MAXIMUS MVX DELUX

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

VIDEOTEC

[Ex] | IP66/IP67 IP68/IP69 | TYPE 4X TYPE 6P

deLUX technology

FULL HD 1080P

FULL HD 1080P

MAXIMUS MVX DELUX + NXWBS1

ONVIF® | QST

DESCRIPTION

MAXIMUS MVX DELUX is an explosion-proof FULL HD camera which integrates new imaging and encoding technology for video surveillance, allowing recordings to be produced with incredibly bright and vivid colours both by day and by night.

In particular, thanks to the camera's increased light sensitivity, the DELUX technology can obtain bright images with well-defined colours in very low light conditions – even typical night-time conditions to 0.006 lux (0.0006 lux in black and white).

MAXIMUS MVX 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.

Up to a maximum of 3 simultaneous and independent video streams can be transmitted via network in H.264/AVC, MPEG4, MJPEG or JPEG format

The housing is compact yet functional and is made entirely out of AISI 316L stainless steel. Its resistance to corrosion is not only guaranteed, but is also enhanced by way of polishing processes.

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.

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.

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

ATEX | IECEx | EAC Ex | INMETRO | ETL Intertek | KCs | LR APPROVED TYPE APPROVAL SCHEME

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

Camera Full HD 1080p, 30x, 60fps

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

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

Complies with ONVIF, Profile Q, Profile S and Profile T

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

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

MECHANICAL

AISI 316L stainless steel construction

External shot peened and electro-polished surfaces

Sunshield

Integrated wiper

Unit weight:
- 8.5kg (18.7lb) (housing with 4m (13ft) multipolar cable shield)
- 12kg (26.5lb) (housing with 10m multipolar 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
- 24Vac ±10%, 2.2A, 50/60Hz
- 24Vdc ±5%, 2.2A
- 12Vdc ±5%, 3.5A

Heater (Ton 15°C±3°C (59°F ±5°F), Toff 22°C±3°C (72°F±5°F))

Armoured cable:
- external diameter = 20.00 ± 0.50mm (0.79±0.20in)
- diameter under armature = 15.20mm (0.60in)
- colour: Black RAL 9005

Armoured cable composition:
- 3 x 2.5mm^2
- 7 x 0.34mm^2
- 4 x 2 x 0.22mm^2 (cat. 5E)

Cable tail composition:
- 3 x 2.5mm^2, rated external diameter = 8.7mm (0.34in)
- 7 x 0.34mm^2, rated external diameter = 6.4mm (0.25in)
- 4 x 2 x 0.21mm^2, (cat. 5E), rated external diameter = 6.7mm (0.26in)

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 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
- Motion Detection
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

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 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)

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 5% up to 95%

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

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

KCs (Employment and labor department 2016-54), cable tail versions

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, 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
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
MVXHD210WAZ00B	12.5kg (28lb)	60x30x60cm (24x12x24in)	-

MAXIMUS MVX RANGE - CERTIFICATIONS AND MARKINGS (VERSIONS WITH ARMOURED CABLE)

Certification	Marking	Ambient temperature
ATEX	⟨Ex⟩ II 2 G Ex db IIC T5 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T100°C Db IP66/IP68	-60°C ≤ Ta ≤ +65°C
	⟨Ex⟩ II 2 G Ex db IIC T6 Gb ⟨Ex⟩ 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	1Ex d IIC T5 Gb X Ex tb IIIC T100°C Db X	-60°C ≤ Ta ≤ +65°C
	1Ex d IIC T6 Gb X Ex tb IIIC T85°C Db X	-60°C ≤ Ta ≤ +55°C

MAXIMUS MVX RANGE - CERTIFICATIONS AND MARKINGS (CABLE TAIL VERSIONS, FOR INSTALLATION WITH CONDUIT)

Certification	Marking	Ambient temperature
ATEX	⟨Ex⟩ II 2 G Ex db IIC T5 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T100°C Db IP66/IP68	-50°C ≤ Ta ≤ +65°C
	⟨Ex⟩ II 2 G Ex db IIC T6 Gb ⟨Ex⟩ 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
KCs	Ex d IIC T5 Ex tb IIIC T100°C	-50°C ≤ Ta ≤ +65°C
	Ex d IIC T6 Ex tb IIIC T85°C	-50°C ≤ Ta ≤ +55°C
EAC Ex	1Ex d IIC T5 Gb X Ex tb IIIC T100°C Db X	-50°C ≤ Ta ≤ +65°C
	1Ex d IIC T6 Gb X Ex tb IIIC T85°C Db X	-50°C ≤ Ta ≤ +55°C
Hazardous Location America	Class I Zone 1 AEx db IIC T5 Gb Zone 21 AEx tb IIIC T100°C Db Class I Div 2 Group A,B,C & D T5 Class II Div 2 Group F & G T100°C	-50°C ≤ Ta ≤ +65°C
	Class I Zone 1 AEx db IIC T6 Gb Zone 21 AEx tb IIIC T85°C Db Class I Div 2 Group A,B,C & D T6 Class II Div 2 Group F & G T85°C	-50°C ≤ Ta ≤ +55°C
Hazardous Location Canada	Ex db IIC T5 Gb Ex tb IIIC T100°C Db Class I Div 2 Group A,B,C & D T5 Class II Div 2 Group F & G T100°C	-50°C ≤ Ta ≤ +65°C
	Ex db IIC T6 Gb Ex tb IIIC T85°C Db Class I Div 2 Group A,B,C & D T6 Class II Div 2 Group F & G T85°C	-50°C ≤ Ta ≤ +55°C

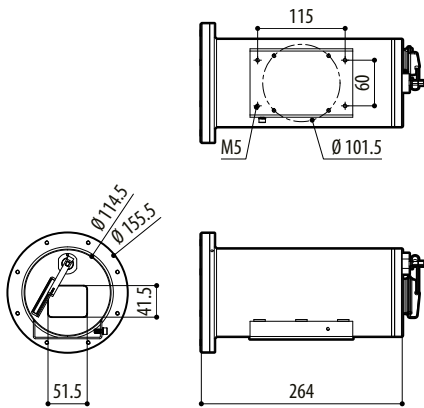## MAXIMUS MVX DELUX - CONFIGURATION OPTIONS WITH CABLE GLAND AND SHIELDED CABLE

	Voltage		Camera				Connections		Video Output		Model		
MVXHD	**2**	12-24Vdc/ 24Vac	**10**	Videotec super low-light Day/ Night 30X zoom, Full HD camera	**W**	With wiper	**A**	Cable gland Ex d 3/4" NPT and 4m (13ft) armored cable	**Z**	IP H.264/AVC control, ONVIF protocol Profile Q, Profile S and Profile T	**00**	T5 -60℃/+65℃	**B**
							B	Cable gland Ex d 3/4" NPT and 10m (32.8ft) armored cable			**02**	T6 -60℃/+55℃	

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

	Voltage		Camera				Connections		Video Output		Model		
MVXHD	**2**	12-24Vdc/ 24Vac	**10**	Videotec super low-light Day/ Night 30X zoom, Full HD camera	**W**	With wiper	**F**	4m (13ft) cable tail	**Z**	IP H.264/AVC control, ONVIF protocol Profile Q, Profile S and Profile T	**01**	T5 -50℃/+65℃	**B**
							G	10m (32.8ft) cable tail			**03**	T6 -50℃/+55℃	

TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.

MAXIMUS MVXHD