MAXIMUS MBX

EXPLOSION-PROOF COMMUNICATION BOX IN STAINLESS STEEL

IP66/IP67
IP68/IP69

TYPE 4X
TYPE 6P

- **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)**
- **Designed to work exclusively with Videotec products and accessories**
- **1 SFP port, Fast Ethernet (100BASE-FX), for fiber optic connection**

CERTIFICATIONS

ATEX | IECEx | c UL us LISTED | INMETRO | KCs | EAC Ex

LR APPROVED TYPE APPROVAL SCHEME | UKCA

MAXIMUM RESISTANCE IN THE MOST CRITICAL ENVIRONMENTS

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.

PERFECT INTEGRATION WITH CONTROL SYSTEMS

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 fiber 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.

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 VIDEOTEC 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
- 24Vdc (available on request)

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: MSA compliant

The SFP module (not supplied by VIDEOTEC) 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): EN ISO 63000

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)

UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)

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
CMSN2200	Unarmoured black cable, available by the metre (minimun order 10m (32.8ft)): 2 Ethernet cables, 3 power supply wires, 2 coaxial video cable, 15 wires for alarms, relays and telemetry
CMAN1300	Armoured black cable, available by the metre (minimum order 10m (32.8ft)): 1 Ethernet cable, 3 power supply conductors, 1 coaxial video cable, 8 conductors for alarms and relay
CMSN0400	Unarmoured multipolar black cable, available by the metre (minimum order 10m (32.8ft)): 1 Ethernet cable, 3 power supply wires
CMAN0401	Armoured black cable, available by the metre (minimum order 10m (32.8ft)): 1 Ethernet cable, 3 power supply conductors

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

For further details on cable codes please refer to the relevant datasheet.

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

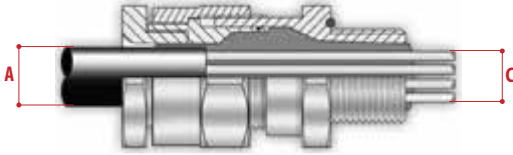|	
MAXIMUS MHX	Ex-proof stainless steel housing
MAXIMUS MHXT	Ex-proof stainless steel housing for thermal cameras
MAXIMUS MMX	Ex-proof FULL HD camera in a compact design
MAXIMUS MPXT SERIES2	Dual vision PTZ with Day/Night and thermal cameras
MAXIMUS MPX SERIES2	Explosion-proof Full HD PTZ camera
MAXIMUS 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.
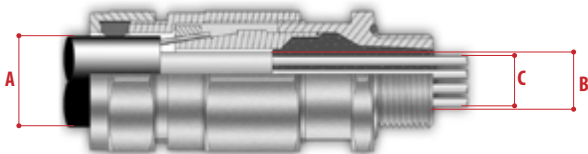
PACKAGE

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

CABLE GLANDS AND ACCESSORIES 1/2" NPT

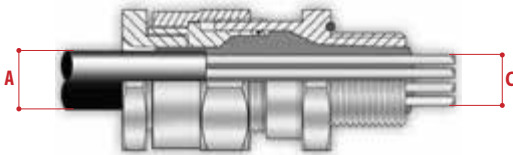| Type	Certification	Operating temperature	Cable	Model Number	Maximum diameter of the external sheath (A)	Maximum diameter of the internal sheath (B)	Maximum diameter of the conductors bundle (C)
Barrier cable gland	IECEX/ATEX/EAC Ex	-60°C (-76°F) / +135°C (+275°F)	Unarmoured cable	OCTEXB1/2P	14.0mm (0.55in)	-	12.5mm (0.5in)
			Armoured cable	OCTEXBA1/2P	15.5 - 21.1mm (0.61-0.83in)	14mm (0.6in) max	12.5mm (0.5in)
Plug EX 1/2"NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (+752°F)	-	OEXPLUG1/2P	-	-	-

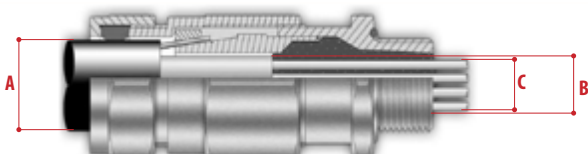Barrier cable gland with unarmoured cable

Barrier cable gland with armoured cable

CABLE GLANDS AND ACCESSORIES 3/4" NPT

Type	Certification	Operating temperature	Cable	Model Number	Maximum diameter of the external sheath (A)	Maximum diameter of the internal sheath (B)	Maximum diameter of the conductors bundle (C)
Barrier cable gland	IECEX/ATEX/EAC Ex	-60°C (-76°F) / +135°C (+275°F)	Unarmoured cable	OCTEXB3/4P	20.0mm (0.78in)	-	17.8mm (0.7in)
			Armoured cable	OCTEXBA3/4P	16.8 - 23.9mm (0.66-0.94in)	20mm (0.79in) max	17.8mm (0.7in)
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	-	-	-

Barrier cable gland with unarmoured cable

Barrier cable gland with armoured cable

Conduit sealing fitting

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 db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	UK Ex	Ⓔ II 2 G Ex db IIC T6...T5 Gb Ⓔ II 2D Ex tb IIIC T85°C…T100°C Db		
	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		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 db IIC T4 Gb X Ex tb IIIC T135°C Db X		
	UK Ex	Ⓔ II 2G Ex db IIC T4 Gb Ⓔ II 2D Ex tb IIIC T135°C Db		

MAXIMUS MBX - CONFIGURATION OPTIONS

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

TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.

HOLES
A=3/4"NPT (M25)
B=1/2"NPT (M20)
C= optional

MAXIMUS MBX