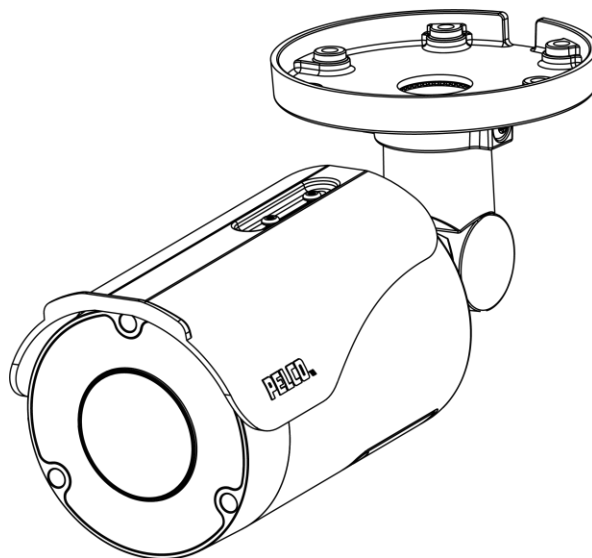




**Sarix[®] Professional 3 IBP
Series Environmental IR
Bullet Camera
Installation Manual**



IBP131-1ER	IBP232-1ER
IBP231-1ER	IBP532-1ER
IBP331-1ER	IBP235-1ER
IBP531-1ER	IBP335-1ER

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Important Notices

REGULATORY NOTICES [FCC CLASS A]

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.

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

LEGAL NOTICE [AUDIO 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.

NOTE: Improper use of audio/visual recording equipment 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 the recorded subjects. You are solely responsible for insuring strict compliance with such laws and for strict adherence to any/all right of privacy and personality.

VIDEO QUALITY CAUTION

FRAME RATE NOTICE REGARDING USER SELECTED OPTIONS

Pelco systems are capable of providing high quality video for both live viewing and playback. However, the systems can be used in lower quality modes, which can degrade picture quality, to allow for a slower rate of data transfer and to reduce the amount of video data stored. The picture quality can be degraded by either lowering the resolution, reducing the picture rate, or both. A picture degraded by having a reduced resolution may result in an image that is less clear or even indiscernible. A picture degraded by reducing the picture rate has fewer frames per second, which can result in images that appear to jump or move more quickly than normal during playback. Lower frame rates may result in a key event not being recorded by the system.

Judgment as to the suitability of the products for users' purposes is solely the users' responsibility. Users shall determine the suitability of the products for their own intended application, picture rate and picture quality. In the event users intend to use the video for evidentiary purposes in a judicial proceeding or otherwise, users should consult with their attorney regarding any particular requirements for such use.

OPEN SOURCE SOFTWARE

This product includes certain open source or other software originated from third parties that is subject to the GNU General Public License (GPL), GNU Library/Lesser General Public License (LGPL) and different and/or additional copyright licenses, disclaimers, and notices.

The exact terms of GPL, LGPL, and some other licenses are provided to you with this product. Please refer to the exact terms of the GPL and LGPL at <http://www.fsf.org> (Free Software Foundation) or <http://www.opensource.org> (Open Source Initiative) regarding your rights under said license. You may obtain a complete corresponding machine-readable copy of the source code of such software under the GPL or LGPL by sending your request to digitalsupport@pelco.com; the subject line should read Source Code Request. You will then receive an email with a link for you to download the source code.

This offer is valid for a period of three (3) years from the date of the distribution of this product by Pelco.

KOREAN CLASS A EMC

이 기기는 업무용 (A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시길 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

ESD WARNING



WARNING: This product is sensitive to Electrostatic Discharge (ESD). To avoid ESD damage to this product, use ESD safe practices during installation. Before touching, adjusting or handling this product, correctly attach an ESD wrist strap to your wrist and appropriately discharge your body and tools. For more information about ESD control and safe handling practices of electronics, please refer to ANSI/ESD S20.20-1999 or contact the Electrostatic Discharge Association (www.esda.org).

WARRANTY

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

NETWORK TOPOLOGY STATEMENT

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.

Preface

This installation manual is to be used as a reference for the installation of the camera unit including wire connection, camera installation, and camera adjustment.

This manual provides the following information.

- **Product Overview:** The main functions and system requirements of the unit.
- **Installation and Connection:** Instructions on unit installation and wire connections.

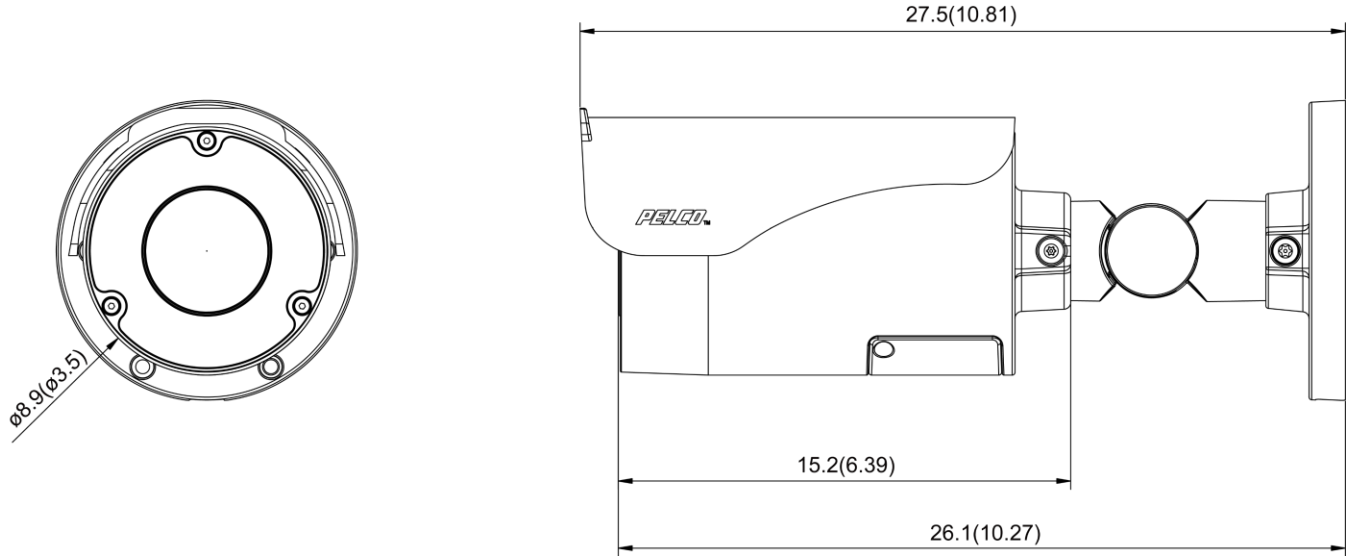
1. Product Overview

1.1 Dimensions

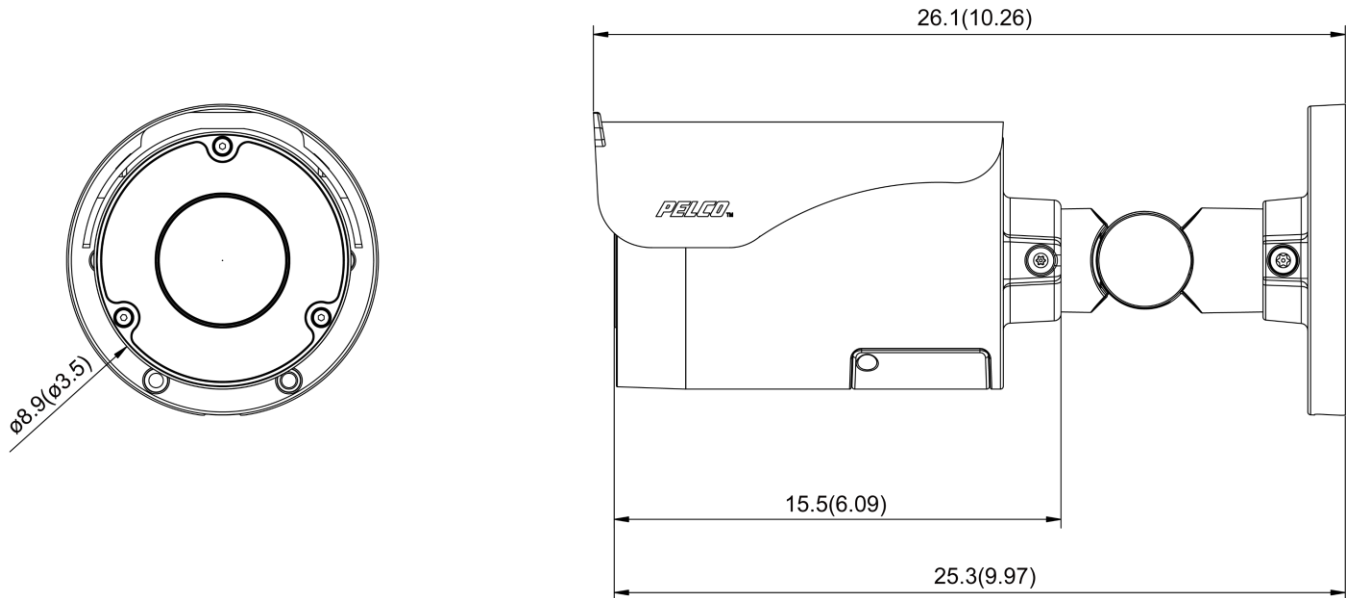
The dimensions of the Sarix Professional 3 Series Environmental IR Bullet are depicted within the Figure 1-1 below.



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



ENVIRONMENTAL IR BULLET - 5-50MM



ENVIRONMENTAL IR BULLET - 2.8-12MM / 7-22MM

FIGURE 1-1: PHYSICAL DIMENSIONS

1.2 Model Instruction

The physical appearances and installation methods for the models indicated within the list below are similar. Consequently, in this manual the IBP335-1ER model is an example to use as a reference to apply to all the varied models.

Model	Description
IBP131-1ER	1MP Environment Bullet with IR and 2.8-12mm Lens
IBP231-1ER	2MP Environment Bullet with IR and 2.8-12mm Lens
IBP331-1ER	3MP Environment Bullet with IR and 2.8-12mm Lens
IBP531-1ER	5MP Environment Bullet with IR and 2.8-12mm Lens
IBP232-1ER	2MP Environment Bullet with IR and 7-22mm Lens
IBP532-1ER	5MP Environment Bullet with IR and 7-22mm Lens
IBP235-1ER	2MP Environment Bullet with IR and 5-50mm Lens
IBP335-1ER	3MP Environment Bullet with IR and 5-50mm Lens

TABLE 1-1: MODELS LIST

1.3 Physical Characteristics

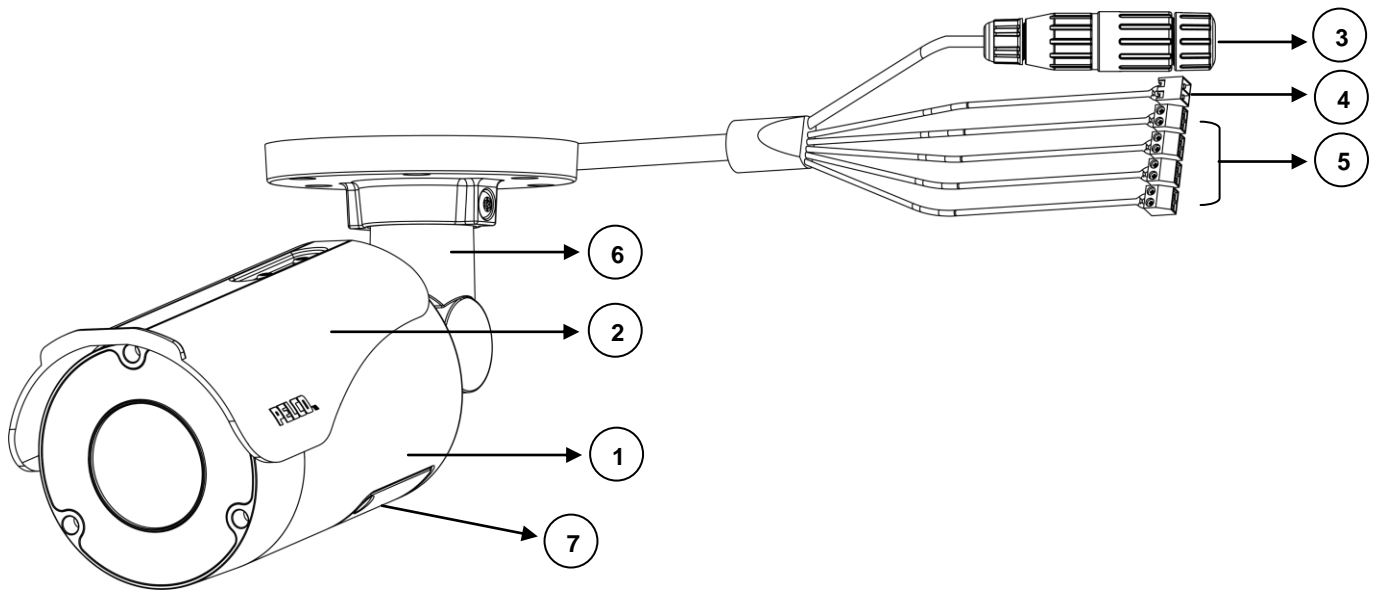


FIGURE 1-2: CAMERA CONNECTIONS AND FEATURES 1/2

1. **Camera Main Body**
2. **Sun Shield:** Minimize the effects of rain and sunlight on image quality.
3. **RJ-45 Network Port:** Connects the camera to the IP network.
4. **Power Connector (Black / Red):** Connects to the external power source DC12V or AC24V.
5. **Digital I/O Connectors**
 - **Audio In (Yellow+ / Orange-):** Audio differential signal via “Signal plus” and “Signal minus” ports, connect to external device like microphone that receives sound for camera.
 - **Audio Out (Purple+ / Green-):** Audio differential signal via “Signal plus” and “Signal minus” ports, connect to device like speaker to be triggered through alarm output signals.
 - **Alarm In (Red-Signal / Black-GND):** Via “Signal” and “GND” ports, connect to external device that can trigger alarm input signals.
 - **Alarm Out (Brown-Signal / Blue-COM):** Via “Signal” and “COM” ports, connect to external device to be triggered through alarm output signals.
6. **Mount Bracket:** Installs the camera to the wall or ceiling.
7. **Access Cover:** Loosen the two screws and remove the access cover. This will provide access to the reset and factory default buttons and SD card slot as the figure shows below.

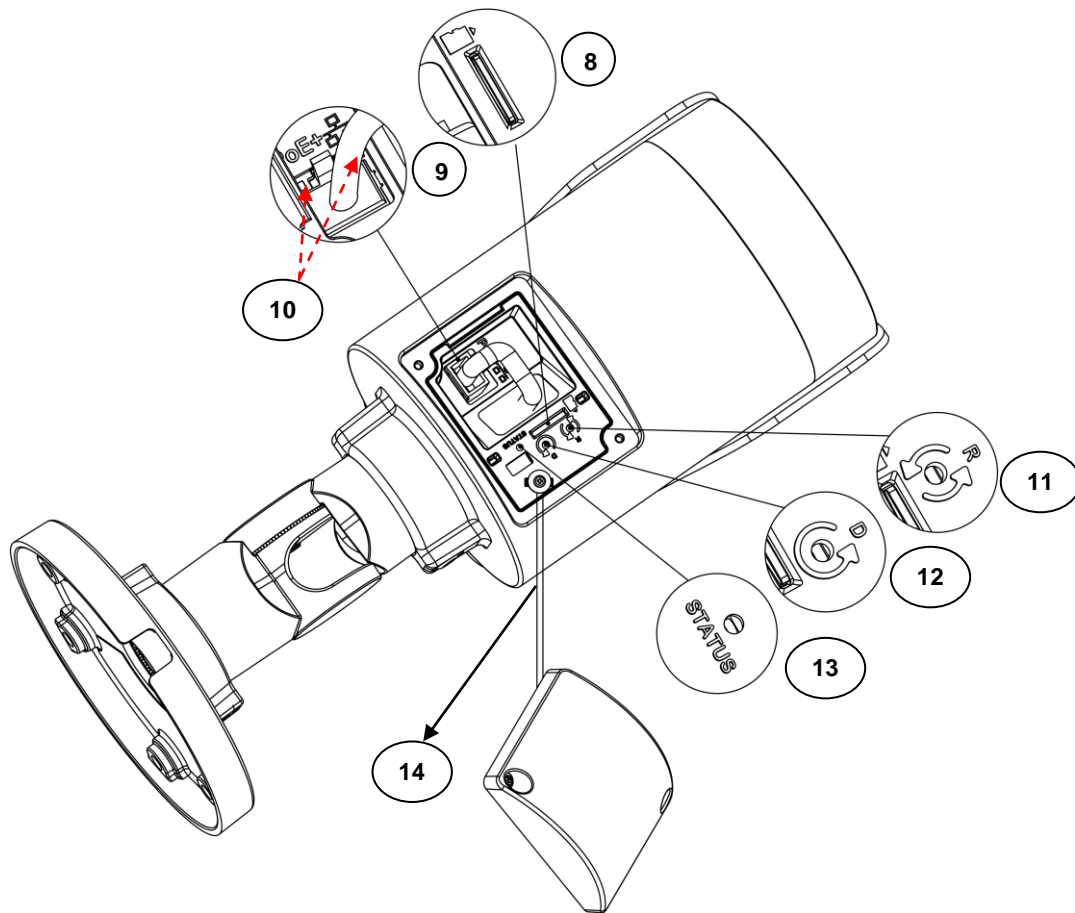


FIGURE 1-3: CAMERA CONNECTIONS AND FEATURES 2/2

8. **Micro-SD Card Slot:** This slot is for inserting a micro SD card for extra file storage.
NOTE: An SDHC or SDXC card capable of a minimum write speed of 10 MB/sec is recommended for recording HD video. Pelco also recommends the SD card's operating temperature range be suitable for the environment it is intended to be used in.
9. **Ethernet / PoE:** The port in the middle is connected to a PoE cable. The other side of this cable is the RJ-45 Network Port demonstrated on Figure 1-2 item #3.
10. **LED Indicators**
 - **Green LED:** With solid green, the LED indicates a live connection is established.
 - **Orange LED:** With flashing orange, the LED indicates data is being transmitted / received between camera and the network.
11. **Reset Button (R):** Press the button for 1 second to reboot the camera.
12. **Default (D):** Press the button for 6 seconds to restore the camera's settings back to the factory default.
13. **Status LED:** LED indicator for booting and firmware upgrade (Green/Red/Amber). The LED behavior is:
 - **Boot Up:** LED solid Red. After 2 ~ 3 seconds, then:
 - Red to flashing Green if boot up is normal.
 - Remains solid Red if an error occurs.
 LED turns off 3 minutes after a successful boot.
 - **Firmware Upgrade:** LED flashing Amber when firmware upgrade is running.

14. **Safety Wire:** The safety lanyard is used to prevent the access cover from falling. Be sure to store the safety wire inside the camera before locking the access cover to ensure that the camera remains waterproof.

2. Installation and Connection

2.1 Unpacking Everything

Check all items in the product box against the order form and the packing slip. In addition to this manual, the items below are included in the product box:

- Environmental IR Bullet Camera * 1
- Plastic Anchor * 6
- Self-tapping Screw (T10) * 6
- T10 Security Torx Bit * 1
- Mounting Template * 1
- Supplemental Resources Sheet * 1
- Important Safety Instruction * 1
- ROHS Statement Slip * 1

Please contact your dealer if any item is missing.

2.2 Optional Accessories

- IBP3BBAP-ES: a Sarix Environmental Surface Mount for Bullet
- IBP3BBAP-EI: a Sarix Environmental In-Ceiling Mount for Bullet
- IBP3-PLMT: a Sarix Pole Mount for Bullet

2.3 Installation

Sarix® Professional 3 Series IR Bullet can be installed by the following methods.

- Wall Surface Mount
- In-Ceiling Mount (refer to In-Ceiling Installation)

2.3.1 Checking Appearance

Although the protective materials used for the packaging has been tested to protect the unit from most events during transportation, check the unit and its accessories for any visible damage. Remove the protective film to check items in accordance with the list in 2.1 Unpacking Everything.

2.3.2 Installing the Camera

2.3.2.1 WALL SURFACE MOUNT

Install the environmental IR bullet camera to a wall surface as shown in the following procedure.

NOTE: The mounting height above ground level shall be more than 3 meters for wall mount height.

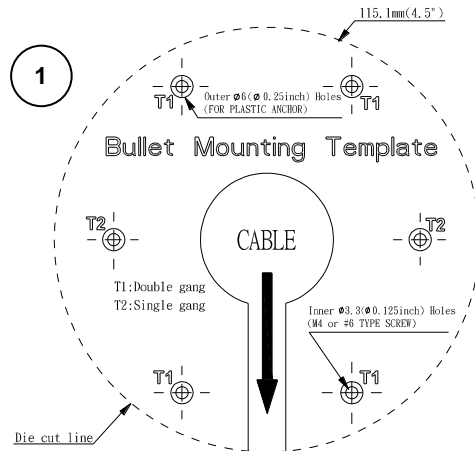


FIGURE 2-1: MOUNTING TEMPLATE FOR WALL SURFACE MOUNT

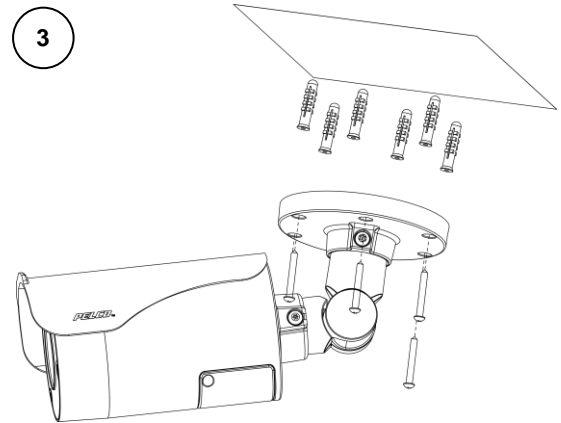


FIGURE 2-3: WALL SURFACE MOUNT 2/2

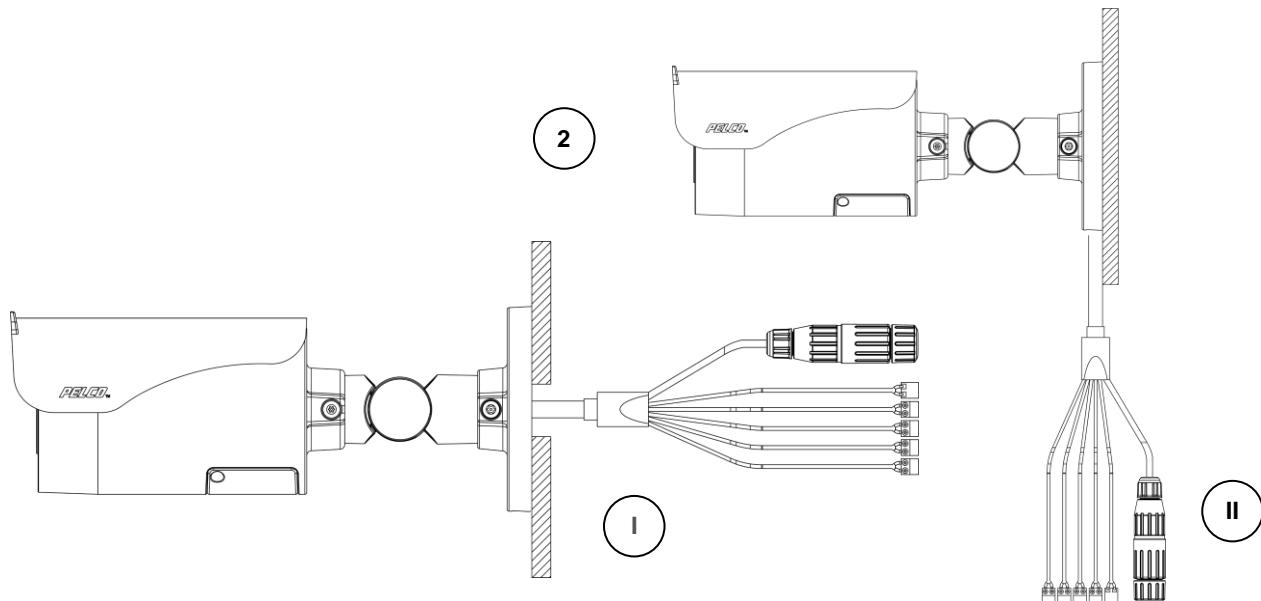


FIGURE 2-2: WALL SURFACE MOUNT 1/2

1. Drill 6 mm (0.25") outer holes based on the mounting template and hammer the plastic anchors into the holes.
2. Pass all the cable through the mounting hole (I) or pass the cable through the side cutout of the bracket (II) according to your application. As an installation best practice, ensure the cutout is facing down. Refer to **2.3.3 Connecting the Cables** to connect the required cables.

NOTE: When installing your Bullet Series camera using method (II), it is recommended that the connections be made in a junction box to protect against environmental factors such as dust and water.

3. Tighten the camera onto the surface by fastening the included tapping screws securely.

WITH IBP3BBAP-ES

Also, you can mount the camera to the wall using **IBP3BBAP-ES**, a **Sarix Environmental Surface Mount** for bullet. Refer to the figure below for surface installation with IBP2BB-ES.

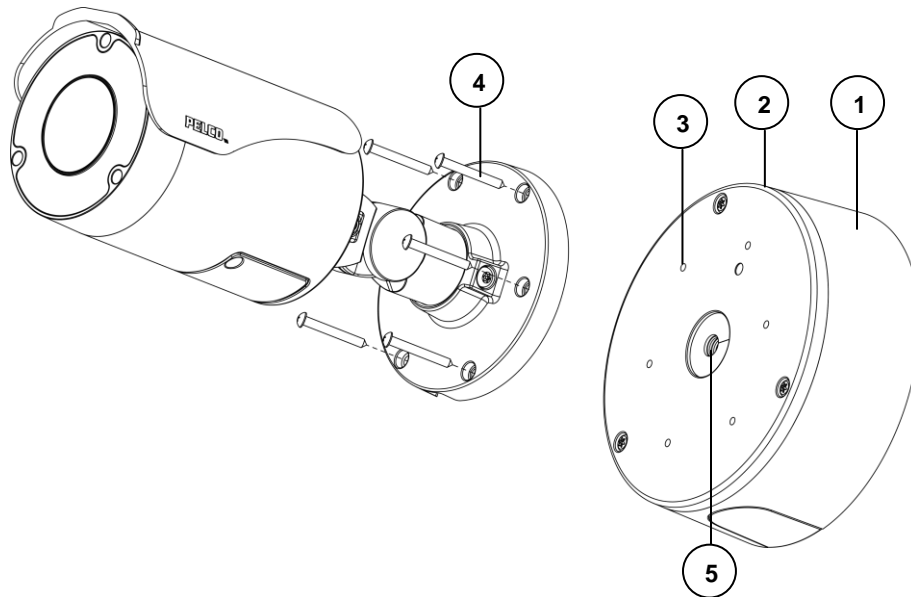


FIGURE 2-4: SURFACE MOUNT WITH IBP3BBAP-ES

1. Fix the IBP3BBAP-ES backbox (#1) to the desirable surface by drilling three holes and fastening it with screws.
2. Incoming cables should be fed through the backbox from the back or side depending on your installation.
3. Pass all the signal cables from the bullet camera through the hole of rubber seal (#5), and then insert the rubber seal into the center hole of metal plate.

NOTE: Please identify both sides of the rubber seal. The angled side of the rubber seal must be facing towards the terminals of the cables and metal plate to prevent water ingress.

4. Refer to **2.3.3 Connecting the Cables** to connect the required cables.
5. Install the adaptor plate (#2) in the backbox and tighten the screws.
6. Insert screws (#4) through the bracket's screw holes and tighten screws into the corresponding hole (#3) of the adaptor plate (#2).
7. Complete surface installation with IBP3BBAP-ES.

2.3.2.2 IN-CEILING INSTALLATION

The **In-Ceiling Installation** is mounting the camera into the ceiling with **IBP3BBAP-EI**, a **Sarix Environmental In-Ceiling Mount** for bullet.

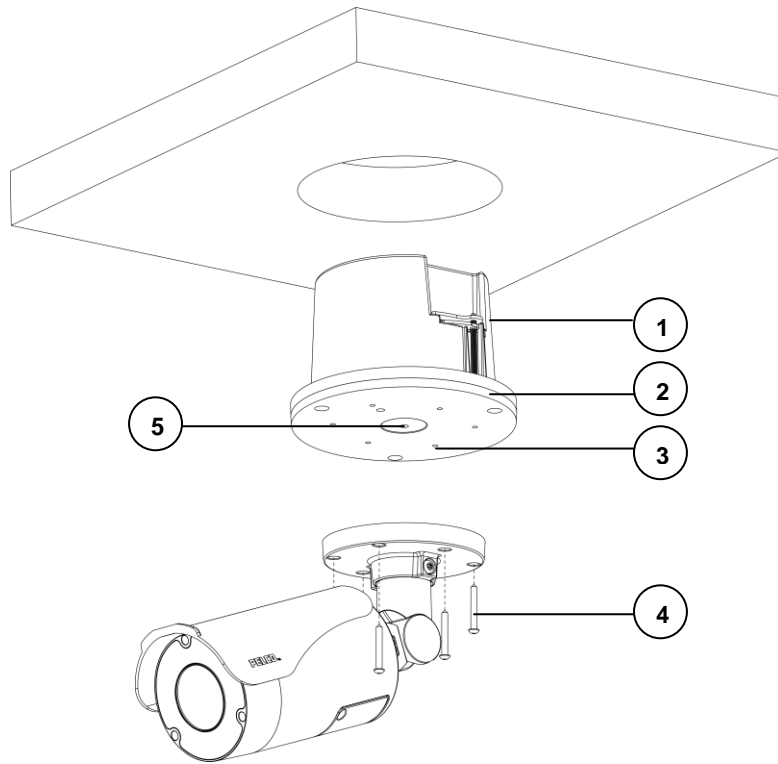


FIGURE 2-5: IN-CEILING INSTALLATION WITH IBP3BBAP-EI

1. Make a round hole for IBP3BBAP-EI backbox (#1) to fit in.
NOTE: The recommended diameter of the hole is 26.9mm.
2. Incoming cables should be fed through the backbox from the back or side depending on your installation.
3. Pass all the signal cables from the bullet camera through the hole of rubber seal (#5), and then insert the rubber seal into the center hole of metal plate.
NOTE: Please identify both sides of the rubber seal. The angled side of the rubber seal must be facing towards the terminals of the cables and metal plate to prevent water ingress.
4. Refer to **2.3.2 Connecting the Cables** to connect the required cables.
5. Install the adaptor plate (#2) in the backbox and tighten the screws.
6. Insert screws (#4) through the bracket's screw holes and tighten screws into the corresponding hole (#3) of the adaptor plate (#3).
7. Complete in-ceiling installation with IBP3BBAP-EI.

2.3.3 Connecting the Cables

- Based on your needs, connect the power cable to the power port via one of the following 3 options.
 - **AC 24V:** Connect a power cable that supplies AC24V power source to the terminal block, and then insert the terminal block into the power port.
 - **DC 12V:** Connect a power cable that supplies DC12V power source to the terminal block, and then insert the terminal block into the power port.
- **NOTE:** The polarities should be matching when using DC12V power source.
- **PoE (Class 3):** Connect an Ethernet cable terminated with RJ-45 connector to the PoE RJ-45 port for both power supply and network connectivity purposes simultaneously.
- **NOTE:**
 - a. If a Class I PoE adapter or switch is used to provide power, be sure that the power cord is firmly plugged into the socket and confirm the main earth connection.
 - b. This product is intended to be supplied by a UL Listed Power Adapter or DC power source marked "L.P.S" (or "Limited Power Source"), rated 24Vac, 1.1A or 12Vdc, 1.6A, Tma=50 degree C or 48Vdc, 350mA Gigabit Passive PoE injector, 802.3af/at PSE.
 - c. Interconnecting cables for PoE is intended to be supplied by a UL Listed type CL3P, CL3R or CL3X, marked "SUNLIGHT RESISTANT", "SUN. RES." or "SR." and "water resistant" or "W".
- Insert audio in/out cables and alarm in/out cables to the corresponding terminals of the camera if required.

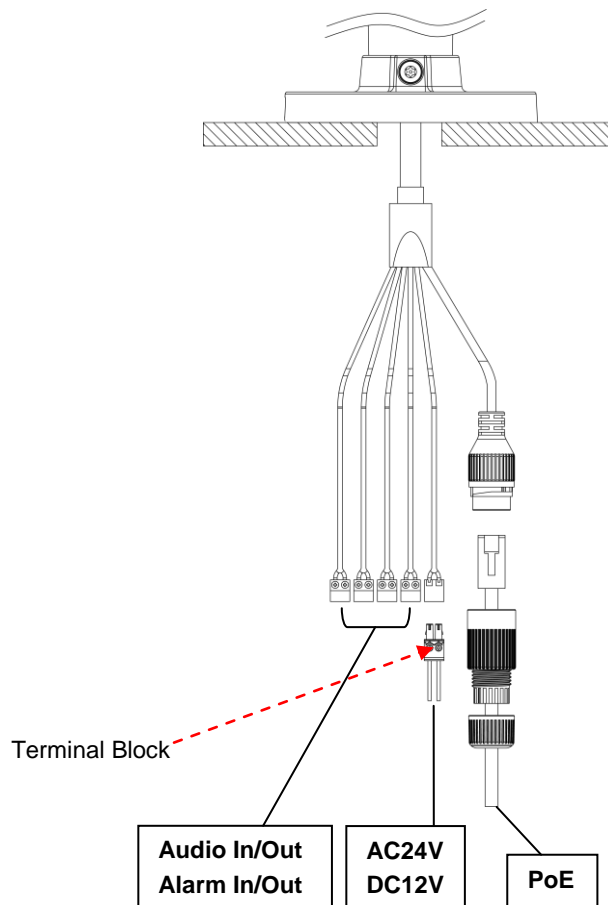


FIGURE 2-6: CONNECTING THE CABLES

2.3.4 Adjusting the Sun Shield

The environmental IR series are designed with capability to operate under rugged environments and thus will possibly be subject to influences from sunlight or rain. Sun shield is therefore coated on the camera to prevent damage from those outside effects. Refer to the figure below to adjust the sun shield.

1. Loosen the two screws on the shield hood.
2. Move the sun shield forward or backward to adjust till the desired position.

NOTE: Be sure to adjust the sun shield in accordance with the lens coverage in case of shadow problems occurring. To avoid housing damage, DO NOT adjust the sun shield position excessively.

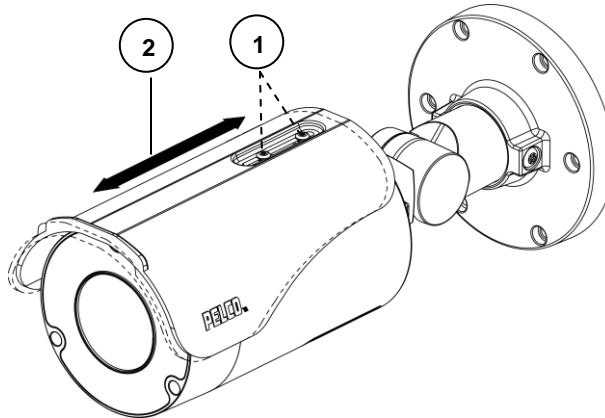


FIGURE 2-7: ADJUSTING THE SUN SHIELD

2.3.5 Positioning the Camera

- Retaining Ring for **Pan Adjustment (A)**: Loosen the locking screw by T10 torx wrench and rotate the retaining ring (A) to adjust the camera horizontally for applying to a variety of applications.
- Bracket Axis for **Tilt Adjustment (B)**: Loosen the locking screw by T10 torx wrench and tilt the bracket axis (B) to adjust the camera vertically for applying to varied applications.
- Adjustable Ring for 360° **Rotation (C)**: Loosen the locking screw by T10 torx wrench and rotate the camera body (C) to adjust the camera for applying to varied applications.

NOTE: Limitation for 3 axes position: Pan range: $\pm 360^\circ$, Tilt range: $0^\circ \sim 90^\circ$, Rotation range: $\pm 360^\circ$.

NOTE: After adjustments, make sure to tighten each part by T10 torx wrench to prevent camera from moving.

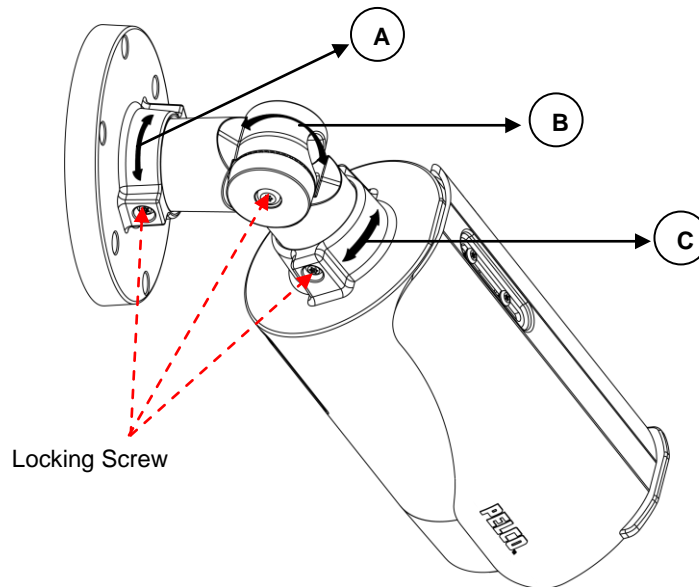


FIGURE 2-8: POSITIONING THE CAMERA

2.3.6 Adjusting the Focus

1. View the camera image using the browser (refer to the Operation Manual).
2. Use the settings in the Web interface (refer to the Operation Manual) to adjust the zoom and focus of the lens to the desired field of view.
3. Also, the focus can be adjusted by moving the zoom slider and using the Focus options in the live webpage.

NOTE: Focus adjustment is done exclusively with Web UI.

Pelco Troubleshooting Contact Information

If the instructions provided fail to solve your problem, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international) for assistance. Be sure to have the serial number available when calling.

Do not try to repair the unit yourself. Leave maintenance and repairs to qualified technical personnel only.



This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union -regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C6630M	07/19	Rev.01



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