

**DF5HD Series  
Heavy-Duty  
Fixed-Mount  
Dome**

**Installation Manual**

**C2432M-A (12/03)**

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## IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by qualified service personnel and conform to all local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. Only use replacement parts recommended by Pelco.
4. The installation method and materials should be capable of supporting four times the weight of the enclosure, pan/tilt, camera and lens combination.

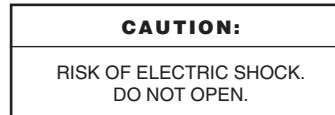
The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

## DESCRIPTION

The Heavy-duty DF5HD Series dome is perfect for fixed camera installations where structural integrity and vandalism are a priority. The system features barrel key locks, heavy-duty construction and a thick injection-molded plastic lower dome. The in-ceiling model has a reinforced bracket mounting system for installation in a fixed ceiling. Pendant models can be mounted to a pole or wall using the IWM wall mount.

## MODELS

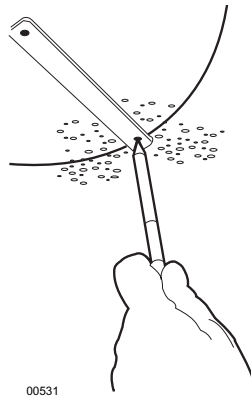
DF5HD-1	In-ceiling back box with reinforced bracket-mounting system and clear dome
DF5HD-PG-1	Indoor, pendant style back box with reinforced sun shroud and clear dome
DF5HD-PG-E1	Environmental, pendant style back box with heater, fan, reinforced sun shroud and clear dome

## INSTALLATION IN-CEILING MODEL

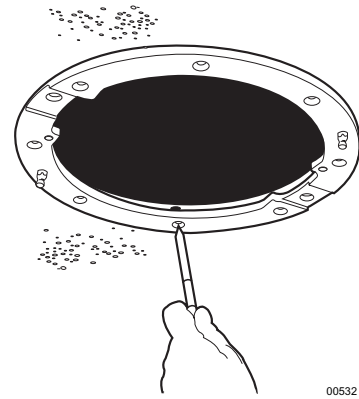
### PREPARE CEILING



- a. Locate the center point of the mounting location. Drill a hole in the ceiling using a 3/32-inch drill.



- b. Insert the compass tool into the hole. Draw a circle on the ceiling using the compass tool and a pencil. Cut the circle out of the ceiling.

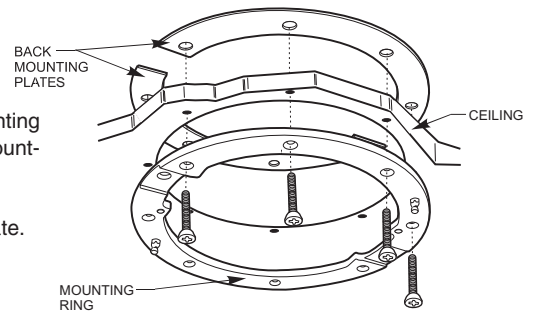


- c. Use the mounting ring as a template and mark the hole pattern onto the mounting surface. Prepare the holes.

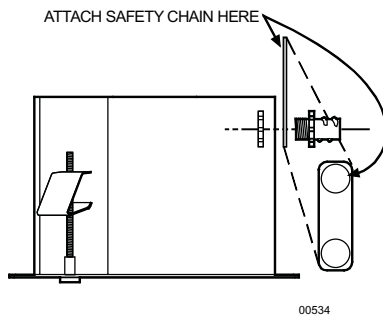
### INSTALL THE MOUNTING PLATES

Use the eight 10-32 x 3-inch screws (supplied) and install the mounting ring and two back mounting plates.

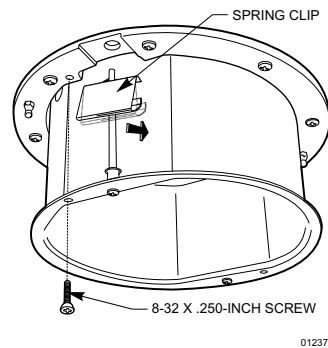
- a. Line up the mounting ring with the eight fastener holes.
- b. Feed one back mounting plate through the hole in the ceiling and line up with four fastener holes.
- c. Install fasteners through the mounting ring, ceiling, and out the back mounting plate.
- d. Install second back mounting plate.



### INSTALL THE BACK BOX



- a. Attach the conduit fitting, lock nut, and safety chain bracket. Install a safety chain/cable (not supplied) that will support up to 16 pounds (7.3 kg).
- b. Turn the thumbscrew and open the hinged door to the back box. Pull wiring into the back box through the conduit fitting. Refer to Tables A and B for cable requirements and wiring distances.

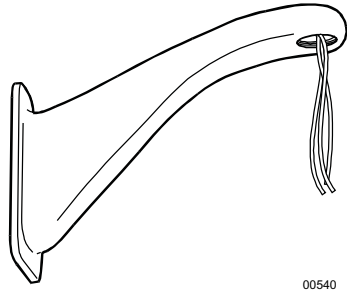


- c. Compress the spring clips on the back box and push it through the hole, until the clips spring back. Tighten the screws until you hear a clicking noise. Insert the two 8-32 x .250-inch screws to secure the back box to the mounting ring.

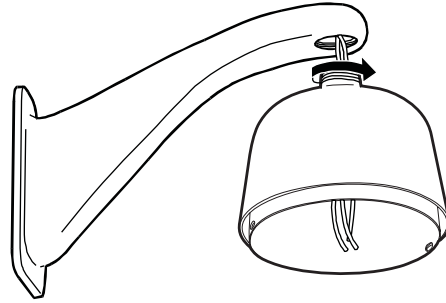
# INSTALLATION PENDANT MODELS

## MOUNT AND INSTALL THE BACK BOX

**NOTE:** If installing outdoors make sure the installation is properly sealed to keep moisture out.



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00541

- Install the mount for the pendant dome. Refer to the instructions supplied with the mount. Bring the wiring for the dome through the mount. Refer to Tables A and B for cable requirements and wiring distances.
- Pull wiring from the mount into the back box.
- Screw the back box into the mount. If outdoors, apply thread compound (provided) to the threads on the back box.

**Table A.** Video Coaxial Cable Requirements

Cable Type*	Maximum Distance
RG59/U	750 ft (229 m)
RG6/U	1,000 ft (305 m)
RG11/U	1,500 ft (457 m)

\* Minimum cable requirements:  
 75 ohms impedance  
 All-copper center conductor  
 All-copper braided shield with 95% braid coverage

**Table B.** 24 VAC Wiring Distances

The following are the recommended maximum distances for 24 VAC applications and are calculated with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.)

**EXAMPLE:** An enclosure that requires 80 vA and is installed 35 feet (10 m) from the transformer would require a minimum wire gauge of 20 AWG.

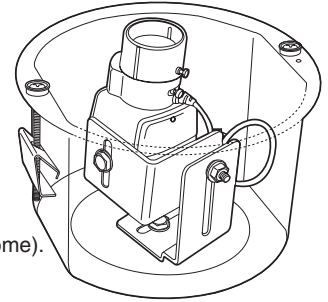
**NOTE:** Distances are calculated in feet; values in parentheses are meters.

		Wire Gauge						
		20	18	16	14	12	10	
Total vA consumed	10	283 (86)	451 (137)	716 (218)	1142 (348)	1811 (551)	2880 (877)	Maximum distance from transformer to load
	20	141 (42)	225 (68)	358 (109)	571 (174)	905 (275)	1440 (438)	
	30	94 (28)	150 (45)	238 (72)	380 (115)	603 (183)	960 (292)	
	40	70 (21)	112 (34)	179 (54)	285 (86)	452 (137)	720 (219)	
	50	56 (17)	90 (27)	143 (43)	228 (69)	362 (110)	576 (175)	
	60	47 (14)	75 (22)	119 (36)	190 (57)	301 (91)	480 (146)	
	70	40 (12)	64 (19)	102 (31)	163 (49)	258 (78)	411 (125)	
	80	35 (10)	56 (17)	89 (27)	142 (43)	226 (68)	360 (109)	

## CAMERA AND LENS INSTALLATION

To install the camera and lens:

1. Extend the lens to the maximum length before installing in the back box.
2. Attach the camera to the tilt table with the 1/4-20 screw and washers (supplied).
3. To ensure that the lens will not hit the lower dome:
  - Place the lower dome over the back box with the camera and lens installed (do not attach dome).
  - If the lens touches the lower dome, adjust the tilt table assembly.
4. Refer to the manual supplied with the camera and lens for the following information:
  - How to connect power and video wiring
  - How to make camera and lens adjustments

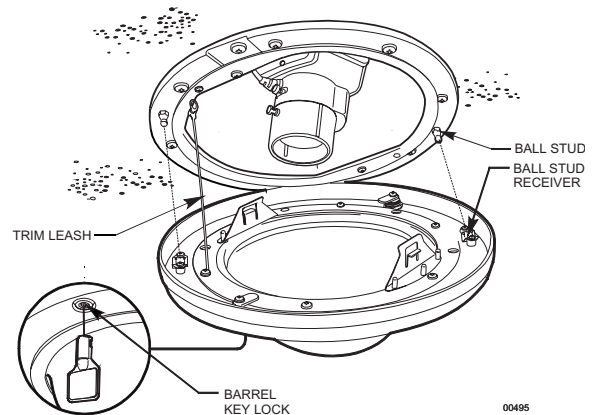


**NOTE:** The torque applied to the camera mounting bracket nut should not exceed 40 pound-inches.

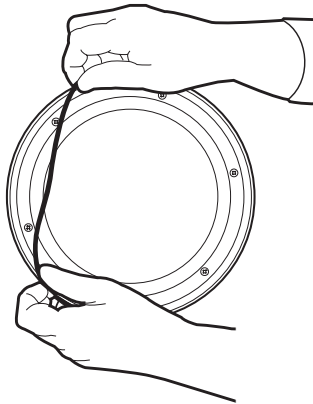
## LOWER DOME INSTALLATION

### IN-CEILING MODEL

- a. Attach the lower dome trim leash to one of the 8-32 x .250-inch screws that secure the back box to the mounting ring.
- b. Insert both keys in the barrel locks. Turn keys clockwise to the unlocked position. Keys can not be removed from lock in the unlocked position.
- c. Align pegs (located on the mounting ring) with the peg receptacles (located on the inside of the lower dome).
- d. Place lower dome over back box. Hold and turn both keys to the locked position.

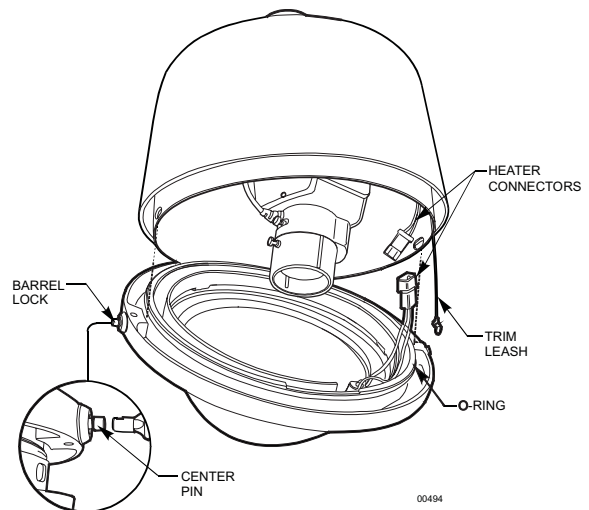


### PENDANT MODELS



- a. Lightly apply O-ring lubricant to the O-ring. Install the O-ring in the groove on the trim ring of the lower dome.
- Attach the back box trim leash to a retainer screw inside the lower dome.

**Environmental Model only:** Plug the two-pin heater connection in the lower dome into the mating connector in the back box.



- b. Align barrel locks in lower dome with the holes located on each side of the back box. Push lower dome onto back box. Press the pins of the barrel locks IN to secure the lower dome.

# SPECIFICATIONS

## ELECTRICAL

Input Voltage: 24 VAC (outdoor models only)  
 Input Power: 62 vA (for heater)

## MECHANICAL

Construction  
 Back Box: Aluminum  
 Mounting Bracket: Steel  
 Lower Dome: Clear polycarbonate, 0.090 inch thick  
 Dimensions: See dimension drawing

## GENERAL

Environment  
 In-Ceiling: Indoor only  
 Pendant: Indoor/outdoor, NEMA 4X, IP66 Rated  
 Operating Range  
 In-Ceiling: 32 to 140°F (0 to 60°C) intermittent operation; 32 to 122°F (0 to 50°C) continuous operation  
 Pendant  
 Without Heater: 32 to 140°F (0 to 60°C) absolute maximum operating temperature;  
 32 to 122°F (0 to 50°C) sustained maximum operating temperature  
 With Heater: (Assumes no wind chill factor; for detailed test conditions, contact Pelco.)  
 Maximum operating temperature: 140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum  
 Minimum operating temperature: -60°F (-51.11°C) absolute minimum; minimal icing at -50°F (-45.56°C) sustained minimum;  
 prevents icing at -40°F (-40°C) sustained minimum; de-ices. 1 inch (2.5 mm) within 3 hours after power-up

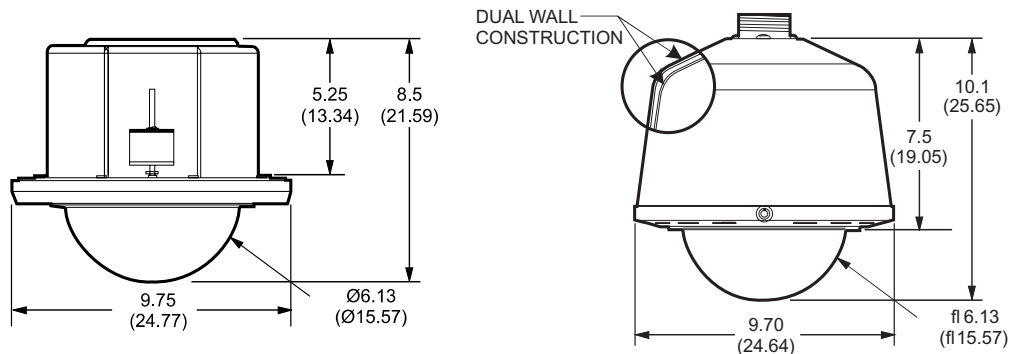
## Weight

Back Box	Unit
(without camera)	
In-ceiling:	2.17 lb (.98 kg)
Pendant Indoor:	4.45 lb (2.02 kg)
Outdoor Pendant:	4.75 lb (2.15 kg)
Lower Dome	
In-ceiling:	1.6 lb (.73 kg)
Pendant:	1.83 lb (.83 kg)

## CAMERA

Maximum Camera and Lens Size: 5.00 (L) x 2.75 (W) x 2.75 (H) (12.70 x 6.99 x 6.99 cm)

(Design and product specifications subject to change without notice.)



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

## 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 on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and VVV5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura™ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, 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 Pelco, Clovis, California. 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 which does not fall under the warranty conditions stated above, please include a 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

In order to expedite parts returned to the factory for repair or credit, please call the factory 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).

All merchandise returned for credit may be subject to a 20% 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. Ship to the appropriate address below.

*If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:*

Service Department  
Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699

*If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:*

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors  
473 Eccles Avenue  
South San Francisco, CA 94080 USA  
Phone: 650-737-1700  
Fax: 650-737-0933

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### REVISION HISTORY

Manual #	Date	Comments
C2432M	7/01	Original version.
C2432M-A	12/03	Per ECO #03-9442, changed dome material description from acrylic to clear polycarbonate.



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