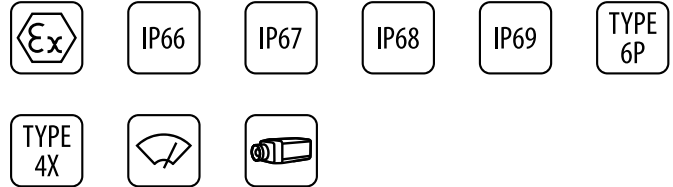


MAXIMUS MVX

HIGH PERFORMANCE EX-PROOF DAY/NIGHT CAMERA



MAXIMUS MVX + NXWBS1

DESCRIPTION

The explosion-protected MAXIMUS MVX is perfect 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 Day/Night high-resolution camera, with sensor 1/4" and motorised 36x zoom for easier setup, ensures superior image quality even in low lighting and difficult environmental conditions.

One striking advantage offered by these cameras is their extremely easy and secure "plug and play" installation, with multipolar wiring. These cameras arrive ready to use, avoiding the complex electrical connections that are typical of this type of device.

The housing has a functional and compact design and is entirely manufactured in stainless steel AISI316L. Corrosion resistance is guaranteed and improved by a double surface polishing process.

Another important feature of the camera is the extended certification temperature range of -60°C to 65°C, along with a sophisticated cold start system, which allows it to operate in harsh environments as standard.

An equally noteworthy point is that the IP66/IP67/IP68 ratings guarantee the complete protection against harsh weather and submersion in up to 5 metres of water for 2 hours. Moreover, the IP69 rating allows the device to be cleaned with high pressure water jets.

These cameras come with wipers and an explosion-proof washer kit is also available, allowing for flawless, maintenance-free cleaning of the front glass.

The MAXIMUS MVX range of cameras meets every installation need, providing maximum performance and excellent value for money.

The MAXIMUS MVX 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 Zones 1 and 2, IIC T5 and T6 Group (Gas) and in Zones 21 and 22, IIIC T100°C and T85°C Group (Dust)

Marine Certification: Lloyd's Register Marine Type Approval

AISI 316L stainless steel construction

External shot peened and electro-polished surfaces

Day/Night camera 36x, 1/4":

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

Autofocus

1 alarm input and 1 relay output

4m (13ft) / 10m (32.8ft) preinstalled armoured multipolar cable with cable gland or, alternatively, with 4m (13ft) / 10m (32.8ft) cable tail (for installation with conduit, conduit sealing fitting and conduit not included)

Integrated wiper

Power supply: 12-24Vdc/24Vac

IP66/IP67/IP68/IP69

TECHNICAL DATA

GENERAL

AISI 316L stainless steel construction
External shot peened and electro-polished surfaces
Silicone O-ring seals
Configuration via OSM

MECHANICAL

Sunshield
Integrated wiper
Unit weight:

- 8.5kg (18.7lb) (housing with 4m (13ft) multi-polar cable shield)
- 12kg (26.5lb) (housing with 10m multi-polar cable shield)

CABLE GLANDS

Cable entry: 1 hole, 3/4", NPT
Cable gland Ex db 3/4"NPT and 4m/10m (13ft/33ft) preinstalled multipolar armored cable or with 4m/10m (13ft/33ft) cable tail (for installation with conduit, conduit sealing fitting and conduit not included)

HOUSING'S WINDOW

Material: Thermally tempered glass

- Dimensions: 51x41mm (2x1.6in)
- Thick: 12mm (0.47in)

ELECTRICAL

Supply voltage/Current consumption (heating switched on, Ton 15°C±3°C (59°F±5°F), Toff 22°C±3°C (72°F±5°F)):

- 24Vac ±10%, 2.2A, 50/60Hz
- 24Vdc ±5%, 2.2A
- 12Vdc ±5%, 3.5A

Armoured cable:

- external diameter = 20.00 ± 0.50mm (0.79±0.20in)
- diameter under armature = 15.20mm (0.60in)
- colour: Black RAL9005

Armoured cable composition:

- 3 x 2.5mm²
- 7 x 0.34mm²
- 1 x coax 75ohm RG179

Cable tail composition:

- 3 x 2.5mm², rated external diameter = 8.7mm (0.34in)
- 7 x 0.34mm², rated external diameter = 6.4mm (0.25in)
- 1 x coax 75ohm RG59, rated external diameter = 4.9mm (0.19in)

NETWORK

Ethernet connection (only for the IP versions of the product): 10BASE-T/100BASE-T
Connector: RJ45
Cable length: 100m max

SERIAL COMMUNICATIONS

Serial interface

- RS-485 line, half-duplex
- Cable length: 1200m max
- Addressable units: 255 (configuration via OSM)

Serial communication protocol

- PANASONIC 850: 9600baud, 19200baud
- PELCO D: 2400baud, 9600baud
- MACRO: 9600baud, 38400baud

I/O INTERFACE

I/O alarm board

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

Cable length: 200m (656ft) max

Version with integrated wiper

- Remote wiper activation: 1 input, dry contact NO

CAMERAS

Day/Night 36x

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 (PAL); ~ 380000 pixel (NTSC)

Minimum Illumination, color (ICR-OFF, Interlace Mode):

- 1.4lx (1/50s), 0.1lx (1/3s), PAL
- 1.4lx (1/60s), 0.01lx (1/4s), NTSC

Minimum Illumination, B/W (ICR-ON, Interlace Mode):

- 0.01lx (1/3s), PAL
- 0.01lx (1/4s), NTSC

"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

Focusing system: Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual

"Smart" lens control: Automatic Lens Reset

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

ENVIRONMENT

For indoors and outdoors installation

Operating temperature:

- Cold start from -40°C (-40°F) up to +65°C (149°F)
- Running from -50°C (-58°F) up to +65°C (149°F)

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

CERTIFICATIONS

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

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

RoHS (CE): EN50581

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

IP protection degree (EN/IEC60529): IP66, IP67, IP68 (2 hours, 5m (16ft)), IP69

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

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

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

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

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 + Errata 1, ABNT NBR IEC 60079-1 + Errata 1, ABNT NBR IEC 60079-31)

ETL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31), cable tail versions

ETL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31), cable tail versions

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

CERTIFICATIONS - MARINE APPLICATIONS

Lloyd's Register Marine Type Approval certification (only if used with the 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

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, 230Vac
MBX2MAA	Explosion-proof communication box in stainless steel, 24Vac
MBX3MAA	Explosion-proof communication box in stainless steel, 120Vac
MBA1S5A	Explosion-proof communication box in aluminium, 230Vac
MBA2S5A	Explosion-proof communication box in aluminium, 24Vac
MBA3S5A	Explosion-proof communication box in aluminium, 120Vac
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))
FM1010	EMC filter for Marine certification

BRACKETS AND ADAPTORS

NXWBS1	AISI 316L stainless steel wall bracket with joint
MHXWFWCA	AISI 316L stainless steel ball joint
NXFWBT	AISI 316L stainless steel parapet mounting bracket
NXCOL	AISI 316L stainless steel pole adapter module
NXCW	AISI 316L stainless steel corner adapter module
NXWTU	Wall adaptor module in stainless steel AISI 316L

PACKAGE

Model Number	Weight	Dimensions (WxHxL)	Master carton
VMX2BOWA000A	12.5kg (28lb)	60x30x60cm (24x12x24in)	-

MAXIMUS MVX RANGE - CERTIFICATIONS AND MARKINGS (VERSIONS WITH ARMoured CABLE)		
Certification	Marking	Ambient temperature
ATEX	Ⓜ II 2 G Ex db IIC T5 Gb Ⓜ II 2 D Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	Ⓜ II 2 G Ex db IIC T6 Gb Ⓜ II 2 D Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C
IECEX	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C
INMETRO	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C
EAC Ex	Ex II 2G Ex db IIC T5 Gb Ex II 2D Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	Ex II 2G Ex db IIC T6 Gb Ex II 2D Ex tb IIIC T85°C Db IP66/IP68	-60°C ≤ Ta ≤ +55°C

MAXIMUS MVX RANGE - CERTIFICATIONS AND MARKINGS (CABLE TAIL VERSIONS, FOR INSTALLATION WITH CONDUIT)		
Certification	Marking	Ambient temperature
ATEX	Ⓜ II 2 G Ex db IIC T5 Gb Ⓜ II 2 D Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	Ⓜ II 2 G Ex db IIC T6 Gb Ⓜ II 2 D Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
IECEX	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
INMETRO	Ex db IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
EAC Ex	Ex II 2G Ex db IIC T5 Gb Ex II 2D Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	Ex II 2G Ex db IIC T6 Gb Ex II 2D Ex tb IIIC T85°C Db IP66/IP68	-50°C ≤ Ta ≤ +55°C
Hazardous Location America	Class I Zone 1 AEx db IIC T5 Gb Class I Div 2 Group A, B, C & D T5 Zone 21 AEx tb IIIC T100°C Db Class II Div 2 Group E, F & G T100°C	-50°C ≤ Ta ≤ +65°C
	Class I Zone 1 AEx db IIC T6 Gb Class I Div 2 Group A, B, C & D T6 Zone 21 AEx tb IIIC T85°C Db Class II Div 2 Group E, F & G T85°C	-50°C ≤ Ta ≤ +55°C
Hazardous Location Canada	Ex db IIC T5 Gb Class I Div 2 Group A, B, C, D T5 Ex tb IIIC T100°C Db Class II Div 2 Group E, F and G T100°C	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Class I Div 2 Group A, B, C, D T6 Ex tb IIIC T85°C Db Class II Div 2 Group E, F and G T85°C	-50°C ≤ Ta ≤ +55°C

MAXIMUS MVX - CONFIGURATION OPTIONS WITH CABLE GLAND AND SHIELDED CABLE

	Voltage	Camera		Connections	Video output	Model	
MVX	2 12-24Vdc/ 24Vac	PO Day/Night camera 36x optical zoom lens, PAL	W With wiper	A Cable gland Ex d 3/4" NPT and 4m (13ft) armored cable	0 Analog control	00 T5 -60°C/+65°C	A
		NO Day/Night camera 36x optical zoom lens, NTSC		B Cable gland Ex d 3/4" NPT and 10m (32.8ft) armored cable		02 T6 -60°C/+55°C	

MAXIMUS MVX - CONFIGURATION OPTIONS WITH CABLE TAIL (FOR INSTALLATION WITH CONDUIT, CONDUIT SEALING FITTING AND CONDUIT NOT INCLUDED)

	Voltage	Camera		Connections	Video output	Model	
MVX	2 12-24Vdc/ 24Vac	PO Day/Night camera 36x optical zoom lens, PAL	W With wiper	F 4m (13ft) cable tail	0 Analog control	01 T5 -50°C/+65°C	A
		NO Day/Night camera 36x optical zoom lens, NTSC		G 10m (32.8ft) cable tail		03 T6 -50°C/+55°C	

TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.

