



by **Schneider** Electric

I N S T A L L A T I O N

IME Series Network Mini Domes



**Sarix® Cameras with SureVision
Technology**

C2269M (7/13)

Contents

Important Notices	5
Legal Notice	5
Regulatory Notices	5
Warranty Statement	5
Introduction	6
Models	7
Recommended Mounts	8
Optional Accessories	8
Getting Started	9
In-Ceiling Models	9
Supplied Parts List	9
User-Supplied Parts List	9
Surface Mount Models	10
Supplied Parts List	10
User-Supplied Parts List	10
Pendant Models	11
Supplied Parts List	11
User-Supplied Parts List	11
Product Overview	12
Installation	13
In-Ceiling: Indoor and Environmental/Vandal-Resistant	14
Pendant: Indoor	20
Pendant: Environmental/Vandal-Resistant	25
Surface Mount: Indoor	30
Surface Mount: Environmental/Vandal-Resistant	35
Cable Terminations	40
Ethernet Wiring Requirement for PoE	40
Alarm/Relay/Audio Port	41
IP Address Settings	42
Logging On to the Camera	43
Surface Mount Templates	44
Specifications	46

List of Illustrations

1	Camera Ports and LEDs	12
2	Plastic Retaining Ring	13
3	Cutting the Hole: In-Ceiling	14
4	Preparing the Cable Entry Holes: In-Ceiling	14
5	Installing the Back Box: In-Ceiling	15
6	Connecting the Wiring: In-Ceiling	16
7	Installing the Camera: In-Ceiling	17
8	Adjusting the Field of View: In-Ceiling	18
9	Installing the Lower Dome: In-Ceiling	19
10	Installing the Pendant Mount: Indoor, Pendant	20
11	Pulling the Wiring: Indoor, Pendant	20
12	Connecting the Wiring: Indoor, Pendant	21
13	Installing the Camera: Indoor, Pendant	22
14	Adjusting the Field of View: Indoor, Pendant	23
15	Installing the Lower Dome: Indoor, Pendant	24
16	Installing the Pendant Mount: Environmental/Vandal-Resistant, Pendant	25
17	Pulling the Wiring: Environmental/Vandal-Resistant, Pendant	25
18	Connecting the Wiring: Environmental/Vandal-Resistant, Pendant	26
19	Installing the Camera: Environmental/Vandal-Resistant, Pendant	27
20	Adjusting the Field of View: Environmental/Vandal-Resistant, Pendant	28
21	Installing the Lower Dome: Environmental/Vandal-Resistant, Pendant	29
22	Fastening the Mounting Plate: Indoor, Surface Mount	30
23	Pulling the Wiring: Indoor, Surface Mount	30
24	Connecting the Wiring: Indoor, Surface Mount	31
25	Installing the Camera: Indoor, Surface Mount	32
26	Adjusting the Field of View: Indoor, Surface Mount	33
27	Installing the Lower Dome: Indoor, Surface Mount	34
28	Fastening the Mounting Plate: Environmental/Vandal-Resistant, Surface Mount	35
29	Preparing the Cable Entry Holes: Environmental/Vandal-Resistant, Surface Mount	35
30	Installing the Surface Mounting Ring: Environmental/Vandal-Resistant, Surface Mount	36
31	Pulling the Wiring: Environmental/Vandal-Resistant, Surface Mount	36
32	Connecting the Wiring: Environmental/Vandal-Resistant, Surface Mount	37
33	Installing the Camera: Environmental/Vandal-Resistant, Surface Mount	38
34	Adjusting the Field of View: Environmental/Vandal-Resistant, Surface Mount	39
35	Installing the Lower Dome: Environmental/Vandal-Resistant, Surface Mount	39
36	Cable Pin Descriptions	40
37	Alarm/Relay/Audio Port Pins	41
38	Template for Surface Mount: Indoor	44
39	Template for Surface Mount: Environmental/Vandal-Resistant	45

Important Notices

LEGAL NOTICE

SOME PELCO EQUIPMENT CONTAINS, AND THE SOFTWARE ENABLES, AUDIO/VISUAL AND RECORDING CAPABILITIES, THE IMPROPER USE OF WHICH MAY SUBJECT YOU TO CIVIL AND CRIMINAL PENALTIES. APPLICABLE LAWS REGARDING THE USE OF SUCH CAPABILITIES VARY BETWEEN JURISDICTIONS AND MAY REQUIRE, AMONG OTHER THINGS, EXPRESS WRITTEN CONSENT FROM RECORDED SUBJECTS. YOU ARE SOLELY RESPONSIBLE FOR INSURING STRICT COMPLIANCE WITH SUCH LAWS AND FOR STRICT ADHERENCE TO ANY/ALL RIGHTS OF PRIVACY AND PERSONALTY. USE OF THIS EQUIPMENT AND/OR SOFTWARE FOR ILLEGAL SURVEILLANCE OR MONITORING SHALL BE DEEMED UNAUTHORIZED USE IN VIOLATION OF THE END USER SOFTWARE AGREEMENT AND RESULT IN THE IMMEDIATE TERMINATION OF YOUR LICENSE RIGHTS THEREUNDER.

REGULATORY NOTICES

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

WARRANTY STATEMENT

For information about Pelco's product warranty and thereto related information, refer to www.pelco.com/warranty.

Introduction

The Sarix® IME Series IP cameras feature SureVision technology that seamlessly delivers advanced low-light performance with wide dynamic range (WDR) and anti-bloom technologies that operate simultaneously. They are part of Pelco's Enhanced (E) range of cameras, providing industry-leading image quality and performance.

The IME Series mini dome camera is easy to install, offers flexible mounting options, and uses a standard Web browser for easy remote setup and administration.

The IME Series easily connects to Pelco IP and hybrid systems such as Endura® version 2.0 (or later), Digital Sentry® version 7.3 (or later), and DX4700/DX4800 hybrid video recorders. The camera is also conformant with ONVIF Profile S for connection with third-party software. Pelco offers an application programming interface (API) and software developer's kit (SDK) for interfacing with Pelco's IP cameras.

This document describes the installation and initial setup procedures to begin operating the camera. For more information about operating your camera, refer to the operation manual specific to the product.

NOTE: For additional information about product documentation in English and other languages, go to www.pelco.com/sarix and navigate to the IME Series Web page.

MODELS

IMES19-1I	Indoor, 3 ~ 9 mm focal range, in-ceiling, standard definition, white
IME119-1I	Indoor, 3 ~ 9 mm focal range, in-ceiling, 1 MPx, white
IME219-1I	Indoor, 3 ~ 9 mm focal range, in-ceiling, 2 MPx, white
IME319-1I	Indoor, 3 ~ 9 mm focal range, in-ceiling, 3 MPx, white
IME319-B1I	Indoor, 3 ~ 9 mm focal range, in-ceiling, 3 MPx, black
IMES19-1S	Indoor, 3 ~ 9 mm focal range, surface mount, standard definition, white
IME119-1S	Indoor, 3 ~ 9 mm focal range, surface mount, 1 MPx, white
IME219-1S	Indoor, 3 ~ 9 mm focal range, surface mount, 2 MPx, white
IME319-1S	Indoor, 3 ~ 9 mm focal range, surface mount, 3 MPx, white
IME319-B1S	Indoor, 3 ~ 9 mm focal range, surface mount, 3 MPx, black
IMES19-1P	Indoor, 3 ~ 9 mm focal range, pendant, standard definition, white
IME119-1P	Indoor, 3 ~ 9 mm focal range, pendant, 1 MPx, white
IME219-1P	Indoor, 3 ~ 9 mm focal range, pendant, 2 MPx, white
IME319-1P	Indoor, 3 ~ 9 mm focal range, pendant, 3 MPx, white
IME319-B1P	Indoor, 3 ~ 9 mm focal range, pendant, 3 MPx, black
IMES19-1EI	Environmental, 3 ~ 9 mm focal range, in-ceiling, standard definition, light gray
IME119-1EI	Environmental, 3 ~ 9 mm focal range, in-ceiling, 1 MPx, light gray
IME219-1EI	Environmental, 3 ~ 9 mm focal range, in-ceiling, 2 MPx, light gray
IME319-1EI	Environmental, 3 ~ 9 mm focal range, in-ceiling, 3 MPx, light gray
IMES19-1ES	Environmental, 3 ~ 9 mm focal range, surface mount, standard definition, light gray
IME119-1ES	Environmental, 3 ~ 9 mm focal range, surface mount, 1 MPx, light gray
IME219-1ES	Environmental, 3 ~ 9 mm focal range, surface mount, 2 MPx, light gray
IME319-1ES	Environmental, 3 ~ 9 mm focal range, surface mount, 3 MPx, light gray
IMES19-1EP	Environmental, 3 ~ 9 mm focal range, pendant, standard definition, light gray
IME119-1EP	Environmental, 3 ~ 9 mm focal range, pendant, 1 MPx, light gray
IME219-1EP	Environmental, 3 ~ 9 mm focal range, pendant, 2 MPx, light gray
IME319-1EP	Environmental, 3 ~ 9 mm focal range, pendant, 3 MPx, light gray
IMES19-1VI	Vandal-resistant, 3 ~ 9 mm focal range, in-ceiling, standard definition, light gray
IME119-1VI	Vandal-resistant, 3 ~ 9 mm focal range, in-ceiling, 1 MPx, light gray
IME219-1VI	Vandal-resistant, 3 ~ 9 mm focal range, in-ceiling, 2 MPx, light gray
IME319-1VI	Vandal-resistant, 3 ~ 9 mm focal range, in-ceiling, 3 MPx, light gray
IMES19-1VS	Vandal-resistant, 3 ~ 9 mm focal range, surface mount, standard definition, light gray
IME119-1VS	Vandal-resistant, 3 ~ 9 mm focal range, surface mount, 1 MPx, light gray
IME219-1VS	Vandal-resistant, 3 ~ 9 mm focal range, surface mount, 2 MPx, light gray
IME319-1VS	Vandal-resistant, 3 ~ 9 mm focal range, surface mount, 3 MPx, light gray
IMES19-1VP	Vandal-resistant, 3 ~ 9 mm focal range, pendant, standard definition, light gray
IME119-1VP	Vandal-resistant, 3 ~ 9 mm focal range, pendant, 1 MPx, light gray
IME219-1VP	Vandal-resistant, 3 ~ 9 mm focal range, pendant, 2 MPx, light gray
IME319-1VP	Vandal-resistant, 3 ~ 9 mm focal range, pendant, 3 MPx, light gray
IME3122-1I	Indoor, 9 ~ 22 mm focal range, in-ceiling, 3 MPx, white
IME3122-B1I	Indoor, 9 ~ 22 mm focal range, in-ceiling, 3 MPx, black
IME3122-1S	Indoor, 9 ~ 22 mm focal range, surface mount, 3 MPx, white
IME3122-B1S	Indoor, 9 ~ 22 mm focal range, surface mount, 3 MPx, black
IME3122-1P	Indoor, 9 ~ 22 mm focal range, pendant, 3 MPx, white
IME3122-B1P	Indoor, 9 ~ 22 mm focal range, pendant, 3 MPx, black
IME3122-1EI	Environmental, 9 ~ 22 mm focal range, in-ceiling, 3 MPx, light gray
IME3122-1ES	Environmental, 9 ~ 22 mm focal range, surface mount, 3 MPx, light gray

IME3122-1EP	Environmental, 9 ~ 22 mm focal range, pendant, 3 MPx, light gray
IME3122-1VI	Vandal-resistant, 9 ~ 22 mm focal range, in-ceiling, 3 MPx, light gray
IME3122-1VS	Vandal-resistant, 9 ~ 22 mm focal range, surface mount, 3 MPx, light gray
IME3122-1VP	Vandal-resistant, 9 ~ 22 mm focal range, pendant, 3 MPx, light gray

RECOMMENDED MOUNTS

WMVE-SR	Wall mount, light gray; for use with environmental and vandal-resistant pendant mount options
WMVE-SW	Wall mount, white; for use with indoor pendant mount options
PA101	Pole adapter for use with WMVE-SR wall mount

OPTIONAL ACCESSORIES

IPCT01	Pelco IP camera tester*
ALM-1	External alarm accessory
POE20U560G	Single port PoE injector
IMELD1-0I	Lower dome, smoked, in-ceiling, white
IMELD1-0BI	Lower dome, smoked, in-ceiling, black
IMELD1-0S	Lower dome, smoked, surface mount/pendant, white
IMELD1-0BS	Lower dome, smoked, surface mount/pendant, black
IMELD1-0V	Lower dome, smoked, environmental/vandal-resistant, bubble only
IMELD1-1V	Lower dome, clear, environmental/vandal-resistant, bubble only

*Contact Pelco Product Support for more information about the use of the Pelco IP camera tester with cameras.

Getting Started

Before installing your device, thoroughly familiarize yourself with the information in the installation section of this manual.

NOTES:

- Pelco recommends connecting the device to a network that uses a Dynamic Host Configuration Protocol (DHCP) server to address devices.
- Do not use a network hub when configuring the network settings for the device.
- To ensure secure access, place the device behind a firewall when it is connected to a network.

IN-CEILING MODELS

SUPPLIED PARTS LIST

Qty	Description
1	Camera
1	Back box
1	Lower dome
1	Bit
1	8-pin connector for Alarm/Relay/Audio port
4	MAC address labels (extra)
1	IME Series Mini Dome IP Camera Installation manual
1	Important Safety Instructions
1	Resource disc

USER-SUPPLIED PARTS LIST

In addition to the standard tools and cables required for a video security installation, you will need to provide the following items:

Qty	Description
1	Pipe/conduit (if applicable)
1	Conduit adapters (if applicable)
1	RJ-45 connector to terminate wires
1	Cat5 (or higher) cable
1	#2 Phillips screwdriver
1	24 AWG, 8-wire multiconductor cable (if using alarm, relays, and/or line-in and line-out audio)

SURFACE MOUNT MODELS

SUPPLIED PARTS LIST

Qty	Description
-----	-------------

1	Camera
1	Mounting plate
1	Surface mounting ring (for environmental and vandal-resistant models)
1	Lower dome
1	Bit
1	8-pin connector for Alarm/Relay/Audio port
4	MAC address labels (extra)
1	IME Series Mini Dome IP Camera Installation manual
1	Important Safety Instructions
1	Resource disc

USER-SUPPLIED PARTS LIST

In addition to the standard tools and cables required for a video security installation, you will need to provide the following items:

Qty	Description
-----	-------------

1	Mounting substrate and fasteners for indoor surface mount as follows: • standard single-gang electrical box and appropriate fasteners or • any substrate using 2 standard screws, size M4 or #8 hardware
1	Mounting substrate and fasteners for environmental and vandal-resistant surface mount as follows: • standard 4 in. square electrical box and appropriate fasteners, or • standard 2-gang electrical box and appropriate fasteners or • any substrate using 3 standard screws, size M6 or 1/4 in. hardware
1	Pipe/conduit (environmental and vandal-resistant models, if applicable)
1	Conduit adapters (environmental and vandal-resistant models, if applicable)
1	Cat5 (or higher) cable
1	RJ-45 connector
1	24 AWG, 8-wire multiconductor cable (if using alarm, relays, and/or line-in and line-out audio)

PENDANT MODELS

SUPPLIED PARTS LIST

Qty	Description
1	Camera
1	Pendant mount
1	Lower dome
1	Bit
1	8-pin connector for Alarm/Relay/Audio port
4	MAC address labels (extra)
1	IME Series Mini Dome IP Camera Installation manual
1	Important Safety Instructions
1	Resource disc

USER-SUPPLIED PARTS LIST

In addition to the standard tools and cables required for a video security installation, you will need to provide the following items:

Qty	Description
1	Pipe/conduit (if applicable)
1	Pipe nipple adapters (if using pipe/conduit)
1	Cat5 (or higher) cable
1	WMVE-SR (if using the wall mount for environmental and vandal-resistant pendant models)
1	WMVE-SW (if using the wall mount for indoor pendant models)
1	RJ-45 connector
1	24 AWG, 8-wire multiconductor cable (if using alarm, relays, or line-in and line-out audio)

Product Overview

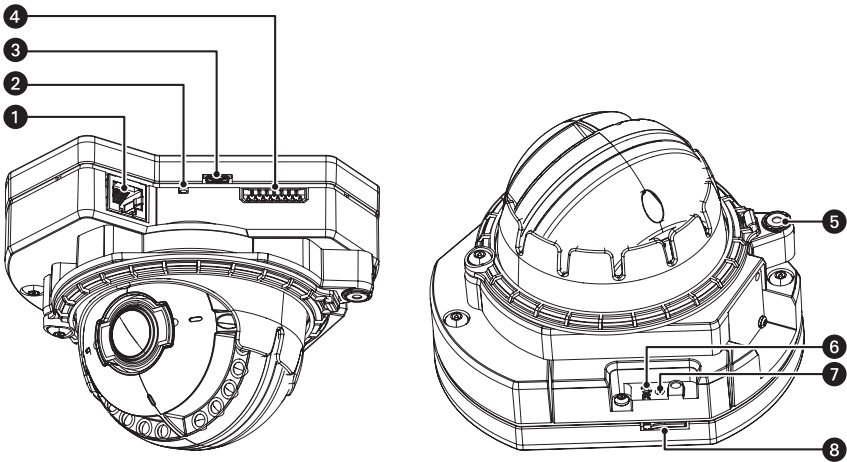


Figure 1. Camera Ports and LEDs

- 1 RJ-45 Network Port:** Connects the camera to the IP network. Also supplies power to the camera (PoE), through the same connector.
- 2 Ethernet Activity/Link LED:** Flashes green to indicate that data is being transmitted or received by the camera. Glows solid amber to indicate that a live network connection is established.
- 3 Accessory Port:** Connects with compatible Pelco accessories.
- 4 Alarm/Relay/Audio Port:** Connects to alarms, relays, and audio in/out.
- 5 Microphone:** Connects to built-in microphone on indoor and vandal-resistant models.
- 6 Reset Button:** Reboots the camera or restores the camera's factory default settings. This button is recessed. Using a small tool, such as a paper clip, press and release the reset button once to reboot the camera. Press and hold the reset button for 10 seconds to restore the camera to the factory default settings.
- 7 Power LED:** Flashes green during the configuration sequence; glows solid green after the sequence is complete. The LED can be disabled. If this LED glows red (solid or flashing), contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international) for assistance.
- 8 Micro SD Slot:** Connects to local storage.

For cable terminations, refer to *Cable Terminations* on page 40.

Installation

You can install the IME Series mini domes using one of the following methods:

- Installation in a suspended ceiling or a fixed ceiling. Refer to *In-Ceiling: Indoor and Environmental/Vandal-Resistant* on page 14.
- Installation using a pendant mount. Refer to *Pendant: Indoor* on page 20 and *Pendant: Environmental/Vandal-Resistant* on page 25.
- Installation on a wall or a fixed ceiling. Refer to *Surface Mount: Indoor* on page 30 and *Surface Mount: Environmental/Vandal-Resistant* on page 35.

⚠ WARNING	
	HOT SURFACE! RISK OF BURN! • Always turn off power and allow the unit to cool prior to handling. • Always handle the unit from the plastic retaining ring. See the manual for detailed instructions. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN SERIOUS INJURY.

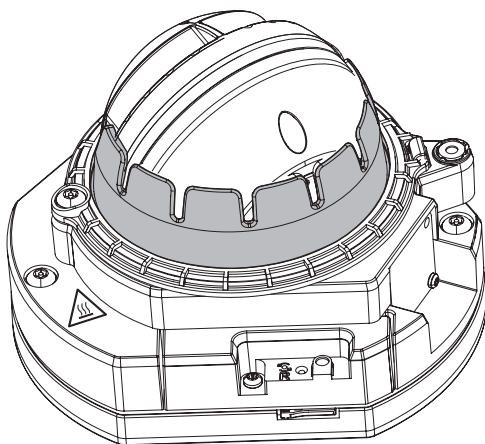


Figure 2. Plastic Retaining Ring

IN-CEILING: INDOOR AND ENVIRONMENTAL/VANDAL-RESISTANT

1. Locate the center point of the mounting location in the ceiling.
2. Cut a 17.145 cm (6.75 in.) hole in the ceiling. Using a hole saw is recommended.
3. Pull the wiring through the hole.

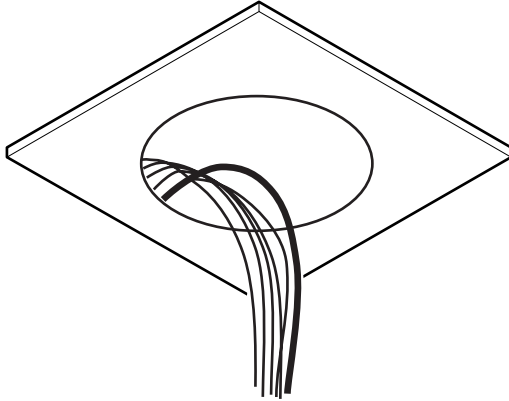


Figure 3. Cutting the Hole: In-Ceiling

4. Prepare the cable entry holes in the back box for either side or top entry as follows:
 - a. Remove the conduit plug for either side or top entry.
 - b. Prepare the cable entry holes as follows:
 - **(1 If using conduit (not supplied):** Replace with 25 mm or 3/4 in. conduit adapters (not supplied).
 - **(2 If using the grommet (plenum rating is not required):** Use the grommet (supplied). Remove the grommet from the back box.

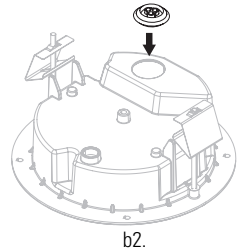
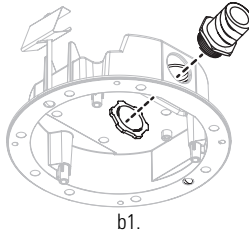
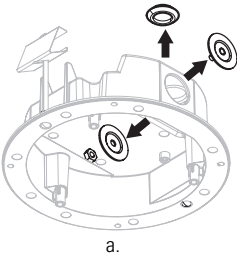


Figure 4. Preparing the Cable Entry Holes: In-Ceiling

5. Install the back box as follows:
- Compress the spring paddles on the back box.
 - Push the back box through the hole.
 - Tighten the two mounting screws to secure the back box.
 - Feed the wires as follows:
 - **If using conduit (not supplied):** Feed wires through the conduit adapter, into the back box, and attach the conduit to the adapter.
 - **If using the grommet (supplied):** Feed the wires into the back box, pass the unterminated cables through the grommet, and insert the grommet in either the side or top entry.
 - Replace the other entry opening with the conduit plug (supplied).
 - Terminate the wires with the appropriate connector (not supplied).

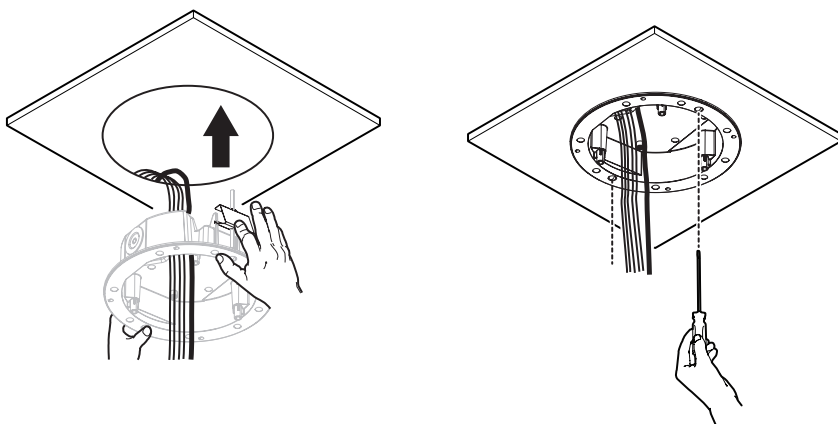


Figure 5. Installing the Back Box: In-Ceiling

6. Connect the wiring to the camera as follows:
- Connect the network cable to the RJ-45 network port on the base of the camera.
 - Connect the Micro USB cable and optional multiconductor cable as follows:
 - **If using a permanently installed Pelco accessory:** Perform step 5d on page 15 with the grommet and the Micro B USB cable that is supplied with the Pelco accessory. Connect the Micro B USB cable to the accessory port on the base of the camera.

NOTE: Remove this accessory before completing the installation.

- **(Optional) If using alarms, relays, or audio:** Connect a 24 AWG, 8-wire multiconductor cable to the 8-pin removable connector (supplied), and then insert the connector back into the base of the camera. This cable is for alarms, relays, and audio line-in and line-out.

NOTE: For cable terminations, refer to *Cable Terminations* on page 40.

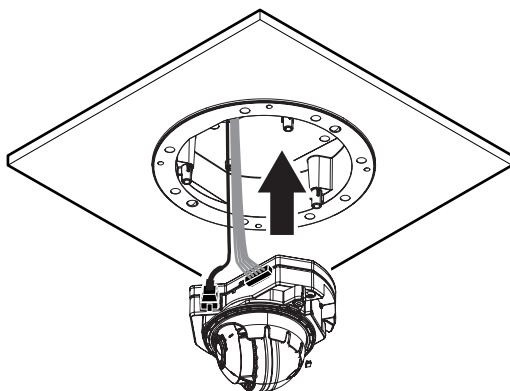


Figure 6. Connecting the Wiring: In-Ceiling

7. Install the camera as follows:
 - a. Install the camera into the back box.
 - b. Tighten the two captive fasteners using the bit (supplied) until they are secure.
 - c. Dress the wires inside the back box.

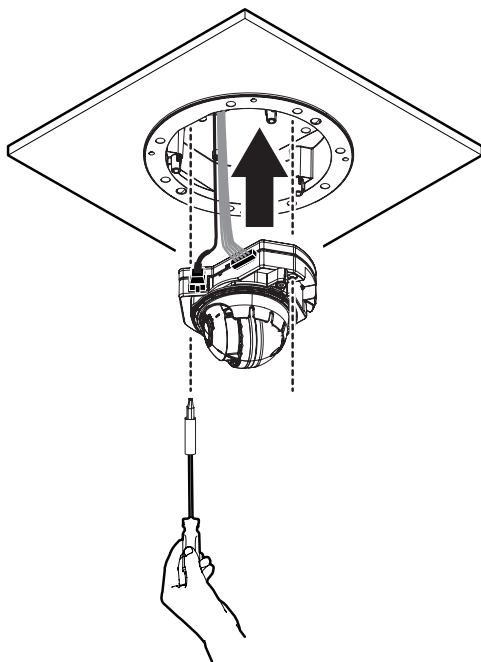


Figure 7. Installing the Camera: In-Ceiling

8. Apply power to the camera. The camera will complete a configuration sequence. The LED at the base of the camera will blink for several minutes while the camera system boots. The LED will turn off when the system boot cycle completes.

NOTE: If the camera is not connected to a DHCP server and DHCP is enabled, the configuration sequence might take up to five minutes to complete.

9. If you do not know the camera's IP address, install the Pelco Device Utility software available at www.pelco.com. The utility will locate the assigned name, IP address, and MAC address of the camera.
10. View the camera image using a Web browser.

11. Adjust the camera field of view using the Web browser.
 - a. Loosen the locking screw with the bit (supplied).
 - b. Position the camera where desired.
 - c. Tighten the locking screw using the bit (supplied).
 - d. Use the Web browser to adjust the focus and zoom.

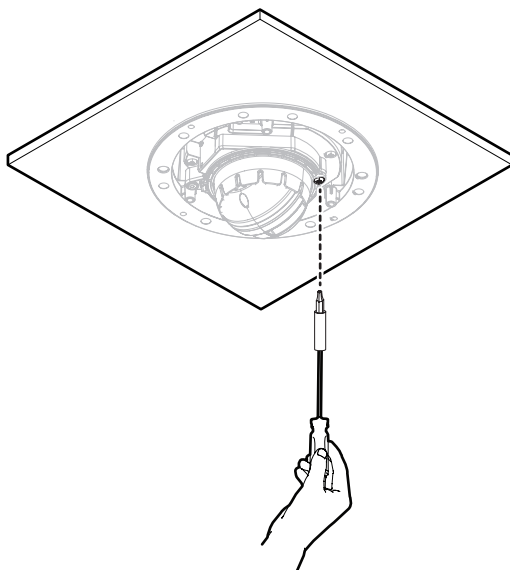


Figure 8. Adjusting the Field of View: In-Ceiling

12. Install the lower dome as follows:
 - a. Align the screw holes on the trim ring with the holes on the back box.
 - b. Tighten the three tamperproof captive fasteners using the bit (supplied) until the trim ring and bubble are secure.

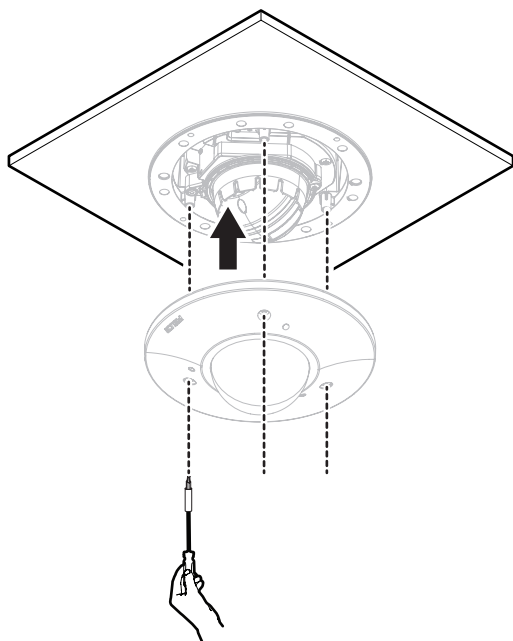


Figure 9. Installing the Lower Dome: In-Ceiling

PENDANT: INDOOR

1. Install the pendant mount (supplied) or the wall mount (not supplied).
The pendant mount attaches to 25 mm or 3/4 in. pipe/conduit (not supplied) through a pipe nipple adapter (not supplied).

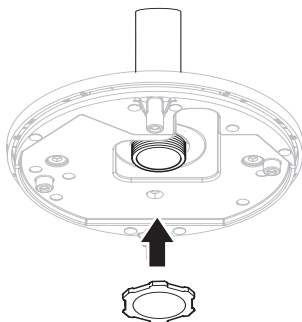


Figure 10. Installing the Pendant Mount: Indoor, Pendant

2. Pull the wiring through the opening in the pendant mount.

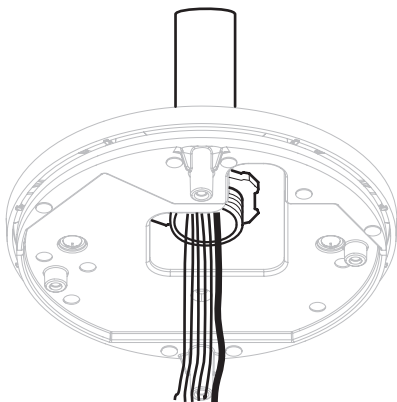


Figure 11. Pulling the Wiring: Indoor, Pendant

3. Connect the wiring to the camera as follows:
 - a. Connect the network cable to the RJ-45 network port on the base of the camera.
 - b. Connect the Micro USB cable and optional multiconductor cable as follows:
 - **If using a permanently installed Pelco accessory:** Perform step 5d on page 15 with the grommet and the Micro B USB cable that is supplied with the Pelco accessory. Connect the Micro B USB cable to the accessory port on the base of the camera.
- NOTE:** Remove this accessory before completing the installation.
- **(Optional) If using alarms, relays, or audio:** Connect a 24 AWG, 8-wire multiconductor cable to the 8-pin removable connector (supplied), and then insert the connector back into the base of the camera. This cable is for alarms, relays, and audio line-in and line-out.

NOTE: For cable terminations, refer to *Cable Terminations* on page 40.

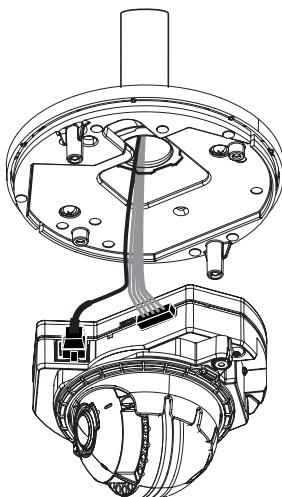


Figure 12. Connecting the Wiring: Indoor, Pendant

4. Install the camera as follows:
 - a. Align the camera with the pendant mount.
 - b. Tighten the two captive fasteners using the bit (supplied) until they are secure.
 - c. Dress the wires inside the pendant mount.

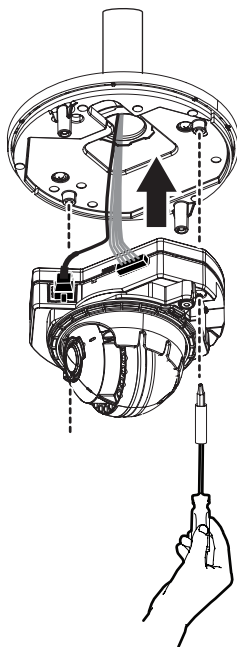


Figure 13. Installing the Camera: Indoor, Pendant

5. Apply power to the camera. The camera will complete a configuration sequence. The LED at the base of the camera will blink for several minutes while the camera system boots. The LED will turn off when the system boot cycle completes.

NOTE: If the camera is not connected to a DHCP server and DHCP is enabled, the configuration sequence might take up to five minutes to complete.

6. If you do not know the camera's IP address, install the Pelco Device Utility software available at www.pelco.com. The utility will locate the assigned name, IP address, and MAC address of the camera.
7. View the camera image using a Web browser.

8. Adjust the camera field of view using the Web browser. (The unit must be powered.)
 - a. Loosen the locking screw with the bit (supplied).
 - b. Position the camera where desired.
 - c. Tighten the locking screw using the bit (supplied).
 - d. Use the Web browser to adjust the focus and zoom.

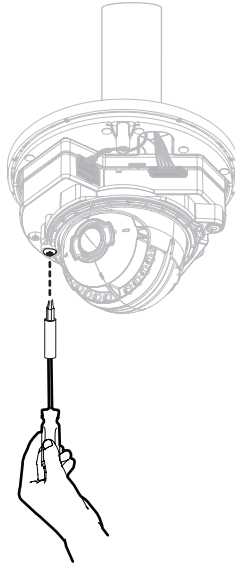


Figure 14. Adjusting the Field of View: Indoor, Pendant

9. Install the lower dome to the pendant mount:
 - a. Align the screw holes on the trim ring with the holes on the mount.
 - b. Tighten the two tamperproof captive fasteners using the bit (supplied) until the trim ring and bubble are secure.

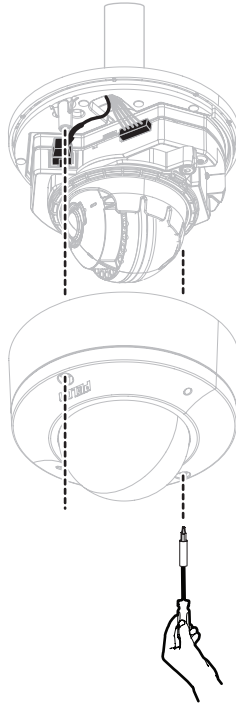


Figure 15. Installing the Lower Dome: Indoor, Pendant

PENDANT: ENVIRONMENTAL/VANDAL-RESISTANT

1. Install the pendant mount to the conduit.
The pendant mount attaches to 1-1/2 in. NPT pipe/conduit or wall mount with 1-1/2 in. NPT thread (not supplied).

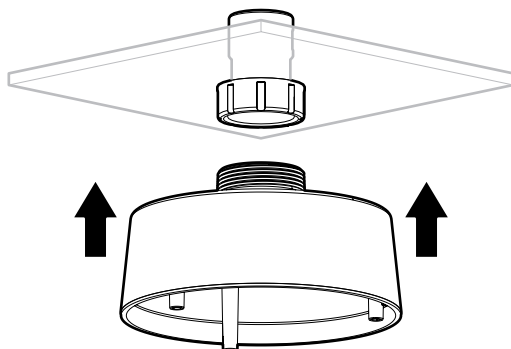


Figure 16. Installing the Pendant Mount: Environmental/Vandal-Resistant, Pendant

2. Pull the wiring through the opening.

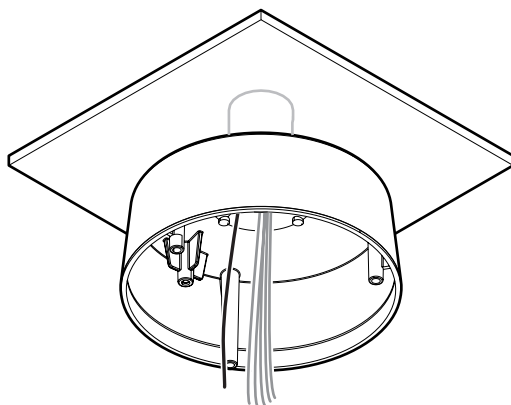


Figure 17. Pulling the Wiring: Environmental/Vandal-Resistant, Pendant

3. Connect the wiring to the camera as follows:
- Connect the network cable to the RJ-45 network port on the base of the camera.
 - Connect the Micro USB cable and optional multiconductor cable as follows:
 - **If using a permanently installed Pelco accessory:** Perform step 5d on page 15 with the grommet and the Micro B USB cable that is supplied with the Pelco accessory. Connect the Micro B USB cable to the accessory port on the base of the camera.
- NOTE:** Remove this accessory before completing the installation.
- **(Optional) If using alarms, relays, or audio:** Connect a 24 AWG, 8-wire multiconductor cable to the 8-pin removable connector (supplied), and then insert the connector back into the base of the camera. This cable is for alarms, relays, and audio line-in and line-out.

NOTE: For cable terminations, refer to *Cable Terminations* on page 40.

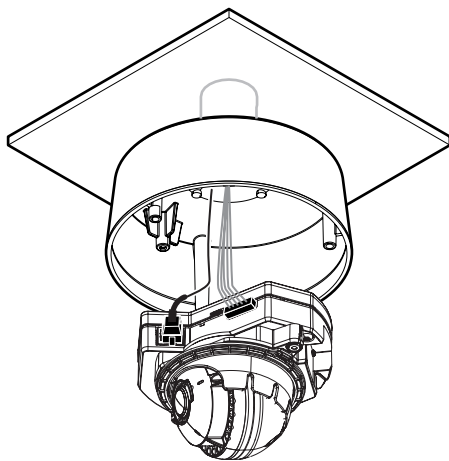


Figure 18. Connecting the Wiring: Environmental/Vandal-Resistant, Pendant

4. Install the camera as follows:
 - a. Align the camera with the pendant mount.
 - b. Tighten the two captive fasteners using the bit (supplied) until they are secure.
 - c. Dress the wires inside the pendant mount.

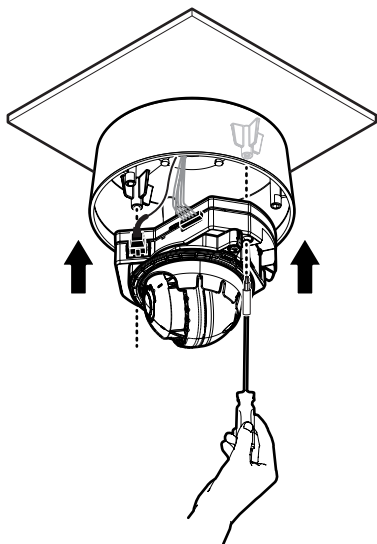


Figure 19. Installing the Camera: Environmental/Vandal-Resistant, Pendant

5. Apply power to the camera. The camera will complete a configuration sequence. The LED at the base of the camera will blink for several minutes while the camera system boots. The LED will turn off when the system boot cycle completes.

NOTE: If the camera is not connected to a DHCP server and DHCP is enabled, the configuration sequence might take up to five minutes to complete.

6. If you do not know the camera's IP address, install the Pelco Device Utility software available at www.pelco.com. The utility will locate the assigned name, IP address, and MAC address of the camera.
7. View the camera image using a Web browser.

8. Adjust the camera field of view using the Web browser. (The unit must be powered.)
 - a. Loosen the locking screw with the bit (supplied).
 - b. Position the camera where desired.
 - c. Tighten the locking screw using the bit (supplied).
 - d. Use the Web browser to adjust the focus and zoom.

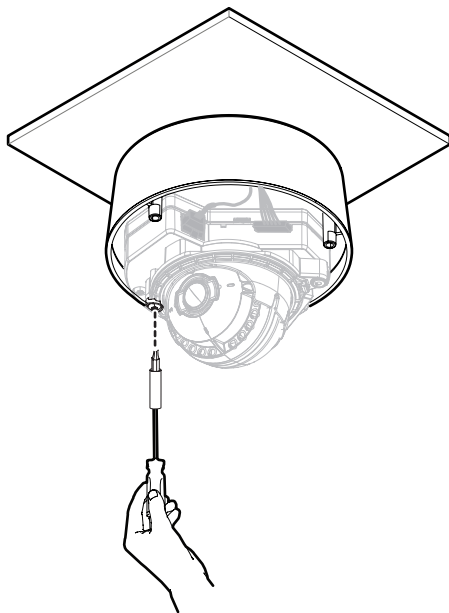


Figure 20. Adjusting the Field of View: Environmental/Vandal-Resistant, Pendant

9. Install the lower dome to the pendant mount:
 - a. Align the screw holes on the trim ring with the holes on the mount.
 - b. Tighten the three tamperproof captive fasteners using the bit (supplied) until the trim ring and bubble are secure.

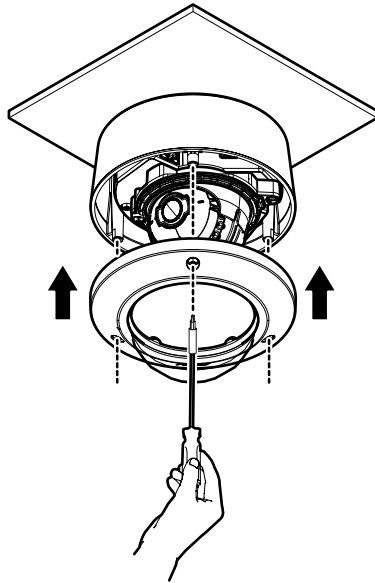


Figure 21. Installing the Lower Dome: Environmental/Vandal-Resistant, Pendant

SURFACE MOUNT: INDOOR

1. Refer to *Surface Mount Templates* on page 44 for a template to locate the holes to be drilled in the mounting substrate.
2. Install the mounting plate to the mounting substrate using one of the following methods:
 - standard single-gang electrical box (not supplied), or
 - any substrate using standard screw size M4 or #8 hardware (not supplied)

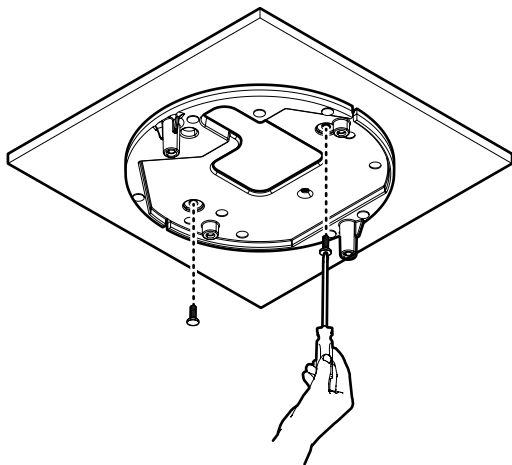


Figure 22. Fastening the Mounting Plate: Indoor, Surface Mount

3. Pull the wiring through the opening.

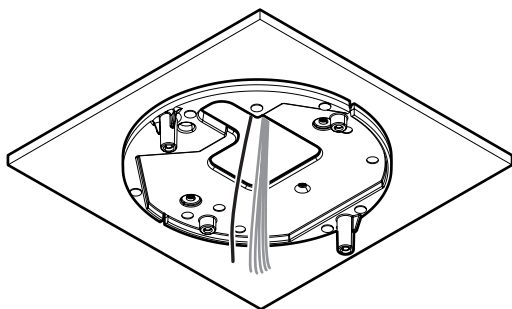


Figure 23. Pulling the Wiring: Indoor, Surface Mount

4. Connect the wiring to the camera as follows:
 - a. Connect the network cable to the RJ-45 network port on the base of the camera.
 - b. Connect the Micro USB cable and optional multiconductor cable as follows:
 - **If using a permanently installed Pelco accessory:** Perform step 5d on page 15 with the grommet and the Micro B USB cable that is supplied with the Pelco accessory. Connect the Micro B USB cable to the accessory port on the base of the camera.

NOTE: Remove this accessory before completing the installation.

- **(Optional) If using alarms, relays, or audio:** Connect a 24 AWG, 8-wire multiconductor cable to the 8-pin removable connector (supplied), and then insert the connector back into the base of the camera. This cable is for alarms, relays, and audio line-in and line-out.

NOTE: For cable terminations, refer to *Cable Terminations* on page 40.

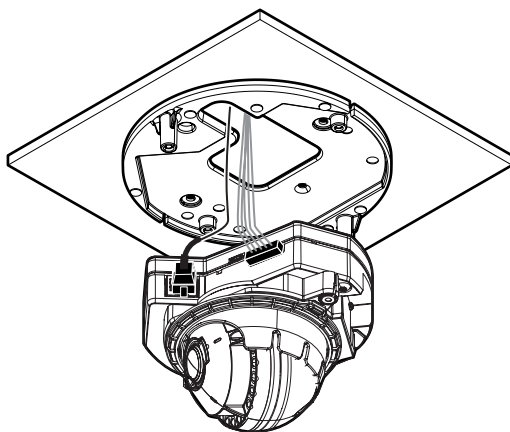


Figure 24. Connecting the Wiring: Indoor, Surface Mount

5. Install the camera as follows:
 - a. Align the camera with the mounting plate.
 - b. Tighten the two captive fasteners using the bit (supplied) until they are secure.
 - c. Dress the wires inside the mounting plate or gang box.

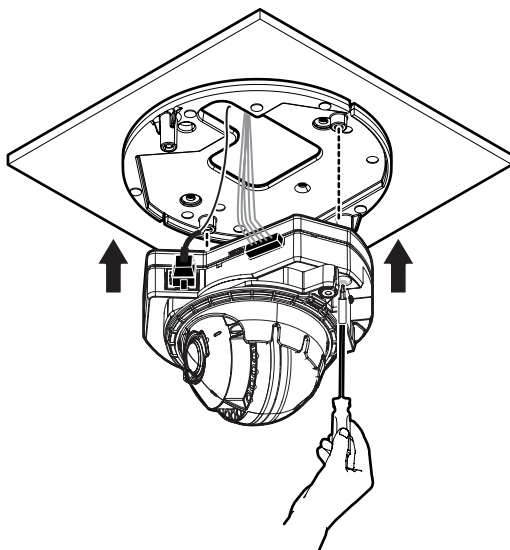


Figure 25. Installing the Camera: Indoor, Surface Mount

6. Apply power to the camera. The camera will complete a configuration sequence. The LED at the base of the camera will blink for several minutes while the camera system boots. The LED will turn off when the system boot cycle completes.

NOTE: If the camera is not connected to a DHCP server and DHCP is enabled, the configuration sequence might take up to five minutes to complete.

7. If you do not know the camera's IP address, install the Pelco Device Utility software available at www.pelco.com. The utility will locate the assigned name, IP address, and MAC address of the camera.
8. View the camera image using a Web browser.

9. Adjust the camera field of view using the Web browser. (The unit must be powered.)
 - a. Loosen the locking screw with the bit (supplied).
 - b. Position the camera where desired.
 - c. Tighten the locking screw using the bit (supplied).
 - d. Use the Web browser to adjust the focus and zoom.

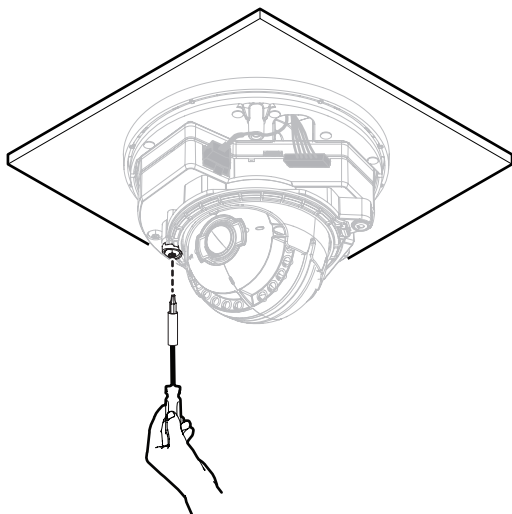


Figure 26. Adjusting the Field of View: Indoor, Surface Mount

10. Install the lower dome to the surface mount:
 - a. Align the screw holes on the trim ring with the holes on the mount.
 - b. Tighten the two tamperproof captive fasteners using the bit (supplied) until the trim ring and bubble are secure.

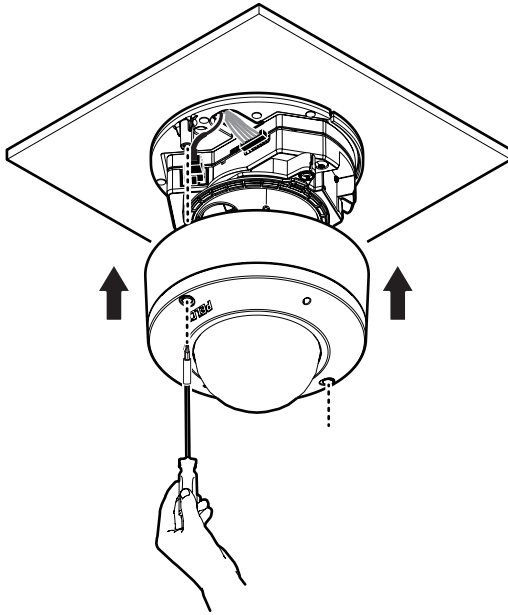


Figure 27. Installing the Lower Dome: Indoor, Surface Mount

SURFACE MOUNT: ENVIRONMENTAL/VANDAL-RESISTANT

1. Refer to *Surface Mount Templates* on page 44 for a template to locate the holes to be drilled in the mounting substrate.
2. Install the mounting plate to the mounting substrate using one of the following methods:
 - standard 4 in. square electrical box (not supplied), or
 - standard 2-gang electrical box (not supplied), or
 - any substrate using standard screw size M6 or 1/4 in. hardware (not supplied)

NOTE: Head height and diameter of fasteners are not to exceed 5/16 in. and 3/4 in., respectively.

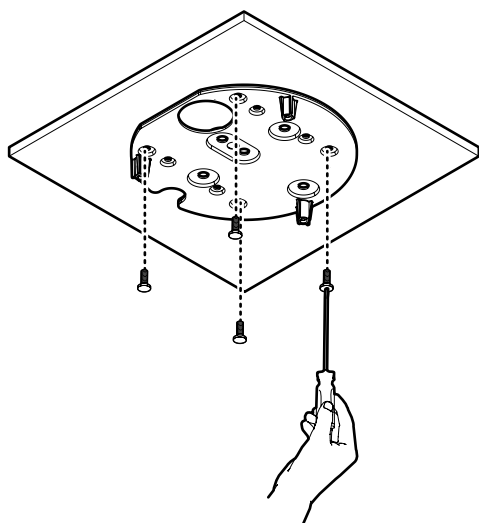
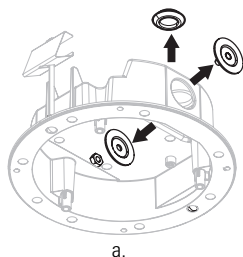
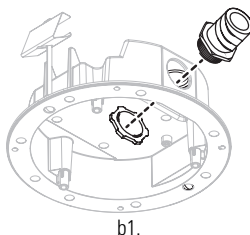


Figure 28. Fastening the Mounting Plate: Environmental/Vandal-Resistant, Surface Mount

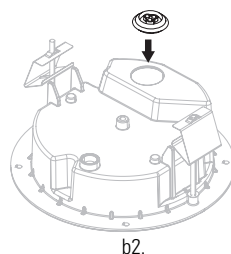
3. Prepare the cable entry holes in the surface mounting ring as follows:
 - a. Remove the conduit plug for either side or top entry.
 - b. Prepare the cable entry holes as follows:
 - **(1) If using conduit (not supplied):** Replace with 25 mm or 3/4 in. conduit adapters (not supplied).
 - **(2) If using the grommet (plenum rating is not required):** Use the grommet (supplied). Remove the grommet from the back box.



a.



b1.



b2.

Figure 29. Preparing the Cable Entry Holes: Environmental/Vandal-Resistant, Surface Mount

4. Install the surface mounting ring to the mounting plate by tightening the three tamperproof captive fasteners using the bit (supplied) until they are secure.

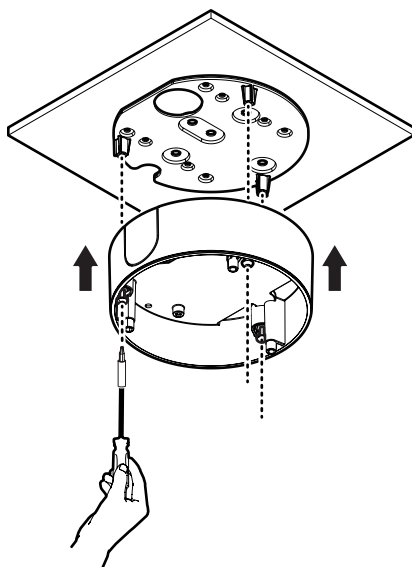


Figure 30. Installing the Surface Mounting Ring: Environmental/Vandal-Resistant, Surface Mount

5. Pull the wiring as follows:
 - **If using conduit (not supplied):** Feed the wires through the conduit adapter (not supplied) into the surface mounting ring, and attach the conduit to the adapter.
 - **If using the grommet:** Feed the wires into the surface mounting ring, pass the unterminated cables through the grommet, and insert the grommet in the top entry.

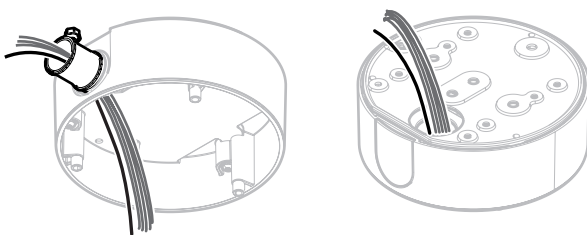


Figure 31. Pulling the Wiring: Environmental/Vandal-Resistant, Surface Mount

6. Connect the wiring to the camera as follows:
 - a. Connect the network cable to the RJ-45 network port on the base of the camera.
 - b. Connect the Micro USB cable and optional multiconductor cable as follows:
 - **If using a permanently installed Pelco accessory:** Perform step 5d on page 15 with the grommet and the Micro B USB cable that is supplied with the Pelco accessory. Connect the Micro B USB cable to the accessory port on the base of the camera.
- NOTE:** Remove this accessory before completing the installation.
- **(Optional) If using alarms, relays, or audio:** Connect a 24 AWG, 8-wire multiconductor cable to the 8-pin removable connector (supplied), and then insert the connector back into the base of the camera. This cable is for alarms, relays, and audio line-in and line-out.

NOTE: For cable terminations, refer to *Cable Terminations* on page 40.

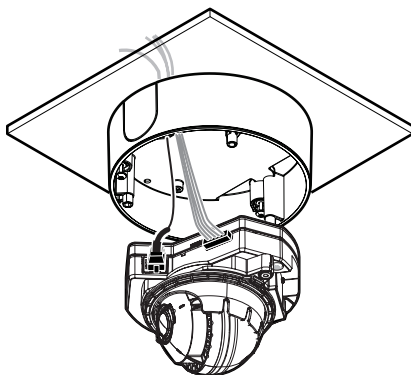


Figure 32. Connecting the Wiring: Environmental/Vandal-Resistant, Surface Mount

7. Install the camera as follows:
 - a. Install the camera into the surface mount.
 - b. Tighten the two captive fasteners using the bit (supplied) until they are secure.
 - c. Dress the wires inside the surface mount.

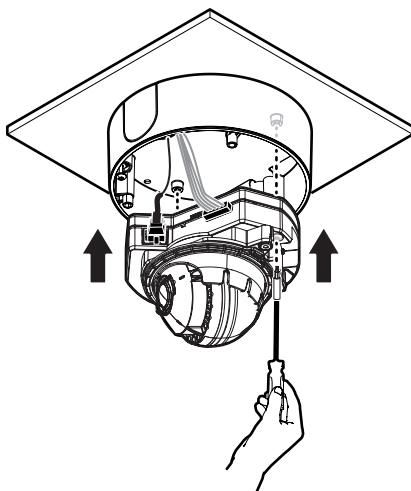


Figure 33. Installing the Camera: Environmental/Vandal-Resistant, Surface Mount

8. Apply power to the camera. The camera will complete a configuration sequence. The LED at the base of the camera will blink for several minutes while the camera system boots. The LED will turn off when the system boot cycle completes.

NOTE: If the camera is not connected to a DHCP server and DHCP is enabled, the configuration sequence might take up to five minutes to complete.

9. If you do not know the camera's IP address, install the Pelco Device Utility software available at www.pelco.com. The utility will locate the assigned name, IP address, and MAC address of the camera.
10. View the camera image using a Web browser.

11. Adjust the camera field of view using the Web browser. (The unit must be powered.)
 - a. Loosen the locking screw with the bit (supplied).
 - b. Position the camera where desired.
 - c. Tighten the locking screw using the bit (supplied).
 - d. Use the Web browser to adjust the focus and zoom.

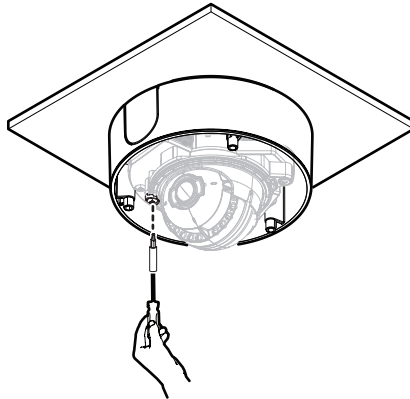


Figure 34. Adjusting the Field of View: Environmental/Vandal-Resistant, Surface Mount

12. Install the lower dome to the surface mount:
 - a. Align the screw holes on the trim ring with the holes on the mount.
 - b. Tighten the three tamperproof captive fasteners using the bit (supplied) until the trim ring and bubble are secure.

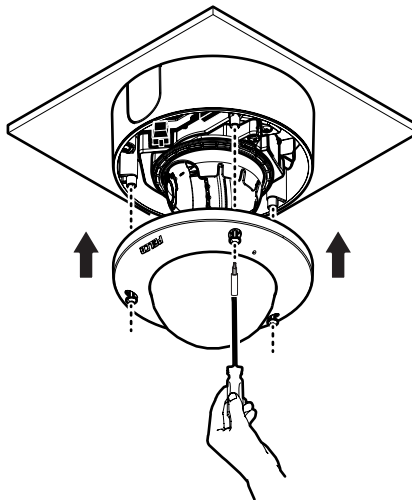


Figure 35. Installing the Lower Dome: Environmental/Vandal-Resistant, Surface Mount

Cable Terminations

ETHERNET WIRING REQUIREMENT FOR POE

Connect a Cat5 cable or higher (Cat5e, Cat6) cable (not supplied) to the RJ-45 network connector. The 8-pin port includes video over Ethernet, and PoE for the camera. PoE (IEEE 802.3af) injects power over the same cabling that carries the network data, eliminating the need for a separate power supply. This simplifies the installation and operation of the camera without affecting network performance.

NOTE: The camera will autosense and configure itself to use either a crossover cable or a straight cable.

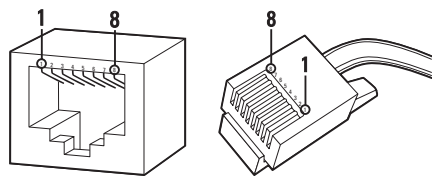


Figure 36. Cable Pin Descriptions

Table A. Ethernet with PoE Mode B

Pin	Function
1	TX+
2	TX-
3	RX+
4	PoE 1-2
5	PoE 1-2
6	RX-
7	PoE 3-4
8	PoE 3-4

Table B. Ethernet with PoE Mode A

Pin	Function
1	TX+, PoE 1-2
2	TX-, PoE 1-2
3	RX+, PoE 3-4
4	Not used
5	Not used
6	RX-, PoE 3-4

Table B. Ethernet with PoE Mode A

Pin	Function
7	Not used
8	Not used

ALARM/RELAY/AUDIO PORT

The 8-pin Alarm/Relay/Audio port has the following pins and pin assignments.

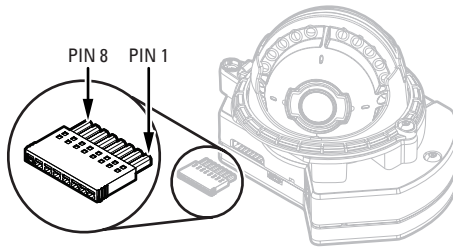


Figure 37. Alarm/Relay/Audio Port Pins

Table C. Pin Descriptions for Alarm/Relay/Audio Port

Pin	Function
1	Audio Out–
2	Audio Out+
3	Audio In–
4	Audio In+
5	Alarm Input
6	Ground
7	Relay N.O.
8	Relay Return

IP Address Settings

If the camera is connected to a Dynamic Host Configuration Protocol (DHCP) network and DHCP is set to On, the server automatically assigns an IP address to the camera. The default setting for the camera is DHCP On. To set the camera's IP address manually, set DHCP to Off.

NOTES:

- If the camera is not connected to a DHCP server but DHCP is set to On, the default IP address 192.168.0.20 on subnet mask 255.255.255.0 is automatically assigned to the camera. After the first camera is connected and assigned the default IP address, the system automatically looks for other cameras on the auto IP address system and assigns IP addresses in sequential order as required.
- For example, if three cameras are connected to a network without a DHCP server, the first camera is assigned address 192.168.0.20, the second camera is assigned address 192.168.0.21, and the third camera is assigned address 192.168.0.22.
- Contact your network administrator to avoid network conflicts before setting/changing the camera's IP address.
- If you do not know the camera's IP address, install the Pelco Device Utility software available at www.pelco.com. The utility will locate the assigned name, IP address, and MAC address of the camera.

Logging On to the Camera

After logging on to the camera, you can view video from the Web user interface.

1. Open the Web browser.
2. Type the camera's IP address in the browser address bar.

NOTE: If you do not know the camera's IP address, you can locate it using the Pelco Device Utility software.

3. Click the Log In button in the navigation bar; a dialog box opens.
4. Type your user name and password.

NOTE: If you are logging on to the camera as the administrator for the first time, the default user name and password are **admin** (all lowercase). For security purposes, be sure to change the password after you log on for the first time.

5. Click Log In.

Surface Mount Templates

 **WARNING:** Before printing this document, your printer must be set for 100% scaling. Printing the templates at an incorrect scale could result in equipment damage.

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

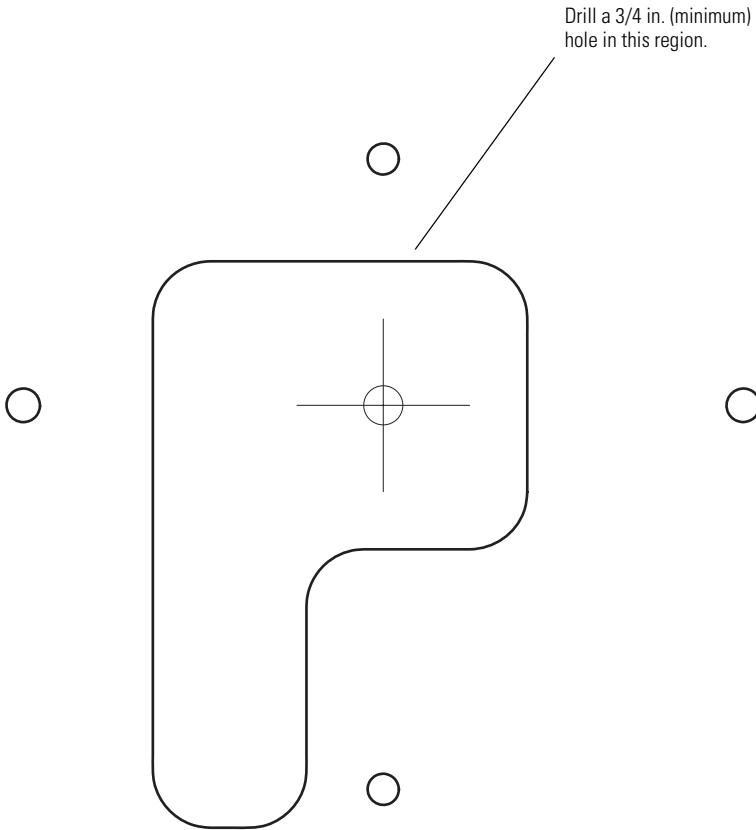


Figure 38. Template for Surface Mount: Indoor

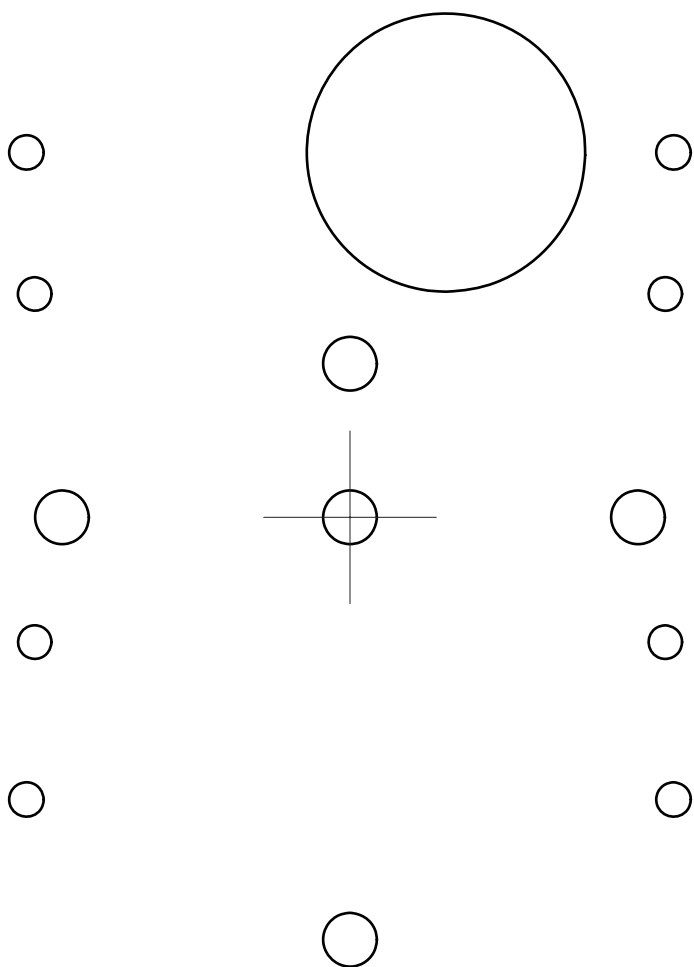


Figure 39. Template for Surface Mount: Environmental/Vandal-Resistant

Specifications

CAMERA

Imaging Device	1/3-inch
Imager Type	CMOS
Imager Readout	Progressive scan
Maximum Resolution	3 MPx (2048 x 1536) 2 MPx (1920 x 1080) 1 MPx (1280 x 1024) 0.5 MPx (800 x 608)
Signal-to-Noise Ratio	>60 dB
Electronic Shutter Range	1 ~ 1/77,000 sec
True Wide Dynamic Range	Up to 100 dB*
White Balance Range	2,000° to 10,000°K
Sensitivity 3 ~ 9 mm	f/1.2; 2,850°K; SNR >20 dB
Color (33 ms)	0.2 lux
Color (500 ms)	0.005 lux
Mono (33 ms)	0.05 lux
Mono (500 ms)	0.0013 lux
Sensitivity 9 ~ 22 mm	f/1.6; 2,850°K; SNR >20 dB
Color (33 ms)	0.4 lux
Color (500 ms)	0.009 lux
Mono (33 ms)	0.09 lux
Mono (500 ms)	0.002 lux
Day/Night Capabilities	Yes
Mechanical IR Cut Filter	Yes, (ON/OFF/ATUO selectable), with different set points on lux
* Sensor level is not inclusive of SureVision image processing.	

LENS

Lens Type	Built-in; varifocal
Focal Length	f/1.2, 3 ~ 9 mm; or f/1.6, 9 ~ 22 mm
Focus	Autofocus, motorized
Zoom	Remote
Auto Iris Type	DC drive P-iris lens

Lens	Focal Length	Mode	Diagonal	Horizontal	Vertical
3 ~ 9 mm	Wide	4:3	105	84	63
	Tele	4:3	38	30	23
	Wide	16:9	97	84	47
	Tele	16:9	35	30	17
9 ~ 22 mm	Wide	4:3	18	14	11
	Tele	4:3	7.4	5.9	4.5
	Wide	16:9	16	14	8.0
	Tele	16:9	6.8	5.9	3.3

ELECTRICAL

Network Port	RJ-45 connector for 100dBase-TX Auto MDI/MDI-X
Accessory Port	Micro B USB connector for Pelco accessories
Cable Type	Cat5 or better for 100dBase-TX
Input Power	PoE (IEEE 802.3af, Class 3)
Power Consumption†	8.5 W nominal
Current Consumption	350 mA maximum
Local Storage	Micro SD
Alarm	
Unsupervised	Detects open or closed alarm state
Supervised	Detects open and short alarm state with external 1-kohm resistor
Input	3.5 VDC maximum, 3.5 mA maximum
Relay Output	±32 VDC maximum, 150 mA maximum

† Does not include optional accessories connected to accessory port.

AUDIO

Streaming	Bidirectional: full or half duplex
Input/Output	Line level/external microphone input; 600-ohm differential, 1 Vp-p max. signal level; built-in microphone
Compression	G.711 PCM 8 bit, 8 kHz mono at 64 kbit/s

MECHANICAL

Dome Attenuation	
Clear	f/0.0 light loss
Smoked	f/1.0 light loss
Pan/Tilt Adjustment	Manual
Pan	355°
Tilt	180°
Rotation	360°

ENVIRONMENTAL

Operating Temperature	
Indoor/Vandal-Resistant	-10° to 50°C (14° to 122°F)
Environmental	-40° to 50°C (-40° to 122°F)
Cold Start	
Indoor/Vandal-Resistant	-10°C (14°F)
Environmental	-20°C (-4°F)
Storage Temperature	-10° to 60°C (14° to 140°F)
Operating Humidity	
Indoor/Vandal-Resistant	20 to 80%, RH noncondensing
Environmental	10 to 95%, RH condensing
Storage Humidity	20 to 80%, RH noncondensing
Environmental/Vandal-Resistant	
Impact Resistance	K10++ 50 Joules per IEC 62262
Shock and Vibration	EN50155 Category 1, Class B; IEC 60068:2-6 and 2-27

VIDEO

Video Streams	Multiple simultaneous streams with up to 2 different configurations plus service stream; the secondary stream is variable based on the setup of the primary stream
Available Resolutions	2 configurable streams as follows:

Camera Model	Resolution				JPEG		H.264 High Profile	
	MPx	Width	Height	Aspect Ratio	IPS (Max.)	Recommended Bit Rate	IPS (Max.)	Recommended Bit Rate
3 MPx	3.0	2048	1536	4:3	7	12	30	9.2
2 MPx	1.9	1600	1200	4:3	15	12	30	5.7
1 MPx	1.2	1280	960	4:3	30	12	30	3.8
0.5 MPx	0.5	800	608	4:3	30	7.8	30	2
	0.3	640	480	4:3	30	4.9	30	1.5
	0.08	320	240	4:3	30	1.2	30	0.5
3 MPx and 2 MPx	1080p	1920	1080	16:9	15	12	30	6
1 MPx	720p	1280	720	16:9	30	12	30	2.9
0.5 MPx	0.5	800	448	16:9	30	5.7	30	1.7
	0.2	640	352	16:9	30	3.6	30	1.2
	0.06	320	176	16:9	30	0.9	30	0.4

NOTE: Lower resolution cameras have a subset of the resolutions shown in the table, as supported by the camera.

Frame Rate	Up to 30, 25, 15, 12.5, 10, 5, 1 (depending on the coding, resolution, and stream configuration)
Video Encoding	H.264 High, Main, or Base profiles; and MJPEG
Bit Rate Control	Constrained variable bit rate (CVBR), constant bit rate (CBR), and variable bit rate (VBR) with target range
Service Stream	JPEG stream; the aspect ratio will be consistent with the independent streams

NETWORK

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, ARP, ICMP, and 802.1x (EAP)
Users	
Unicast	Up to 20 simultaneous users depending on the resolution settings
Multicast	Unlimited users H.264
Security Access	Password protected
Software Interface	Web browser view and setup

NOTE: IPv6 protocol supports mixed IPv4 and IPv6 installations, but not IPv6-only deployments.

INTEGRATION

Pelco System Integration	Endura 2.0 (or later); Digital Sentry 7.3 (or later); DX4700/DX4800
Open API	Pelco API or ONVIF Profile S
Mobile Application	Integrated with Pelco Mobile Application

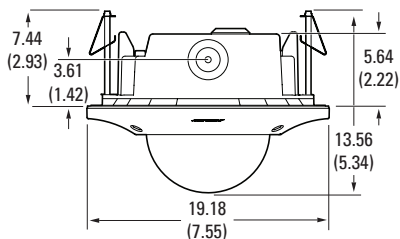
PHYSICAL

Weight	Unit
Indoor, In-Ceiling	1.2 kg (2.6 lb)
Indoor, Surface Mount	1.0 kg (2.0 lb)
Indoor, Pendant	1.0 kg (2.1 lb)
Environmental, In-Ceiling	1.4 kg (3.1 lb)
Environmental, Surface Mount	1.5 kg (3.3 lb)
Environmental, Pendant	1.3 kg (2.9 lb)
Vandal-Resistant, In-Ceiling	1.4 kg (3.1 lb)
Vandal-Resistant, Surface Mount	1.5 kg (3.3 lb)
Vandal-Resistant, Pendant	1.3 kg (2.9 lb)

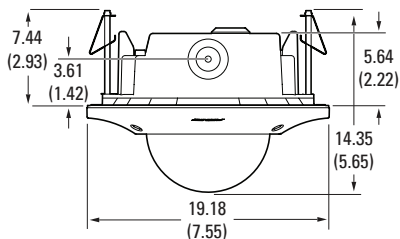


NOTE: VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.

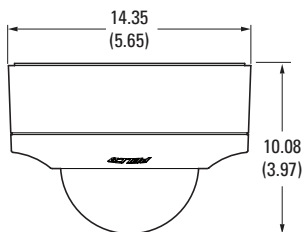
INDOOR, IN-CEILING



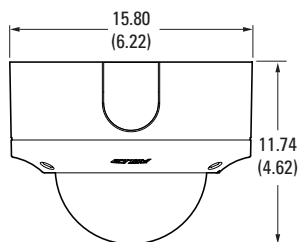
ENVIRONMENTAL/VANDAL-RESISTANT, IN-CEILING



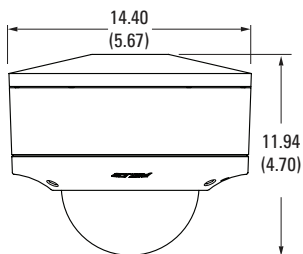
INDOOR, SURFACE MOUNT



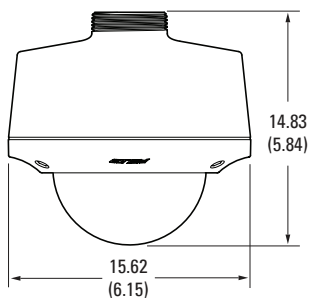
ENVIRONMENTAL/VANDAL-RESISTANT, SURFACE MOUNT



INDOOR, PENDANT



ENVIRONMENTAL/VANDAL-RESISTANT, PENDANT



REVISION HISTORY

Manual #	Date	Comments
C2269M	7/13	Original version.

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