

# Spectra® HD Series IP Dome System

## S5118 MODELS, HIGH DEFINITION PAN/TILT/ZOOM HIGH-SPEED DOME

### Product Features

- Up to 1280 x 960 Resolution
- 4:3 or 16:9 Aspect Ratio; 960p at 20 Images per Second (ips), 720p at 30 ips
- 1.3 Megapixel (MPx), 18X Optical, Wide Dynamic Range (WDR) Camera
- Ability to Control and Monitor Video Over IPv4 and IPv6 Networks
- Built-in Analytics Including AutoTracker and Adaptive Motion Detection
- 2 Simultaneous Video Stream: Dual H.264 or H.264 and Scalable MJPEG
- 360° Continuous Pan Rotation at 280° per Second
- Supported Protocols: TCP/IP, UDP/IP (Unicast, Multicast IGMP), UPnP, DNS, DHCP, RTP, RTSP, NTP, and More
- Power over Ethernet (PoE) IEEE 802.3af (For Non-Environmental Units Only)

### Network Dome System

Pelco takes its industry-leading Spectra® Series dome into the world of high definition. **Spectra HD** delivers crystal-clear, live streaming images over the Internet using a standard Web browser (Microsoft® Internet Explorer® or Mozilla® Firefox®). With four times the resolution of standard definition domes, **Spectra HD** is an ideal solution to view details such as faces, license plates, tattoos, playing cards (in casinos), or other specific features.

**Spectra HD** supports High-Profile H.264 compression, a vast improvement in quality over MPEG-4 and 20 times more efficient than MJPEG. The dome system features open architecture connectivity for third-party software recording solutions allowing integration into virtually any IP-based HD system. It is also compatible with Digital Sentry® video management systems. As with all Pelco IP camera solutions, **Spectra HD** is Endura Enabled™ to record, manage, configure, and view multiple live streams. When connected to an Endura® HD network-based video security system, the dome system has access to EnduraStor™ and EnduraView™ for optimized image quality and bandwidth efficiency.

**Spectra HD** features the same ease of installation and ease of maintenance that you have come to expect from Spectra. Each dome system consists of a back box, a dome drive, and a lower dome.

**Spectra HD** includes a choice of five back box models: in-ceiling, environmental in-ceiling, pendant, environmental pendant, and stainless steel environmental pendant. All environmental models meet NEMA Type 4X, IP66 when properly installed.



- USB Expansion Slots for Pelco Alarm and Audio Accessories
- 16 Preset Tours, 256 Dome Presets, 8 Privacy Zones
- Open IP Standards
- ONVIF Profile S Conformant

### Built-In Analytics

**Pelco Analytics** enhance the flexibility and performance of Spectra HD. Nine Pelco behaviors are preloaded and included as standard features. Pelco behaviors can be configured and enabled using a standard Web browser, and they are compatible with Endura or a third-party system that supports alarms using Pelco's API.

### Web Interface

**Spectra HD** uses a standard Web browser for powerful remote setup and administration.

### Window Blanking

Window blanking is used to conceal user-defined privacy areas that cannot be viewed by an operator. **Spectra HD** supports up to eight blanked windows. A blanked area will appear on the screen as a solid gray window.

### Video Systemization

**Spectra HD** easily connects to Pelco IP and hybrid systems such as Endura version 2.0 (or later) and Digital Sentry version 7.3 (or later). The camera is also compatible with Digital Sentry NVs (DS NVs), a full-featured video management software, which is available as a free download at [www.pelco.com](http://www.pelco.com). DS NVs includes four free Pelco IP licenses and allows for the management of video from up to 64 cameras.

**Spectra HD** features open architecture connectivity to third-party software. Pelco offers an application programming interface (API) and software developer's kit (SDK) for interfacing with Pelco's IP cameras.



by Schneider Electric



International Standards  
Organization Registered Firm;  
ISO 9001 Quality System



C3470 / REVISED 6-18-14

# TECHNICAL SPECIFICATIONS

## PELCO ANALYTICS

Spectra HD Series includes nine user-configurable behaviors. The camera is capable of running up to three behaviors at the same time; although, the number of behaviors is limited to the available processing power of the camera and the type of analytic being used.

**Note:** Available processing power is determined by the settings for compression standards, resolution, image rate, bit rate, and analytic configuration.

For each behavior, you can create several custom profiles that contain different camera settings. With these profiles, you can set up different scenarios for the behavior, which will automatically detect and trigger alarms when specific activity is detected.

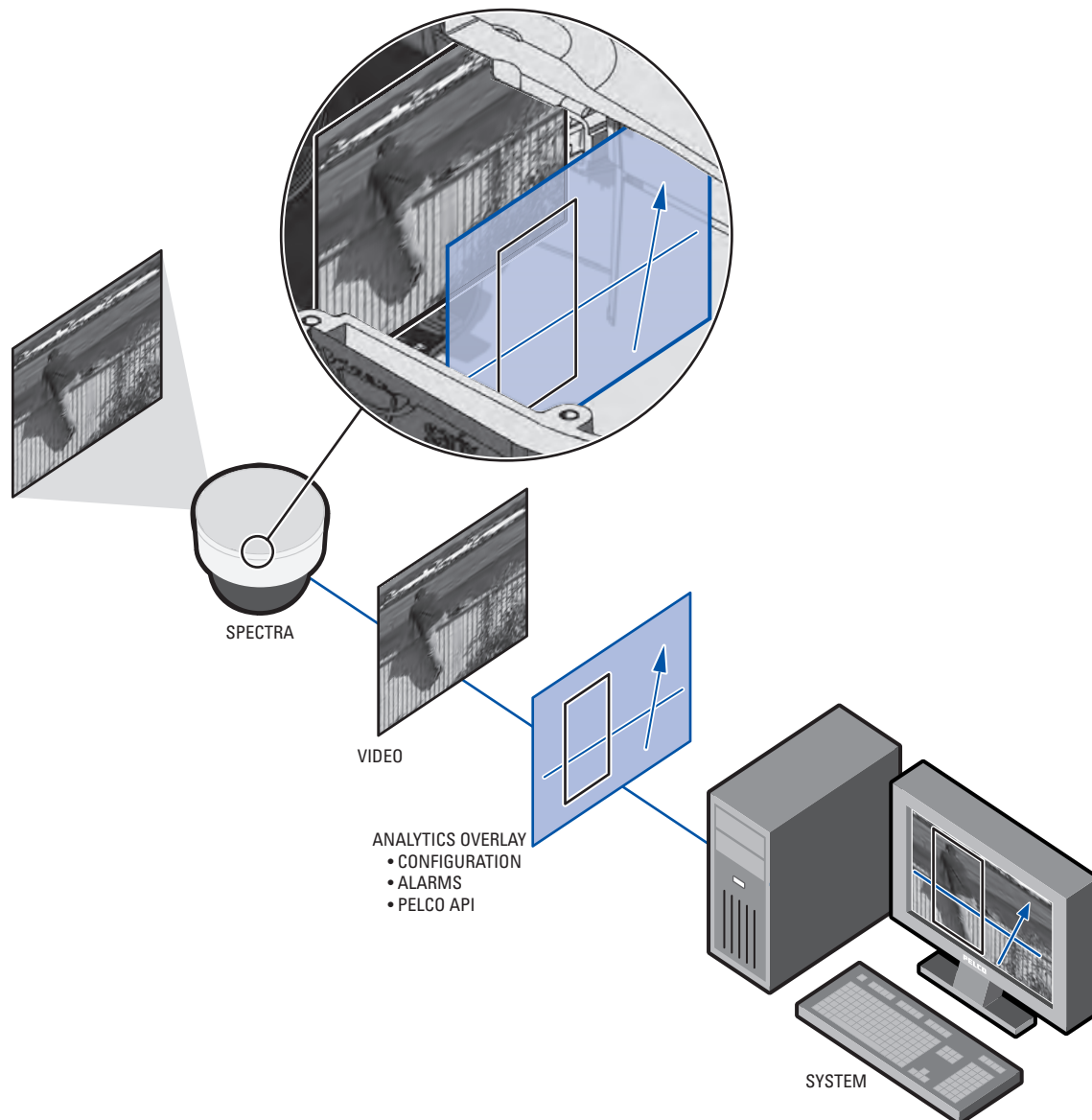
Pelco Analytics are configured and enabled using a standard Web browser, and Pelco behavior alarms are compatible with Endura or a third-party system that supports Pelco's API system.

Multiple Pelco behaviors can be scheduled to work during a certain time or condition. For example, during the day, a camera can be configured with Object Counting to count the number of people that enter a lobby door. At night, the operator can change the profile to Camera Sabotage to trigger an alarm if a camera is moved or obstructed. Available Pelco behaviors include:

- **Abandoned Object:** Detects objects placed in a defined zone and triggers an alarm if the object remains in the zone longer than the user-defined time allows. An airport terminal is a typical installation for this behavior. This behavior can also detect objects left behind at an ATM, signaling possible card skimming.
- **Adaptive Motion Detection:** Detects and tracks objects that enter a scene and then triggers an alarm when the objects enter a user-defined zone. This behavior is primarily used in outdoor environments with light traffic to reduce the number of false alarms caused by environmental changes.
- **AutoTracker:** Detects and tracks movement in the field of view. When the AutoTracker behavior is configured, the system will automatically pan and tilt to follow the moving object until the object stops or disappears from the monitored area.
- **Camera Sabotage:** Detects contrast changes in the field of view. An alarm is triggered if the lens is obstructed by spray paint, a cloth, or a lens cap. Any unauthorized repositioning of the camera also triggers an alarm.
- **Directional Motion:** Generates an alarm in a high traffic area when a person or object moves in a specified direction. Typical installations for this behavior include an airport gate or tunnel where cameras can detect objects moving in the opposite direction of the normal flow of traffic or an individual entering through an exit door.
- **Loitering Detection:** Identifies when people or vehicles remain in a defined zone longer than the user-defined time allows. This behavior is effective in real-time notification of suspicious behavior around ATMs, stairwells, and school grounds.
- **Object Counting:** Counts the number of objects that enter a defined zone. This behavior can be used to count the number of people at a store entrance/exit or inside a store where the traffic is light. This behavior is based on tracking and does not count people in a crowded setting.
- **Object Removal:** Triggers an alarm if an object is removed from a user-defined zone. This behavior is ideal for customers who want to detect the removal of high value objects, such as a painting from a wall or a statue from a pedestal.
- **Stopped Vehicle:** Detects vehicles stopped near a sensitive area longer than the user-defined time allows. This behavior is ideal for airport curbside drop-offs, parking enforcement, suspicious parking, traffic lane breakdowns, and vehicles waiting at gates.

# TECHNICAL SPECIFICATIONS

The following diagram illustrates how the camera system interprets streaming video when embedded analytics are configured and enabled.



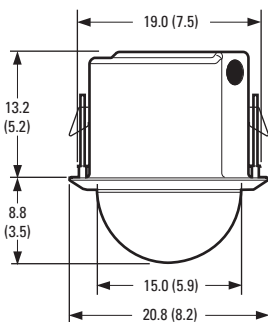
**IMPORTANT NOTE: PLEASE READ.** The network implementation is shown as a general representation only and is not intended to show a detailed network topology. Your actual network will differ, requiring changes or perhaps additional network equipment to accommodate the system as illustrated. Please contact your local Pelco representative to discuss your specific requirements.

# TECHNICAL SPECIFICATIONS

## BACK BOX FEATURES

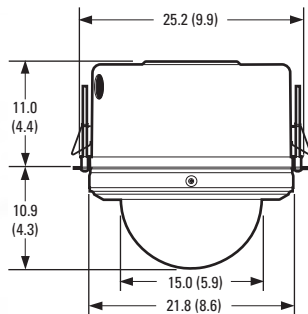


NOTE: VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.



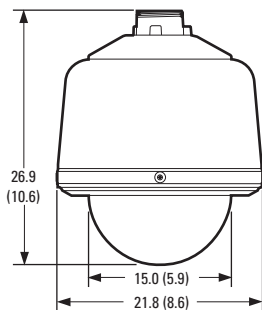
### In-Ceiling (Indoor)

- Single Back Box for Suspended or Hard Ceiling Applications
- Requires 13.35 cm (5.25 in.) Space Above Ceiling and 8.25 cm (3.25 in.) Below
- Minimum Ceiling Thickness 1.27 cm (0.50 in.); Maximum 4.45 cm (1.75 in.)
- Quick Disconnect to Dome Drive
- Aluminum Construction
- Suitable for Use in Environmental Air Handling Spaces



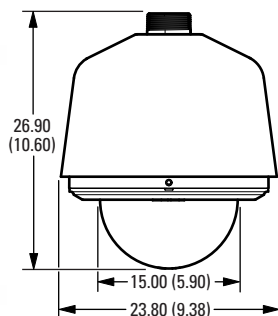
### Environmental In-Ceiling

- Single Back Box for Hard Ceiling Applications
- Requires 11.18 cm (4.40 in.) Space Above Ceiling and 10.92 cm (4.30 in.) Below
- Includes Heater and Blower
- Minimum Ceiling Thickness 1.27 cm (0.50 in.); Maximum 4.45 cm (1.75 in.)
- Quick Disconnect to Dome Drive
- Aluminum Construction



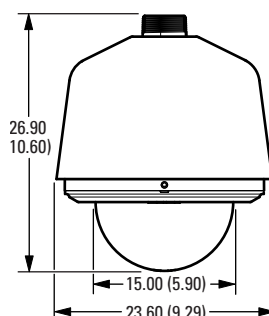
### Standard Pendant

- Standard Pendant Available in Black or Gray Finish
- Aluminum Construction



### Environmental Pendant

- Environmental Pendant Available in Gray Finish Only
- Aluminum Construction
- Includes Sun Shield, Heater, and Blower



### Stainless Steel Environmental Pendant

- Stainless Steel Environmental Pendant Available in Gray Finish Only
- All Stainless Steel Construction
- Includes Sun Shield, Heater, and Blower

# TECHNICAL SPECIFICATIONS

## CAMERA

|                          |   |
|--------------------------|---|
| Sensor Type              | 1/3-inch CCD                                |
| Optical Zoom             | 18X   |
| Maximum Resolution       | 1280 x 960                                  |
| Lens                     | f/1.6 (focal length, 4.7 ~ 84.6 mm optical) |
| Horizontal Angle of View | 37.6° (wide) ~ 2.0° (tele)                  |
| Aspect Ratios            | 4:3 or 16:9                                 |
| Light Sensitivity        | f/1.6; 2,850°K; SNR >24dB                   |
| Color (33 ms)            | 0.70 lux                                    |
| Color (250 ms)           | 0.07 lux                                    |
| Mono (33 ms)             | 0.25 lux                                    |
| Mono (250 ms)            | 0.02 lux                                    |
| Day/Night Capabilities   | Yes   |
| IR Cut Filter            | Yes   |
| Wide Dynamic Range       | 60 dB                                       |
| Iris Control             | Auto iris with manual override              |
| Backlight Compensation   | Yes   |
| Automatic Gain Control   | Yes   |
| Active Noise Filtering   | Yes   |

## VIDEO

|                |   |
|----------------|---|
| Video Encoding | H.264 High, Main, or Base profiles and MJPEG  |
| Video Streams  | Up to 2 simultaneous streams; the secondary stream is variable based on the setup of the primary stream                       |
| Frame Rate     | Up to 30, 25, 24, 15, 12.5, 12, 10, 8, 7.5, 6, 5, 4, 3, 2.5, 2, 1 (depending on coding, resolution, and stream configuration) |

Available Resolutions

| Resolution |       |        |              | H.264 High Profile<br>(IP GOP structure) |                             |
|------------|-------|--------|--------------|--|-----------------------------|
| MPx        | Width | Height | Aspect Ratio | Maximum IPS                              | Recommended Bit Rate (Mbps) |
| 1.30       | 1280  | 960    | 4:3          | 20                                       | 3.00                        |
| 0.92       | 1280  | 720    | 16:9         | 30                                       | 2.90                        |
| 0.49       | 800   | 608    | 4:3          | 20                                       | 1.75                        |
| 0.31       | 640   | 480    | 4:3          | 20                                       | 1.20                        |
| 0.23       | 640   | 352    | 16:9         | 30                                       | 1.15                        |
| 0.18       | 480   | 368    | 4:3          | 20                                       | 0.75                        |
| 0.13       | 480   | 272    | 16:9         | 30                                       | 0.75                        |
| 0.08       | 320   | 240    | 4:3          | 20                                       | 0.40                        |
| 0.06       | 320   | 176    | 16:9         | 30                                       | 0.35                        |

|                     |   |
|---------------------|---|
| Supported Protocols | TCP/IP, UDP/IP (Unicast, Multicast IGMP), UPnP, DNS, DHCP, RTP, RTSP, NTP, IPv4, IPv6*, SNMP v2c/v3, QoS, HTTP, HTTPS, LDAP (client), SSH, SSL, SMTP, FTP, and 802.1x (EAP) |
|---------------------|---|

Users

|           |   |
|-----------|---|
| Unicast   | Up to 20 simultaneous users depending on resolution settings (2 guaranteed streams) |
| Multicast | Unlimited users H.264   |

|                 |                    |
|-----------------|--------------------|
| Security Access | Password protected |
|-----------------|--------------------|

|                    |                            |
|--------------------|----------------------------|
| Software Interface | Web browser view and setup |
|--------------------|----------------------------|

|                          |  |
|--------------------------|--|
| Pelco System Integration | Endura 2.0 (or later)<br>Digital Sentry 7.3 (or later) |
|--------------------------|--|

|          |                              |
|----------|------------------------------|
| Open API | Pelco API or ONVIF Profile S |
|----------|------------------------------|

Minimum System Requirements

|                        |   |
|------------------------|---|
| Processor              | Intel® Core™ i3 Processor, 2.4 GHz  |
| Operating System       | Windows® 7 (32-bit and 64-bit) with DirectX® 11, Windows XP Service Pack 3 with DirectX 9.0c, or Mac® OS X 10.4 (or later)            |
| Memory                 | 4 GB RAM  |
| Network Interface Card | 100 megabits (or greater)   |
| Monitor                | Minimum of 1024 x 768 resolution, 16- or 32-bit pixel color resolution  |
| Web Browser            | Internet Explorer 8.0 (or later) or Firefox 3.5 (or later); Internet Explorer 8.0 (or later) is recommended for configuring analytics |
| Media Player           | Pelco Media Player <sup>†</sup> or QuickTime® 7.6.5 for Windows XP and Windows 7; or QuickTime 7.6.4 for Mac OS X 10.4 (or later)     |

\*Supports mixed IPv4 and IPv6 installations, but not IPv6-only deployments.

<sup>†</sup>Pelco Media Player is recommended for control, smoothness, and reduced latency as compared to QuickTime.

# TECHNICAL SPECIFICATIONS

## SOFTWARE FEATURES

- 256 Presets
- 16 Tours
- $\pm 0.1^\circ$  Preset Accuracy
- Multilingual Menus (English, Spanish, Portuguese, Italian, German, French, Russian, Polish, and Turkish)
- Password Protection
- 280°/sec Pan Preset Speed and 160°/sec Tilt Preset Speed
- 8 Privacy Zones, Configurable in Size
- "Auto Flip" Feature Rotates Dome 180° at Bottom of Tilt Travel
- Configurable Park with Actions
- Proportional Pan/Tilt Continually Decreases Pan/Tilt Speeds in Proportion to Depth of Zoom

## ANALYTICS

Required Systems for Pelco Analytics

|                 |   |
|-----------------|---|
| Pelco Interface | WS5200 Advanced System Management Software on an Endura 2.0 (or later) system   |
| Open API        | The Pelco API can transmit behavior alarm data to third-party applications, available at <a href="http://pdn.pelco.com">pdn.pelco.com</a> |

## GENERAL

|   |  |
|---|--|
| Construction                            |  |
| Back Box                                | Aluminum   |
| Dome Drive                              | Aluminum, thermo plastic   |
| Lower Dome                              | Acrylic  |
| Stainless Steel Construction            |  |
| Back Box                                | 316 stainless steel; gray, polyurethane powder coated finish   |
| Lower Dome                              | 316 stainless steel; black, polyurethane powder coated finish  |
| Bubble                                  | Acrylic, clear or smoked   |
| Light Attenuation                       |  |
| Smoked                                  | f/0.5 light loss   |
| Clear                                   | f/0.0 light loss   |
| Cable Entry (back box)                  |  |
| In-Ceiling                              | 0.75-inch conduit fitting  |
| Pendant                                 | Through 1.5-inch NPT pendant mount   |
| Weight (approximate)                    | Unit Shipping  |
| In-Ceiling                              | 2.1 kg (4.6 lb) 3.3 kg (7.3 lb)  |
| Environmental In-Ceiling                | 2.4 kg (5.3 lb) 3.9 kg (8.6 lb)  |
| Standard Pendant                        | 2.7 kg (5.9 lb) 4.7 kg (10 lb)   |
| Environmental Pendant                   | 3.3 kg (7.3 lb) 5.3 kg (12 lb)   |
| Stainless Steel (environmental pendant) | 6.3 kg (14 lb) 8.3 kg (18 lb)  |
| Installation Environment                |  |
| In-Ceiling                              | Indoor/environmental   |
| Pendant                                 | Indoor/environmental   |
| Operating Temperature                   |  |
| In-Ceiling                              | 0° to 50°C (32° to 122°F)  |
| Standard Pendant                        | (Assumes no wind chill factor)   |
| Maximum                                 | 45°C (113°F) absolute maximum;<br>35°C (95°F) sustained maximum  |
| Minimum                                 | -4°C (25°F) sustained minimum  |
| Environmental In-Ceiling/<br>Pendant    | (Assumes no wind chill factor)   |
| Maximum                                 | 60°C (140°F) absolute maximum;<br>50°C (122°F) sustained maximum   |
| Minimum                                 | -45°C (-50°F) sustained minimum;<br>-51°C (-60°F) absolute minimum;<br>prevents icing at sustained minimum of<br>-30°C (-22°F); de-ices 2.5 mm (0.1 in.) within<br>3 hours after power-up at -30°C (-22°F)<br>(no wind chill factor) |

|   |   |
|---|---|
| Operating Humidity  |   |
| In-Ceiling (indoor),<br>Standard Pendant  | 10 to 90% RH (noncondensing)  |
| Environmental In-Ceiling,<br>Environmental Pendant,<br>Stainless Steel<br>(environmental pendant) | 10 to 100% RH (condensing)  |
| Effective Projected Area (EPA)  | 20.5 square inches (without mount),<br>47 square inches (with IWM Series mount) |

## MECHANICAL

(Dome Drive Only)

|                         |                                  |
|-------------------------|----------------------------------|
| Variable Speed          | 0.1° to 280°                     |
| Preset Accuracy         | $\pm 0.1^\circ$                  |
| Pan Movement            | 360° continuous pan rotation     |
| Vertical Tilt           | +0° to -90°                      |
| Manual Pan/Tilt Speeds  |                                  |
| Pan                     | 0.1° to 80°/sec manual operation |
| Tilt                    | 0.1° to 45°/sec manual operation |
| Preset Speeds           |                                  |
| Pan                     | 280°/sec                         |
| Tilt                    | 160°/sec                         |
| Rotating Discreet Liner | Sealed fixed bubble              |

## ELECTRICAL

|               |  |
|---------------|--|
| Ports         | RJ-45 connector for 100Base-TX<br>Auto MDI/MDI-X<br>Autonegotiate/manual setting     |
| Cabling Type  | Cat5 or better for 100Base-TX  |
| Input Voltage | 18 to 32 VAC; 24 VAC nominal<br>22 to 27 VDC; 24 VDC nominal                         |
| Input Power   |  |
| 24 VAC        | 23 VA nominal (without heater and blower);<br>73 VA nominal (with heater and blower) |
| 24 VDC        | 0.7 A nominal (without heater and blower);<br>3 A nominal (with heater and blower)   |
| PoE           | IEEE802.3af (without heater and blower)  |

# TECHNICAL SPECIFICATIONS

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class A
- FCC, Class A
- UL/cUL Listed
- C-Tick
- ONVIF Profile S
- Cisco® Medianet Media Services Proxy 2.0 compatible
- Environmental pendants were tested in accordance with:
  - IEC 60068-2-1
  - IEC 60068-2-2
  - IEC 60068-2-6
  - IEC 60068-2-14
  - IEC 60068-2-27
  - IEC 60068-2-30
  - IEC 60068-2-78
- Meets NEMA Type 4X and IP66 standards when installed properly (B5-F-E, B5-PG-E, and B5-PSG-E)
- U.S. Patents 5,931,432; 6,793,415 B2; 6,802,656 B2; 6,821,222 B2; 7,161,615 B2

## RECOMMENDED MOUNTS

### In-Ceiling Domes

|       |  |
|-------|--|
| SD5-P | 2' x 2' drop ceiling panel, aluminum construction; replaces 2' x 2' ceiling tile |
| SCA1  | Support rails for B5-F; for use in ceiling tile applications                     |

### Pendant Domes

|             |   |
|-------------|---|
| BB5-PCA-BK  | Pendant conduit adapter, black  |
| BB5-PCA-GY  | Pendant conduit adapter, gray   |
| IWM Series  | Wall mount, with or without integral 24 VAC, 100 VA transformer; black or gray finish; can be adapted for corner, parapet or pole application |
| MRCA        | Ceiling mount, black  |
| PP4348      | Parapet roof mount  |
| PP350/PP351 | Parapet wall/roof mount   |
| SWM Series  | Compact wall mount, black or gray finish; can be adapted for corner or pole applications  |
| IDM4012SS   | Stainless steel wall mount with feed-through capabilities   |

## OPTIONAL ACCESSORIES

|                    |   |
|--------------------|---|
| ALM-1              | External alarm accessory                                  |
| AUD-1              | External audio accessory                                  |
| MCS Series         | Indoor, 24 VAC power supply                               |
| WCS Series         | Outdoor, 24 VAC power supply                              |
| SECURE-SLA License | Enables Information Assurance compliant mode of operation |

*Refer to individual power supply specifications for more information.*

# TECHNICAL SPECIFICATIONS

## SYSTEM MODEL NUMBERS

| Type                                    | Back Box Color             | Lower Dome | HD, 1.3 MPx, 18X Color |
|---|----------------------------|------------|------------------------|
| In-ceiling, indoor                      | Black with white trim ring | Smoked     | S5118-FW0              |
|   |                            | Clear      | S5118-FW1              |
| In-ceiling, environmental               | Black with black trim ring | Smoked     | S5118-YB0              |
|   |                            | Clear      | S5118-YB1              |
| Pendant, standard                       | Gray                       | Smoked     | S5118-PG0              |
|   |                            | Clear      | S5118-PG1              |
|   | Black                      | Smoked     | S5118-PB0              |
|   |                            | Clear      | S5118-PB1              |
| Pendant, environmental                  | Gray                       | Smoked     | S5118-EG0              |
|   |                            | Clear      | S5118-EG1              |
| Pendant, environmental, stainless steel | Gray                       | Smoked     | S5118-ESG0             |
|   |                            | Clear      | S5118-ESG1             |

## COMPONENT MODEL NUMBERS

| Back Box |   | High Definition (HD) Lower Dome* |                                  | Dome Drive |                           |
|----------|---|----------------------------------|----------------------------------|------------|---------------------------|
| B5-F     | In-ceiling                                    | LDHDF-0                          | In-ceiling, smoked               | D5118      | 1.3 MPx, 18X optical zoom |
| B5-F-E   | In-ceiling, environmental                     | LDHDF-1                          | In-ceiling, clear                |            |                           |
| B5-PG    | Pendant, gray                                 | LDHDPB-0                         | Pendant, smoked                  |            |                           |
| B5-PB    | Pendant, black                                | LDHDPB-1                         | Pendant, clear                   |            |                           |
| B5-PG-E  | Pendant, gray, environmental                  | LDHDSS-0                         | Pendant, smoked, stainless steel |            |                           |
| B5-PSG-E | Pendant, gray, environmental, stainless steel | LDHDSS-1                         | Pendant, clear, stainless steel  |            |                           |

\*Use the pendant lower domes with the environmental in-ceiling and environmental pendant back boxes.