**DIVISION 28 ELECTRONIC SAFETY AND SECURITY**

**SECTION 28 20 00 ELECTRONIC SURVEILLANCE**

**SECTION 28 23 00 VIDEO SURVEILLANCE**

**SECTION 28 23 29 VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS**

**1 General**

**1.1 General requirements**

A The components and materials used for the construction of the products are standard type, they are manufactured and available also as spare parts, as long as the products remain on the market.

B All products and versions will be severely tested and validated by the internal laboratories of the manufacturer before being released on the market.

C All products released on the market by the manufacturer are designed for 24x7x365 constant use.

D For all products a Technical Support service is available, for free, via phone, e-mail and ticketing system.

**1.2 Quality**

A The manufacturer has to repair or replace without charge any products in which construction and/or material defects are found for the stated warranty period, starting from the delivery date of the material.

B The specified devices must be manufactured in Italy following the standards of EN ISO 9001: 2008 and ISO/IEC 80079-34:2011certification.

**1.3 Environmental sustainability**

A All products must comply with RoHS-6/6 according to the specifications 2011/65/EU, 2005/717/EC, 2006/122/EC and REACH according to the specifications EC 1907/2006.

**1.4 Certifications**

A All products must have the following certifications:

01 ATEX (EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-31: 2009):

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

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

02 IECEX (IEC 60079-0: 2011 Ed.6, IEC 60079-1: 2007-04 Ed.6, IEC 60079-31: 2008 Ed.1):

a Ex d IIC T6 Gb Ta -40°C to +60°C

b Ex tb IIIC T85°C Db Ta -40°C to +60°C

c IP66/IP67 (EN60529:1991/A1 2001)

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

a Ex d IIC T6 Gb -40°C à/to +60°C

b Ex tb IIIC T85°C Db -40ºC à/to +60ºC

c IP66/IP67

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

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

a Class I, Zone 1, AEx d IIC T6

b Zone 21, AEx tb IIIC T85°C

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

a Class I, Zone 1, Ex d IIC T6 Gb

b Class II, Groups E, F and G

07 EAC EX:

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

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

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

a Ex d IIC T6

b Ex tb IIIC T85°C

**2 Products**

**2.1 Technical data**

**A General**

01 AISI 316L stainless steel construction

02 Passivated and electropolished external surfaces

03 Silicone O-ring seals

**B Mechanical**

01 2 3/4" NPT holes for cable entry

02 Window with protection grid

03 Sunshield

04 Unit weight: 16.5kg (36lb)

**C Housing's window**

01 Material: Germanium

02 Dimensions:

a Diameter: 56mm (2.2in)

b Thick: 10mm (0.4in)

03 External treatment: Antiscratch (Hard Carbon Coating, DLC)

04 Internal treatment: Antireflection

05 Spectral range: From 7.5μm up to 14μm

**D Electrical**

01 Supply voltage/Current consumption:

a 230Vac, 0.34A, 50/60Hz

b 120Vac, 0.5A, 50/60Hz

c 24Vac, 2.2A, 50/60Hz

d 12Vdc, 2.8A

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

**E Communications**

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

**F Camera**

01 Compatible cameras:

a Power consumption (assembly, camera and lens): 13W max

b Cameras dimensions/Lenses that can be installed (WxHxL): 80x82x245mm (3.1x3.2x9.6in) max

c Minimum distance between camera and housing's window: 10mm (0.4in)

**G Environment**

01 Indoor/Outdoor

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

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

04 Relative Humidity 10-95% (no condensation)

**2.2 Accessories**

**A** OCTEX3/4C Cable gland with gasket EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex

**B** OCTEXA3/4C Cable gland with gasket EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex

**C** OCTEXB3/4C Barrier cable gland 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex

**D** OCTEXBA3/4C Barrier cable gland 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex

**E** OCTEX3/4 Cable gland with gasket EX 3/4" NPT, unarmoured cable ATEX

**F** OCTEXA3/4 Cable gland with gasket EX 3/4" NPT, armoured cable ATEX

**G** OCTEXB1/2C Barrier cable gland EX 1/2” NPT unarmoured cable ATEX-IECEx-EAC Ex

**H** 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)

**I** 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)

**J** OCTEX1/2-3/4C Cable glands reduction in nickel-plated brass 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex

**K** OCTEXP3/4C

**L**

**M** Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX-EAC EX

**N** OEXPLUG3/4 Plug EX 3/4" NPT IECEX-ATEX-EAC Ex

**O** USB485 USB-RS485 converter

**2.3 Brackets and adaptors**

**A** MHXWBS AISI 316L stainless steel wall bracket

**B  MPXCW** AISI 316L stainless steel corner adapter module

**C  MPXCOL** AISI 316L stainless steel pole adapter module

**D** MHXWFWCA AISI316L stainless steel ball joint

**E  NXFWBT** AISI 316L stainless steel parapet mounting bracket

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| MAXIMUS MHXT - Configuration options |
|   | **Voltage** | **Certification** |   | **Thermal camera** |   |
| **MHXT** | **1** 230Vac | **C** IIC -40°C | **0** With sunshield | **00** Without camera | **B** ATEX / IECEX / INMETRO |
|  | **2** 24Vac |  |  | **N0** Thermal camera 50mm, 320x256, 7.5-8.3Hz | **B-U** UL Listed for USA and CANADA 1 |
|  | **3** 120Vac |  |  | **NH** Thermal camera 50mm, 320x256, 25-30Hz |  |
|  |  |  |  | **A0** Thermal camera 35mm, 320x256, 7.5-8.3Hz |  |
|  |  |  |  | **AH** Thermal camera 35mm, 320x256, 25-30Hz |  |
|  |  |  |  | **B0** Thermal camera 25mm, 320x256, 7.5-8.3Hz |  |
|  |  |  |  | **BH** Thermal camera 25mm, 320x256, 25-30Hz |  |
|  |  |  |  | **V0** Thermal camera 19mm, 320x256, 7.5-8.3Hz |  |
|  |  |  |  | **VH** Thermal camera 19mm, 320x256, 25-30Hz |  |
|  |  |  |  | **FO** Thermal camera 13mm, 320x256, 7.5-8.3Hz |  |
|  |  |  |  | **FH** Thermal camera 13mm, 320x256, 25-30Hz |  |
|  |  |  |  | **CO** Thermal camera 9mm, 320x256, 7.5-8.3Hz |  |
|  |  |  |  | **CH** Thermal camera 9mm, 320x256, 25-30Hz |  |
|  |  |  |  | **P0** Thermal camera 50mm, 640x512, 7.5-8.3Hz |  |
|  |  |  |  | **PH** Thermal camera 50mm, 640x512, 25-30Hz |  |
|  |  |  |  | **D0** Thermal camera 35mm, 640x512, 7.5-8.3Hz |  |
|  |  |  |  | **DH** Thermal camera 35mm, 640x512, 25-30Hz |  |
|  |  |  |  | **E0** Thermal camera 25mm, 640x512, 7.5-8.3Hz |  |
|  |  |  |  | **EH** Thermal camera 25mm, 640x512, 25-30Hz |  |
|  |  |  |  | **UO** Thermal camera 19mm, 640x512, 7.5-8.3Hz |  |
|  |  |  |  | **UH** Thermal camera 19mm, 640x512, 25-30Hz |  |
|  |  |  |  | **GO** Thermal camera 13mm, 640x512, 7.5-8.3Hz |  |
|  |  |  |  | **GH** Thermal camera 13mm, 640x512, 25-30Hz |  |
|  |  |  |  | **HO** Thermal camera 9mm, 640x512, 7.5-8.3Hz |  |
|  |  |  |  | **HH** Thermal camera 9mm, 640x512, 25-30Hz |  |

1 MHXT2...B-U, UL Certifications only for 24Vac versions and with pre-installed camera by Videotec. Operating temperature -40°C / + 54°C (-40°F / 122°F)