

SPECTRA® IV SE HORIZON 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 nonwarranty items.

2.02 INDOOR/OUTDOOR CCTV CAMERA DOME SYSTEM

- A. The indoor/outdoor CCTV camera dome system shall be a discreet, miniature camera dome system consisting of a dome drive with a variable speed/high speed pan/tilt drive unit with continuous 360° rotation; 1/4-inch high resolution color, monochrome, or color/black-white CCD camera; motorized zoom lens with optical and digital zoom; auto focus; and an enclosure consisting of a back box, lower dome, and a quick-install mounting.
- B. The indoor/outdoor CCTV camera dome system shall meet or exceed the following design and performance specifications.

2.03 DOME DRIVE

- A. The variable speed/high speed pan/tilt dome drive unit shall meet or exceed the following design and performance specifications:
 - 1. Pan Speed Variable between 400° per second continuous pan to 0.1° per second
 - 2. Vertical Tilt Unobstructed tilt of +18° 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 400° and a tilt speed of 200° per second
 - 5. Presets 256 positions with a 20-character label available for each position; programmable camera settings, including selectable auto focus modes, iris level, LowLight™ limit, and backlight compensation for each preset; command to copy camera settings from one preset to another; and preset programming through control keyboard or through dome system on-screen menu.

6. Preset Accuracy	$\pm 0.1^\circ$
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 an automatic return to position or function before power outage
9. Zones	8 zones with up to 20-character labeling for each, with the 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 and variable speed, operating at 18 to 32 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 a sealed lower dome
15. Alarm Inputs	Ability to control 7 alarm inputs located in the back box
16. Alarm Outputs	Ability to control 1 auxiliary Form C relay output and 1 open collector auxiliary output located in the back box
17. Alarm Output Programming	Auxiliary outputs can be alternately programmed to operate on alarm
18. Alarm Action	Individually programmed for 3 priority levels, initiating a stored pattern or going to a preassigned preset position
19. Resume after Alarm	After completion of alarm, dome returns to previously programmed state or its previous position
20. Window Blanking	8, four-sided user-defined shapes, each side with 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	8 user-defined programmable patterns including pan/tilt/zoom and preset functions, and pattern programming through control keyboard or through dome system on-screen menu.
22. Pattern Length	8 patterns of user-defined length based on dome memory
23. Internal Clock	Internal system clock, user programmable for 12- or 24-hour day format and mm/dd/yy or dd/mm/yy calendar format
24. Scheduler	Internal scheduling system for programming presets, patterns, window blanks, alarms, and auxiliary functions based on internal clock settings
25. Autosensing	Automatically sense and respond to protocol utilized for controlling the unit whether Coaxitron® or RS-422 Pelco P or Pelco D protocols, and accept competitors' control protocols with the use of optional translator cards
26. Menu System	Built-in setup of programmable functions and multiple languages including English, French, Italian, Spanish, Portuguese, German, Russian, Turkish, Polish, and Czech
27. Auto Flip	Rotates dome 180° at bottom of tilt travel
28. Password Protection	Programmable settings with optional password protection
29. Clear	Clear individual, grouped, or all programmed settings

30. Freeze Frame	Freeze current scene of video during preset movement Spectra® IV SE Horizon Series Dome System
31. Display Setup	User-definable locations of all labels and displays and user-selectable time duration of each display
32. Azimuth/Elevation/Zoom	On-screen display of pan/tilt locations and zoom ratio
33. Compass Display	On-screen display of compass heading and user-definable compass setup
34. Camera Title Overlay	20 user-definable characters on the screen camera title display
35. Video Output Level	User-selectable for normal or high output levels to compensate for long video wire runs
36. Dome Drive Compatibility	All dome drives are compatible with all back box configurations
37. RJ-45 Jack	Contains a plug-in jack on the dome drive for control and setup of the unit, the uploading of new operating code and language file updates, and is compatible with personal computers and PDAs such as Palm™ and iPAQ™
38. Remote Data Port Compatibility	Ability to set up and control unit, and upload new operating code and language file updates through the easily accessible optional remote data port; remote data port is also compatible with personal computers and PDAs such as Palm and iPAQ
39. Power Consumption	Maximum 70 VA
B. The high resolution CCD camera shall meet or exceed the following design and performance specifications:	
1. Image Sensor	1/4-inch EXview HAD™ CCD
2. Scanning System	2:1 interlaced output
3. Effective Pixels	
a. NTSC	768 x 494
b. PAL	752 x 582
4. Horizontal Resolution	
a. NTSC	>540 TVL
b. PAL	>540 TVL
5. Lens	f/1.4 (focal length, 3.4~119 mm; 35X optical zoom, 12X digital zoom)
6. Programmable Zoom Speeds	3.2, 4.6, or 6.6 seconds
7. Horizontal Angle of View	55.8° at 3.4 mm wide zoom, 1.7° at 119 mm telephoto zoom
8. Focus	Automatic with manual override
9. Sensitivity at 35 IRE	
a. NTSC/EIA	0.55 lux at 1/60 sec shutter speed (color) 0.063 lux at 1/4 sec shutter speed (color) 0.00018 lux at 1/2 sec shutter speed (B-W)
b. PAL/CCIR	0.50 lux at 1/50 sec shutter speed (color) 0.062 lux at 1/3 sec shutter speed (color) 0.00014 lux at 1/1.5 sec shutter speed (B-W)
10. Synchronization System	Internal/AC line lock phase adjustable through remote control, V-sync
11. White Balance	Automatic with manual override
12. Shutter Speed	
a. NTSC	1/2~1/30,000

b. PAL

1/1.5~1/30,000

13. Iris Control	Automatic with manual override
14. Gain Control	Automatic/ off
15. Video Output	1 Vp-p, 75 ohms
16. Video Signal-to-Noise	>50 dB
17. Type of Lighting	Menu selection of indoor or outdoor lighting for optimum camera performance
18. Wide Dynamic Range	128X
19. Motion Detection	User-definable motion detection settings for each preset scene, can activate auxiliary outputs, and contains three sensitivity levels per zone
20. Electronic Image Stabilization	Integrated electronic compensation for external vibration sources that cause image blurring
21. Image Enhancement	Integrated electronic improvement of sharpness of objects, lines or text in high contrast areas

2.04 BACK BOX AND LOWER DOME

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

A. In-Ceiling, Environmental

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 provides complete separation of the wiring from the dome drive mechanics when closed
3. Terminal Strips	Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes
4. Auxiliary Connections	1 Form-C relay output at <40 V, 2 A maximum, and a second open collector output at 32 VDC maximum at 30 mA
5. Alarm Inputs	7 alarm inputs
6. Integrated UTP Circuit	Integrated circuit board that converts video output to passive UTP transmission
7. Fiber Optic Compatibility	Ability to plug into back box an optional Pelco fiber optic module, or a third-party board that converts video output and control input for fiber optic transmission
8. Third-Party Control Systems	Ability to plug in an optional TXB board that converts control signals from selected third-party controllers
9. Installation	Quick-mount spring clips
10. Cable Entry	Through a 0.75-inch conduit hole
11. Environmental Features	Factory-installed heaters and blowers
12. Operating Temperatures	Maximum temperature range of -60° to 140°F (-51.1° to 60°C) for two hours, and a continuous operating range of -50° to 122°F (-51.1° to 50°C)
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 will automatically download into new dome drive
14. Color	Black, 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 +18° above the horizontal
17. Dome Color	Clear and smoked versions

B. 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 provides complete separation of the wiring from the dome drive mechanics when closed |
| 3. Terminal Strips | Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes |
| 4. Auxiliary Connections | 1 Form-C relay output at <40 V, 2 A maximum and a second open collector output at 32 VDC maximum at 30 mA |
| 5. Alarm Inputs | 7 alarm inputs |
| 6. Integrated UTP Circuit | Integrated circuit that converts video output to passive UTP transmission |
| 7. Fiber Optic Compatibility | Ability to plug into back box an optional Pelco fiber optic module, or a third-party board that converts video output and control input for fiber optic transmission |
| 8. Third-Party Control Systems | Ability to plug in an optional TXB board that converts control signals from selected third-party controllers |
| 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 | Maximum temperature range of -60° to 140°F (-51.1° to 60°C) for two hours, and a continuous operating range of -50° to 122°F (-51.1° to 50°C) |
| 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 will automatically download 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 +18° above the horizontal |
| 17. Dome Color | Clear and smoked versions |
| 18. Trim Ring Connection | 2 captivated screws |

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 provides complete separation of the wiring from the dome drive mechanics when closed |
| 3. Terminal Strips | Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes |
| 4. Auxiliary Connections | 1 Form-C relay output at <40 V, 2 A maximum, and a second open collector output at 32 VDC maximum at 30 mA |
| 5. Alarm Inputs | 7 alarm inputs |
| 6. Integrated UTP Circuit | Integrated circuit board that converts video output to passive UTP transmission |

7. Fiber Optic Compatibility	Ability to plug into back box an optional Pelco fiber optic module, or a third-party board that converts video output and control input for fiber optic transmission
8. Third-Party Control Systems	Ability to plug in an optional TXB board that converts control signals from selected third-party controllers
9. Installation	Quick-mount wall, corner, pole, parapet, or ceiling adapter
10. Cable Entry	Through a 1.5-inch NPT fitting
11. Operating Temperatures	Maximum temperature range of 25° to 113°F (-4° to 45°C) for two hours, and a continuous operating range of 25° to 95°F (-4° to 35°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 will automatically download 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 +18° above the horizontal
16. Dome Color	Clear, smoked, chrome, and gold versions
17. Trim Ring Connection	2 captivated screws

2.05 DOME SYSTEM DIMENSIONS

A. Diameter, All Models	
1. Bubble Diameter	6.0 inches (15.24 cm)
2. Dome Diameter	8.6-inch (21.8 cm)
B. In-Ceiling, Environmental	4.4 inches (11.0 cm) above ceiling, lower dome 4.3 inches (10.9 cm) below ceiling,
C. Pendant, Environmental	13.0-inch (33.1 cm) overall length (including dome)
D. Pendant, Standard	13.0-inch (33.1 cm) overall length (including dome)

2.06 DOME SYSTEM WEIGHTS

A. In-Ceiling, Environmental	5.9 lb (2.71 kg)
B. Pendant, Environmental	7.3 lb (3.35 kg)
C. Pendant, Standard	6.2 lb (2.85 kg)

2.07 MANUFACTURER'S WARRANTY

- A. Repair or replacement of defective parts for a period of three years from the date of shipment, including continuous motion modes.

2.08 CERTIFICATIONS AND RATINGS

A. UL and cUL listed	All models
B. FCC, Class B	All models
C. CE, Class B	All models
D. Meets NEMA Type 4X, IP66 standards	All models

2.09 MODELS**A. NTSC**

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Environmental	Black	SD4H35-F-E0 SD4H35-F-E1	Smoked Clear
Pendant, Environmental	Lt. Gray	SD4H35-PG-E0 SD4H35-PG-E1	Smoked Clear
Pendant, Standard	Lt. Gray	SD4H35-PG-0 SD4H35-PG-1	Smoked Clear

B. PAL

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
In-Ceiling, Environmental	Black	SD4H35-F-E0-X SD4H35-F-E1-X	Smoked Clear
Pendant, Environmental	Lt. Gray	SD4H35-PG-E0-X SD4H35-PG-E1-X	Smoked Clear
Pendant, Standard	Lt. Gray	SD4H35-PG-0-X SD4H35-PG-1-X	Smoked Clear

(Revised November 5, 2009)