MAXIMUS MPX SERIES2 with SONY FCB-EV7520 camera

NEW GENERATION OF EXPLOSION-PROOF PTZ WITH DAY/NIGHT CAMERA

VIDEOTEC

Ex

IP66/IP67
IP68/IP69

TYPE 4X
TYPE 6P

IP

- **Certified explosion-proof for use in Zones 1 and 2, Group IIC (Gas), Zones 21 and 22, Group IIIC (Dust)**
- **Certified up to a temperature of +80°C**
- **Maximum resistance in corrosive environments**
- **Possibility of direct connection via fibre optic**
- **Image electronic stabilizer and dynamic masking**

Onvif | QST | SONY

ATEX | IECEx | EAC Ex | INMETRO | KCs | cULus LISTED | LR APPROVED TYPE APPROVAL SCHEME

MAXIMUM RESISTANCE IN THE MOST CRITICAL ENVIRONMENTS

MAXIMUS MPX SERIES2 is an ex-proof Full-HD PTZ camera that is ideal for effective video surveillance and process monitoring in environments in the Oil & Gas, maritime or industrial sectors where fire or explosion hazards may exist due to the presence of flammable gases or vapors, flammable liquids, combustible dusts.

MAXIMUS MPX SERIES2 offers the highest level of corrosion resistance thanks to its solid AISI 316L stainless-steel construction and its microshot and electropolished surfaces. As well as this, the IP66/IP67/IP68/IP69, NEMA Type 4X and Type 6P certifications guarantee complete protection against water and dust. It can continue to operate in winds up to 210 Km/h.

CERTIFIED QUALITY

Every version of MAXIMUS MPX SERIES2 PTZ is explosion-proof certified with an ambient temperature of up to +80°C. They have international certifications for use in Zone 1 and 2, Group IIC for gas, Zone 21 and 22, Group IIIC for dust (ATEX, IECEx, UL/CSA, EAC Ex, INMETRO, KCs). Thanks to the double cable entry, both 120Vac and 230Vac voltage supply versions are compliant with UL/CSA standards.

MAXIMUS MPX SERIES2 products are Lloyd's Register Marine Type Approval System Test Specification Number 1 certified and can be used in Marine and Offshore environments with category types ENV1, ENV2, ENV3 and ENV5 (for example, passenger ships, open bridges, closed spaces, technical rooms subject to heat generated by equipment, areas where there is a risk of explosion, and visual support for docking manoeuvres).

INSTALLATION FLEXIBILITY

The SERIES2 PTZ cameras have an SFP module slot at the base of the unit to allow easy fiber optic connection. The double cable entry and the numerous accessories and support available – including front window washing kit, communication boxes, pre-wired cabling, cable glands, and wall, parapet, corner, and pole mounts – mean maximum flexibility when it comes to installation. As well as this, the compact design means the camera fits in the tightest spaces, while its reduced weight makes it easier to install.

SONY FCB-EV7520 CAMERA

MAXIMUS MPX SERIES2 with the SONY FCB-EV7520 camera has a 30x optical zoom and a 1/2.8" Exmor R™ CMOS sensor with Full HD 1080/60p resolution that produces the highest image quality, even when surveilling moving objects or in poor lighting conditions. The advanced SONY technology brings Wide Dynamic Range and a configurable High Light Compensation that allows optimal management of contrasting light and dark conditions. The camera's high sensitivity means you get colour video with a minimum illumination of just 0.0013lx (0.0008lx in black and white). This guarantees surveillance coverage even when lighting at the scene is very poor.

100% MADE IN VIDEOTEC

All Videotec products are developed end-to-end by the dedicated internal R&D team who have the business know-how to design the mechanisms, electronics and software. This internal R&D presents a real competitive advantage as the team are able to create customised solutions or integrations with third-party systems. Videotec can respond to customers quickly and efficiently.

Mechanics, electronics, positioning and networking, software and firmware are proudly developed end to end internally by Videotec R&D, as is the case with all their network products. All products come with the company guarantee of being a reliable, cyber-safe and future-proof platform that can be integrated with third-party products easily. MPX SERIES2 offers an integrated and certified all-in-one professional solution.

In the SERIES2, Videotec has expanded the list of compatible software, but has not changed the tested and proven software functions and protocols already found in the MAXIMUS MPX series. As a result, Videotec can guarantee complete compatibility and interchangeability between the previous and new generations of PTZ, while protecting the investments made by its customers when it comes to validation and integration of MAXIMUS MPX.

TECHNICAL DATA

GENERAL

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

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)

ELECTRICAL

Supply voltage/Current consumption:
- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz

Power consumption:
- 120W max

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
- UL/IEC 60950-1 or UL/IEC 62368-1 Certification

CYBERSECURITY

Digitally signed firmware

Password restricted access (HTTP digest)

Support of various user access levels

Control of accesses IEEE 802.1X

HTTPS cryptography using TLS1.0, TLS1.1, TLS1.2 and TLS1.3

Centralised certificate management

Complies with ONVIF Security Service specifications

VIDEO

Video encoder
- Communication protocol: ONVIF, Profile Q, Profile S and Profile T
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, HTTPS, NTP, DHCP, WS-DISCOVERY, DSCP, IGMP (Multicast), SOAP, DNS
- Streaming: RTSP, RTCP, RTP/IPv4-IPv6, HTTP, Multicast
- Video compression: H.264/AVC, MJPEG, JPEG, MPEG4
- 3 independent video streams Full HD
- Image resolution: from 320x180pixel up to 1920x1080pixel in 6 steps
- Selectable frame rate from 1 to 60 images per second (fps)
- Web Server
- Directional OSD (maximum 4 settable areas)
- Motion Detection
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

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: from10.7dB 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

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)

ENVIRONMENT

For indoors and outdoors installation

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

CERTIFICATIONS

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

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

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

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

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

RCM (Australian and New Zealand Regulatory Compliance Mark)

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)

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)

EAC Ex (TR CU 012/2011)

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

KCs (Employment and labor department 2016-54)

For further details on certifications and markings, consult the relevant table.

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

BRACKETS AND ADAPTORS

MPXCW	AISI 316L stainless steel corner adapter module
MPXWBA	AISI 316L stainless steel wall bracket
MPXCOL	AISI 316L stainless steel pole adapter module
MPXWBTA	AISI 316L stainless steel parapet or ceiling mounting bracket

ACCESSORIES

WASEX2T4AT	Tank 10l (2.6gal) with integrated manual pump controlled by ATEX certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc
WASEX2T4GOR	Tank 10l (2.6gal) with integrated manual pump controlled by EAC EX certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc
WASEX2T4IN	Tank 10l (2.6gal) with integrated manual pump controlled by INMETRO certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc
MBX1MAA	Explosion-proof communication box in stainless steel, IN 230Vac, with EMC filter for marine certification
MBX2MAA	Explosion-proof communication box in stainless steel, IN 24Vac, with EMC filter for marine certification
MBX3MAA	Explosion-proof communication box in stainless steel, IN 120Vac, with EMC filter for marine certification
MBA1S5A	Explosion-proof communication box in aluminium, IN 230Vac
MBA2S5A	Explosion-proof communication box in aluminium, IN 24Vac
MBA3S5A	Explosion-proof communication box in aluminium, IN 120Vac
OCTEX3/4C	Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXA3/4C	Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex
OCTEXB3/4P	Barrier cable gland in nickel-plated brass EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXBA3/4P	Barrier cable gland in nickel-plated brass EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex
OCTEX3/4	Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable ATEX
OCTEXA3/4	Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX
OCTEX1/2-3/4P	Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex
OCTEXP3/4C	Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))
OEXPLUG1/2P	Plug EX 1/2" NPT IECEX-ATEX-EAC Ex
OEXPLUG3/4P	Plug EX 3/4" NPT IECEX-ATEX-EAC Ex
FM1010	EMC filter for Marine certification
MPX2CABLARM4	Cabling for MAXIMUS MPX SERIES2, 4m (13.1ft), armoured cable, barrier cable gland
MPX2CABL4	Cabling for MAXIMUS MPX SERIES2, 4m (13.1ft), unarmoured cable, barrier cable gland
MPX2CABLARM10	Cabling for MAXIMUS MPX SERIES2, 10m (32.8ft), armoured cable, barrier cable gland
MPX2CABL10	Cabling for MAXIMUS MPX SERIES2, 10m (32.8ft), unarmoured cable, barrier cable gland

For further details about cable glands part numbers, please refer to the relevant table.

PACKAGE

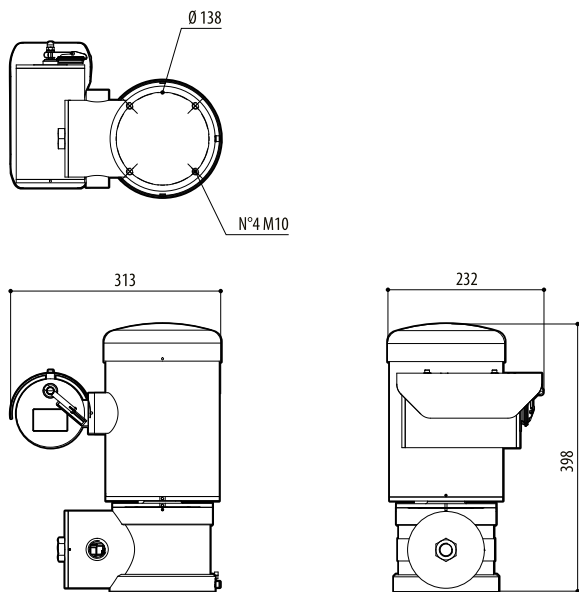| Model Number	Weight	Dimensions (WxHxL)	Master carton
MPXHD11A000C	29kg (64lb)	50x42x26cm (19.7x16.5x10.2in)	-

CABLE GLANDS AND ACCESSORIES 3/4" NPT

Type	Certification	Operating temperature	Cable		Model Number	Diameter of the external cable	Under armor cable diameter
Barrier cable gland	IECEX/ATEX/EAC Ex	-60°C (-76°F) / +135°C (275°F)	Unarmoured cable		OCTEXB3/4P	17.8 - 20.0mm (0.70-0.79in)	–
			Armoured cable		OCTEXBA3/4P	16.8 - 23.9mm (0.66-0.94in)	–
Cable gland with gasket	IECEX/ATEX/EAC Ex	-60°C / +100°C (-76°F / +212°F)	Unarmoured cable		OCTEX3/4C	13.0 - 20.2mm (0.51-0.79in)	–
		-60°C / +80°C (-76°F / +176°F)	Armoured cable		OCTEXA3/4C	16.9 - 26.0mm (0.66-1.02in)	11.1 - 19.7mm (0.44 - 0.78in)
	ATEX	-40°C / +100°C (-40°F / +212°F)	Unarmoured cable		OCTEX3/4	14.0 - 17.0mm (0.55-0.67in)	–
			Armoured cable		OCTEXA3/4	18.0 - 23.0mm (0.71-0.91in)	14 - 17mm (0.55 - 0.67in)
Plug EX 3/4"NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (752°F)	–		OEXPLUG3/4P	–	–
Conduit sealing fitting	IECEX-ATEX- c CSA us - EAC Ex	-60°C / +80°C (-76°F / +176°F)	–		OCTEXP3/4C	–	–
Reduction 3/4" NPT x 1/2" NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (752°F)	–		OCTEX1/2-3/4P	–	–

MAXIMUS MPX SERIES2 - CERTIFICATIONS AND MARKINGS

Part number	Certification	Marking	Ambient temperature	Cable entry temperature
MPXHD**A0**C	ATEX	⟨Ex⟩ II 2 G Ex db IIC T6...T5 Gb ⟨Ex⟩ 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		80°C with Ta = 69°C 81°C with 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		
MPXHD**D0**C	ATEX	⟨Ex⟩ II 2G Ex db IIC T4 Gb ⟨Ex⟩ 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		

MAXIMUS MPX SERIES2 WITH SONY FCB-EV7520 CAMERA- CONFIGURATION OPTIONS

	Voltage		Camera		Temperature class and ambient temperature		
MPXHD	**1**	230Vac	**2**	SONY FCB-EV7520 camera, FULL HD 1080p, 30x	**A**	T6...T5 -40°C/+60°C or +70°C	**000C**
	2	24Vac			**D**	T4 -40°C/+80°C	
	3	120Vac					

TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.

Ø 138

N°4 M10

313

232

398

MAXIMUS MPX SERIES2