

# MAXIMUS MPX

EXPLOSION-PROOF PTZ DAY/NIGHT 36X SD CAMERA



MAXIMUS MPX

## DESCRIPTION

MAXIMUS MPX is an ex-proof PTZ camera that offers a superior image quality and an exceptional precision even in poorly lighted environments. This ex camera is ideal for effective video surveillance and process control in harsh settings where the presence of gases or flammable dust can create a potentially explosive environment. A reality often found in the oil and gas industries or marine and industrial sectors.

The area is always monitored, thanks to the speed and detection accuracy of the target.

MAXIMUS MPX offers maximum resistance against corrosion thanks to construction in AISI 316L stainless steel and micro-shot peened and electro-polished surfaces.

The WASEX washer kit, with tank and pump controlled by an ex-proof solenoid valve, allows flawless and maintenance-free cleaning of the front glass.

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



## MAIN 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

AISI 316L stainless steel construction, external surfaces micro-shot peened and electro-polished

Day/Night camera:

- True Progressive Scan
- High resolution: up to 550 TV Lines
- Advanced image stabilizer (Stable Zoom Mode)
- Day/Night (Auto ICR: automatic removal of IR filter)

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

Position accuracy: 0.02°

2 threaded holes 3/4" NPT for use of cable glands or conduit

Extremely easy electrical connections directly into the unit, thanks to the explosion-proof inspection box

Integrated wiper

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

## TECHNICAL DATA

### GENERAL

AISI 316L stainless steel construction  
External surfaces micro-shot peened and electro-polished  
Dynamic positioning control system  
Functions: Autopan, Preset, Patrol, Tour (maximum 3), Autoflip  
Up to 999 units, addressable by means of dip-switches

### 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°  
12mm (0.47in) thick tempered glass window  
Integrated wiper  
Unit weight: 26.5kg (58lb)

### ELECTRICAL

Supply voltage/Current consumption

- 230Vac, 0.5A, 50/60Hz
- 24Vac, 5A, 50/60Hz
- 120Vac, 1A, 50/60Hz

Power consumption:

- 120W max

### SERIAL COMMUNICATIONS

Serial communication protocol: AMERICAN DYNAMICS, ERNITEC, PANASONIC, PELCO D, MACRO

Maximum number of presets for serial communication protocol

- MACRO: 250
- ERNITEC: 250
- PANASONIC: 250
- PELCO D: 99
- AMERICAN DYNAMICS: 95

Firmware updating from console in remote mode (PELCO D, MACRO)

Configuration through OSM

Fiber optic connector: ST (standard)

### VIDEO

Analog version:

- 1 video output 75 Ohm 1Vpp (PAL/NTSC)
- 16-character string for zone and preset titling

### CAMERAS

Please refer to the relevant table

### I/O INTERFACE

I/O alarm board  
5 alarm inputs  
2 relay outputs (1A 30Vac/60Vdc max)

### 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 5% up to 95%

### 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)  
RCM (Australian and New Zealand Regulatory Compliance Mark)

### 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)  
Compliant CCEO (PESO)

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

### CERTIFICATIONS - MARINE APPLICATIONS

Lloyd's Register Marine Type Approval certification (the 24Vac and 120Vac 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
MPXWBA	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
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
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))
OCABLMXP4	Cabling for MPX/MPXT, 4m (13ft) (unarmoured cable and barrier cable gland): 2 Ethernet cables, 3 power supply wires, 2 coaxial video cables, 15 wires for alarms, relays and telemetry
OCABLMXP10	Cabling for MPX/MPXT, 10m (32.8ft) (unarmoured cable and barrier cable gland): 2 Ethernet cables, 3 power supply wires, 2 coaxial video cables, 15 wires for alarms, relay and telemetry
OCABLMXPARM4	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
OCABLMXPARM10	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
MPX1QVW00CA	29kg (64lb)	54x31x49cm (21x12x19in)	-

ANALOGUE CAMERAS (DAY/NIGHT)		
	Day/Night 36x	
	PAL	NTSC
Optical zoom	36x	
Wide Dynamic Range (ON, OFF, Auto)	√	
True progressive SCAN	√	
Digital image stabilization	√	
White balance	Auto, ATW, Indoor, Outdoor (Fix/Auto), Sodium Vapor Lamp (Fix/Auto), Manual	
High horizontal resolution	Up to 550 TV Lines	
Day/Night (Auto ICR)	√	
Image Sensor	1/4" EXView HAD CCD	
Number of effective Pixels	~ 440000 pixel	~ 380000 pixel
Min. Lighting Colour (IR-Cut Filter = OFF) (Interlace Mode)	1.4Lux / 1/50s 0.1 Lux / 1/3s	1.4Lux / 1/60s 0.1 Lux / 1/4s
Min. Lighting B/W (Interlace Mode)	0.01 Lux / 1/3s	0.01 Lux / 1/4s
"Shutter Time" automatic increase to improve the night surveillance	√	
S/N ratio	More than 50dB	
AE control	Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual	
Back light compensation	On/Off	
Spherical masking (3D) of Privacy zones with automatic upgrade	√	
Privacy Zone Masking	On/Off (24 positions)	
Maximum number of masking blocks to be displayed	8	
Resolution of masking blocks	160x120 HxV	
Masking	Up to 15 different masking types: 14 colour types or mosaic	
Focusing system	Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual	
"Smart" lens control	Automatic Lens Reset	
High Zoom and Wide Horizontal Field of View Capability	√	
Optical zoom	36x, f=3.4 (wide) to 122.4mm (tele) / F1.6 to F4.5	
Digital Zoom	12x (432x with optical zoom)	
Horizontal field of view	57.8 degrees (wide) to 1.7 degrees (tele)	
Minimum object distance	10mm (0.4in) (wide) to 1500mm (59.1in) (tele)	
Shutter speed	1/1 ÷ 1/10000s	

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 (-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)	14mm (0.6in) max
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	–	–

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)	20mm (0.79in) max
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)	–
			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 - CERTIFICATIONS AND MARKINGS		
Certification	Marking	Ambient temperature
ATEX	⊕ II 2G Ex db IIC T6 Gb ⊕ II 2D Ex tb IIIC T85°C Db IP66	-40°C ≤ Ta ≤ +60°C
IECEX	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66	
EAC Ex	1Ex d IIC T6 Gb X Ex tb IIIC T85°C Db X	
INMETRO	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66	
KCs	Ex d IIC T6 Ex tb IIIC T85°C	
UL listed for USA (only 24Vac)	Class I, Zone 1, AEx db IIC T6 Gb Zone 21, AEx 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	
UL listed for Canada (only 24Vac)	Ex db IIC T6 Gb X Ex tb IIIC T85°C Db X Class I, Division 2, Group A, B, C and D, T6 Class II, Division 2, Group F and G, T6	

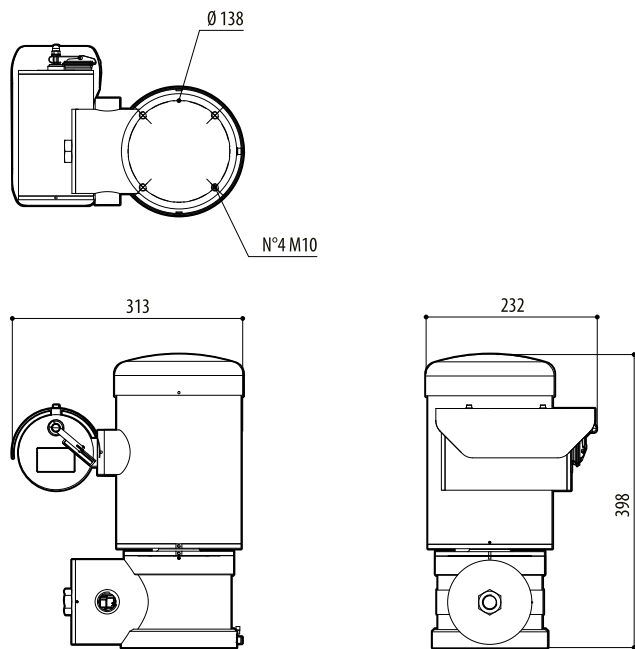
## MAXIMUS MPX - CONFIGURATION OPTIONS

	Voltage	Day/Night camera			Video Output	
<b>MPX</b>	<b>1</b> 230Vac	<b>P</b> Day/Night camera 36x optical zoom lens, PAL	<b>V</b> With alarm board	<b>W</b> With wiper	<b>0</b> <b>0</b> Analog control	<b>OCA</b>
	<b>2</b> 24Vac	<b>N</b> Day/Night camera 36x optical zoom lens, NTSC				
	<b>3</b> 120Vac					

Not all combinations are possible.

## TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.



MAXIMUS MPX