**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 and e-mail.

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 certification.

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:

1. Electrical safety: EN60950-1, IEC60950-1

2. Electromagnetic compatibility: (CE) EN50130-4, EN610000-6-4, EN55022 (Class A), FCC Part 15 (Class B)

3. Outdoor installation: (CE) EN60950-22, IEC60950-22

4. Photobiological safety: (CE) EN62471

5. IP protection degree: EN60529 (IP66)

6. Resistant to salty fog: EN50130-5, EN60068-2-52

7. UL certification: cULus Listed (TYPE 4X)

8. EAC certification

2 Products

2.1 Outdoor High Speed Full HD PTZ camera

A) The system is an IP66 Full HD PTZ network camera that delivers excellent high-definition picture quality. It can withstand to harsh external environments, ensuring high speed and accurate target detection at any time.

B) The Full HD camera integrates a 30x optical zoom lens and is able to accurately identify specific details of a scene.

C) The camera has Day/Night functionality for high image quality in low light conditions. Moreover the optional integrated LED illuminator delivers round-the-clock clear images of the area.

D) Thanks to the built-in wiper, the images result always perfectly clear; wide choice of tanks with washer pump available with different capacities and delivery heights.

E) The de-fog feature allows clearer and natural viewing in foggy or misty scenes; when activated, the camera detects the haze level and automatically applies the required effects.

F) The flexible operator control of Pan/Tilt/Zoom functions allows the images transmission over Ethernet with H.264/AVC and MJPEG compression, certified ONVIF, Profile S. The response to operator commands is immediate.

G) The unit can deliver from 2 to 4 H.264/AVC or MJPEG streams simultaneously, up to a total of 20Mbits depending on the unit configuration.

H) Thanks to its characteristics of reliability, robustness and accuracy, this PTZ camera unit is the ideal solution for demanding security applications, including: traffic and highways control, borders, stadiums and industries surveillance, prisons, military installation and perimeter surveillance.

I) The PTZ camera Full HD features the following specifications:

1. General:

a. Constructed from aluminium and tecnopolymer

b. Epoxypolyester powder painting, RAL9002 colour

c. Easy installation thanks to the self-centring connector

d. Zero backlash

a. Quick configuration and setup

e. Dynamic positioning control system

f. Functions: Autopan, Preset, Patrol, Tour (max 1), Autoflip

g. Maximum number of presets: 250

2. Mechanical features:

a. Cable glands: 2xM16, 2xM12

b. Horizontal rotation: continuous

c. Vertical rotation: from -90° to +90°

d. Pan speed: (variable): from 0.1°/s up to 200°/s

e. Tilt speed (variable): from 0.1°/s to 200°/s

f. Preset accuracy: 0.05°

g. Unit weight: 12.5kg (27.5lb) (13kg-29lb- with LED illuminator)

3. Electrical features:

a. Power supply/Current consumption:

1. 230Vac, 0.4A, 50/60Hz

2. 24Vac, 4A, 50/60Hz

3. 120Vac, 0.8A, 50/60Hz

b. Power consumption:

1. 40W, P&T stopped, heating switched off

2. 60W, P&T in motion, heating switched off

3. 125W, power pick, heater on

c. Power consumption with illuminator switched on:

1. 55W, P&T stopped, heating switched off

2. 75W, P&T in motion, heating switched off

3. 140W, power pick, heater on

d. Input cables dimensions: AWG 16-19

e. Signal cables dimensions: AWG 16-30

f. I/O alarm card

1. Alarm inputs: 1

2. Relay output: 1 (1A, 30Vac/60Vdc max)

4. Camera:

a. Day/Night Full HD 30x

b. Image Sensor: 1/2.8 type Exmor™ CMOS sensor

c. Effective Pixels: approx. 2.38 Megapixels

d. Minimum Illumination, colours (ICR-OFF):

1. 1.4lx, 1/30s, 50 IRE (Normal mode)

2. 0.35lx, 1/30s, 50 IRE (High Sensitivity mode)

3. 0.19lx, 1/3s, 50 IRE (Normal mode)

4. 0. 05lx, 1/3s, 50 IRE (High Sensitivity mode)

e. Minimum Illumination, B/W (ICR-ON):

1. 0.05lx, 1/30s, 50 IRE (Normal mode)

2. 0.013lx, 1/30s, 50 IRE (High Sensitivity mode)

3. 0.002lx, 1/3s, 30 IRE (High Sensitivity mode)

f. Lens: f=4.3 mm (wide) ~ 129.0 mm (tele), F1.6 to F4.7

g. Zoom: 30x (360x with digital zoom)

h. Horizontal Viewing Angle: 63.7° (wide end) to 2.3° (tele end)

i. Minimum object distance: 10mm (wide) ~ 1,200 mm (tele)

j. Electronic Shutter: 1/1 to 1/10,000 s, 22 steps

k. White balance: Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium vapor lamp (Fix, Auto, Outdoor Auto), One-push, Manual

l. Gain: Auto, Manual, Gain Limit (from 3dB up to 43dB, steps: 3dB)

m. Wide Dynamic Range: On/Off/Visibility enhancer, Light level, Brightness compensation selection, Light compensation level

n. Focus System: Auto (Sensitivity: Normal, Low), One-push AF, Manual, Focus compensation with ICR On, Interval AF, Zoom trigger AF

o. Picture Effects: E-flip, Black & White, Mirror image, Color enhancement, Negative art

p. Exposure Control: Auto, EV Compensation, Manual, Priority (Shutter priority, Iris priority), Brightness, Slow AE

q. S/N Ratio: more than 50 dB

r. Wide-D (wide dynamic range): 130dB

s. De-fog: ON/OFF

5. Video features:

a. Compression H.264/AVC and MJPEG

b. 2 independent video streams Full HD or 4 independent video streams depending on the configuration

c. Image resolution: from FullHD to 352x240 in 18 steps

d. Selectable frame rate from 1 to 60 images per second (fps)

e. Web Server

f. Certified ONVIF, Profile S

6. LED illuminator:

a. 10° or 30° horizontal beam

b. Wavelength: 850nm, 940nm, white light

c. Auto power on through integrated sensor or by VMS

d. The camera and the light beam are factory aligned

e. The pre-installed illuminator does not slow down the P&T’s rotation speed

7. Network:

a. Connection Ethernet port LAN 10/100T

8. Network protocols:

a. ONVIF, Profile S

b. For device configuration: TCP/IPv4, TCP/IPv6, UDP/IPv4, UDP/IPv6, IGMP (Multicast), HTTP, NTP, DHCP, WS-DISCOVERY, QoS

c. For streaming: RTSP, RTCP, RTP/IPv4

9. Environmental features:

a. Indoor/Outdoor

b. Operating temperature (with heater): -40°C / +60°C (-40°F /+140°F)

c. Wind resistance:

1. operational up to 160km/h

2. stationary up to 210km/h

d. Surge immunity: up to 2KV (line to line), up to 4KV line to earth (Class 4)

10. Optional Accessories:

a. Water tank 5l, pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac (WASPT0V5L5M00)

b. Water tank 23l, pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac (WASPT0V23L5M00)

c. Water tank 23l, pump with delivery up to 11m (36ft), IN 230Vac-24Vac-120Vac (WASPT0V23L11M00)

d. Water tank 23l, pump with delivery up to 30m (98ft), IN 230Vac (WASPT1V23L30M00)

e. Water tank 23l, pump with delivery up to 30m (98ft), IN 120Vac (WASPT3V23L30M00)

f. Junction weatherproof box for cables connection (according UL norm) (UPTJBUL)

11. Brackets and Adapters:

a. Wall bracket with internal cable channel (UPTWBA)

b. Parapet bracket with internal cable channel (UPTWBTAB)

c. Pole mount adaptor for UPTWBA (PTCC1)

d. Corner mount adaptor for UPTWBA (WCWGC)

e. Ceiling bracket for upside down mounting and working of the unit (UCCMA)

L) The following table shows the configuration options depending on the installation needs:

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| ULISSE COMPACT HD- Configuration options |
|   | Voltage |   | Options |   | Video output |   |
| UCHD | 1 230Vac | F Day/Night camera 30X zoom, FullHD | W With wiper, 1 input, 1 output | A | Z Compression H.264/AVC, ONVIF protocol, Profile S | 00A |
|   | 2 24Vac |   | N With wiper, 1 input, 1 output, IR LED illuminator 10°, 940nm |   |   |   |
|   | 3 120Vac |   | U With wiper, 1 input, 1 output, IR LED illuminator 30°, 850nm |   |   |   |
|   |   |   | T With wiper, 1 input, 1 output, IR LED illuminator 10°, 850nm |   |   |   |