MAXIMUS MPX DELUX

EXPLOSION-PROOF FULL HD PTZ CAMERA WITH NEW DELUX TECHNOLOGY, FOR DAY/NIGHT VIEWING WITH EXCEPTIONAL NIGHT BRIGHTNESS

FULL HD 1080P

ONVIF® | SQ

MPX DELUX

DESCRIPTION

MAXIMUS MPX DELUX is an explosion-proof FULL HD PTZ camera which integrates new DELUX imaging and encoding technology for outdoor video surveillance, allowing recordings to be produced with incredibly bright and vivid colours both by day and by night. This camera is ideal for efficient video surveillance and control of processes in critical environments where the atmosphere is potentially explosive due to the presence of inflammable gases or dust, typical of the Oil&Gas, marine or industrial sectors.

Thanks to the superior light sensitivity of the sensor, the DELUX technology means that it is possible to make bright recordings with sharp, clearly defined colours in the very low light conditions typically found at night, working at as low as 0.006 lux (0.0006 lux in black and white).

MAXIMUS MPX DELUX is a Day/Night Full HD 1080p camera with 30x optical zoom and a frame rate of 60fps. It is capable of precisely identifying the details in a scene, even in dynamic, rapidly changing situations. DELUX technology for MAXIMUS MPX DELUX has introduced new, advanced performance in proportional zoom control and management of privacy masking for sensitive areas.

The video images are sent via the network with compression H.264/AVC, MPEG4, MJPEG or JPEG and up to a maximum of 3 simultaneous and independent Full HD video streams.

The MAXIMUS MPX series products are Lloyd's Register Type Approval System Test Specification Number 1 certified and therefore can be used in Marine and Offshore applications for environmental categories ENV1, ENV2, ENV3 and ENV5 (eg. passenger ships, open-air decks, closed spaces and technical areas that may be subject to heat generated by other equipment, potentially explosive areas, docking procedures).

CERTIFICATIONS

FEATURES

Certifications for use in Zone 1 and 2, Group IIC T6 (Gas), and in Zone 21 and 22, Group IIIC T85° (Dust)

Marine Certification: Lloyd's Register Marine Type Approval

Electropolished AISI 316L stainless steel ex-proof PTZ unit

Camera Full HD 1080p, 30x, 60fps

Minimum Illumination:
- Colour: 0.006lx
- B/W: 0.0006lx

Video compression H.264/AVC, MJPEG, JPEG and MPEG4

Certified ONVIF, Profile S, Profile Q

Digitally signed firmware

Complies with ONVIF Security Service specifications

Day/Night (Auto ICR: automatic removal of IR filter)

De-fog function

Up to 3 simultaneous video streams in FULL HD

1 alarm input and 1 relay output

Variable speed: from 0.1°/s up to 100°/s Pan and Tilt

Position accuracy: 0.02°

Speed proportional to Zoom

¾" NPT threaded hole for use of cable glands or conduit

Integrated wiper

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

TECHNICAL DATA

GENERAL

AISI 316L stainless steel construction

Passivated and electropolished external surfaces

Dynamic positioning control system

MECHANICAL

1 hole 3/4" NPT for cable gland

Zero backlash

Horizontal rotation: 360°, continuous rotation

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

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

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

Accuracy of preset positions: 0.02°

12mm (0.47in) thick tempered glass window

Integrated wiper

Unit weight: 27kg (60lb)

ELECTRICAL

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

Power consumption:
- 120W max

NETWORK

Ethernet connection: 100 Base-TX

Connector: RJ45

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 S and Profile Q
- 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

I/O INTERFACE

I/O alarm board
- Alarm inputs: 1
- Relay outputs: 1 (1A, 30Vac/60Vdc max)

CAMERAS

Day/Night Full HD 30x DeLux

Resolution: Full HD 1080p (1920x1080pixel)

Image Device: 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 F9.6,10 steps (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 36dB (Auto, Manual)

Wide Dynamic Range: 120dB

Focus System: Auto, Manual, Trigger

Picture Effects: E-flip, Color enhancement

Noise removal: 2D, 3D

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

De-fog: On/Off

Privacy zones masking (maximum 8 settable masks)

ENVIRONMENT

For indoors and outdoors installation

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

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

Relative humidity: from 10% up to 95% (no condensation)

CERTIFICATIONS

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

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

RoHS (CE): EN50581

Outdoor installation (CE): EN60950-22, ICE60950-22

IP protection degree (EN/IEC60529): IP66

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

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07): cULus Listed (only for 24Vac version)

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

Level of protection Type (UL50E): 4X (only for 24Vac version)

BIS certification: IS 13252(PART 1):2010/ IEC 60950-1 : 2005 (certification only valid for the code: MPXHD21VW0Z00B)

CERTIFICATIONS - EXPLOSION-PROOF APPLICATIONS

ATEX (EN 60079-0+A11, EN 60079-1, EN 60079-31)

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

EAC EX (TR CU 012/2011)

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

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31), only for 24Vac version

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), only for 24Vac version

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 (the 24Vac versions require a filter accessory FM1010):

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

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

Tested at 70°C (158°F) for 16 hours in compliance with EN60068-2-2

BRACKETS AND ADAPTORS

MPXWBA	AISI 316L stainless steel wall bracket
MPXCW	AISI 316L stainless steel corner adapter module
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
OCTEXB3/4C	Barrier cable gland in nickel-plated brass 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXB3/4P	Barrier cable gland in nickel-plated brass EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXBA3/4C	Barrier cable gland in nickel-plated brass 3/4" NPT, armoured 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
OCTEXB1/2C	Barrier cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXB1/2P	Barrier cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXBA1/2P	Barrier cable gland in nickel-plated brass EX 1/2" NPT, armoured cable IECEX-ATEX-EAC Ex
OCTEX1/2C	Cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXS1/2C	Cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXA1/2C	Cable gland in nickel-plated brass EX 1/2" NPT armoured cable IECEX-ATEX-EAC Ex
OCTEX1/2-3/4P	Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex
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))
OCABLMPXARM4	Cabling for MPX/MPXHD, 4m (13ft) (armoured cable and barrier cable gland): 1 Ethernet cable, 3 power supply wires, 1 coaxial video cable, 7 wires for alarms, relay and telemetry
OCABLMPXARM10	Cabling for MPX/MPXHD, 10m (32.8ft) (armoured cable and barrier cable gland): 1 Ethernet cable, 3 power supply wires, 1 coaxial video cable, 7 wires for alarms, relay and telemetry
FM1010	EMC filter for Marine certification

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

PACKAGE

Model Number	Weight	Dimensions (WxHxL)	Master carton
MPXHD11VW0Z00B	30.4kg (67lb)	54x31x49cm (21x12x19in)	-

SELECTION DIAGRAM FOR CABLE GLANDS AND ACCESSORIES 1/2" 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 / +80°C (-76°F / +176°F)	Unarmoured cable	OCTEXB1/2C	3.0 - 8.0mm (0.12-0.31in)	–
		-60°C (-76°F) / +135°C (275°F)	Unarmoured cable	OCTEXB1/2P	12.5 - 14.0mm (0.5-0.55in)	–
			Armoured cable	OCTEXBA1/2P	15.5 - 21.1mm (0.61-0.83in)	–
Cable gland with gasket	IECEX/ATEX/EAC Ex	-60°C / +100°C (-76°F / +212°F)	Unarmoured cable	OCTEX1/2C	3.2 - 8.0mm (0.12-0.31in)	–
			Unarmoured cable	OCTEXS1/2C	6.5 - 11.9mm (0.26 - 0.47in)	–
			Armoured cable	OCTEXA1/2C	12.5 - 20.5mm (0.49 - 0.8in)	10 - 14.3mm (0.4 - 0.56in)
Plug EX 1/2"NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (752°F)	–	OEXPLUG1/2P	–	–

SELECTION DIAGRAM FOR CABLE GLANDS AND ACCESSORIES 3/4" NPT

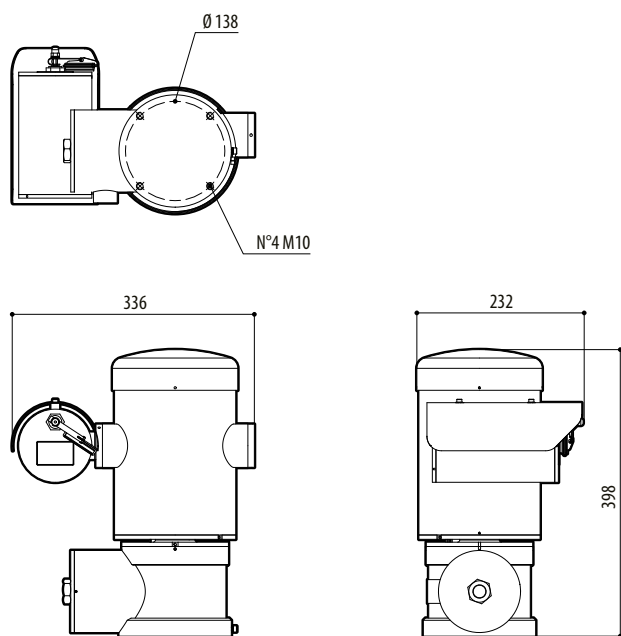| Type	Certification	Operating temperature	Cable	Model Number	Diameter of the external cable	Under armor cable diameter
Barrier cable gland	IECEX/ATEX/EAC Ex	-60°C / +80°C (-76°F / +176°F)	Unarmoured cable	OCTEXB3/4C	13.0 - 20.2mm (0.51-0.79in)	–
			Armoured cable	OCTEXBA3/4C	16.9 - 26.0mm (0.66-1.02in)	–
		-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 DELUX - CERTIFICATIONS AND MARKINGS

Certification	Marking
ATEX	Ⓔ II 2G Ex db IIC T6 Gb Ta -40°C to +60°C Ⓔ II 2D Ex tb IIIC T85°C Db Ta -40°C to +60°C IP66
IECEx	Ex db IIC T6 Gb Ta -40°C to +60°C Ex tb IIIC T85°C Db Ta -40°C to +60°C IP66
EAC EX	Ex II 2G Ex db IIC T6 Gb Ta -40°C to +60°C Ex II 2D Ex tb IIIC T85°C Db Ta -40°C to +60°C IP66
INMETRO	Ex db IIC T6 Gb -40°C ≤ Ta ≤ +60°C Ex tb IIIC T85°C Db -40°C ≤ Ta ≤ +60°C IP66
KCs	Ex d IIC T6 Ex tb IIIC T85°C -40°C ≤ Ta ≤ +60°C
UL listed for USA (only 24Vac)	Class I Zone 1 AEx db IIC T6 Zone 21 AEx tb IIIC T85°C Class I, Division 2, Group A, B, C and D, T6 Class II, Division 2, Group F and G, T6
UL listed for Canada (only 24Vac)	Ex db IIC T6 Gb Ex tb IIIC T85°C Db Class I, Division 2, Group A, B, C and D, T6 Class II, Division 2, Group F and G, T6

MAXIMUS MPX DELUX - CONFIGURATION OPTIONS

	Voltage		Camera							Video Output	
MPXHD	**1**	230Vac	**1**	Videotec super low-light Day/Night 30X zoom, Full HD camera	**V**	With alarm board	**W**	With wiper	**0**	**Z**	IP H.264/AVC, ONVIF protocol Profile S and Profile Q	**00B**
	2	24Vac									
	3	120Vac									

TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.

Ø 138

N°4 M10

336

232

398

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