

SPECTRA® IV IP SERIES DISCREET 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 include a built-in 100Base-TX network interface for live streaming to a standard Web browser.
- B. The indoor/outdoor CCTV camera dome system shall operate in an Endura® environment and accept Endura commands, as well as open architecture connectivity for third-party software recording solutions.
- C. 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/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.
- D. The indoor/outdoor fixed dome system shall meet or exceed the following design and performance specifications.

2.03 ELECTRICAL SPECIFICATIONS

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| A. Connectors | RJ-45 for 100Base-TX
Auto MDI/MDI-X |
| B. Cabling | Cat5 cable or better for 100Base-TX |
| C. Input Voltage | 18 to 32 VAC; 24 VAC nominal
22 to 27 VDC; 24 VDC nominal |
| D. Input Power | |
| 1. 24 VAC | 23 VA nominal (without heater);
73 VA nominal (with heater) |
| 2. 24 VDC | 0.7 A nominal (without heater);
3 A nominal (with heater) |

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| E. Alarm Outputs | 7 |
| F. Auxiliary Outputs | 2 |

2.04 VIDEO SPECIFICATIONS

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|-------------------------------------|--|------------|-------------|------------|---------|-----------|-----------|---------|-----------|-----------|--------|-----------|-----------|---------|-----------|-----------|
| A. Analog | NTSC/PAL | | | | | | | | | | | | | | | |
| B. Digital Compression | MJPEG, MPEG-4 (available only with Microsoft® Internet Explorer®) | | | | | | | | | | | | | | | |
| C. Video Streams | 3, simultaneous | | | | | | | | | | | | | | | |
| D. Video Resolutions | <table border="0"> <tr> <td></td> <td><u>NTSC</u></td> <td><u>PAL</u></td> </tr> <tr> <td>1. 4CIF</td> <td>704 x 480</td> <td>704 x 576</td> </tr> <tr> <td>2. 2CIF</td> <td>704 x 240</td> <td>704 x 288</td> </tr> <tr> <td>3. CIF</td> <td>352 x 240</td> <td>352 x 288</td> </tr> <tr> <td>4. QCIF</td> <td>176 x 120</td> <td>176 x 144</td> </tr> </table> | | <u>NTSC</u> | <u>PAL</u> | 1. 4CIF | 704 x 480 | 704 x 576 | 2. 2CIF | 704 x 240 | 704 x 288 | 3. CIF | 352 x 240 | 352 x 288 | 4. QCIF | 176 x 120 | 176 x 144 |
| | <u>NTSC</u> | <u>PAL</u> | | | | | | | | | | | | | | |
| 1. 4CIF | 704 x 480 | 704 x 576 | | | | | | | | | | | | | | |
| 2. 2CIF | 704 x 240 | 704 x 288 | | | | | | | | | | | | | | |
| 3. CIF | 352 x 240 | 352 x 288 | | | | | | | | | | | | | | |
| 4. QCIF | 176 x 120 | 176 x 144 | | | | | | | | | | | | | | |
| E. Bit Rate Configurable | | | | | | | | | | | | | | | | |
| 1. MPEG-4 | 30 ips, 2 Mbps for primary stream, 1 Mbps for secondary stream; implements EnduraView™ | | | | | | | | | | | | | | | |
| 2. MJPEG | 15 ips, 3 Mbps, MJPEG | | | | | | | | | | | | | | | |
| F. Web User Interface | Pelco Device Utility interface for viewing HTTP, requires Java Runtime Environment (JRE™) | | | | | | | | | | | | | | | |
| G. Users | 5 simultaneous users MJPEG and/or MPEG-4 unicast; unlimited number of users using multicast (MPEG-4 only) | | | | | | | | | | | | | | | |
| H. Minimum Web Browser Requirements | | | | | | | | | | | | | | | | |
| 1. Operating System | PC (Intel® Pentium® 4 microprocessor, 1.6 GHz) with Windows® 98, Windows 2000, Windows XP, (or later)
Mac® OS X 10.3.9 (or later) | | | | | | | | | | | | | | | |
| 2. RAM | 512 MB | | | | | | | | | | | | | | | |
| 3. Ethernet Card | 100 Mbps | | | | | | | | | | | | | | | |
| 4. Web Brower | Internet Explorer 5.5 (or later) Firefox® 1.5 (or later) | | | | | | | | | | | | | | | |
| 5. Screen Resolution | 1024 x 768 pixels or higher, 16- or 32-bit pixel color resolution | | | | | | | | | | | | | | | |

2.05 DOME DRIVE

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| 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 +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 400° and a tilt speed of 200° per second |

5. Presets
 - a. 35X, 23X, and 22X Models 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
 - b. 18X and 16X Models 128 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 (35X, 23X, and 22X only) Ability to control 7 alarm inputs located in the back box
16. Alarm Outputs (35X, 23X, and 22X only) 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

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| 20. Window Blanking | |
| a. 35X, 23X, and 22X Models | 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 |
| b. 18X and 16X Models | 1, four-sided user-defined shape, 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 | |
| a. 35X, 23X, and 22X Models | 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 |
| b. 18X and 16X Models | |
| 22. Pattern Length | 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 |
| 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 |
| 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

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| 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.

Color/Black-White Optic System (35X)

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| 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 | 0.55 lux at 1/50 sec shutter speed (color)
0.063 lux at 1/3 sec shutter speed (color)
0.00018 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 |

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| 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 | Electronic compensation for external vibration sources that cause image blurring; user selectable for 2 frequency ranges, 5 Hz (3-7 Hz) and 10 Hz (8-12 Hz) |
| 21. Image Enhancement | Electronic improvement of sharpness of objects, lines or text in high contrast areas |

Color/Black-White Optic System (23X)

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| 1. Image Sensor | 1/4-inch CCD |
| 2. Scanning System | 2:1 interlaced output |
| 3. Effective Pixels | |
| a. NTSC | 724 x 494 |
| b. PAL | 724 x 582 |
| 4. Horizontal Resolution | |
| a. NTSC | >470 TVL |
| b. PAL | >470 TVL |
| 5. Lens | f/1.6 (focal length, 3.6~82.8 mm; 23X optical zoom, 12X digital 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 | |
| a. NTSC/EIA | 0.08 lux at 1/2 sec shutter speed (color)
0.3 lux at 1/60 sec shutter speed (B-W)
0.013 lux at 1/2 sec shutter speed (B-W) |
| b. PAL/CCIR | 0.08 lux at 1/1.5 sec shutter speed (color)
0.3 lux at 1/50 sec shutter speed (B-W)
0.013 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 | 80X |
| 19. Motion Detection | User-definable motion detection settings for each preset scene, can activate auxiliary outputs, and contains 3 sensitivity levels per zone |

Color Optic System (22X)

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|--------------------|-------------------------|
| 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	>470 TVL
b. PAL	>460 TVL
5. Lens	f/1.6 (focal length, 4~88 mm; 22X optical zoom, 12X digital zoom)
6. Programmable Zoom Speeds	2.4, 3.9, or 6.3 seconds
7. Horizontal Angle of View	47° at 4 mm wide zoom, 2.2° at 88 mm telephoto zoom
8. Focus	Automatic with manual override
9. Sensitivity at 35 IRE	
a. NTSC/EIA	0.02 lux at 1/2 sec shutter speed
b. PAL/CCIR	0.02 lux at 1/1.5 sec shutter speed
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

Color/Black-White Optic System (18X)

1. Image Sensor	1/4-inch CCD
2. Scanning System	2:1 interlaced output
3. Effective Pixels	
a. NTSC	724 x 494
b. PAL	724 x 582
4. Horizontal Resolution	
a. NTSC	>470 TVL
b. PAL	>470 TVL
5. Lens	f/1.6 (focal length 3.8~68.4 mm; 18X optical zoom, 12X digital zoom)
6. Programmable Zoom Speeds	2.9, 4.2, or 5.8 seconds
7. Horizontal Angle of View	51° at 3.8 mm wide zoom, 3° at 68.4 mm telephoto zoom
8. Focus	Automatic with manual override
9. Sensitivity at 35 IRE	
a. NTSC/EIA	0.08 lux at 1/2 sec shutter speed (color) 0.3 lux at 1/60 sec shutter speed (B-W) 0.013 lux at 1/2 sec shutter speed (B-W)
b. PAL/CCIR	0.08 lux at 1/1.5 sec shutter speed (color) 0.3 lux at 1/50 sec shutter speed (B-W) 0.013 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

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| 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 |

Color Optic System (16X)

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|-----------------------------|--|
| 1. Image Sensor | 1/4-inch interline transfer 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 | >470 TVL |
| b. PAL | >460 TVL |
| 5. Lens | f/1.4 (focal length, 4~64 mm; 16X optical zoom, 8X digital zoom) |
| 6. Programmable Zoom Speeds | 1.9, 3.6, or 6.0 seconds |
| 7. Horizontal Angle of View | 43° at 4 mm wide zoom, 3° at 64 mm telephoto zoom |
| 8. Focus | Automatic with manual override |
| 9. Sensitivity at 35 IRE | |
| a. NTSC/EIA | 0.05 lux at 1/2 sec shutter speed (color) |
| b. PAL/CCIR | 0.05 lux at 1/1.5 sec shutter speed (color) |
| 10. Synchronization System | 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 with manual override |
| 15. Video Output | 1 Vp-p, 75 ohms |
| 16. Video Signal-to-Noise | >50 dB |

2.06 BACK BOX AND LOWER DOME

- A. The back box and lower dome shall meet or exceed the following design and performance specifications.

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. Installation	Quick-mount wall, corner, pole, parapet, or ceiling adapter
7. Cable Entry	Through a 1.5-inch NPT fitting
8. Environmental Features	Factory-installed heaters, blowers, and sun shroud
9. 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)
10. 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
11. Color	Gray, baked-on enamel powder coat
12. Construction	Aluminum
13. Lower Dome Material	Acrylic, optically clear, with no distortion in any portion of the dome up to +2° above the horizontal
14. Dome Color	Clear and smoked versions
15. Trim Ring Connection	2 captivated screws

Pendant, Standard

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. Installation	Quick-mount wall, corner, pole, parapet, or ceiling adapter
7. Cable Entry	Through a 1.5-inch NPT fitting
8. 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)
9. 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
10. Colors	Gray or black, baked-on enamel powder coat

11. Construction	Aluminum
12. Lower Dome Material	Acrylic, optically clear with no distortion in any portion of the dome up to +2° above the horizontal
13. Dome Color	Clear, smoked, chrome, and gold versions
14. Trim Ring Connection	2 captivated screws
15. Safety Cable	Plastic tether
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. Installation	Quick-mount spring clips
7. Cable Entry	Through a 0.75-inch conduit hole
8. Environmental Features	Factory-installed heaters and blowers
9. 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)
10. 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
11. Color	Black, baked-on enamel powder coat
12. Construction	Aluminum
13. Lower Dome Material	Acrylic, optically clear, with no distortion in any portion of the dome up to +2° above the horizontal
14. Dome Color	Clear and smoked versions
15. Trim Ring Connection	2 captivated screws
In-Ceiling, Interior	
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. Installation	Quick-mount spring clips
7. Cable Entry	Through a 0.75-inch conduit hole
8. Operating Temperatures	Maximum temperature range of 32° to 122°F (0° to 50°C)
9. 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
10. Color	Black back box with baked-on enamel powder coat; white trim ring
11. Construction	Aluminum
12. Lower Dome Material	Acrylic, optically clear with no distortion in any portion of the dome up to +2° above the horizontal
13. Dome Color	Clear, smoked, chrome, and gold versions
14. Trim Ring Connection	Snap in place
15. Safety Cable	Plastic tether

Heavy-Duty In-Ceiling, Interior

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. 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. Installation	Quick-mount spring clips
7. Cable Entry	Through a 0.75-inch conduit hole
8. Operating Temperatures	Maximum temperature range of 32° to 122°F (0° to 50°C)
9. 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
10. Color	Black, baked-on enamel powder coat

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| 11. Construction | Aluminum, with 0.090-inch thick, clear polycarbonate lower dome and aluminum trim ring |
| 12. Trim Ring Connection | Barrel type key locks |
| 13. Lower Dome Protection | Available with optional stainless steel cage around lower dome. Bars of cage not to interfere with picture at medium to high zoom rates |

Heavy-Duty 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. 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. Installation | Quick-mount wall, corner, pole, parapet, or ceiling adapter |
| 7. Cable Entry | Through a 1.5-inch NPT fitting |
| 8. Environmental Features | Factory-installed heaters, blowers, and sun shroud |
| 9. 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) continuous operation |
| 10. 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 |
| 11. Color | Gray, baked-on enamel powder coat |
| 12. Construction | Tough, dual wall aluminum enclosure with a 0.090-inch thick, clear polycarbonate lower dome and aluminum trim ring |
| 13. Trim Ring Connection | Barrel type key locks |
| 14. Lower Dome Protection | Available with optional stainless steel cage around lower dome. Bars of cage not to interfere with picture at medium to high zoom rates |

Heavy-Duty Pendant, Standard

- | | |
|-----------------------------|---|
| 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. 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. Installation	Quick-mount wall, corner, pole, parapet, or ceiling adapter
7. Cable Entry	Through a 1.5-inch NPT fitting
8. Operating Temperatures	Maximum temperature range of 32° to 140°F (0° to 60°C) for two hours, and a continuous operating range of 32° to 122°F (0° to 50°C) continuous operation
9. 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 setting to download automatically into new dome drive
10. Colors	Gray baked-on enamel powder coat
11. Construction	Tough, dual wall aluminum enclosure with a 0.090-inch thick, clear polycarbonate lower dome and aluminum trim ring
12. Trim Ring Connection	Barrel type key locks
13. Lower Dome Protection	Available with optional stainless steel cage around lower dome. Bars of cage not to interfere with picture at medium to high zoom rates

Stainless Steel Pendant, 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, when closed, provides complete separation of the wiring from the dome drive mechanics
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. Installation	Quick-mount wall, corner, pole, parapet, or ceiling adapter
7. Cable Entry	Through a 1.5-inch NPT fitting
8. Environmental Features	Factory-installed heaters, blowers, and sun shroud
9. Operating Temperatures	Maximum temperature range of -60° to 140°F (-51.1° to 60°C) for 2 hours, and a continuous operating range of -40° to 122°F (-40° to 50°C) continuous operation

10. 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
11. Color	Gray, baked-on enamel powder coat
12. Construction	All 316 stainless steel enclosure, sun shroud, trim ring, and mounting plate
13. Lower Dome Material	Acrylic, optically clear, with no distortion in any portion of the dome up to +2° above the horizontal
14. Dome Color	Clear and smoked versions
15. Trim Ring Connection	Two screws

2.07 DOME SYSTEM DIMENSIONS

A. Diameter of Bubble, All Models	Maximum of 5.9 inches (15.0 cm)
B. Pendant, Environmental	10.6-inch (26.9 cm) overall length (including dome) by 8.6-inch (21.8 cm) diameter
C. Pendant, Standard	Pendant 10.6-inch (26.9 cm) overall length (including dome) by 8.6-inch (21.8 cm) diameter
D. In-Ceiling, Environmental	4.4 inches (11.0 cm) above ceiling, lower dome 4.3 inches (10.9 cm) below ceiling, 8.6-inch (21.8 cm) diameter
E. In-Ceiling, Interior	5.2 inches (13.2 cm) above ceiling, 3.5 inches (8.8 cm) below ceiling, 8.2-inch (20.8 cm) diameter
F. Heavy-Duty In-Ceiling, Interior	5.25 inches (13.34 cm) above ceiling, 3.53 inches (8.97 cm) below ceiling, 9.75-inch (24.77 cm) diameter; lower dome maximum of 2.75 inches (6.7) below ceiling
G. Heavy-Duty Pendant, Environmental	10.1-inch (25.65 cm) overall length (including dome) by 9.7-inch (24.7 cm) diameter
H. Heavy-Duty Pendant, Standard	10.1-inch (25.65 cm) overall length (including dome) by 9.7-inch (24.7 cm) diameter
I. Stainless Steel Pendant, Environmental	10.9-inch (27.69 cm) overall length (including dome) by 8.52-inch (21.64 cm) diameter

2.08 DOME SYSTEM WEIGHTS

A. Pendant, Environmental	7.6 lb (3.5 kg)
B. Pendant, Standard	6.5 lb (3.0 kg)
C. In-Ceiling, Environmental	6.2 lb (2.8 kg)
D. In-Ceiling, Interior	5.2 lb (2.4 kg)
E. Heavy-Duty In-Ceiling, Interior	
1. With Cage	9.3 lb (4.2 kg)
2. Without Cage	7.3 lb (3.3 kg)
G. Heavy-Duty Pendant, Environmental	
1. With Cage	11.8 lb (5.4 kg)
2. Without Cage	9.8 lb (4.5 kg)
H. Heavy Duty Pendant, Standard	
1. With Cage	11.8 lb (5.4 kg)
2. Without Cage	9.8 lb (4.5 kg)
I. Stainless Steel Pendant, Environmental	10.1 lb (4.6 kg)

2.09 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. CE, Class B	All models
B. FCC, Class B	All models
C. UL/cUL Listed	All models
D. C-Tick	All models
E. Meets NEMA Type 4X, IP66 standards	Pendant, Environmental In-Ceiling, Environmental Pendant, Standard Heavy-Duty Pendant, Standard Heavy-Duty Pendant, Environmental Stainless Steel Pendant, Environmental
F. Meets NEMA Type 1, IP40 standards	Heavy-Duty In-Ceiling, Interior

2.09 MODELS

A. The discreet CCTV camera dome system shall be the Pelco Spectra IV IP Series.

Color/Black-White Dome System (35X)

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
1. In-Ceiling, Indoor	Black	SD4N35-F0 SD4N35-F1 SD4N35-F2 SD4N35-F3	Smoked Clear Chrome Gold
2. In-Ceiling, Environmental	Black	SD4N35-F-E0 SD4N35-F-E1	Smoked Clear
3. Pendant, Standard	Black	SD4N35-PB-0 SD4N35-PB-1 SD4N35-PB-2 SD4N35-PB-3	Smoked Clear Chrome Gold
4. Pendant, Standard	Lt. Gray	SD4N35-PG-0 SD4N35-PG-1 SD4N35-PG-2 SD4N35-PG-3	Smoked Clear Chrome Gold
5. Pendant, Environmental	Lt. Gray	SD4N35-PG-E0 SD4N35-PG-E1	Smoked Clear
6. Heavy-Duty In-Ceiling a. Without Cage b. With Cage	Lt. Gray	SD4N35-HF1 SD4N35-HCF1	Clear Clear
7. Heavy-Duty Pendant, Standard a. Without Cage b. With Cage	Lt. Gray	SD4N35-HP1 SD4N35-HCP1	Clear Clear
8. Heavy-Duty Pendant, Environmental a. Without Cage b. With Cage	Lt. Gray	SD4N35-HPE1 SD4N35-HCPE1	Clear Clear
9. Stainless Steel Pendant, Environmental	Lt. Gray	SD4N35-PSGE0 SD4N35-PSGE1	Smoked Clear

Color/Black-White Dome System (23X)

<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
1. In-Ceiling, Indoor	Black	SD4NCBW-F0 SD4NCBW-F1 SD4NCBW-F2 SD4NCBW-F3	Smoked Clear Chrome Gold
2. In-Ceiling, Environmental	Black	SD4NCBW-F-E0 SD4NCBW-F-E1	Smoked Clear
3. Pendant, Standard	Black	SD4NCBW-PB-0 SD4NCBW-PB-1 SD4NCBW-PB-2 SD4NCBW-PB-3	Smoked Clear Chrome Gold

4.	Pendant, Standard	Lt. Gray	SD4NCBW-PG-0 SD4NCBW-PG-1 SD4NCBW-PG-2 SD4NCBW-PG-3	Smoked Clear Chrome Gold
5.	Pendant, Environmental	Lt. Gray	SD4NCBW-PG-E0 SD4NCBW-PG-E1	Smoked Clear
6.	Heavy-Duty In-Ceiling	Lt. Gray		
	a. Without Cage		SD4NCBW-HF1	Clear
	b. With Cage		SD4NCBW-HCF1	Clear
7.	Heavy-Duty Pendant, Standard	Lt. Gray		
	a. Without Cage		SD4NCBW-HP1	Clear
	b. With Cage		SD4NCBW-HCP1	Clear
8.	Heavy-Duty Pendant, Environmental	Lt. Gray		
	a. Without Cage		SD4NCBW-HPE1	Clear
	b. With Cage		SD4NCBW-HCPE1	Clear
9.	Stainless Steel Pendant, Environmental	Lt. Gray	SD4NCBW-PSGE0 SD4NCBW-PSGE1	Smoked Clear

Color Dome System (22X)

	<u>Type</u>	<u>Back Box</u>	<u>Model</u>	<u>Dome</u>
1.	In-Ceiling, Indoor	Black	SD4NC22-F0 SD4NC22-F1 SD4NC22-F2 SD4NC22-F3	Smoked Clear Chrome Gold
2.	In-Ceiling, Environmental	Black	SD4NC22-F-E0 SD4NC22-F-E1	Smoked Clear
3.	Pendant, Standard	Black	SD4NC22-PB-0 SD4NC22-PB-1 SD4NC22-PB-2 SD4NC22-PB-3	Smoked Clear Chrome Gold
4.	Pendant, Standard	Lt. Gray	SD4NC22-PG-0 SD4NC22-PG-1 SD4NC22-PG-2 SD4NC22-PG-3	Smoked Clear Chrome Gold
5.	Pendant, Environmental	Lt. Gray	SD4NC22-PG-E0 SD4NC22-PG-E1	Smoked Clear
6.	Heavy-Duty In-Ceiling	Lt. Gray		
	a. Without Cage		SD4NC22-HF1	Clear
	b. With Cage		SD4NC22-HCF1	Clear
7.	Heavy-Duty Pendant, Standard	Lt. Gray		
	a. Without Cage		SD4NC22-HP1	Clear
	b. With Cage		SD4NC22-HCP1	Clear

- | | | | | |
|----|---|----------|---------------|--------|
| 8. | Heavy-Duty Pendant,
Environmental | Lt. Gray | | |
| | a. Without Cage | | SD4NC22-HPE1 | Clear |
| | b. With Cage | | SD4NC22-HCPE1 | Clear |
| 9. | Stainless Steel Pendant,
Environmental | Lt. Gray | | |
| | | | SD4NC22-PSGE0 | Smoked |
| | | | SD4NC22-PSGE1 | Clear |

Color/Black-White Dome System (18X)

- | | <u>Type</u> | <u>Back Box</u> | <u>Model</u> | <u>Dome</u> |
|----|---|-----------------|--|-----------------------------------|
| 1. | In-Ceiling, Indoor | Black | SD4N18-F0
SD4N18-F1
SD4N18-F2
SD4N18-F3 | Smoked
Clear
Chrome
Gold |
| 2. | In-Ceiling,
Environmental | Black | SD4N18-F-E0
SD4N18-F-E1 | Smoked
Clear |
| 3. | Pendant, Standard | Black | SD4N18-PB-0
SD4N18-PB-1
SD4N18-PB-2
SD4N18-PB-3 | Smoked
Clear
Chrome
Gold |
| 4. | Pendant, Standard | Lt. Gray | SD4N18-PG-0
SD4N18-PG-1
SD4N18-PG-2
SD4N18-PG-3 | Smoked
Clear
Chrome
Gold |
| 5. | Pendant,
Environmental | Lt. Gray | SD4N18-PG-E0
SD4N18-PG-E1 | Smoked
Clear |
| 6. | Heavy-Duty In-Ceiling | Lt. Gray | | |
| | a. Without Cage | | SD4N18-HF1 | Clear |
| | b. With Cage | | SD4N18-HCF1 | Clear |
| 7. | Heavy-Duty Pendant,
Standard | Lt. Gray | | |
| | a. Without Cage | | SD4N18-HP1 | Clear |
| | b. With Cage | | SD4N18-HCP1 | Clear |
| 8. | Heavy-Duty Pendant,
Environmental | Lt. Gray | | |
| | a. Without Cage | | SD4N18-HPE1 | Clear |
| | b. With Cage | | SD4N18-HCPE1 | Clear |
| 9. | Stainless Steel Pendant,
Environmental | Lt. Gray | | |
| | | | SD4N18-PSGE0
SD4N18-PSGE1 | Smoked
Clear |

Color Dome System (16X)

- | | <u>Type</u> | <u>Back Box</u> | <u>Model</u> | <u>Dome</u> |
|----|------------------------------|-----------------|--|-----------------------------------|
| 1. | In-Ceiling, Indoor | Black | SD4NTC-F0
SD4NTC-F1
SD4NTC-F2
SD4NTC-F3 | Smoked
Clear
Chrome
Gold |
| 2. | In-Ceiling,
Environmental | Black | SD4NTC-F-E0
SD4NTC-F-E1 | Smoked
Clear |

3.	Pendant, Standard	Black	SD4NTC-PB-0 SD4NTC-PB-1 SD4NTC-PB-2 SD4NTC-PB-3	Smoked Clear Chrome Gold
4.	Pendant, Standard	Lt. Gray	SD4NTC-PG-0 SD4NTC-PG-1 SD4NTC-PG-2 SD4NTC-PG-3	Smoked Clear Chrome Gold
5.	Pendant, Environmental	Lt. Gray	SD4NTC-PG-E0 SD4NTC-PG-E1	Smoked Clear
6.	Heavy-Duty In-Ceiling	Lt. Gray		
	a. Without Cage		SD4NTC-HF1	Clear
	b. With Cage		SD4NTC-HCF1	Clear
7.	Heavy-Duty Pendant, Standard	Lt. Gray		
	a. Without Cage		SD4NTC-HP1	Clear
	b. With Cage		SD4NTC-HCP1	Clear
8.	Heavy-Duty Pendant, Environmental	Lt. Gray		
	a. Without Cage		SD4NTC-HPE1	Clear
	b. With Cage		SD4NTC-HCPE1	Clear
10.	Stainless Steel Pendant, Environmental	Lt. Gray	SD4NTC-PSGE0 SD4NTC-PSGE1	Smoked Clear

(New June 19, 2008)