

# MAXIMUS MBX

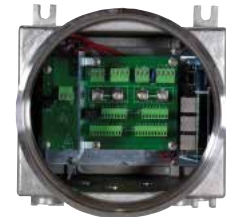
EXPLOSION-PROOF COMMUNICATION BOX IN STAINLESS STEEL



MAXIMUS MBX



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## DESCRIPTION

MAXIMUS MBX is a communication box designed to integrate seamlessly with one or more IP or analogue cameras from the Videotec MAXIMUS range.

This device can connect a 24Vac-powered PTZ and its washing kit, or two fixed cameras equipped with washing kits.

MAXIMUS MBX provides the devices that it connects to with a low-voltage local power supply. It also offers a Fast Ethernet connection thanks to the integrated Ethernet switch that is equipped with 3 RJ45 ports and an SFP port for fibre optic connection. The SFP module can be chosen according to the requirements of the installation. It has been designed so that the inside gives easy access to cables, making connection effortless. The internal circuitry also makes it possible to bypass analogue video signals and all input/output connections available across the Videotec MAXIMUS range.

The robust AISI 316L stainless steel construction means maximum anti-corrosion properties for use in industrial and marine environments.

Thanks to the integrated filter, any products connected to MBX comply with Lloyd's Register Marine Type Approval standards for electromagnetic (EMC) compatibility.

MAXIMUS MBX is the complete and competitive solution for professional installation of Videotec's MAXIMUS explosion-proof products.

## CERTIFICATIONS



## MAIN FEATURES

Certifications for use in Zones 1 and 2 IIC Group (Gas) and in Zones 21 and 22 IIIC Group (Dust); ambient temperature up to +80°C (+176°F)

AISI 316L stainless steel construction

Designed to work exclusively with Videotec products and accessories

Built-in Ethernet switch with 4 channels:

3 RJ45 ports, Fast Ethernet (10BASE-T/100BASE-T)

1 SFP port, Fast Ethernet (100BASE-FX), for fibre optic connection

2 bypass for analog video signals with BNC connectors

2 bypass for I / O signals with multi-pin connectors

Input voltages available: 230Vac, 120Vac, 24Vac

Extended/Industrial range electronics

Operating temperature: from -40°C (-40°F) up to +70°C (158°F)

IP66, IP67, IP68, IP69

## TECHNICAL DATA

### MECHANICAL

AISI 316L stainless steel construction

Fastening slots: 4 x Ø11mm (0.43in)

Cable gland holes: 4 x 3/4" NPT + 2 x 1/2" NPT (on request: 4 x M25 + 2 x M20)

External dimensions (WxHxL): 220x216x240mm (8.7x8.5x9.4in)

Unit weight: 17.4kg (38.4lb)

### ELECTRICAL

MAXIMUS MBX exclusively supports VIDEOTECH products from the MAXIMUS range with 24Vac and WASEX with 24Vac.

Maximum power output: 120W

Input voltages available:

- 230Vac, 50/60Hz
- 24Vac, 50/60Hz
- 120Vac, 50/60Hz

Possible system configurations:

- up to 1 PTZ + 1 wash system
- up to 2 fixed cameras + 2 wash systems

### NETWORK

4 channels unmanaged ethernet switch:

3 RJ45 ports

- Ethernet connection: 10BASE-T/100BASE-T

1 SFP port (SMALL FORM FACTOR PLUGGABLE)

- Ethernet connection: 100BASE-FX
- Supply voltage: 3.3V
- Standard: compliant MSA

The SFP module (not supplied by VIDEOTECH) must meet the following requirements:

- Laser: Class 1, complies with EN60825-1
- UL/IEC 60950-1 or UL/IEC 62368-1 Certification

### ANALOGUE VIDEO

2 bypass for analog video signals with BNC connectors

### I/O INTERFACE

2 bypass for I / O signals with multi-pin connectors

### ENVIRONMENT

For indoors and outdoors installation

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

Operating temperature: from -40°C (-40°F) up to +70°C (158°F)

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 B), 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 B), ICES-003 (Class B)

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

KCs (Employment and labor department. 2020-33)

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

### CERTIFICATIONS - MARINE APPLICATIONS

Lloyd's Register Marine Type Approval certification:

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

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

ACCESSORIES	
MBXWRE	Opening wrench for the MAXIMUS MBX cover
OCTEXBA3/4P	Barrier cable gland in nickel-plated brass EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex
OCTEXBA1/2P	Barrier cable gland in nickel-plated brass EX 1/2" 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
OCTEXB1/2P	Barrier cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OEXPLUG3/4P	Plug EX 3/4" NPT IECEX-ATEX-EAC Ex
OEXPLUG1/2P	Plug EX 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

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

BRACKETS AND ADAPTORS	
MBXMP	Plate for assembly of the MAXIMUS MBX with MPXCOL pole adaptor or with MPXCW corner adaptor
MPXCW	AISI 316L stainless steel corner adapter module
MPXCOL	AISI 316L stainless steel pole adapter module

RELATED PRODUCTS*	
MAXIMUS MHX	Ex-proof stainless steel housing
MAXIMUS MHXT	Ex-proof stainless steel housing for thermal cameras
MAXIMUS MMX	Ex-proof FULL HD camera in a compact design
MAXIMUS MPX	Ex-proof PTZ Day/Night camera
MAXIMUS MPXT	Dual vision PTZ with Day/Night and thermal cameras
MAXIMUS MPXT SERIES2	Dual vision PTZ with Day/Night and thermal cameras
MAXIMUS MPX SERIES2	Explosion-proof Full HD PTZ camera
MAXIMUS MPXR SERIES2	Explosion-proof PTZ with thermal camera
MAXIMUS MVX	Ex-proof Day/Night camera
MAXIMUS MVXT	Ex-proof thermal camera
MAXIMUS MVX DELUX	Ex-proof FULL HD camera
WASEX	Washer pump with ex-proof solenoid valve

\*MAXIMUS MBX can only be installed with the indicated products from the MAXIMUS line.

PACKAGE			
Model Number	Weight	Dimensions (WxHxL)	Master carton
MBX1MAA	19.5kg (43lb)	32x32x26cm (12.5x12.5x10.2in)	-

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
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
Plug EX 3/4"NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (752°F)	-	OEXPLUG3/4P	-	-
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 MBX - CERTIFICATIONS AND MARKINGS**

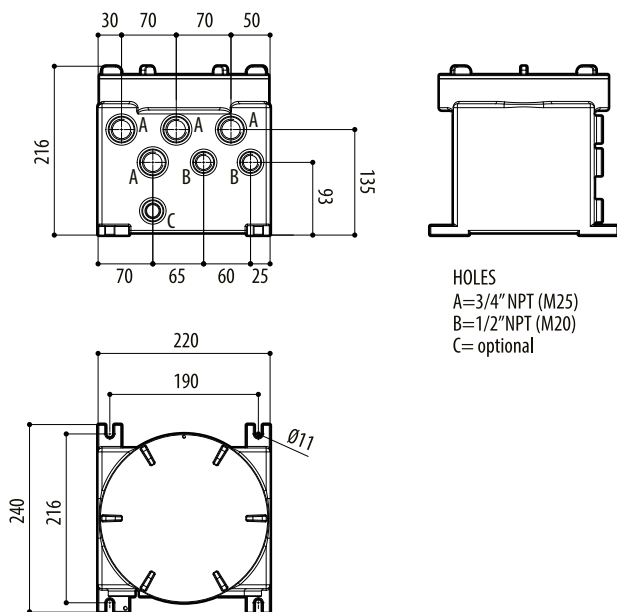
Part number	Certification	Marking	Ambient temperature	Cable entry temperature
MBX**AA	ATEX	⊕ II 2 G Ex db IIC T6...T5 Gb ⊕ II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +60°C or +70°C	80°C
	IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	INMETRO	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	KCs	Ex d IIC T6...T5 Ex tb IIIC T85°C...T100°C		
	EAC Ex	1Ex d IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	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	-40°C ≤ Ta ≤ +60°C or +70°C	80°C with Ta = 60°C max 90°C with Ta = 70°C max
	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		
MBX**DA	ATEX	⊕ II 2G Ex db IIC T4 Gb ⊕ 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		
	INMETRO	Ex db IIC T4 Gb Ex tb IIIC T135°C Db		
	KCs	Ex d IIC T4 Ex tb IIIC T135°C		
	EAC Ex	1Ex d IIC T4 Gb X Ex tb IIIC T135°C Db X		

**MAXIMUS MBX - CONFIGURATION OPTIONS**

	Input voltage		Temperature class - Ambient temperature	
<b>MBX</b>	<b>1</b> 230Vac	<b>M</b> Fibre splice tray and EMC Marine filter	<b>A</b> T6...T5 -40/+60°C or +70°C	<b>A</b>
	<b>2</b> 24Vac		<b>D</b> T4 -40°C (-40°F)/+80°C (+176°F)	
	<b>3</b> 120Vac			

**TECHNICAL DRAWINGS**

The indicated measurements are expressed in millimetres.



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