

SPECTRA III™ SE EVS SERIES DOME SYSTEM

TECHNICAL SPECIFICATIONS

SECURITY SYSTEM

DIVISION – 28 ELECTRONIC SAFETY AND SECURITY

LEVEL 1___28 20 00 ELECTRONIC SURVEILLANCE

LEVEL 2___28 23 00 VIDEO SURVEILLANCE

LEVEL 3___28 23 29 VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS

PART 2 - PRODUCTS

2.01 GENERAL

- A. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in —actual use.
- C. All systems and components shall be provided with the availability of a toll-free (U.S. and Canada), 24-hour technical assistance program (TAP) from the manufacturer.- The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge for as long as the product is installed.
- D. All systems and components shall be provided with a one-day turnaround repair express and 24-hour parts replacement. The repair and parts express shall be guaranteed by the manufacturer on warranty and non-warranty items.

2.02 INDOOR/OUTDOOR IP CCTV CAMERA DOME SYSTEM

- A. The indoor/outdoor CCTV camera dome system shall be a discreet camera dome system consisting of a dome drive with a variable speed/high speed pan and tilt drive unit with continuous 360° rotation; an Endura™ IP camera system containing a 1/4-inch high resolution color (or monochrome or color/black-white) CCD imager and a motorized zoom lens with optical and digital zoom and autofocus; and an enclosure consisting of a back box, dome drive, lower dome, and a quick-install mounting.
- B. The dome system shall combine the high-quality, network-based video technology of Endura with Pelco's high-performance, integrated dome system.
- C. The Endura IP camera system shall be capable of dual MPEG-4 stream video encoding. The system shall process up to 30 high-quality images per second per stream. The system shall also include motion adaptive deinterlacing technology.
- D. The Endura IP camera system shall include a 10/100BaseT RJ-45 network connection for direct network cable termination.
- E. The indoor/outdoor Endura IP camera dome system shall meet or exceed the following design and performance specifications.

2.03 DOME DRIVE

A. The variable speed/high speed pan and tilt drive unit shall meet or exceed the following design and performance specifications:

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|--------------------------------|---|
| 1. Pan Speed | Variable between 360° per second continuous pan to 0.1° per second |
| 2. Vertical Tilt | Unobstructed tilt of +2° to -92° |
| 3. Manual Control Speed | Pan speed of 0.1° to 80° per second, and pan at 150° per second in turbo mode. Tilt operation shall range from 0.1° to 40° per second |
| 4. Automatic Preset Speed | Pan speed of 360° and a tilt speed of 200° per second |
| 5. Preset | One hundred fifty preset positions with a 20-character label available for each position; programmable camera settings, including selectable autofocus modes, iris level, LowLight™ limit, and backlight compensation, for each preset; command to copy camera settings from one preset to another; preset programming through control keyboard or through dome system on-screen menu |
| 6. Preset Accuracy | +/- 0.1° |
| 7. Proportional Pan/Tilt Speed | Speed decreases in proportion to the increasing depth of zoom |
| 8. Automatic Power-Up | User-selectable to the mode of operation the dome will assume when power is cycled, including automatically returning to position or function occurring before power outage |
| 9. Zones | Eight zones with up to 20-character labeling for each, with ability to blank the video in the zone |
| 10. Motor Drive | Cogged belt with 0.9° stepper motor |
| 11. Motor Operating Mode | Microstep to 0.015° steps |
| 12. Motor | Continuous duty, variable speed, operating at 18 to 30 VAC, 24 VAC nominal |
| 13. Limit Stops | Programmable for manual panning, auto/random scanning, and frame scanning |
| 14. Inner Liner | Rotating black ABS liner inside sealed lower dome |
| 15. Alarm Inputs | Seven N.O./N.C. dry contacts |
| 16. Alarm Outputs | One auxiliary Form C relay output and one open collector auxiliary output |
| 17. Alarm Output Programming | Auxiliary outputs can be alternately programmed to operate on alarm |
| 18. Alarm Action | Individually programmed for three priority levels, initiating a stored pattern or going to a preassigned preset position |
| 19. Resume after Alarm | After completion of alarm, dome returns to previous programmed state or its previous position |

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|------------------------------|---|
| 20. Window Blanking | Eight four-sided, user-defined shapes, with each side being of different lengths; window blanking setting to turn off at user-defined zoom ratio; window blanking set to opaque gray or translucent smear; blank all video above user-defined tilt angle; blank all video below user-defined tilt angle |
| 21. Patterns | Four user-defined programmable patterns including pan, tilt, zoom, and preset functions; pattern programming through control keyboard or through dome system on-screen menu |
| 22. Pattern Length | Four patterns of user-defined length, based on dome memory |
| 23. Menu System | Built-in for setup of programmable functions; multilingual, including English, French, Italian, Spanish, Portuguese, and German, and alternative languages in Russian, Turkish, Polish, and Czechoslovakian |
| 24. Auto Flip | Rotates dome 180° at bottom of tilt travel |
| 25. Password Protection | Programmable settings with optional password protection |
| 26. Clear | Clear individual, grouped, or all programmed settings |
| 27. Diagnostics | On-screen diagnostic system information |
| 28. Freeze Frame | Freeze current scene of video during preset movement |
| 29. Display Setup | User-definable locations of all labels and displays; user-selectable time duration of each display |
| 30. Azimuth/Elevation/Zoom | On-screen display of pan and tilt locations and zoom ratio |
| 31. Compass Display | On-screen display of compass heading; user-definable compass setup |
| 32. Dome Drive Compatibility | All dome drives are compatible with all back box configurations |
| 33. RJ-45 Jack | Plug-in jack on dome drive for control and setup of unit and for uploading new operating code and language file updates. Compatible with personal computers and PDAs such as Palm and iPAQ |
| 34. Power Consumption | Maximum 88 VA |
| 35. Text Overlay | Allows for a 20-character camera title |
- B. The high resolution CCD imager shall meet or exceed the following design and performance specifications:

Color/Black-White Optic System

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|--------------------------|---|
| 1. Image Sensor | 1/4-inch |
| 2. Scanning System | 2:1 interlaced output |
| 3. Effective Pixels | NTSC – 724 X 494
PAL – 724 X 582 |
| 4. Horizontal Resolution | NTSC – >470 TVL
PAL - >470 TVL |
| 5. Lens | F1.6 (f=3.6-82.8 mm optical, 23X optical zoom, 10X electronic zoom) |

6. Programmable Zoom Speeds	2.9, 4.2, or 5.8 seconds
7. Horizontal Angle of View	54° at 3.6 mm wide zoom – 2.5° at 82.8 mm telephoto zoom
8. Focus	Automatic with manual override
9. Sensitivity at 35 IRE	NTSC Color: 0.08 lux at 1/2 sec shutter speed B-W: 0.013 lux at 1/2 sec shutter speed B-W: 0.3 lux at 1/60 sec shutter speed PAL Color: 0.08 lux at 1/1.5 sec shutter speed B-W: 0.013 lux at 1/1.5 sec shutter speed B-W: 0.3 lux at 1/50 sec shutter speed
10. White Balance	Automatic with manual override
11. Shutter Speed	NTSC – 1/2-1/30,000 PAL – 1/1.5-1/30,000
12. Iris Control	Automatic with manual override
13. Gain Control	Automatic/ off
14. Video Signal-to-Noise	>50 dB
15. Type of Lighting	Menu selection of indoor or outdoor lighting for optimum camera performance
16. Wide Dynamic Range	80X
17. Motion Detection	User-definable motion detection settings for each preset scene; can activate auxiliary output; three sensitivity levels per zone

Color Optic System

1. Image Sensor	1/4-inch Ex-View CCD
2. Scanning System	2:1 interlaced output
3. Effective Pixels	NTSC – 768 X 494 PAL – 752 X 582
4. Horizontal Resolution	NTSC – >470 TVL PAL – >460 TVL
5. Lens	F1.6 (f=4.0-88.0 mm optical, 22X optical zoom, 12X electronic zoom)
6. Programmable Zoom Speeds	2.4, 3.9, or 6.3 seconds
7. Horizontal Angle of View	47° at 4.0 mm wide zoom – 2.2° at 88.0 mm telephoto zoom
8. Focus	Automatic with manual override
9. Sensitivity at 35 IRE	NTSC, 0.02 lux at 1/2-second shutter speed PAL, 0.02 lux at 1/1.5-second shutter speed
10. White Balance	Automatic with manual override
11. Shutter Speed	NTSC – 1/2-1/30,000 PAL – 1/1.5-1/30,000
12. Iris Control	Automatic with manual override
13. Gain Control	Automatic/off
14. Video Signal-to-Noise	>50 dB
15. Type of Lighting	Menu selection of indoor or outdoor lighting for optimum camera performance

Monochrome Optic System

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|-----------------------------|---|
| 1. Image Sensor | 1/4-inch Ex-View CCD |
| 2. Scanning System | 2:1 interlaced output |
| 3. Effective Pixels | EIA -- 768 x 494
CCIR -- 752 x 582 |
| 4. Horizontal Resolution | EIA -- >500 TVL
CCIR -- >500 TVL |
| 5. Lens | F1.6 (f=4.0-88.0 mm optical, 22X optical zoom, 12X electronic zoom) |
| 6. Programmable Zoom Speeds | 2.4, 3.9, or 6.3 seconds |
| 7. Horizontal Angle of View | 47° at 4.0 mm wide zoom – 2.2° at 88.0 mm telephoto zoom |
| 8. Focus | Automatic with manual override |
| 9. Sensitivity at 35 IRE | EIA, 0.005 lux at 1/2-second shutter speed
CCIR, 0.005 lux at 1/1.5-second shutter speed |
| 10. Shutter Speed | EIA – 1/2-1/30,000
CCIR – 1/1.5-1/30,000 |
| 11. Iris Control | Automatic with manual override |
| 12. Gain Control | Automatic/off |
| 13. Video Signal-to-Noise: | >48 dB |

2.04 ENDURA INTEGRATED ENCODER

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|----------------------|---|
| A. System | |
| 1. Processor | PowerPC® 405EP |
| 2. Operating System | Linux® |
| 3. User Interface | Remote operation via WS5050 or VCD5000 |
| B. Video | |
| 1. Video Standards | NTSC/PAL/EIA/CCIR composite |
| 2. Video Coding | MPEG-4 |
| 3. Video Streams | 2, simultaneous |
| 4. Video Resolutions | NTSC PAL |
| a. 4 CIF | 704 x 480 704 x 576 |
| b. 2 CIF | 704 x 240 704 x 288 |
| c. CIF | 352 x 240 352 x 288 |
| d. QCIF | 176 x 120 176 x 144 |
| 5. Zones | 3 plus background zone |
| 6. Zone Types | Any shape, user-definable in 16 x 16 pixel blocks |
| 7. Sensitivity | Adjustable |

2.05 BACK BOX AND LOWER DOME

The back box and lower dome shall meet or exceed the following design and performance specifications:

A. Pendant Environmental

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|-----------------------------|--|
| 1. Connection to Dome Drive | Quick, positive mechanical and electrical disconnect without the use of any tools |
| 2. Trap Door | Easy-access trap door that allows complete access to the installation wiring and, when closed, provides complete separation of the wiring from the dome drive mechanics |
| 3. Network Connector | RJ-45, 10/100BaseT |
| 4. Back Box Indicators | A. Unit Status
B. Network Status
C. Network Activity |
| 5. Configuration/Reset | Recessed button, four states |
| 6. Terminal Strips | Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes |
| 7. Auxiliary Connection | One Form-C relay output at <40 V, 2 A maximum |
| 8. Alarm Inputs | Seven alarm inputs |
| 9. Installation | Quick-mount wall, corner, pole, parapet, or ceiling adapter |
| 10. Cable Entry | Through a 1.5-inch NPT fitting |
| 11. Environmental Features | Factory-installed heaters, blowers, and sun shroud |
| 12. Operating Temperatures | (Assumes no wind chill factor; for detailed test conditions, contact Pelco) |
| a. Maximum | 140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum |
| b. Minimum | -60°F (-51°C) absolute minimum; minimal icing at sustained minimum of -50°F (-45°C); prevents icing at sustained minimum of -40°F (-40°C); de-ices 0.1 inch (2.5 mm) within 3 hours after power-up |
| 13. Memory | Built-in memory storage of camera and location-specific dome settings such as presets and patterns. If new dome drive is installed in back box, all settings to download automatically into new dome drive |
| 14. Color | Gray, baked-on enamel powder coat |
| 15. Construction | Aluminum |
| 16. Lower Dome Material | Acrylic, optically clear, with no distortion in any portion of the dome up to +2° above the horizontal |
| 17. Dome Color | Clear and smoked versions |
| 18. Trim Ring Connection | Two captivated screws |

B. In-Ceiling Interior

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|-----------------------------|--|
| 1. Connection to Dome Drive | Quick, positive mechanical and electrical disconnect without the use of any tools |
| 2. Trap Door | Easy-access trap door that allows complete access to the installation wiring and, when closed, provides complete separation of the wiring from the dome drive mechanics |
| 3. Network Connector | RJ-45, 10/100BaseT |
| 4. Back Box Indicators | A. Unit Status
B. Network Status
C. Network Activity |
| 5. Configuration/Reset | Recessed button, four states |
| 6. Terminal Strips | Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes |
| 7. Auxiliary Connection | One Form-C relay output at <40 V, 2 A maximum |
| 8. Alarm Inputs | Seven alarm inputs |
| 9. Installation | Quick-mount spring clips |
| 10. Cable Entry | Through a 0.75-inch conduit hole |
| 11. Operating Temperatures | 32° to 122°F (0° to 50°C) |
| 12. Memory | Built-in memory storage of camera and location-specific dome settings such as presets and patterns. If new dome drive is installed in back box, all settings to download automatically into new dome drive |
| 13. Color | Black back box, baked-on enamel powder coat; white trim ring |
| 14. Construction | Aluminum |
| 15. Lower Dome Material | Acrylic, optically clear, with no distortion in any portion of the dome up to +2° above the horizontal |
| 16. Dome Color | Clear, smoked, chrome, and gold versions |
| 17. Trim Ring Connection | Snaps in place |
| 18. Safety Cable | Plastic tether |

C. Pendant Standard

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|-----------------------------|---|
| 1. Connection to Dome Drive | Quick, positive mechanical and electrical disconnect without the use of any tools |
| 2. Trap Door | Easy-access trap door that allows complete access to the installation wiring and, when closed, provides complete separation of the wiring from the dome drive mechanics |
| 3. Network Connector | RJ-45, 10/100BaseT |
| 4. Back Box Indicators | A. Unit Status
B. Network Status
C. Network Activity |
| 5. Configuration/Reset | Recessed button, four states |
| 6. Terminal Strips | Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes |

7. Auxiliary Connection	One Form-C relay output at <40 V, 2 A maximum
8. Alarm Inputs	Seven alarm inputs
9. Installation	Quick-mount wall, corner, pole, parapet, or ceiling adapter
10. Cable Entry	Through a 1.5-inch NPT fitting
11. Operating Temperatures	32° to 140°F (0° to 60°C) absolute maximum operating temperature; 32° to 122°F (0° to 50°C) sustained maximum operating temperature
12. Memory	Built-in memory storage of camera and location- specific dome settings such as presets and patterns. If new dome drive is installed in back box, all settings to download automatically into new dome drive
13. Colors	Gray or black, baked-on enamel powder coat
14. Construction	Aluminum
15. Lower Dome Material	Acrylic, optically clear, with no distortion in any portion of the dome up to +2° above the horizontal
16. Dome Color	Clear, smoked, chrome, and gold versions
17. Trim Ring Connection	Two captivated screws

2.06 DOME SYSTEM DIMENSIONS

A. All Models	
Diameter of Bubble	Maximum of 6.0 inches
B. Pendant Environmental	Pendant 13.0-inch (33.02 cm) overall length (including dome) by 9.4-inch (23.87 cm) diameter
C. In-Ceiling Interior	7.2 inches (18.28 cm) above ceiling, 3.5 inches (8.89 cm) below ceiling, by 8.25-inch (20.95 cm) diameter
D. Pendant Standard	Pendant 13.0-inch (33.02 cm) overall length (including dome) by 8.7-inch (22.09 cm) diameter

2.07 DOME SYSTEM WEIGHTS

A. Dome Drive	2.4 lb (1.09 kg)
B. Back Box	
a. Pendant Environmental	3.5 lb (1.59 kg)
b. Pendant Standard	2.4 lb (1.09 kg)
C. Lower Dome	
a. In-Ceiling	0.2 lb (0.09 kg)
b. Pendant	0.6 lb (0.27 kg)

2.08 MANUFACTURER'S WARRANTY

Repair or replacement of defective parts for a period of two years from the date of shipment, including continuous motion modes

2.09 CERTIFICATIONS AND RATINGS

A. Certifications

CE, Class B
 UL Listed
 UL Listed to Canadian safety standards
 FCC, Class B
 C-Tick

B. Ratings

Pendant Environmental Meets NEMA Type 4X, IP66 standards

2.10 MODELS

The discreet CCTV camera dome system shall be the Pelco Spectra III Series:

A. Color/B-W Dome (NTSC):

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Indoor	Gray	SDEVCBW-F0	Smoked
		SDEVCBW-F1	Clear
		SDEVCBW-F2	Chrome
		SDEVCBW-F3	Gold
Pendant, Standard	Black	SDEVCBW-PB-0	Smoked
		SDEVCBW-PB-1	Clear
		SDEVCBW-PB-2	Chrome
		SDEVCBW-PB-3	Gold
Pendant, Standard	Lt. Gray	SDEVCBW-PG-0	Smoked
		SDEVCBW-PG-1	Clear
		SDEVCBW-PG-2	Chrome
		SDEVCBW-PG-3	Gold
Pendant, Environmental	Lt. Gray	SDEVCBW-PG-E0	Clear
		SDEVCBW-PG-E1	Smoked

B. Color/B-W Dome (PAL):

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Indoor	Gray	SDEVCBW-F0-X	Smoked
		SDEVCBW-F1-X	Clear
		SDEVCBW-F2-X	Chrome
		SDEVCBW-F3-X	Gold
Pendant, Standard	Black	SDEVCBW-PB-0-X	Smoked
		SDEVCBW-PB-1-X	Clear
		SDEVCBW-PB-2-X	Chrome
		SDEVCBW-PB-3-X	Gold
Pendant, Standard	Lt. Gray	SDEVCBW-PG-0-X	Smoked
		SDEVCBW-PG-1-X	Clear
		SDEVCBW-PG-2-X	Chrome
		SDEVCBW-PG-3-X	Gold
Pendant, Environmental	Lt. Gray	SDEVCBW-PG-E0-X	Clear

SDEVCBW-PG-E1-X Smoked

C. Color Dome (NTSC):

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Indoor	Gray	SDEVC22-F0	Smoked
		SDEVC22-F1	Clear
		SDEVC22-F2	Chrome
		SDEVC22-F3	Gold
Pendant, Standard	Black	SDEVC22-PB-0	Smoked
		SDEVC22-PB-1	Clear
		SDEVC22-PB-2	Chrome
		SDEVC22-PB-3	Gold
Pendant, Standard	Lt. Gray	SDEVC22-PG-0	Smoked
		SDEVC22-PG-1	Clear
		SDEVC22-PG-2	Chrome
		SDEVC22-PG-3	Gold
Pendant, Environmental	Lt. Gray	SDEVC22-PG-E0	Clear
		SDEVC22-PG-E1	Smoked

D. Color Dome (PAL):

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Indoor	Gray	SDEVC22-F0-X	Smoked
		SDEVC22-F1-X	Clear
		SDEVC22-F2-X	Chrome
		SDEVC22-F3-X	Gold
Pendant, Standard	Black	SDEVC22-PB-0-X	Smoked
		SDEVC22-PB-1-X	Clear
		SDEVC22-PB-2-X	Chrome
		SDEVC22-PB-3-X	Gold
Pendant, Standard	Lt. Gray	SDEVC22-PG-0-X	Smoked
		SDEVC22-PG-1-X	Clear
		SDEVC22-PG-2-X	Chrome
		SDEVC22-PG-3-X	Gold
Pendant, Environmental	Lt. Gray	SDEVC22-PG-E0-X	Clear
		SDEVC22-PG-E1-X	Smoked

E. Monochrome Dome (EIA):

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Indoor	Gray	SDEVM22-F0	Smoked
		SDEVM22-F1	Clear
		SDEVM22-F2	Chrome
		SDEVM22-F3	Gold
Pendant, Standard	Black	SDEVM22-PB-0	Smoked
		SDEVM22-PB-1	Clear
		SDEVM22-PB-2	Chrome
		SDEVM22-PB-3	Gold
Pendant, Standard	Lt. Gray	SDEVM22-PG-0	Smoked
		SDEVM22-PG-1	Clear
		SDEVM22-PG-2	Chrome
		SDEVM22-PG-3	Gold
Pendant, Environmental	Lt. Gray	SDEVM22-PG-E0	Clear
		SDEVM22-PG-E1	Smoked

F. Monochrome Dome (CCIR):

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Indoor	Gray	SDEVM22-F0-X	Smoked
		SDEVM22-F1-X	Clear
		SDEVM22-F2-X	Chrome
		SDEVM22-F3-X	Gold
Pendant, Standard	Black	SDEVM22-PB-0-X	Smoked
		SDEVM22-PB-1-X	Clear
		SDEVM22-PB-2-X	Chrome
		SDEVM22-PB-3-X	Gold
Pendant, Standard	Lt. Gray	SDEVM22-PG-0-X	Smoked
		SDEVM22-PG-1-X	Clear
		SDEVM22-PG-2-X	Chrome
		SDEVM22-PG-3-X	Gold
Pendant, Environmental	Lt. Gray	SDEVM22-PG-E0-X	Clear
		SDEVM22-PG-E1-X	Smoked