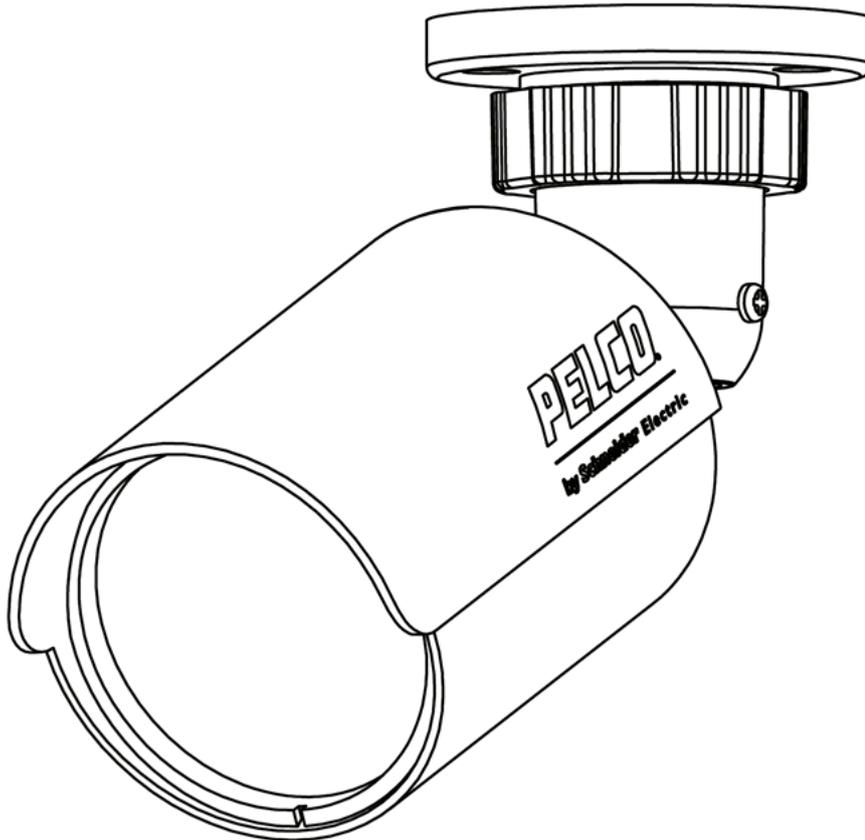


**PELCO**

by Schneider Electric

# BU4 Series 540 TV lines

## High Resolution Camera Installation/Operation Manual



C3910M-EN (03/12)

Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.

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## Important Safety Instructions

1. **Read Instructions.** All the safety and operating instructions should be read before the camera is operated.
2. **Retain Instructions.** The safety and operating instructions should be retained for future reference.
3. **Heed Warnings.** All warnings on the camera and in the operating instructions should be adhered to.
4. **Follow Instructions.** All operating and use instructions should be followed.
5. **Cleaning:** Unplug the power unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. **Attachments:** Do not use attachments not recommended by your appliance dealer, as they may cause hazards.
7. **Water and Moisture:** Do not use the camera in any location in which it may be exposed to water or moisture. (For example, dripping, splashing, or liquid near equipment etc.)
8. **Accessories:** Do not place the camera on an unstable cart, stand, tripod, bracket, or table. The camera may fall, causing serious injury to a child or adult, and serious damage to the camera. Use only with mounting accessories recommended by your appliance dealer or sold with the camera. Any mounting of the camera should follow your appliance dealer's instructions.



S3125A

The camera must be installed in a location or on a piece of equipment that can withstand three times the total weight of the camera, including the lens, camera, mount, adapter, etc.

9. Any appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
10. **Ventilation:** The camera should never be placed near or over a radiator or heat register. The camera should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or your appliance dealer's instructions have been adhered to.
11. **Power Sources:** The camera should be operated only from the type of power source indicated on the rating plate. If you are not sure of the type of power supply for your installation site, consult your appliance dealer or local power company.
12. **Power Cord Protection:** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the camera.
13. **Lightning:** For added protection for the camera during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the camera due to lightning and power line surges.
14. **Overloading:** Do not overload the wall outlet and extension cord, as this can result in a risk of fire or electric shock.
15. **Object and Liquid Entry:** Never push objects of any kind into the camera through openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the camera.
16. **Servicing:** Do not attempt to service the camera yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. **Damage Requiring Service:** Unplug the power unit from the wall outlet. Refer servicing to qualified service personnel under the following conditions.

## Important Safeguards and Warnings

- a. When the power supply cord or plug is damaged.
  - b. If liquid has been spilled or objects have fallen into the camera.
  - c. If the camera has been exposed to rain or water.
  - d. If the camera does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the camera to its normal operation.
  - e. If the camera has been dropped or the cabinet has been damaged.
  - f. When the camera exhibits a distinct change in performance. This indicates a need for service.
18. Replacement Parts: When replacement parts are required, be sure the service technician has used replacement parts specified by a qualified dealer or that have the same characteristics as the original part.
- Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Safety Check: Upon completion of any service or repairs to the camera, ask the service technician to perform safety checks to determine that the camera is in proper operating condition.

## Troubleshooting Tips

- Ensure that all power cords are attached.
- Ensure that all power switches are in the ON position.
- Ensure that all cables are installed in the proper location and are fully seated.

## 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.

In order to maintain compliance with FCC regulations shielded cables must be used with this equipment. Operation with non-approved -equipment or unshielded cables is likely to result in interference to radio and television reception.

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.

### Operating Notes:

Connect to DC12V power adapter.

### Operating Conditions

- Avoid viewing very bright objects (example, light fixtures) for extended periods.
- Avoid operating or storing the unit in the following locations:
  - Extremely humid, dusty, hot/cold environments where the operating temperature is outside the recommended range of -22°F to 122°F (-30°C to +50°C)
  - Close to sources of powerful radio or TV transmitters
  - Close to fluorescent lamps or objects reflecting light
  - Under unstable light sources (may cause flickering)

## 1. Introduction

The bullet camera is ideal for outdoor installation in a commercial environment.

### 1.1 Before You Begin

Please read this guide carefully before you install the camera. Keep this guide for future reference.

### 1.2 Package Contents

Check that the items received match those listed on the order form and packing slip. The bullet camera packing box includes:

- One fully assembled camera
- One installation/operation manual
- One guide pattern
- Three screw anchors
- Three TP4x31mm tapping screws

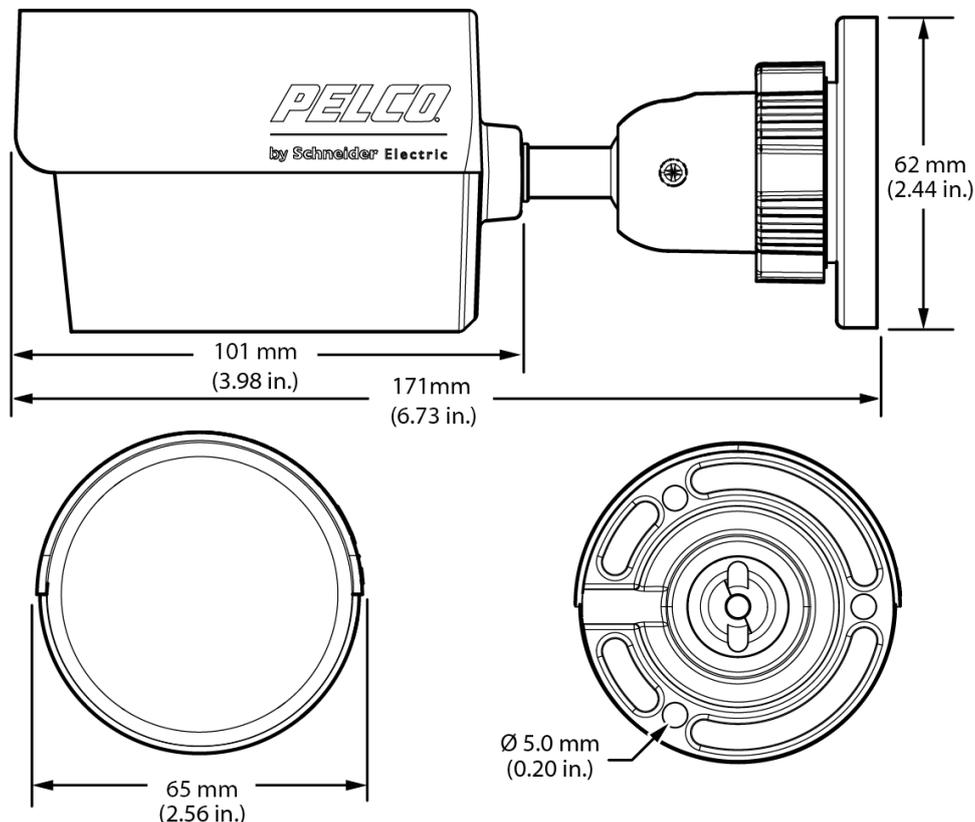
If any parts are missing or damaged, contact the dealer you purchased the camera.

### 1.3 Optional Accessories

- BU-Adapter

Use the BU-Adapter for cable management when the installation requires surface mounted conduit. See section 2.3 for details.

### 1.4 Dimensions



## 2. Installation

### 2.1 Mounting the Bracket

1. Drill three mounting holes and insert provided anchors.
2. Fasten the base plate to the wall with three provided TP4x31mm tapping screws.

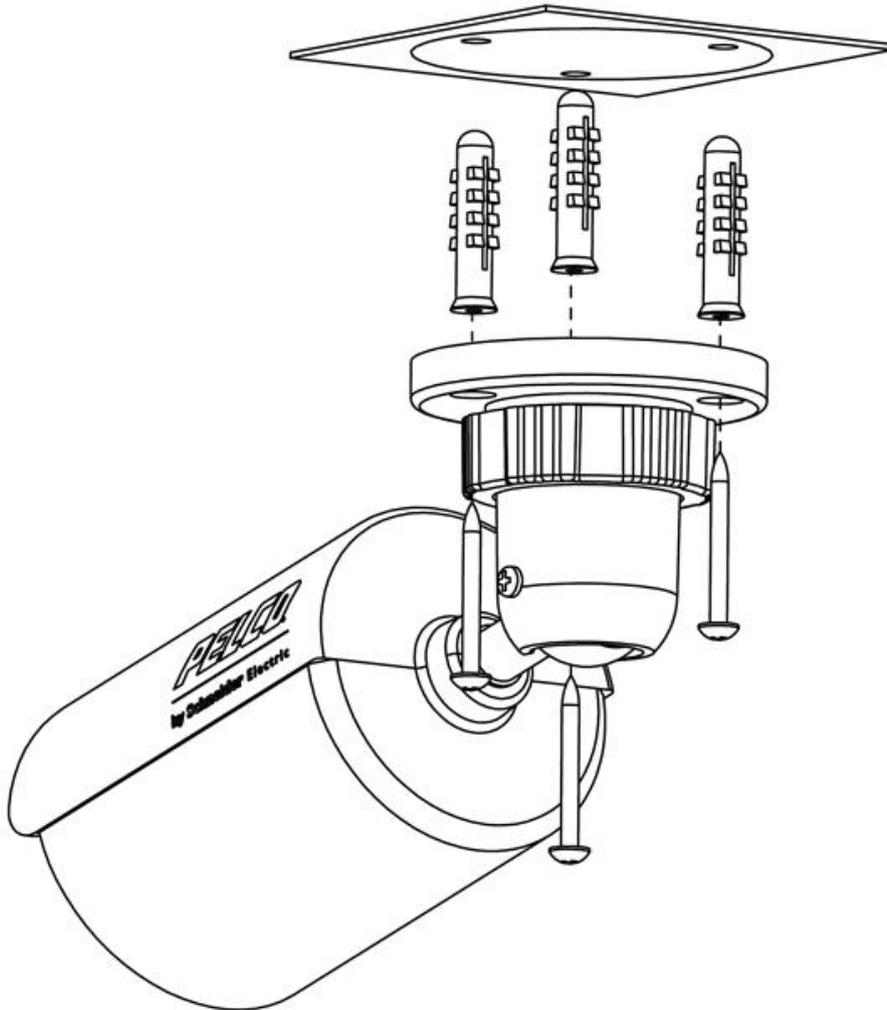


Figure 2-1 Mounting the Bracket

# Installation

## 2.2 Cable Connection

1. Pass all the signal cables through the mounting bracket.
2. Connect the camera power/video cable and external power/video cable together. The mounting bracket also has a cable relief if the mounting surface cannot be penetrated.

**Note:** The power connector is 2pc/2pin DC12V only (Red+/Black-).The power cable is a 2pin 2piece connector.

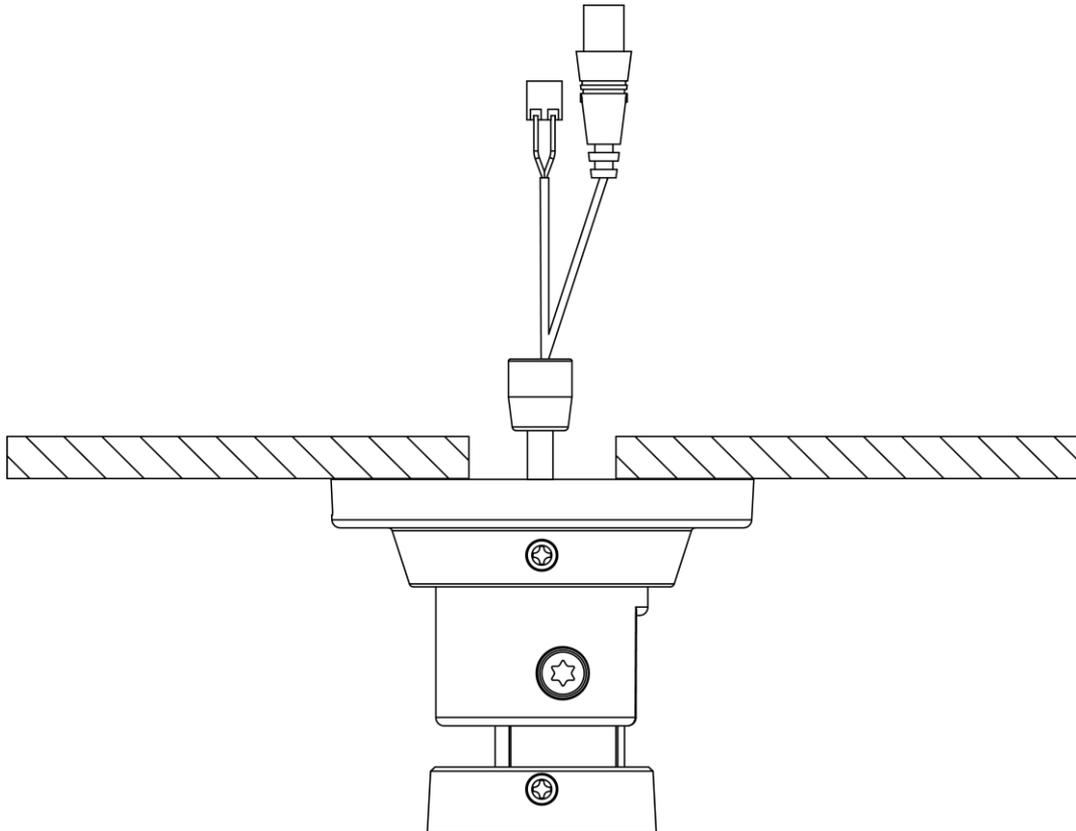


Figure 2-2 Cable Connection

# Installation

## 2.3 Instructions for Using the BU-Adapter (Optional)

You can use the BU-Adapter with the recommended conduit boxes to protect cables from rain, heat, vandals and other harsh factors and make a tidy, professional installation on a surface mount installation.

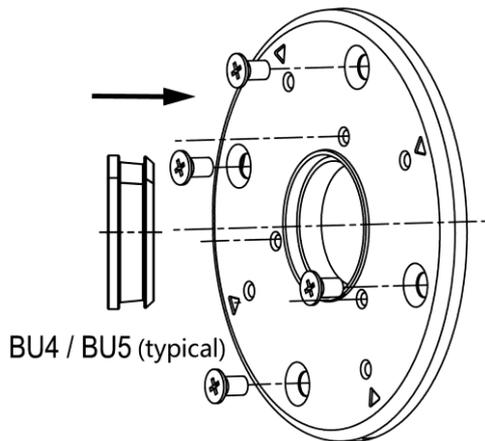
### Descriptions for the Figure 2-3 Installation Guide (typical):

- ① Camera bracket(BU4/BU5 series shown)
- ② Camera cables
- ③ Rubber of BU-Adapter
- ④ Screws(provided)
- ⑤ Metal plate of BU- Adapter
- ⑥ Conduit box(See **Table 2.3-1 Compatible Conduit Boxes** for details)

### Installation Procedures(typical):

1. Pass all cables through the hole of rubber.

**Note:** Please identify both sides of the rubber. The side of the rubber with the inclined angle must be towards the terminals of the cables and metal plate to avoid water leakage. Refer to the figure below.



2. Insert the rubber into the center hole of metal plate.
3. Then install the metal plate in the conduit box and tighten the screws and finish the installation.

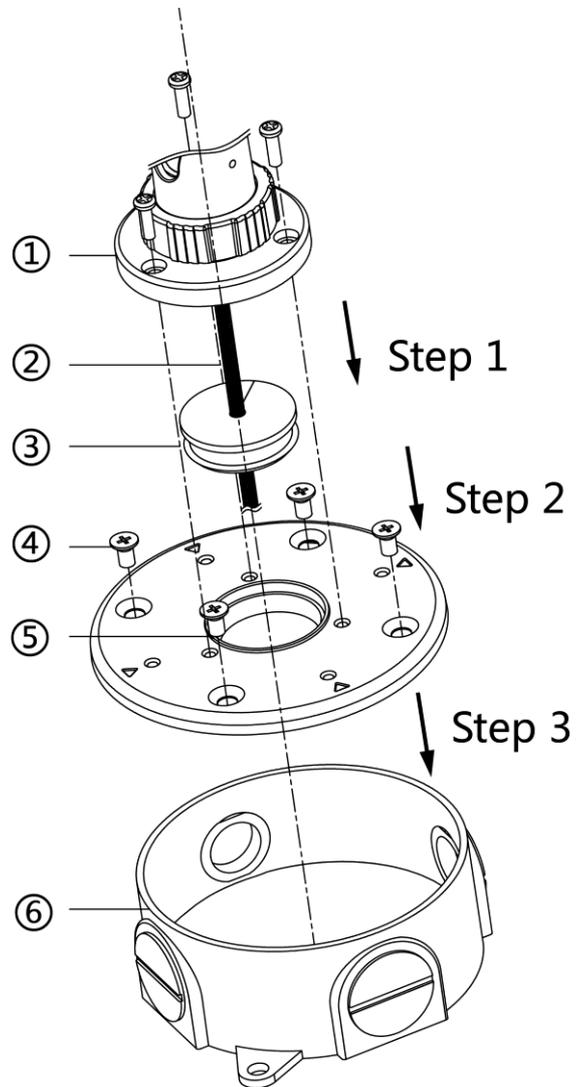


Figure 2-3 Installation Guide (typical)

### The BU-Adapter can be used with the following conduit boxes:

Manufacturer	Part Number	Description
Teddico/BWF	RB-7V	ROUND OUTLET BOX 3/4" GREY 5 HOLE
Teddico/BWF	RB-5V	ROUND OUTLET BOX 1/2" GREY 5 HOLE
Raco	5361-0	4" Round Weatherproof Splice Box 5-1/2" Outlets
Raco	5372-0	4" Round Weatherproof Splice Box 5-3/4" Outlets
Orbit	RB50-5	4" ROUND 1/2" THREADED HOLE OUTDOOR WEATHERPROOF BOX
Orbit	RB75-5	4" ROUND 3/4" THREADED HOLE OUTDOOR WEATHERPROOF BOX
EGS	WRX50	Round WPRF Box 5-1/2"
EGS	WRX75	Round WPRF Box 5-3/4"

Table 2.3-1 Compatible Conduit Boxes

# Installation

## 2.4 Install the Camera Body

1. Screw the camera body into the skeleton bracket and adjust the camera's view.
2. Tighten the knob to fix the camera.

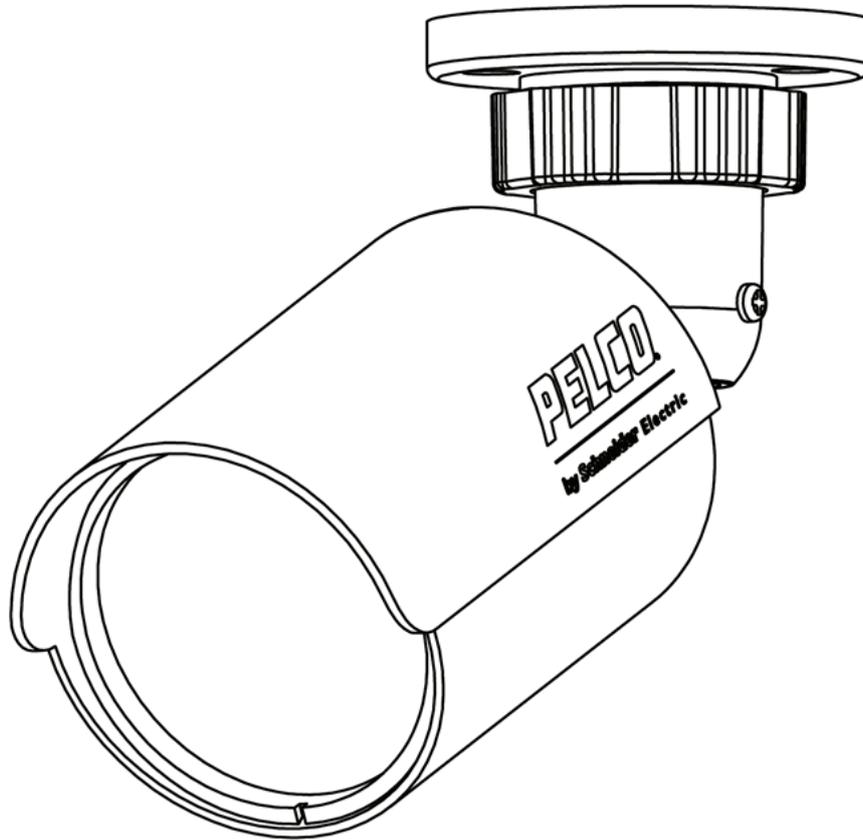


Figure 2-4 Completing the Installation

# Specification

## 3. Specifications

Camera System Type	BU4-IRF4-4	BU4-IRF4-4X
Format	NTSC	PAL
<b>Optical System</b>		
Imager Size	1/3"	
IR Cut Filter	Yes - D/N Switch	
Low Light Technology	LED only	
<b>Electric</b>		
Sync System	Internal	
Lens Options	F2.0, f3.6mm	
Zoom/Focus Controls	Fixed	
Horizontal Resolution	540TVL	
Field Of View	Horizontal: 72° Vertical: 52°	
Min. Object Distance	1.2m~∞	
Sensitivity	f/2.0; 2,850°K; 30IRE Color (17 ms) 0.2 Lux Mono (with IR) 0 Lux	f/2.0; 2,850°K; 30IRE Color (20 ms) 0.2 Lux Mono (with IR) 0 Lux
Shutter	Auto: 1/60~1/10,000, only	Auto: 1/50~1/10,000, only
IR Illumination Type	Standard	
IR Illumination Distance	15 meters	
IR Sensitivity	850nm >40% Peak Response	
WDR	On / Off (selectable, ATR)	
Noise Reduction-DNR	Yes 2D	
Language	Manual only (English, Spanish)no OSD	
<b>Power supply</b>		
Power	12VDC (+10%/-15%)	
Power Consumption	3W (IR on, without heater) 8W (IR on, with heater on)	
<b>Environment</b>		
Operating Temperature Range	-30° C ~ +50°C	
Operating humidity	98% Non-condensing	
<b>Mechanism</b>		
Construction	Aluminum Diecast	
Impact Resistance	IK10	
Positioning Mechanism/Adjustment	Bracket Panning Range: ±360° Tilting Range: ±90° Rotation Range: ±360°	
Sunshield	Yes	
Dehumidifier	Yes	
Dimension	65mm x 171 mm	
Weight(unit)	650g	

## PRODUCT WARRANTY AND RETURN INFORMATION

### WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - Unshielded Twisted Pair (UTP) transmission products
  - CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models
- Three years:
  - FD Series and BU Series analog camera models.
  - Fixed network cameras and network dome cameras with Sarix<sup>®</sup> technology
  - Sarix thermal imaging products (TI and ESTI Series)
  - Fixed camera models (C20 Series, CCC1390H Series, C10DN Series, C10CH Series)
  - EH1500 Series enclosures
  - Spectra<sup>®</sup> IV products (including Spectra IV IP)
  - Spectra HD dome products
  - Camclosure<sup>®</sup> IS Series integrated camera systems
  - DX Series video recorders (except DX9000 Series which is covered for a period of one year), DVR5100 Series digital video recorders, Digital Sentry<sup>®</sup> Series hardware products, DVX Series digital video recorders, and NVR300 Series network video recorders
  - Endura<sup>®</sup> Series distributed network-based video products
  - Genex<sup>®</sup> Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
  - PMCL5xxF Series and PMCL5xxNB Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses
  - DF5/DF8 Series fixed dome products
  - Legacy<sup>®</sup> Series integrated positioning systems
  - Spectra III<sup>™</sup>, Spectra Mini, Spectra Mini IP, Esprit<sup>®</sup>, ExSite<sup>®</sup>, ExSite IP, and PS20

scanners, including when used in continuous motion applications

- Esprit Ti and TI2500 Series thermal imaging products
  - Esprit and WW5700 Series window wiper (excluding wiper blades)
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP<sup>®</sup>) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
- Six months:
    - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes)

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a

## PRODUCT WARRANTY AND RETURN INFORMATION

written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

### RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA

number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid.



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.



[www.pelco.com](http://www.pelco.com)

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