에 연락합니다.


SFP 슬롯에 SFP 모듈(별매)을 삽입 (7.3 컨넥터 색인카드의 기술, 페이지 25).

7.7 접속함 단기

 **OR이 접속함의 튜브에 도달하기 전에 나사줄이 있는 뚜껑을 손으로 돌릴 수 없다면, 이는 나사줄에 오물이나 부스러기가 있거나 뚜껑이 잘못 끼워져 있음을 의미합니다. 이 경우, 나사줄이 손상될 수 있는 중대한 위험이 있습니다. 뚜껑의 나사를 풀고 정렬 상태를 점검하고 나사줄을 청소합니다.**

 **OR이 접속함에 도달하기 전에는 나사줄이 있는 뚜껑의 회전을 절대로 강제하지 마십시오. 그렇지 않으면, 나사줄 손상이 일어날 수 있습니다.**

 **나사줄 손상이 의심되면, 설치를 보류합니다. 해당 장치는 잠재적 폭발성 분위기에서 더 이상 설치에 안전하지 않을 수 있습니다. 이 경우, VIDEOTEC 기술 지원에 연락하십시오.**

 **마개를 닫기 전에 O링 개스킷에 손상된 부분이 있는지 확인하십시오. 개스킷이 손상되어 있는 경우 제공된 개스킷으로 교체하십시오 (11.1.2 개스킷 교체, 페이지 31).**

뚜껑에 오물이나 부스러기가 있는지 확인합니다.

마개를 원활히 조일 수 있도록 IEC/EN60079-14를 준수하는 그리스를 이용해 나사산을 윤활하십시오.

접속함의 나사줄이 있는 뚜껑을 닫을 때 방해되지 않도록 케이블을 정리합니다.

접속함의 나사줄이 있는 뚜껑을 OR 개스킷이 튜브에 닿을 때까지 손으로 돌립니다.

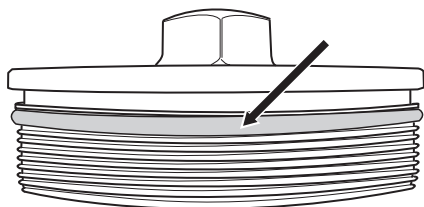


그림. 19

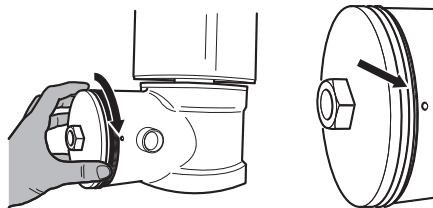


그림. 20

30mm 렌치를 사용하여 접속함의 나사줄이 있는 뚜껑을 단단히 단습니다. 뚜껑을 조인 후 나사줄이 있는 뚜껑과 접속함 사이에 틈이 없는지 확인합니다.

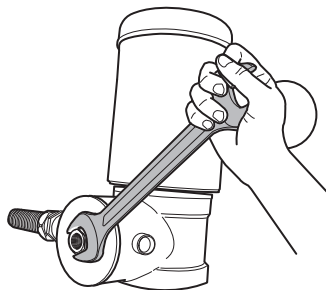


그림. 21

제품을 닫고 의도하지 않은 나사 플러그 풀림을 방지하려면 안전 그라브 나사를 조여야 합니다.

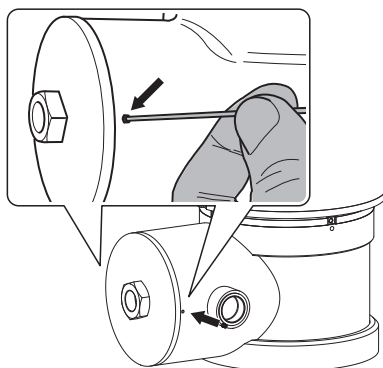




그림. 22

8 켜짐

 모든 유형의 조정을 수행하기 전에 제품 설명서의 "안전 표준"장을 주의 깊게 읽어보십시오.

 **자동예열의 절차(De-Ice)는 -10°C 이하의 환경 온도에서 장치가 켜지는 모든 순간을 활성화 할 수 있습니다. 이 절차는 저온에서 장치의 올바른 작동을 보장하기 위해 필요합니다. 기간은 환경 조건에 따라 범위 (~로부터 60 분 까지 120 분).**

장치를 켜기 위해서 전기 전원공급에 연결합니다.

장치를 켜 후 장치가 완전히 작동하려면 몇 분 정도 걸립니다.

장치를 끄기위해서 전기 전원공급을 분리합니다.

9 형성

9.1 기본 IP 주소


 장치는 DHCP 서버에서 IP 주소를 가져오도록 구성되었습니다.

DHCP를 통해 가져온 IP 주소는 DHCP 서버 로그 파일에 표시됩니다.

DHCP 서버를 사용할 수 없을 경우 장치는 169.254.x.x/16 서브넷에서 자체 생성된 IP 주소로 자동 구성됩니다. 동일한 서브넷에 속한 PC의 IP 주소 구성 (예: IP 주소: 169.254.1.1, subnet mask: 255.255.0.0).

ONVIF 호환 VMS나 네트워크 스니퍼를 사용해 장치의 IP 주소를 찾습니다. (IP scan utility).

9.2 인터페이스 웹

 **지원 브라우저 (최신 버전): Microsoft Edge, Google Chrome, Mozilla Firefox.**

9.2.1 웹 페이지에 처음 액세스하기

장치형성의 첫 작업은 그의 인터페스 웹에 연결로 구성합니다.

제품의 웹 인터페이스에 액세스하려면 간단히 브라우저를 사용하여 http://ip_address 에 연결합니다.

처음 액세스 시 홈 페이지가 표시됩니다.

웹 인터페이스를 구성하려면 설치된 펌웨어 버전과 관련된 설명서를 참조하십시오. 설명서는 웹사이트 www.videotec.com의 제품 페이지에서 다운로드할 수 있습니다.

10 보통의 기능 지침들

! 모든 유형의 조정을 수행하기 전에 제품 설명서의 "안전 표준"장을 주의 깊게 읽어보십시오.

! 주변 온도가 0°C 이하이거나 얼음이 있는 경우 와이퍼를 사용하지 마십시오.

i 켜져 있는 상태에서는, 와이퍼가 저절로 자동으로 비활성화됩니다.

다른 모드를 통해 장치 제어를 수행할 수 있습니다.

- 웹 인터페이스의 사용자 제어를 통해 (9.2 인터페이스 웹, 페이지 30).
- ONVIF 프로토콜을 지원하는 VMS(Video Management Software)를 통해 가능합니다. 이 경우 ONVIF 프로토콜의 보조 명령어를 사용하여 특수 제어를 구현합니다.
- PTZ Assistant 소프트웨어를 통해 (PTZ Assistant 소프트웨어는 웹사이트 www.videotec.com의 제품 페이지에서 다운로드할 수 있습니다).

11 유지보수

! 중재를 수행하는 경우 제품 설명서의 안전 표준 장을 주의 깊게 읽어보십시오.

VIDEOTEC의 기술 서비스 센터에 연결되어졌을 때 유일하게 장치를 확인할 수 있는 코드인 일련번호가 제공되어야 합니다.

VIDEOTEC 순정 예비 부품만 사용하십시오.

11.1 정기 유지관리 (정기적으로 수행)

11.1.1 케이블 검사하기

위험한 상황이 발생할 수 있는 케이블 손상이나 마모 징후를 보이지 않아야 합니다. 이 경우 각별한 유지관리가 필수적입니다.

11.1.2 개스킷 교체

연결부 마개 씌움을 제공된 부품으로 교체하십시오. 이전 장에 설명된 대로 연결부를 열었다가 닫으십시오. 올바르게 배치되는지 주의하면서 개스킷을 교체하십시오.

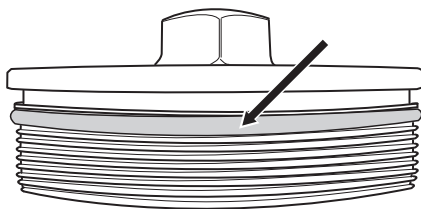


그림. 23

11.2 각별한 유지관리가 (특정 상황에서만 이루어짐)

11.2.1 퓨즈 교체

필요한 경우 그림의 퓨즈를 교체합니다 (7.3 컨넥터 색인카드의 기술, 페이지 25).

퓨즈의 교체		
전원공급의 전압	퓨즈 (F1)	퓨즈 (F2)
24Vac, 50/60Hz	T 4A H 250V 5x20	T 4A H 250V 5x20
120Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
230Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
220Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20
100Vac, 50/60Hz	T 2A H 250V 5x20	T 4A H 250V 5x20

표 11

11.2.2 와이퍼 블레이드 교체

와이퍼가 장착된 모델의 경우 닳은 블레이드는 교체할 수 있습니다.

블레이드를 고정하는 리벳 너트를 풀고 와셔와 함께 제거합니다. 닳은 블레이드를 새 것으로 교체합니다. 적정량의 나사고정제(Loctite 270)를 바르고 블레이드가 유리에 올바르게 닿을 때까지 리벳 너트와 와셔를 조절 및 고정하여 위치를 지정합니다. 와이퍼를 활성화하여 블레이드가 올바르게 조정되었는지 점검합니다.

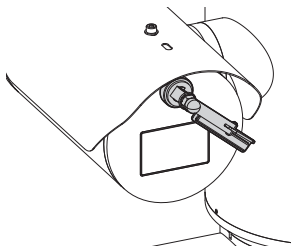


그림. 24

11.2.3 Factory Default

! 액세스 암호를 더는 사용할 수 없는 경우 절차에 따라 기본 출하 시 설정으로 재설정하십시오.

공장 기본 설정 절차의 효과는 웹 인터페이스를 통해 얻은 효과와 동일합니다. (하드 리셋 버튼).

네트워크, 사용자 접근과 카메라 형성에 관련된 제조의 설정들을 복구하기 위해서 절차를 따라합니다.

- 장치를 끕니다.
- 연결 부분을 엽니다.
- 재설정 버튼을 길게 누릅니다 (P1, 7.3 컨넥터 색인카드의 기술, 페이지 25).
- 장치에 전원공급
- 30초 동안 기다립니다.
- 재설정 버튼에서 손을 땁니다.
- 2분 기다리십시오.
- 장치를 끕니다.
- 연결 부분을 닫습니다.
- 장치에 전원공급

원격 모드에서 재설정을 수행할 수도 있습니다. 아래 절차를 따릅니다:

- 장치를 끕니다.
- 커넥터 J6의 RST 접점을 연결하십시오 (7.3 컨넥터 색인카드의 기술, 페이지 25).
- 장치에 전원공급
- 30초 동안 기다립니다.
- RST 접점을 분리하십시오.
- 2분 기다리십시오.
- 장치를 끕니다.
- 장치에 전원공급

i 공장 기본 설정 절차가 종료되면 관련 챕터의 설명에 따라 장치를 구성해야 합니다. (9.1 기본 IP 주소, 페이지 30).

12 청소

! 모든 유형의 조정을 수행하기 전에 제품 설명서의 "안전 표준"장을 주의 깊게 읽어보십시오.

i 주파수는 제품을 사용할 환경의 유형에 따라 다릅니다.

12.1 일상적 청소 (정기적으로 수행)

12.1.1 유리창 청소

물로 희석한 순한 비누로 청소해야 합니다.

12.1.2 게르마늄 창의 청소

! 탄소 코팅 처리된 외부 표면이 긁히거나 손상되지 않도록 **항** 청소 시 주의하십시오. 이 코팅이 손상되면 표면의 자외선 투명도도 저해할 수 있습니다.

물로 희석한 순한 비누로 청소해야 합니다.

2mm 스파크 방지 육각 렌치를 사용하여 하우징 전면의 평 접시 나사를 풀어 보호 격자와 스페이서를 제거하십시오.

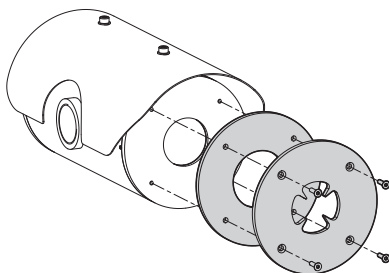


그림. 25

청소가 완료되면, 스페이서와 보호용 그리드를 다시 조립합니다.

12.1.3 제품 청소


! 제품의 외부 표면에 먼지가 5mm 이상 쌓이지 않도록 하십시오.

i 정전기가 쌓이지 않도록 이 챔터의 지침에 따라 제품을 청소해야 합니다.

장치는 젖은 천으로 청소해야 하며 압축 공기를 사용하지 마십시오.

13 폐기 및 재활용 정보


유럽 전자 폐기물 (WEEE) 지침 2012/19/EU 은 기기들이 일반적으로 고품질 폐기물의 절차에 따라 처리 되지 말아야 하며 재활용과 회수를 최적화 하기 위해 별도로 수집되어야 한다고 규정한다. 이는 잠재적 유해 물질이 인간의 건강과 환경에 미칠 영향을 줄이기 위해서이다.


 이를 기억하기 위해 심볼은 모든 제품에 마킹되어야 한다.

쓰레기는 적절한 수거 센터로 배달되거나 신규로 상응하는 제품 구매할 때 무상으로 유통업자에게 전달될 수 있다. 또는 25cm 보다 작은 크기의 장비를 신규 구매시는 의무 없이 유통업자에게 전달 될 수 있다.

이러한 기기의 올바른 처분에 대해서는 담당 공무원에게 문의 할 수 있다.

14 Troubleshooting

 모든 유형의 조정을 수행하기 전에 제품 설명서의 "안전 표준"장을 주의 깊게 읽어보십시오.

 위 목록의 문제가 지속되거나 여기에서 설명하지 않은 다른 문제가 있는 경우 공인 서비스 센터로 문의하십시오.

문제	제품은 켜지지 않습니다.
원인	잘못된 배선, 퓨즈의 손상
해결책	연결의 올바른 실행을 확인합니다. 손상되었을 경우, 퓨즈의 지속성을 확인하고 지시된 수치에 따라 교체합니다.

문제	촬영 지역이 선택한 사전 설정 위치에 해당하지 않습니다.
원인	절대적 참조 위치의 상실
해결책	기기를 끄고 다시 켜면서 재설정합니다.

문제	본 장치는 시동 단계에는 움직이지 않습니다.
원인	환경 온도가 너무 낮습니다.
해결책	예열 과정이 끝날 때까지 기다리십시오. 다음 메시지가 웹 페이지에 표시됩니다: De-Ice 절차가 진행 중입니다.

15 기술 데이터

15.1 MAXIMUS MPX SERIES2 (MPXHD)

15.1.1 일반

AlSi 316L 스테인리스 스틸 구조

마이크로 쇼트 피닝 및 전기연마 외부 표면

위치의 제어에 대한 다이내믹한 시스템

15.1.2 기계

케이블 입력: 2 x 3/4" NPT

제로백래쉬

수평회전: 360°, 연속 회전

수직회전: ~로부터 -90° 까지 +90°

수평속력 (다양성): 0.1° ~ 100°/s

수직속력 (다양성): 0.1° ~ 100°/s

사전설정된 재호출 위치의 정확도: 0.02°

통합 와이퍼

추가 투명 강화 유리 창: 두께 12mm

단일 중량: 26.5kg

15.1.3 전기

전원공급의 전압/흡수류:

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

흡수력:

- 120W max

15.1.4 네트워크

RJ45 포트

- 이더넷 연결: 10BASE-T/100BASE-T

SFP 슬롯(소형 폼 팩터 플러그형)

- 이더넷 연결:100BASE-FX
- 전원공급의 전압: 3.3V
- Standard: 호환 MSA

SFP 모듈(VIDEOTECH에서 제공되지 않음)은 다음 요구 사항을 충족해야 합니다:

- 레이저: Class 1, 준수 EN60825-1
- 인증: UL/IEC 60950-1 혹은 UL/IEC 62368-1

15.1.5 I/O 인터페이스

원격 재설정용 입력: 1

알람 입력: 1

릴레이 출력: 1+1 (와셔 펌프 및 구성 가능한 하나에 사용될 1 릴레이, 1A, 30Vac/60Vdc max)

15.1.6 비디오 분석

외부 경계를 제어하기위한 매우 강력한 감지 및 자동 추적 알고리즘.

Targets Classification: People, vehicles, generic objects

비디오 분석을위한 프로그래밍 가능한 규칙, VIDEOTECH ANALYTICS (직관적 인 제어 관리 인터페이스를 사용하여 모든 사전 설정에 대해 최대 10 개의 규칙을 신속하게 구성 할 수 있습니다)

- Line crossing: 대상이 한 방향 또는 양방향으로 선을 넘으면 경보를 트리거합니다
- Entering/leaving area: 대상이 구성된 영역을 떠나거나 들어 오면 경보를 트리거합니다
- Appearing in area: 대상이 구성된 영역 내부에 나타나면 경보를 트리거합니다
- Loitering: 타겟이 설정된 시간 동안 구성된 영역 내에 머무르면 알람이 트리거됩니다

Detection Mask: 허위 경보를 방지하기 위해 이미지의 일부에서 감지 활동을 비활성화합니다

Video Tampering Detection: 비디오 카메라 시야가 가려진 경우 (예 : 스프레이) 특정 ONVIF 경보가 트리거됩니다

15.1.7 카메라

Day/Night Full HD 30x DELUX

해상도: Full HD 1080p (1920x1080)

이미지 센서: 1/2.8" Exmor™ R CMOS sensor

유효화소: approx. 2.38 Megapixels

최소 밝기:

- 컬러: 0.006lx (F1.6, 30 IRE)
- B/W: 0.0006lx (F1.6, 30 IRE)

초점거리: ~로부터 4.5mm (wide) 까지 135mm (망원)

Zoom: 30x (480x 디지털 줌 사용)

Iris: ~로부터 F1.6 까지 F9.6 (Auto, 매뉴얼)

수평의 시각 범위: ~로부터 61.6° (wide end) 까지 2.50° (tele end)

수직 보기 각도: ~로부터 37.07° (wide end) 까지 1.44° (tele end)

셔터 속도: ~로부터 1/1s 까지 1/10000s (Auto, 매뉴얼)

화이트 밸런스: Auto, 매뉴얼

이득: ~로부터 0dB 까지 100dB (Auto, 매뉴얼)

Wide Dynamic Range: 120dB

포커스 시스템: Auto, 매뉴얼, Trigger

이미지 효과: E-flip, 색 향상

노이즈 제거: 2D (3개 레벨), 3D (3개 레벨)

노출점검: Auto, 매뉴얼, Priority (조리개 우선, 셔터 우선), 밝기, Custom

De-fog: On/Off

프라이버시 구역 마스크 (최대 8개의 설정 가능 마스크)

Indoor Flicker Reduction

Auto Slowshutter: Off, On (~로부터 1/30s 까지 1/1s)

노출 보정: Off, On (~로부터 레벨 0 까지 레벨 14)

선명도: ~로부터 레벨 0 까지 레벨 3

SONY FCB-EV7520 Day/Night Full HD 30x

해상도: Full HD 1080p (1920x1080)

이미지 센서: 1/2.8" Exmor™ R CMOS sensor

유효화소: approx. 2.13 Megapixels

최소 밝기:

- 컬러: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

초점거리: ~로부터 4.3mm (wide) 까지 129mm (망원)

Zoom: 30x (360x 디지털 줌 사용)

Iris: ~로부터 F1.6 까지 F14 (Auto, 매뉴얼)

수평의 시각 범위: ~로부터 63.7° (wide end) 까지 2.3° (tele end)

수직 보기 각도: ~로부터 38.5° (wide end) 까지 1.3° (tele end)

셔터 속도: 1/1s ~ 1/10000s (Auto, 매뉴얼)

화이트 밸런스: Auto, Auto Tracing, Indoor, Outdoor, 매뉴얼, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

이득: ~로부터 0dB 까지 50.0dB (Auto, 매뉴얼)

Wide Dynamic Range: 120dB

포커스 시스템: Auto (PTZ Trigger, Full Auto), 매뉴얼

이미지 효과: E-flip

노이즈 제거 (2D, 3D): Off, On (~로부터 레벨 1 까지 레벨 5)

노출점검: Auto, 매뉴얼, Priority (Shutter priority, Iris priority, 밝기 우선)

De-fog: Off, Low, Mid, High

사생활 보호 구역의 동적 마스크: 최대 24개 마스크 설정 가능, 최대 8개 동시 표시 가능

Indoor Flicker Reduction

게인 한계: ~로부터 10.7dB 까지 50dB

High sensitivity: On/Off

역광 보정: On/Off

Auto Slowshutter: On/Off

노출 보정: Off, On (~로부터 -10.5dB 까지 +10.5dB)

선명도: ~로부터 레벨 0 까지 레벨 15

High Light Compensation (HLC): Off, Low, Mid, High, 마스크 레벨 (Off, On, ~로부터 레벨 1 까지 레벨 15)

디지털 영상 흔들림 방지: On/Off

15.1.8 환경

실내 및 실외 환경에 설치

인증 온도: ~로부터 -40°C 까지 +80°C

동작 온도:

- 지속 기능: ~로부터 -40°C 까지 +65°C (까지 +50°C VIDEOTEC ANALYTICS 버전 용)
- NEMA-TS 2-2003(R2008)을 준수하는 온도 테스트 par. 2.1.5.1, 테스트 프로필 그림 2-1(-34°C(-29.2°F)~+74°C(165.2°F)) (통합 비디오 분석이있는 버전에는 유효하지 않습니다, VIDEOTEC ANALYTICS)
- 제빙 기능 개입 (콜드 스타트): ~로부터 -40°C 까지 -10°C

바람의 저항력

- 정적 PTZ: 230km/h max.
- 최대 속도에서 PTZ 작동: 210km/h max.

상대 습도: ~로부터 5% 까지 95%

15.1.9 인증서

전기 안전 (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

전자기 호환성 (CE): EN50130-4, EN55032 (클래스 A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

실외에 설치 (CE): EN60950-22, IEC60950-22

진동 시험: EN50130-5, EN60068-2-6

UL 인증서 (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (100Vac 및 220Vac 버전에는 사용할 수 없음): cULus Listed

전자기 호환성 (북아메리카) (100Vac 및 220Vac 버전에는 사용할 수 없음): FCC part 15 (클래스 A), ICES-003 (클래스 A)

IP 보호 등급 (EN/IEC60529): IP66, IP67, IP68, IP69 보호 수준 형식 (UL50E) (100Vac 및 220Vac 버전에는 사용할 수 없음): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

KC 인증서 (인증 코드 MPXHD51A001C에만 유효)

15.1.10 인증서 - 방폭 기기

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (100Vac 및 220Vac 버전에는 사용할 수 없음)

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) (100Vac 및 220Vac 버전에는 사용할 수 없음)

EAC Ex (TR CU 012/2011) (100Vac 및 220Vac 버전에는 사용할 수 없음)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (100Vac 및 220Vac 버전에는 사용할 수 없음)

KCs (Employment and labor department 2020-33)

15.1.11 인증서 - 해양 기기

로이드 선급협회 선박용물건 형식승인인증서(TAC) (MAXIMUS MBX 통신 박스 또는 FM1010 필터 사용): Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

전자기 호환성: EN60945

업무 저항: EN60068-2-52

15.2 MAXIMUS MPXR SERIES2 (MPXR)

15.2.1 일반

AlSi 316L 스테인리스 스틸 구조

마이크로 쇼트 피닝 및 전기연마 외부 표면

위치의 제어에 대한 다이내믹한 시스템

Radiometric analysis:

- 열 화상 카메라에 방사 측정 기능이있는 경우 4 개의 중앙 픽셀에서
- 열 화상 카메라에 고급 방사 기능이있는 경우 특정 영역의 정의

방사 측정 경보 활성화: 온도가 설정된 임계 값 이상, 설정된 임계 값 미만, 설정된 두 임계 값 사이 또는 외부에있는 경우.

경보에 대한 조치: 디지털 출력 활성화, 프리셋 투어 리콜, 홈 포지션 리콜, 프리셋 위치 리콜 및 http 요청 요청

15.2.2 기계

케이블 입력: 2 x 3/4" NPT

제로백래쉬

수평회전: 360°, 연속 회전

수직회전: ~로부터 -90° 까지 +90°

수평속력 (다양성): 0.1°/s ~ 100°/s

수직속력 (다양성): 0.1°/s ~ 100°/s

사전설정된 재호출 위치의 정확도: 0.02°

단일 중량: 26.5kg

15.2.3 하우징 창

게르마늄 창

- 두께: 8mm
- 외부 처리: 굽힘 방지 (Hard Carbon Coating - DLC), 반사 방지
- 내부 처리: 반사 방지
- 스펙트럼의 범위: ~로부터 7.5µm 까지 14µm
- 중간 투과율 (~로부터 7.5µm 까지 11.5µm): 87.5%
- 중간 투과율 (~로부터 11.5µm 까지 14µm): 72.1%

15.2.4 전기

전원공급의 전압/흡수류:

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

흡수력:

- 120W max

15.2.5 네트워크

RJ45 포트

- 이더넷 연결: 10BASE-T/100BASE-T

SFP 슬롯(소형 폼 팩터 플러그형)

- 이더넷 연결:100BASE-FX
- 전원공급의 전압: 3.3V
- Standard: 호환 MSA

SFP 모듈(VIDEOTEC에서 제공되지 않음)은 다음 요구 사항을 충족해야 합니다:

- 레이저: Class 1, 준수 EN60825-1
- 인증: UL/IEC 60950-1 혹은 UL/IEC 62368-1

15.2.6 I/O 인터페이스

원격 재설정용 입력: 1

경보 입력들: 1

릴레이 출력: 1 (1A, 30Vac/60Vdc max)

15.2.7 열 카메라

열화상 카메라 (결의안 336X256)							
	9mm 렌즈	13mm 렌즈	19mm 렌즈	25mm 렌즈	35mm 렌즈	50mm 렌즈	60mm 렌즈
이미지 센서	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계
보간된 해상도	720x480	720x480	720x480	720x480	720x480	720x480	720x480
픽셀 치수	17µm	17µm	17µm	17µm	17µm	17µm	17µm
스펙트럼 응답 - 장파장적외선(LWIR)	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm
내부 셔터(센서 보정용)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
디지털 화질 개선(DDE)	√	√	√	√	√	√	√
디지털 줌	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
이미지 갱신 빈도	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
높은 빈도 이미지 갱신	30fps	30fps	30fps	30fps	30fps	30fps	30fps
현장 범위 (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
현장 범위 (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
수평 시야	35°	25°	17°	13°	9,3°	6,5°	5,5°
수직 시야	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
열 감도 (NETD), 방사 측정 기능이 있는 열 화상 카메라	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0
열 감도 (NETD), 방사 측정 기능이 있는 고급 열 화상 카메라	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
사람 (감지 / 인식 / 식별)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
차량(검출, 인식, 식별)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

열화상 카메라 (결의안 640X512)							
	9mm 렌즈	13mm 렌즈	19mm 렌즈	25mm 렌즈	35mm 렌즈	50mm 렌즈	60mm 렌즈
이미지 센서	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계
보간된 해상도	720x480	720x480	720x480	720x480	720x480	720x480	720x480
픽셀 치수	17µm	17µm	17µm	17µm	17µm	17µm	17µm
스펙트럼 응답 - 장파장적외선(LWIR)	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm	7.5µm ~ 13.5µm
내부 셔터(센서 보정용)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
디지털 화질 개선(DDE)	√	√	√	√	√	√	√
디지털 줌	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
이미지 갱신 빈도	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
높은 빈도 이미지 갱신	30fps	30fps	30fps	30fps	30fps	30fps	30fps
현장 범위 (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
현장 범위 (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
수평 시야	69°	45°	32°	25°	18°	12.4°	10.4°
수직 시야	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
열 감도 (NETD), 방사 측정 기능이 있는 열 화상 카메라	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0
열 감도 (NETD), 방사 측정 기능이 있는 고급 열 화상 카메라	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
사람(감지 / 인식 / 식별)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
차량(검출, 인식, 식별)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

15.2.8 환경

실내 및 실외 환경에 설치

인증 온도: ~로부터 -40°C 까지 +80°C

동작 온도:

- 지속 기능: ~로부터 -40°C 까지 +65°C
- NEMA-TS 2-2003(R2008)을 준수하는 온도 테스트 par. 2.1.5.1, 테스트 프로필 그림 2-1(-34°C(-29.2°F)~+74°C(165.2°F))
- 제빙 기능 개입 (콜드 스타트): ~로부터 -40°C 까지 -10°C

바람의 저항력

- 정적 PTZ: 230km/h max.
- 최대 속도에서 PTZ 작동: 210km/h max.

상대 습도: ~로부터 5% 까지 95%

15.2.9 인증서

전기 안전 (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

전자기 호환성 (CE): EN50130-4, EN55032 (클래스 A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

실외에 설치 (CE): EN60950-22, IEC60950-22

진동 시험: EN50130-5, EN60068-2-6

UL 인증서 (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (100Vac 및 220Vac 버전에는 사용할 수 없음): cULus Listed

전자기 호환성 (북아메리카) (100Vac 및 220Vac 버전에는 사용할 수 없음): FCC part 15 (클래스 A), ICES-003 (클래스 A)

IP 보호 등급 (EN/IEC60529): IP66, IP67, IP68, IP69 보호 수준 형식 (UL50E) (100Vac 및 220Vac 버전에는 사용할 수 없음): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.2.10 인증서 - 방폭 기기

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (100Vac 및 220Vac 버전에는 사용할 수 없음)

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) (100Vac 및 220Vac 버전에는 사용할 수 없음)

EAC Ex (TR CU 012/2011) (100Vac 및 220Vac 버전에는 사용할 수 없음)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (100Vac 및 220Vac 버전에는 사용할 수 없음)

KCs (Employment and labor department 2020-33)

15.2.11 인증서 - 해양 기기

로이드 선급협회 선박용물건 형식승인인증서(TAC) (MAXIMUS MBX 통신 박스 또는 FM1010 필터 사용): Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

전자기 호환성: EN60945

업무 저항: EN60068-2-52

15.3 MAXIMUS MPXT SERIES2 (MPXT)

15.3.1 일반

AISI 316L 스테인리스 스틸 구조

마이크로 쇼트 피닝 및 전기연마 외부 표면

위치의 제어에 대한 다이내믹한 시스템

Radiometric analysis:

- 열 화상 카메라에 방사 측정 기능이있는 경우 4개의 중앙 픽셀에서
- 열 화상 카메라에 고급 방사 기능이있는 경우 특정 영역의 정의

방사 측정 경보 활성화: 온도가 설정된 임계 값 이상, 설정된 임계 값 미만, 설정된 두 임계 값 사이 또는 외부에있는 경우.

경보에 대한 조치: 디지털 출력 활성화, 프리셋 투어 리콜, 홈 포지션 리콜, 프리셋 위치 리콜 및 http 요청 요청

15.3.2 기계

케이블 입력: 2 x 3/4" NPT

제로백래쉬

수평회전: 360°, 연속 회전

수직회전: ~로부터 -90° 까지 +90°

수평속력 (다양성): 0.1°/s ~ 100°/s

수직속력 (다양성): 0.1°/s ~ 100°/s

사전설정된 재호출 위치의 정확도: 0.02°

통합 와이퍼

단일 중량: 31kg

15.3.3 하우징 창

추가 투명 강화 유리 창

- 두께: 12mm

게르마늄 창

- 두께: 8mm
- 긁힘 방지 처리 (Hard Carbon Coating - DLC)
- 반사 방지 처리
- 스펙트럼의 범위: ~로부터 7.5μm 까지 14μm
- 중간 투과율 (~로부터 7.5μm 까지 11.5μm): 87.5%
- 중간 투과율 (~로부터 11.5μm 까지 14μm): 72.1%

15.3.4 전기

전원공급의 전압/흡수류:

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

흡수력:

- 120W max

15.3.5 네트워크

RJ45 포트

- 이더넷 연결: 10BASE-T/100BASE-T

SFP 슬롯(소형 폼 팩터 플러그형)

- 이더넷 연결: 100BASE-FX
- 전원공급의 전압: 3.3V
- Standard: 호환 MSA

SFP 모듈(VIDEOTECH에서 제공되지 않음)은 다음 요구 사항을 충족해야 합니다:

- 레이저: Class 1, 준수 EN60825-1
- 인증: UL/IEC 60950-1 혹은 UL/IEC 62368-1

15.3.6 I/O 인터페이스

원격 재설정용 입력: 1

경보 입력들: 1

릴레이 출력: 1+1 (1A, 30Vac/60Vdc max, 와셔 펌프 및 구성 가능한 하나에 사용될 릴레이 1개)

15.3.7 주야간 카메라

SONY FCB-EV7520 Day/Night Full HD 30x

해상도: Full HD 1080p (1920x1080)

이미지 센서: 1/2.8" Exmor™ R CMOS sensor

유효화소: approx. 2.13 Megapixels

최소 밝기:

- 컬러: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

초점거리: ~로부터 4.3mm (wide) 까지 129mm (망원)

Zoom: 30x (360x 디지털 줌 사용)

Iris: ~로부터 F1.6 까지 F14 (Auto, 매뉴얼)

수평의 시각 범위: ~로부터 63.7° (wide end) 까지 2.3° (tele end)

수직 보기 각도: ~로부터 38.5° (wide end) 까지 1.3° (tele end)

셔터 속도: 1/1s ~ 1/10000s (Auto, 매뉴얼)

화이트 밸런스: Auto, Auto Tracing, Indoor, Outdoor, 매뉴얼, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

이득: ~로부터 0dB 까지 50.0dB (Auto, 매뉴얼)

Wide Dynamic Range: 120dB

포커스 시스템: Auto (PTZ Trigger, Full Auto), 매뉴얼

이미지 효과: E-flip

노이즈 제거 (2D, 3D): Off, On (~로부터 레벨 1 까지 레벨 5)

노출점검: Auto, 매뉴얼, Priority (Shutter priority, Iris priority, 밝기 우선)

De-fog: Off, Low, Mid, High

사생활 보호 구역의 동적 마스크: 최대 24개 마스크 설정 가능, 최대 8개 동시 표시 가능

Indoor Flicker Reduction

게인 한계: ~로부터 10.7dB 까지 50dB

High sensitivity: On/Off

역광 보정: On/Off

Auto Slowshutter: On/Off

노출 보정: Off, On (~로부터 -10.5dB 까지 +10.5dB)

선명도: ~로부터 레벨 0 까지 레벨 15

High Light Compensation (HLC): Off, Low, Mid, High, 마스크 레벨 (Off, On, ~로부터 레벨 1 까지 레벨 15)

디지털 영상 흔들림 방지: On/Off

15.3.8 열 카메라

열화상 카메라 (결의안 336X256)

	9mm 렌즈	13mm 렌즈	19mm 렌즈	25mm 렌즈	35mm 렌즈	50mm 렌즈	60mm 렌즈
이미지 센서	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계
보간된 해상도	720x480	720x480	720x480	720x480	720x480	720x480	720x480
픽셀 치수	17μm	17μm	17μm	17μm	17μm	17μm	17μm
스펙트럼 응답 - 장파장적외선(LWIR)	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm
내부 셔터(센서 보정용)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
디지털 화질 개선(DDE)	√	√	√	√	√	√	√
디지털 줌	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
이미지 갱신 빈도	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
높은 빈도 이미지 갱신	30fps	30fps	30fps	30fps	30fps	30fps	30fps
현장 범위 (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
현장 범위 (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
수평 시야	35°	25°	17°	13°	9,3°	6,5°	5,5°
수직 시야	27°	19°	13°	10°	7,1°	5°	4,2°
F-number	F/1.25	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
열 감도 (NETD), 방사 측정 기능이 있는 열 화상 카메라	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0
열 감도 (NETD), 방사 측정 기능이 있는 고급 열 화상 카메라	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
사람 (감지 / 인식 / 식별)	285m / 71m / 36m	440m / 112m / 56m	640m / 160m / 80m	930m / 230m / 116m	1280m / 320m / 160m	1700m / 430m / 215m	2000m / 510m / 255m
차량(검출, 인식, 식별)	880m / 220m / 108m	1340m / 340m / 170m	1950m / 500m / 250m	2800m / 710m / 360m	3850m / 950m / 295m	5100m / 1320m / 660m	6000m / 1560m / 780m

열화상 카메라 (결의안 640X512)							
	9mm 렌즈	13mm 렌즈	19mm 렌즈	25mm 렌즈	35mm 렌즈	50mm 렌즈	60mm 렌즈
이미지 센서	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계	냉각되지 않은 VOx 미세저항온도계
보간된 해상도	720x480	720x480	720x480	720x480	720x480	720x480	720x480
픽셀 치수	17μm	17μm	17μm	17μm	17μm	17μm	17μm
스펙트럼 응답 - 장파장적외선(LWIR)	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm	7.5μm ~ 13.5μm
내부 셔터(센서 보정용)	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s	Video stop < 1s
디지털 화질 개선(DDE)	√	√	√	√	√	√	√
디지털 줌	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
이미지 갱신 빈도	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
높은 빈도 이미지 갱신	30fps	30fps	30fps	30fps	30fps	30fps	30fps
현장 범위 (High Gain)	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C	-40°C ÷ +160°C
현장 범위 (Low Gain)	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C	-40°C ÷ +550°C
수평 시야	69°	45°	32°	25°	18°	12.4°	10.4°
수직 시야	56°	37°	26°	20°	14°	9.9°	8.3°
F-number	F/1.4	F/1.25	F/1.25	F/1.1	F/1.2	F/1.2	F/1.25
열 감도 (NETD), 방사 측정 기능이 있는 열 화상 카메라	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0	< 50mK 에서 f/1.0
열 감도 (NETD), 방사 측정 기능이 있는 고급 열 화상 카메라	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0	< 30mK a f/1.0
사람(감지 / 인식 / 식별)	250m / 63m / 31m	390m / 95m / 47m	570m / 144m / 72m	820m / 210m / 104m	1140m / 280m / 142m	1500m / 380m / 190m	1750m / 450m / 225m
차량(검출, 인식, 식별)	720m / 175m / 88m	1080m / 275m / 140m	1550m / 400m / 200m	2200m / 580m / 290m	3000m / 800m / 200m	3900m / 1060m / 540m	4500m / 1240m / 640m

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15.3.9 환경

실내 및 실외 환경에 설치

인증 온도: ~로부터 -40°C 까지 +80°C

동작 온도:

- 지속 기능: ~로부터 -40°C 까지 +65°C
- NEMA-TS 2-2003(R2008)을 준수하는 온도 테스트 par. 2.1.5.1, 테스트 프로필 그림 2-1(-34°C(-29.2°F)~+74°C(165.2°F))
- 제빙 기능 개입 (콜드 스타트): ~로부터 -40°C 까지 -10°C

바람의 저항력

- 정적 PTZ: 230km/h max.
- 최대 속도에서 PTZ 작동: 210km/h max.

상대 습도: ~로부터 5% 까지 95%

15.3.10 인증서

전기 안전 (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

전자기 호환성 (CE): EN50130-4, EN55032 (클래스 A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN50581

실외에 설치 (CE): EN60950-22, IEC60950-22

진동 시험: EN50130-5, EN60068-2-6

UL 인증서 (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1, CAN/CSA C22.2 No. 62368-1-14) (100Vac 및 220Vac 버전에는 사용할 수 없음): cULus Listed

전자기 호환성 (북아메리카) (100Vac 및 220Vac 버전에는 사용할 수 없음): FCC part 15 (클래스 A), ICES-003 (클래스 A)

IP 보호 등급 (EN/IEC60529): IP66, IP67, IP68, IP69 보호 수준 형식 (UL50E) (100Vac 및 220Vac 버전에는 사용할 수 없음): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

15.3.11 인증서 - 방폭 기기

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

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (100Vac 및 220Vac 버전에는 사용할 수 없음)

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) (100Vac 및 220Vac 버전에는 사용할 수 없음)

EAC Ex (TR CU 012/2011) (100Vac 및 220Vac 버전에는 사용할 수 없음)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31) (100Vac 및 220Vac 버전에는 사용할 수 없음)

KCs (Employment and labor department 2020-33)

15.3.12 인증서 - 해양 기기

로이드 선급협회 선박용물건 형식승인인증서(TAC) (MAXIMUS MBX 통신 박스 또는 FM1010 필터 사용): Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

전자기 호환성: EN60945

업무 저항: EN60068-2-52

16 기술 도면

i 측정 단위는 밀리미터로 표시됩니다.

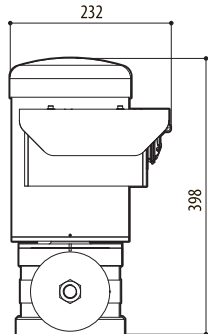
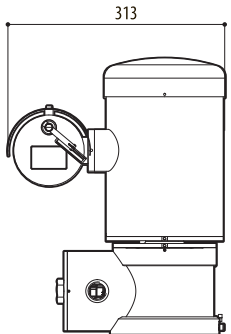
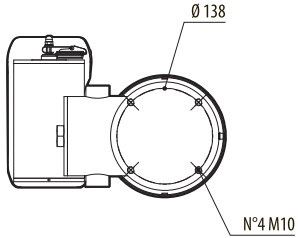


그림. 26 MAXIMUS MPX SERIES2.

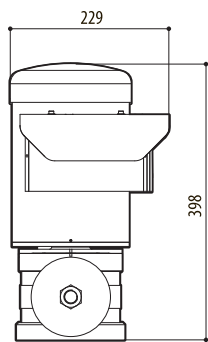
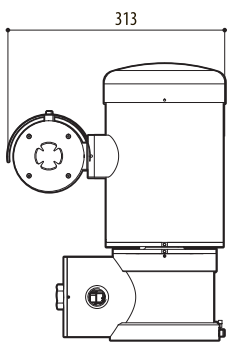
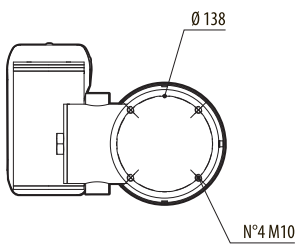


그림. 27 MAXIMUS MPXR SERIES2.

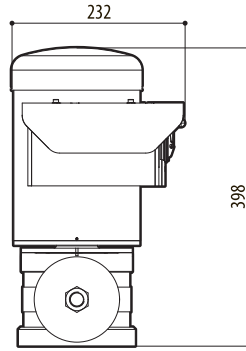
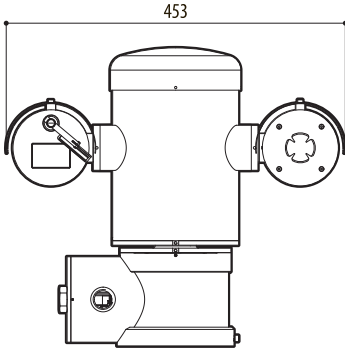
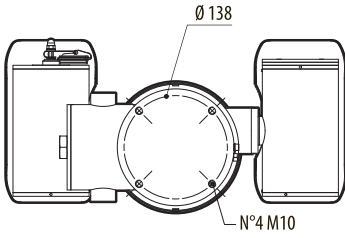


그림. 28 MAXIMUS MPXT SERIES2.



Headquarters Italy Videotec S.p.A.
Via Friuli, 6 - I-36015 Schio (VI) - Italy
Tel. +39 0445 697411 - Fax +39 0445 697414
Email: info@videotec.com
www.videotec.com



Headquarters Italy Videotec S.p.A.
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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