MAXIMUS MHX
EX-PROOF HOUSING

TYPE 4X PROTECTION | IP66 IP67 PROTECTION | WIPER

MAIN FEATURES

Certifications Ex d for use in Zone 1 and 2, Group IIC (Gas), and in Zone Ex tb 21 and 22 (Dust)

Made of AISI 316L electropolished stainless steel

2 ¾" NPT threaded holes for use of cable glands or conduit

Integrated telemetry receiver for version with wiper

Sunshield and heater included

Power supply: 230Vac, 24Vac or 120Vac

Environment temperature: -40°C / +60°C (-40°F / +140°F)

OPTIONS:

Wiper

DESCRIPTION

These explosion-proof housings for the MAXIMUS range have been certified and designed to meet the strictest standards regarding installation in potentially explosive environments, i.e. where there is the presence of gas and flammable dusts.

The MAXIMUS range ensures excellent performance for monitoring critical processes in areas that carry a risk of explosion, such as refineries, gas pipelines, oil tankers, offshore platforms, industrial processes, chemical industries, etc.

Equipped with heating, the housing has the same installation and operating temperatures, of between -40° C and + 60° (-40°F / +140°F).

In the version with wiper, MHX is equipped with an integrated telemetry receiver that allows, through the RS485 serial interface, to receive data from the remote control for the activation of the wiper / washer and for switching an eventual external illuminator.

The wiring is made easier thanks to the removable connectors on the circuit board.

The control board, with removable connectors, is also equipped with an input for the wiper activation through a dry contact.

The housing can eventually be controlled by VMS through a video encoder with RS485 serial port.

MHX + MHXWBS1

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

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TECHNICAL DATA

GENERAL

AISI 316L stainless steel construction

Passivated and electropolished external surfaces

Silicone O-ring seals

MECHANICAL

2 3/4" NPT holes for cable entry

Sunshield

Unit weight: 16.5kg (36lb)

HOUSING'S WINDOW

Tempered window glass

- Usable diameter: 75mm (3.0in)
- Thick: 12mm (0.47in)

ELECTRICAL

Supply voltage/Current consumption:

- 230Vac, 0.34A, 50/60Hz
- 120Vac, 0.5A, 50/60Hz
- 24Vac, 2.2A, 50/60Hz

Heater (Ton 15°C±4°C (59°F±7°F), Toff 22°C±3°C (72°F±5°F))

COMMUNICATIONS

Serial interface: 1 RS-485 line, half-duplex

Addressable units: Up to 31, via dip-switch

PROTOCOLS

PELCO D: 2400baud, 9600baud

VIDEOTEC MACRO: 9600baud, 38400baud

PELCO is registered trademark.

The product may be interfaced with devices not manufactured by VIDEOTEC. It is possible that the interface protocols have changed or are in a different configuration from earlier tested units by VIDEOTEC. VIDEOTEC recommends a test prior to installation. VIDEOTEC will not be liable for any installation costs or lost revenues in the event a compatibility problem will occur.

I/O INTERFACE

Version with wiper

- Remote wiper activation: 1 input, dry contact NO
- Day/Night camera status: 1 input
- Wash system activation relay: 1 output, 60Vdc max or 30Vac max, 1A
- Illuminator activation relay: 1 output, 60Vdc max or 30Vac max, 1A

CAMERA

Compatible cameras:

- Power consumption (assembly, camera and lens): 13W max
- Cameras dimensions/Lenses that can be installed (WxHxL): 80x82x245mm (3.1x3.2x9.6in) max
- Minimum distance between camera and housing's window: 10mm (0.4in)

ENVIRONMENT

For installation indoors and outdoors

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

Operating temperature/Installation temperature (MHX2...A-U, in 24Vac and with pre-installed camera by Videotec): from -40°C (-40°F) up to +54°C (129°F)

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

CERTIFICATIONS

ATEX (EN 60079-0: 2012+A11: 2013, EN 60079-1: 2014, EN 60079-31: 2014):

Ⓔx II 2 G Ex d IIC T6 Gb Ta -40°C to +60°C

Ⓔx II 2 D Ex tb IIIC T85°C Db Ta -40°C to +60°C

IECEX (IEC 60079-0: 2011 Ed.6, IEC 60079-1: 2014 Ed.7, IEC 60079-31: 2013 Ed.2):

Ex d IIC T6 Gb Ta -40°C to +60°C

Ex tb IIIC T85°C Db Ta -40°C to +60°C

IP66/IP67 (EN60529:1991/A1 2001)

INMETRO (ABNT NBR IEC 60079-0:2008 + Errata 1:2011, ABNT NBR IEC 60079-1:2009 + Errata 1:2011, ABNT NBR IEC60079-31:2011):

Ex d IIC T6 Gb -40°C à/to +60°C

Ex tb IIIC T85°C Db -40°C à/to +60°C

IP66/IP67

cULus Listed, TYPE 4X (only versions MHX2...A-U, in 24Vac with pre-installed camera by Videotec)

UL listed for USA (only versions MHX2...A-U, in 24Vac with pre-installed camera by Videotec):

Class I, Zone 1, AEx d IIC T6

Zone 21, AEx tb IIIC T85°C

UL listed for Canada (only versions MHX2...A-U, in 24Vac with pre-installed camera by Videotec):

Class I, Zone 1, Ex d IIC T6 Gb

Class II, Groups E, F and G

EAC EX:

Ex II 2G Ex d IIC T6 Gb,Ta -40°C/+60°C

Ex II 2D Ex tb IIIC T85°C Db Ta -40°C/+60°C, IP66/IP67

KCs 16- KABO-0172X - 16- KABO-0171X

Ex d IIC T6

Ex tb IIIC T85°C

ACCESSORIES

WASEX2T4AT	Tank 10l with integrated manual pump controlled by ATEX certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc
WASEX2T4GOR	Tank 10l with integrated manual pump controlled by EAC EX certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc
WASEX2T4IN	Tank 10l with integrated manual pump controlled by INMETRO certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc
OCTEX3/4C	Cable gland with gasket EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXA3/4C	Cable gland with gasket EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex
OCTEXB3/4C	Barrier cable gland 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex
OCTEXBA3/4C	Barrier cable gland 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex
OCTEX3/4	Cable gland with gasket EX 3/4" NPT, unarmoured cable ATEX
OCTEXA3/4	Cable gland with gasket EX 3/4" NPT, armoured cable ATEX
OCTEXB1/2C	Barrier cable gland EX 1/2" NPT unarmoured cable ATEX-IECEx-EAC Ex
OCTEX1/2C	Cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex, with gasket from 3 to 8mm (0.12 to 0.31in)
OCTEXS1/2C	Cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable IECEX-ATEX-EAC Ex, with gasket from 7.5 to 11.9mm (3 to 4.7in)
OCTEXA1/2C	Cable gland in nickel-plated brass EX 1/2" NPT armoured cable IECEX-ATEX-EAC Ex, with gasket
OCTEX1/2-3/4C	Cable glands reduction in nickel-plated brass 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))
OEXPLUG3/4	Plug EX 3/4" NPT IECEX-ATEX-EAC Ex
USB485	USB-RS485 converter

BRACKETS AND ADAPTORS	
MHXWBS	AISI 316L stainless steel wall bracket
MPXCW	AISI 316L stainless steel corner adapter module
MPXCOL	AISI 316L stainless steel pole adapter module
MHXWFWCA	AISI316L stainless steel ball joint
NXFWBT	AISI 316L stainless steel parapet mounting bracket

PACKAGE

Model Number	Weight	Dimensions (WxHxL)	Master carton
MHX	19kg (42lb)	58x34x22cm (23x13.4x8.7in)	-

ELECTRICAL RATING

Supply voltage	Max peak electrical ratings (comprising the max power dissipation of the end user camera/lens and heater)	Maximum power dissipation for end user fitted camera/lens
230Vac	0.34A, 50/60Hz, 80W	13W
120Vac	0.5A, 50/60Hz, 60W	13W
24Vac	2.2A, 50/60Hz, 53W	13W
12Vdc	2.8A, 34W	13W

AVAILABLE MODELS

Model Number	230Vac	24Vac	120Vac	Wiper	Sunshield	ATEX / IECEX / EAC EX / INMETRO
MHX1CS000A	✓	–	–	–	✓	✓
MHX1CW000A	✓	–	–	✓	✓	✓
MHX2CS000A	–	✓	–	–	✓	✓
MHX2CW000A	–	✓	–	✓	✓	✓
MHX3CS000A	–	–	✓	–	✓	✓
MHX3CW000A	–	–	✓	✓	✓	✓

MAXIMUS MHX CERTIFICATIONS AND MARKINGS

Certification	Marking	Product Nr. Ending
ATEX	Ex II 2 G Ex d IIC T6 Gb Ta -40°C to +60°C, Ex II 2 D Ex tb IIIC T85°C Db Ta -40°C to +60°C	**...A**
IECEX	Ex d IIC T6 Gb Ta -40°C to +60°C, Ex tb IIIC T85°C Db Ta -40°C to +60°C	**...A**
EAC Ex	Ex II 2G Ex d IIC T6 Gb,Ta -40°C/+60°C, Ex II 2D Ex tb IIIC T85°C Db Ta -40°C/+60°C, IP66/IP67	**...A**
INMETRO	Ex d IIC T6 Gb, Ex tb IIIC T85°C Db Tamb -40°C to +60°C	**...A**
KCs	Ex d IIC T6, Ex tb IIIC T85°C	**...A**
UL listed for USA (only 24Vac)	Class I, Zone 1, AEx d IIC T6, Zone 21, AEx tb IIIC T85°C	**...A-U**[1]
UL listed for Canada (only 24Vac)	Class I, Zone 1, Ex d IIC T6 Gb, Class II, Groups E, F and G	**...A-U**[1]

[1] *UL Certifications only for 24Vac versions and with pre-installed camera by Videotec. Operating temperature -40°C / + 54°C (-40°F / 122°F)*

3/4" NPT CABLE GLAND SELECTION GUIDE

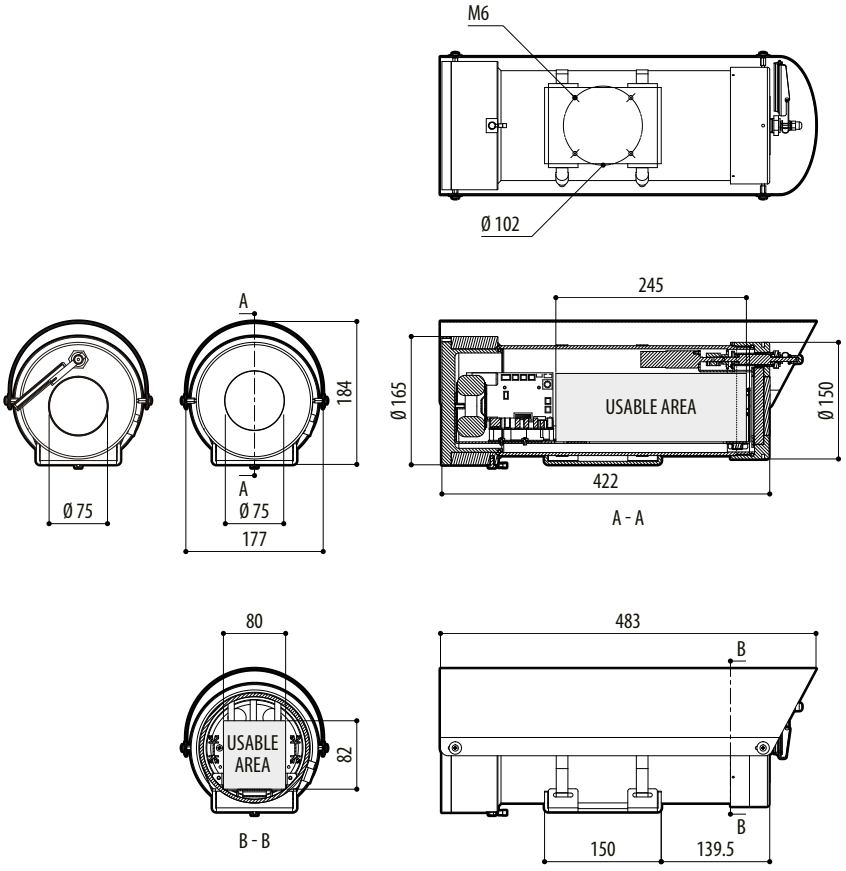
Cable gland type	Certification	Operating temperature	Cable	Cable glands product code	Diameter of the external cable (mm)	Under armor cable diameter (mm)
Barrier	IECEX/ATEX/EAC Ex	-60°C / +80°C (-76°F / +176°F)	Not armoured	OCTEXB3/4C	13 - 20.2	–
			Armoured	OCTEXBA3/4C	16.9 - 26	–
With gasket	IECEX/ATEX/EAC Ex	-60°C / +100°C (-76°F / +212°F)	Not armoured	OCTEX3/4C	13 - 20.2	–
			Armoured	OCTEXA3/4C	16.9 - 26	11.1 - 19.7
	ATEX	-20°C / +80°C (-4°F / + 176°F)	Not armoured	OCTEX3/4	14 - 17	–
			Armoured	OCTEXA3/4	18 - 23	14 - 17

1/2" NPT CABLE GLAND SELECTION GUIDE						
Cable gland type	**Certification**	**Operating temperature**	**Cable**	**Cable glands product code**	**Diameter of the external cable (mm)**	**Under armor cable diameter (mm)**
Barrier	IECEX/ATEX/EAC Ex	-60°C / +80°C (-76°F / +176°F)	Not armoured	OCTEXB1/2C	3 - 8	–
With gasket	IECEX/ATEX/EAC Ex	-60°C / +100°C (-76°F / +212°F)	Not armoured	OCTEX1/2C	3 - 8	–
			Not armoured	OCTEXS1/2C	7.5 - 11.9	–
			Armoured	OCTEXA1/2C	12.5 - 20.5	8.4 - 14.3

For a correct installation of the MHX/MHXT housing, cable entries and field wiring must be suitable for an operating temperature of at least +30°C above ambient.

TECHNICAL DRAWINGS

The dimensions of the drawings are in millimetres.



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