**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

**2.1 Outdoor High Speed PTZ camera**

A) The positioning unit integrates a compact system with a high performance P&T motor with telemetry receiver and a Day/Night camera. The system is able to manage a high speed continuous horizontal rotation (200°/s) ranging from -90° to + 90° vertically with an absolute positioning accuracy (0.05°) and a higher image quality. The system is characterized by an extreme robustness and a simplified configurability. Preset, autopan, patrol, tour and alarms are managed.

B) The integrated Day/Night camera, with 36x, 28x or 10x optical zoom, detects objects with a high accuracy and allow the dynamic masking of privacy zones. In addition, the Super HAD CCD II sensor provides a high sensitivity in low-light environments (28x and 10x version).

C) The system has, in addition to the OSD configuration, a RS485 and a RS422 interface for the complete system control and the remote firmware update.

D) The system features a high level of customization; different power supplies (230Vac, 24Vac, 120Vac), type of cameras (PAL or NTSC, 36x, 28x or 10x optical zooms) and optional accessories (Infrared illuminator, White Light illuminator, wiper, washer pumps and tanks, front flange with heated glass).

E) The IP-based versions with integrated server for compressing analog data of videos and telemetry allow a network integration for a full control of all the PTZ functions via network. These models support the ONVIF protocol, Profile S.

F) Thanks to its characteristics of reliability, robustness and accuracy, this positioning 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.

G) The compact positioning unit with integrated Day/Night camera 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

e. Quick configuration and setup

f. Dynamic positioning control system

g. Functions: Autopan, Preset, Patrol, Tour (max 3), Autoflip

h. 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. Zoom speed proportional to P&T speed

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

3. Electrical features:

a. Power supply/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. Video line: coaxial cable (1Vpp, 75Ohm)

4. 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)

5. Technical features:

a. Functions: Autopan, Preset, Patrol, Tour (max 3), Autoflip

b. Supported protocols:

1. AMERICAN DYNAMICS

2. ERNITEC

3. PANASONIC

4. PELCO D

5. VIDEOTEC MACRO

6. IP control mode, ONVIF protocol, Profile S:

- Compression H.264/AVC and JPEG

- Two independent video streams

- Image resolution: from Full D1 (720x576 for PAL, 720x480 for NTSC) to 352x240 in 18 steps

- Web Server

c. Max. preset number:

1. AMERICAN DYNAMICS Protocol: 95 (from OSD: 250)

2. ERNITEC protocol: 250

3. PANASONIC protocol: 250

4. PELCO D Protocol: 99 (from OSD: 250)

5. VIDEOTEC MACRO Protocol: 250

d. Titling: 16-character string for zone and preset titling

e. I/O alarm card:

1. 6 alarm inputs

2. 2 relay outputs (2A, 30Vac/60Vdc max)

f. Communication:

1. Half-duplex serial RS485 interface, full-duplex RS422 and daisy-chain architecture

2. Firmware updating from console in remote mode (with protocols VIDEOTEC MACRO and PELCO D)

3. 1023 units addressable via dip-switch

4. Connection Ethernet port LAN 10/100T for IP version

g. LED illuminator:

1. 10° or 30° horizontal beam for 36x and 28x camera

2. 30° horizontal beam for 10x cameras

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

4. Built-in sensor for self-lighting, through external photocell or from control keyboard

5. The camera and the light beam are factory aligned

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

6. Video features:

a. Camera D/N 36x:

1. Standard Video PAL or NTSC

2. Optical zoom: 36x, f=3.4 (wide) to 122.4 mm (tele) / F1.6 to F4.5

3. Digital Zoom: 12x (432x with optical zoom)

4. WDR: Yes (Fix/Auto)

5. True Progressive Scan: Yes

6. Digital image stabilisation: Yes

7. White balance: Auto, ATW, Indoor, Outdoor (Fix/Auto), Sodium Vapor Lamp (Fix/Auto)

8. Horizontal Resolution: 550 TVL

9. Day/Night: Yes (Auto ICR)

10. Sensor: 1/4" EXView HAD CCD

11. Effective Pixels: PAL ~ 440000 pixel; NTSC ~ 380000 pixel

12. Min. day Illumination (ICR ON): PAL 0.01 Lux / 1/3s; NTSC 0.01 Lux / 1/4s

13. Min. day Illumination (ICR OFF): PAL 0.1 Lux / 1/3s; NTSC 0.1 Lux / 1/4s

14. “Shutter Time” automatic increase to improve the night surveillance

15. S/N ratio: Greater than 50dB

16. AE control: Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual

17. Back light compensation: Yes (On/Off)

18. Spherical masking (3D) of Privacy zones with automatic upgrade

19. Privacy Zone Masking: On/Off (24 positions)

20. Maximum number of masking blocks to be displayed: 8

21. Resolution of masking blocks: 160x120 HxV

22. Masking: up to 15 different masking types, 14 colour types or mosaic

23. Focusing system: Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual

24. “Smart” lens control: Automatic Lens Reset Technology

25. High Zoom and Wide Horizontal Field of View Capability

26. Angle of view: 57.8° (wide) to 1.7° (tele)

27. Minimum object distance: 320mm (12.6in) (wide) to 1500mm (59.1in) (tele)

28. Electronic Iris Speed: 1/1 ÷ 1/10000s

b. Camera D/N 28x High Sensitivity:

1. Standard Video PAL or NTSC

2. Optical zoom: 28x, f=3.5 (wide) to 98mm (tele) / F1.35 to F3.7

3. Digital Zoom: 12x (336x with optical zoom)

4. Digital image stabilisation: Yes

5. White balance: Auto, ATW, Indoor, Outdoor (Fix/Auto), Sodium Vapor Lamp (Fix/Auto)

6. Horizontal Resolution: 550 TVL

7. Day/Night: Yes (Auto ICR)

8. Sensor: 1/4" Super HAD CCD II

9. Effective Pixels: PAL ~ 440000 pixel; NTSC ~ 380000 pixel

10. Min. day Illumination (ICR ON): PAL 0.0015 Lux / 1/3s; NTSC 0.0015 Lux / 1/4s

11. Min. day Illumination (ICR OFF): PAL 0.16 Lux / 1/3s; NTSC 0.16 Lux / 1/4s

12. “Shutter Time” automatic increase to improve the night surveillance

13. S/N ratio: Greater than 50dB

14. AE control: Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual

15. Back light compensation: Yes (On/Off)

16. Spherical masking (3D) of Privacy zones with automatic upgrade

17. Privacy Zone Masking: On/Off (24 positions)

18. Maximum number of masking blocks to be displayed: 8

19. Resolution of masking blocks: 160x120 HxV

20. Masking: up to 15 different masking types, 14 colour types or mosaic

21. Focusing system: Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual

22. “Smart” lens control: Automatic Lens Reset Technology

23. High Zoom and Wide Horizontal Field of View Capability

24. Angle of view: 55.8° (wide) to 2.1° (tele)

25. Minimum object distance: 10mm (0.4in) (wide) to 1500mm (59.1in) (tele)

26. Electronic Iris Speed: 1/1 ÷ 1/10000s

c. Camera D/N 10x High Sensitivity:

1. Standard Video PAL or NTSC

2. Optical zoom: 10x, f=5.1 (wide) to 51.0mm (tele) / F1.8 to F2.1

3. Digital Zoom: 12x (120x with optical zoom)

4. White balance: Auto, ATW, Indoor, Outdoor

5. Horizontal Resolution: 530 TVL

6. Day/Night: Yes (Auto ICR)

7. Sensor: 1/3’’ Super HAD CCD II

8. Effective Pixels: PAL ~ 440000 pixel; NTSC ~ 380000 pixel

9. Min. day Illumination (ICR ON): PAL 0.0004 Lux / 1/3s; NTSC 0.0004 Lux / 1/4s

10. Min. day Illumination (ICR OFF): PAL 0.015 Lux / 1/3s; NTSC 0.015 Lux / 1/4s

11. “Shutter Time” automatic increase to improve the night surveillance

12. S/N ratio: Greater than 50dB

13. AE control: Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual

14. Back light compensation: Yes (On/Off)

15. Spherical masking (3D) of Privacy zones with automatic upgrade

16. Privacy Zone Masking: On/Off (24 positions)

17. Maximum number of masking blocks to be displayed: 8

18. Resolution of masking blocks: 160x120 HxV

19. Masking: up to 15 different masking types, 14 colour types or mosaic

20. Focusing system: Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual

21. “Smart” lens control: Automatic Lens Reset Technology

22. Angle of view: 52° (wide) to 5.4° (tele)

23. Minimum object distance: 150mm (5.9in) (wide) to 800mm (31.5in) (tele)

24. Electronic Iris Speed: 1/1 ÷ 1/10000s

7. Optional Accessories:

a. Complete front flange with heated glass

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

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

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

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

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

g. Control keyboard for matrix, telemetry and multiplexer with three axis joystick (DCJ.3)

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

8. 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)

H) Available models: the following table shows the configuration options depending on the installation needs:

|  |
| --- |
| **ULISSE COMPACT - Configuration options** |
|   | **Voltage** | **Day/Night camera** |   | **Options** |   | **Video output** |   |
| **UC** | **1** 230Vac | **P** Day/Night camera 36x optical zoom lens, PAL | **V** With I/O alarm board | **S** Without accessories | **A** | **0** Analog control | **00A** |
|  | **2** 24Vac | **Q** Day/Night camera 28x optical zoom lens, PAL |  | **W** With wiper |  | **Z** IP H.264/AVC control, Protocol ONVIF Profile S |  |
|  | **3** 120Vac | **B** Day/Night camera 10x optical zoom lens, PAL |  | **Q** With IR LED illuminator 30°, 850nm |  |  |  |
|  |  | **N** Day/Night camera 36x optical zoom lens, NTSC |  | **R** With IR LED illuminator 10°, 850nm |  |  |  |
|  |  | **M** Day/Night camera 28x optical zoom lens, NTSC |  | **U** With wiper and IR LED illuminator 30°, 850nm |  |  |  |
|  |  | **K** Day/Night camera 10x optical zoom lens, NTSC |  | **T** With wiper and IR LED illuminator 10°, 850nm |  |  |  |
|  |  |  |  | **M** With IR LED illuminator 10°, 940nm |  |  |  |
|  |  |  |  | **N** With wiper and IR LED illuminator IR LED 10°, 940nm |  |  |  |
|  |  |  |  | **Z** With wiper and LED illuminator 30°, white light (only with 36x camera) |  |  |  |