**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: 2014, EN 60079-1: 2015, EN 60079-31: 2014):

a bEx II 2 G Ex d IIC T5 Gb  
b II 2 D Ex tb IIIC T100°C Db IP66/IP68  
-60°C ≤ Ta ≤ +65°C (versions with armoured cable)

b bEx II 2 G Ex d IIC T5 Gb  
bEx II 2 D Ex tb IIIC T100°C Db IP66/IP68  
-50°C ≤ Ta ≤ +65°C (versions with cable tail)

c bEx II 2 G Ex d IIC T6 Gb  
bEx II 2 D Ex tb IIIC T85°C Db IP66/IP68  
-60°C ≤ Ta ≤ +55°C (versions with armoured cable)

d bEx II 2 G Ex d IIC T6 Gb  
bEx II 2 D Ex tb IIIC T85°C Db IP66/IP68  
-50°C ≤ Ta ≤ +55°C (versions with cable tail)

02 IECEx (IEC 60079-0: 2011 Ed.6, IEC 60079-1: 2014-06 Ed.7, IEC 60079-31: 2013 Ed.2):

a Ex d IIC T5 Gb  
Ex tb IIIC T100°C Db IP66/IP68  
-60°C ≤ Ta ≤ +65°C (versions with armoured cable)

b Ex d IIC T5 Gb  
Ex tb IIIC T100°C Db IP66/IP68  
-50°C ≤ Ta ≤ +65°C (versions with cable tail)

c Ex d IIC T6 Gb  
Ex tb IIIC T85°C Db IP66/IP68  
-60°C ≤ Ta ≤ +55°C (versions with armoured cable)

d Ex d IIC T6 Gb  
Ex tb IIIC T85°C Db IP66/IP68  
-50°C ≤ Ta ≤ +55°C (versions with cable tail)

e IP66/IP68 (2 hours, 5m (16ft), EN/IEC60529)

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

a Ex d IIC T5 Gb  
Ex tb IIIC T100°C Db IP66/IP68  
-60°C ≤ Tamb ≤ +65°C (versions with armoured cable)

b Ex d IIC T5 Gb  
Ex tb IIIC T100°C Db IP66/IP68  
-50°C ≤ Tamb ≤ +65°C (versions with cable tail)

c Ex d IIC T6 Gb  
Ex tb IIIC T85°C Db IP66/IP68  
-60°C ≤ Tamb ≤ +55°C (versions with armoured cable)

d Ex d IIC T6 Gb  
Ex tb IIIC T85°C Db IP66/IP68  
-50°C ≤ Tamb ≤ +55°C (versions with cable tail)

04 EAC Ex:

a Ex II 2G Ex d IIC T5 Gb -60°C/+65°C

b Ex II 2D Ex tb IIIC T100°C Db -60°C/+65°C, IP66/IP68 (versions with armoured cable)

c Ex II 2G Ex d IIC T5 Gb -50°C/+65°C

d Ex II 2D Ex t IIIC T85°C Db -50°C/+65°C, IP66/IP68 (versions with cable tail)

e Ex II 2G Ex d IIC T6 Gb -60°C/+55°C

f Ex II 2D Ex tb IIIC T85°C Db -60°C/+55°C, IP66/IP68 (versions with armoured cable)

g Ex II 2G Ex d IIC T6 Gb -50°C/+55°C

h Ex II 2D Ex t IIIC T100°C Db -50°C/+55°C, IP66/IP68 (versions with cable tail)

05 ETL pending

06 TYPE 6P, TYPE 4X (UL50E)

07 IP69 (EN/IEC60529), housing only

**2 Products**

**2.1 Technical data**

**A General**

01 AISI 316L stainless steel construction

02 Electropolished and silicon micro shot peened external surfaces

03 Silicone O-ring seals

04 Cable entry: 1 hole, 3/4", NPT

05 Cable gland with gasket Ex d 3/4"NPT and 4m/10m (13ft/33ft) preinstalled multipolar armored cable or with 4m/10m (13ft/33ft) cable tail

**B Mechanical**

01 Sunshield

02 Unit weight: 8kg (18lb)

**C Housing windows**

01 Material: Germanium

02 Dimensions (big grid)

a Diameter: 57mm

b Thick: 10mm (0.4in)

03 Dimensions (small grid)

a Diameter: 40mm (1.6in)

b Thick: 8mm

04 External scratch-resistant treatment: Hard Carbon Coating (DLC)

05 Internal antireflection treatment

06 Spectral range: from 7.5μm up to 14μm

07 Medium transmittance (from 7.5μm up to 11.5μm): 94%

08 Medium transmittance (from 11.5μm up to 14μm): 90%

**D Electrical**

01 Power supply/Current consumption

a 24Vac, 2.2A, 50/60Hz

b 24Vdc, 2.2A

c 12Vdc, 3.5A

02 I/O alarm card

a Alarm inputs: 1

b Relay outputs: 1 (1A, 30Vac/60Vdc max)

03 Heater (Ton 15°C±3°C (59°F ±5°F), Toff 22°C±3°C (77°F±5°F))

04 Armoured cable:

a external diameter = 18.0 +/- 0.5mm

b colour blue RAL5015

05 Armoured cable composition:

a 1 x 3G1.5mm²

b 1 x 7 x 0.34mm²

c 4 x 2 x 0.22mm² (cat. 5E)

d 1 x coax 75ohm RG179

06 Cable tail composition:

a 1 x 3G2.5mm², rated external diameter = 8.7mm

b 1 x 7 x 0.34mm², rated external diameter = 6.4mm

c 4 x 2 x 0.21mm², (IP based version, cat. 5E), rated external diameter = 6.7mm

d 1 x coax 75ohm RG59 (analog version), rated external diameter = 4.9mm

**E I/O interface**

01 Cable length: 200m (656ft) max (analog version)

**F Communications**

01 Configuration via OSD

02 Serial interface

a RS-485 line, half-duplex

b Cable length: 1200m max

03 IP based control mode

a Compression H.264/AVC and JPEG

b 2 independent video streams

c Web Server

d Compatible with ONVIF protocol, Profile S

e Cable length: 100m (328ft) max

f Ethernet IEEE 802.3 100Base-Tx connection

**G Protocols**

01 Serial communication protocol

a PANASONIC: 9600baud, 19200baud

b PELCO D: 2400baud, 9600baud

c VIDEOTEC MACRO: 9600baud, 38400baud

**H Network protocols**

01 Protocol: ONVIF, Profile S

02 Device configuration: TCP/IPv4, UDP/IPv4, HTTP, NTP, DHCP, WS-DISCOVERY, QoS, IGMP (Multicast)

03 Streaming: RTSP, RTCP, RTP

**I Camera**

01 Power consumption (assembly, camera and lens)

a Without video encoder IP: 8W

b With video encoder IP: 6W

02 Minimum distance between camera and housing's window: 4mm (0.2in)

03 Cameras dimensions/Lenses that can be installed (WxHxL)

a Without video encoder: 70x65x140mm (2,6x2,5x5,5in)

b With video encoder: 70mmx65mmx120mm

**J Environment**

01 Indoor/Outdoor

02 Operating temperature: from -40°C (-40°F) up to +65°C (149°F)

03 Relative Humidity 10-95% (no condensation)

**B Accessories**

1 OCTEXP3/4C Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX-EAC EX

**C Brackets and adaptors**

1 NXWBS1 AISI 316L stainless steel wall bracket with joint

2 MHXWFWCA AISI316L stainless steel ball joint

3 NXFWBT AISI 316L stainless steel parapet mounting bracket

4 NXCOL AISI 316L stainless steel pole adapter module

5 NXCW AISI 316L stainless steel corner adapter module

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| MAXIMUS MVXT - Configuration options | | | | | | | | |
|  | **Voltage** | **Thermal camera** |  | **Connections** | **Video Output** | **Models** |  | **Frequency** |
| **MVXT** | **2** 12-24Vdc/ 24Vac | **Q0** Thermal camera 9mm, 336x256 | **S** | **A** Cable gland with gasket Ex d 3/4" NPT and 4m (13ft) armored cable | **Z** IP H.264/AVC control, Protocol ONVIF Profile S | **00** T5 -60°C/+65°C | **A** | **H** 25-30Hz |
|  |  | **M0** Thermal camera 13mm, 336x256 |  | **B** Cable gland with gasket Ex d 3/4" NPT and 10m (33ft) armored cable | **0** Analog control | **01** T5 -50°C/+65°C 1 |  | **-** 7.5-8.3Hz |
|  |  | **Z0** Thermal camera 19mm, 336x256 |  | **F** 4m (13ft) cable tail |  | **02** T6 -60°C/+55°C |  |  |
|  |  | **L0** Thermal camera 25mm, 336x256 |  | **G** 10m (33ft) cable tail |  | **03** T6 -50°C/+55°C 1 |  |  |
|  |  | **I0** Thermal camera 35mm, 336x256 |  |  |  |  |  |  |
|  |  | **J0** Thermal camera 50mm, 336x256 |  |  |  |  |  |  |
|  |  | **P0** Thermal camera 60mm, 336x256 |  |  |  |  |  |  |
|  |  | **H0** Thermal camera 9mm, 640x512 |  |  |  |  |  |  |
|  |  | **G0** Thermal camera 13mm, 640x512 |  |  |  |  |  |  |
|  |  | **U0** Thermal camera 19mm, 640x512 |  |  |  |  |  |  |
|  |  | **E0** Thermal camera 25mm, 640x512 |  |  |  |  |  |  |
|  |  | **D0** Thermal camera 35mm, 640x512 |  |  |  |  |  |  |
|  |  | **W0** Thermal camera 50mm, 640x512 |  |  |  |  |  |  |
|  |  | **K0** Thermal camera 60mm, 640x512 |  |  |  |  |  |  |

1 The versions with cable tail have a temperature range of -50°C/+65°C or -50°C/+55°C depending on the temperature class of the product.