

20131

**BBDF5-F, BBDF5L-F,  
and BBDF5S-F  
Back Boxes**

**Installation/  
Operation Manual**

**C1496M-A (2/02)**

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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. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.
5. The installation method and materials should be capable of supporting four times the weight of the unit and equipment.

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.

**CAUTION:**

RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.

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

## DESCRIPTION

The BBDF5-F, BBDF5L-F, and BBDF5S-F are plenum rated back boxes that can be installed in hard ceiling or standard 2' x 2' (61 x 61 cm) suspended ceiling. The BBDF5-F and BBDF5L-F require 5.25 inches (13.34 cm) of space above the ceiling, and the BBDF5S-F needs only 2.75 inches (7 cm) of room.

## MODELS

BBDF5-F	Standard in-ceiling back box
BBDF5L-F	Extended in-ceiling box
BBDF5S-F	Shortened in-ceiling box

## INSTALLATION

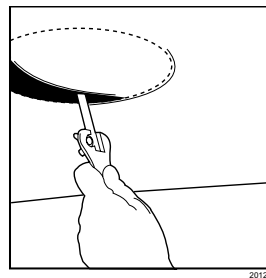
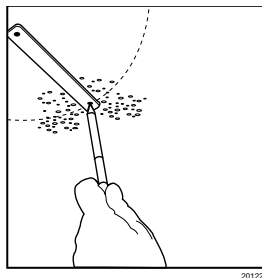
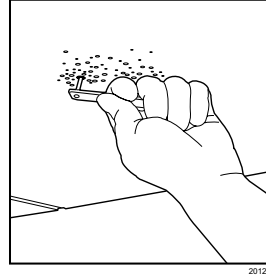
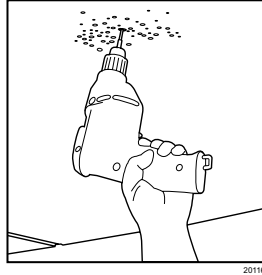
### CONTENTS

- 1 Back box with tilt table assembly installed (includes camera and lens if specified with order)
- 1 Parts bag
  - 1 Conduit fitting with lock nut
  - 1 Safety chain bracket
  - 1 3-inch miniature coaxial cable assembly
  - 1 Compass tool
  - 1 Flat washer (models without camera)
  - 1 Split lock washer (models without camera)
  - 1 Screw (models without camera)

## HARD CEILING INSTALLATION

### 1 PREPARE CEILING

Locate the center point of the mounting location. Drill a hole in the ceiling using a 3/32-inch drill. Insert the compass tool into the hole. Use a pencil and the compass tool to draw a circle on the ceiling. Carefully cut out the circle.

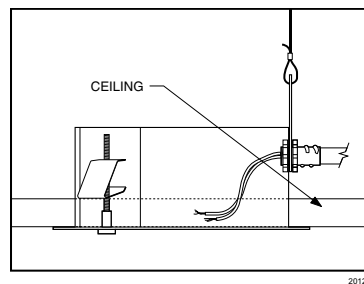
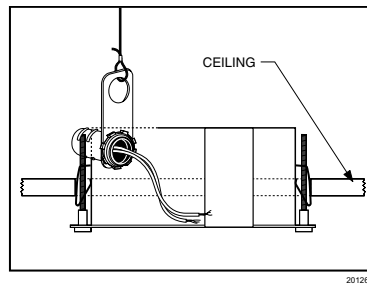
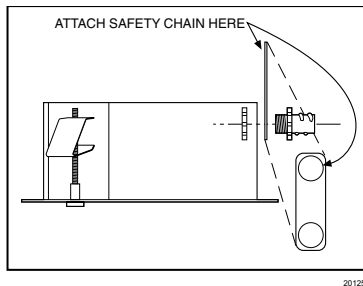


### 2 INSTALL THE BACK BOX

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). Install one end of the safety chain/cable to the safety chain bracket and the other end to a support structure in the ceiling.

Prepare the wiring for camera and lens power; refer to Tables A and B for wiring distances. Pull wiring into the back box through the conduit fitting.

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.



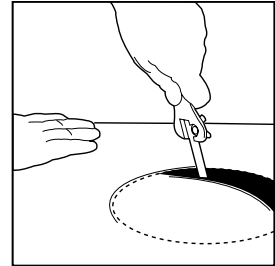
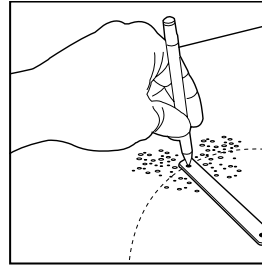
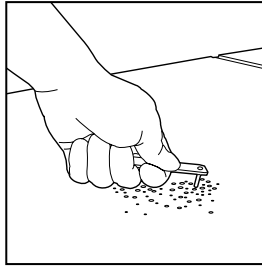
## SUSPENDED CEILING INSTALLATION

**NOTE:** The ceiling tile cannot be thinner than 0.50-inch (1.27 cm) or thicker than 1.75 inches (4.45 cm).

### 1 PREPARE CEILING TILE

Remove the ceiling tile from the ceiling. Insert the compass tool (supplied) into the center of the tile.

(If necessary, use a 3/32-inch bit to drill a hole.) Draw a circle on the tile using the compass tool and a pencil. Carefully cut out the circle.

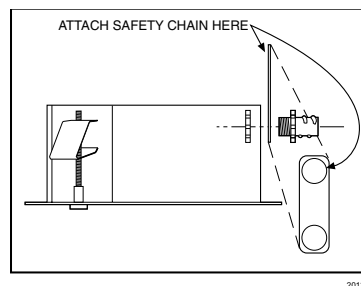
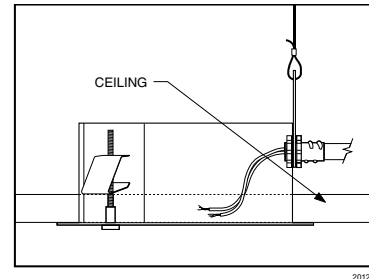
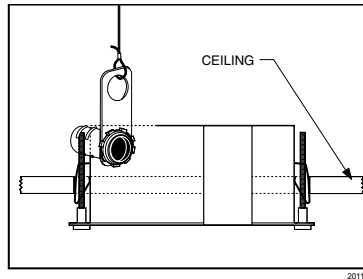


### 2 INSTALL THE BACK BOX

Attach the conduit fitting, lock nut, and safety chain bracket. Attach to the bracket one end of a safety chain/cable (not supplied) that will support up to 16 pounds (7.3 kg). Do not attach the other end yet.

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. Reinstall the ceiling tile.

Remove an adjacent ceiling tile. Prepare the wiring for camera and lens power; refer to Tables A and B for wiring distances. Pull wiring into the back box through the conduit fitting. Attach the safety chain to a support structure. Replace the adjacent ceiling tile.



**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 with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.)

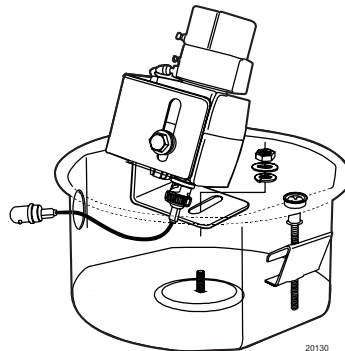
Total vA	Wire Gauge					
	20	18	16	14	12	10
10 vA	283 ft (86)	451 ft (137)	716 ft (218)	1142 ft (348)	1811 ft (551)	2880 ft (877)

## CAMERA AND LENS INSTALLATION

**NOTE:** If the camera and lens are already installed, refer to the camera and lens manuals for information on wiring and operating your equipment.

To install the camera and lens:

- 1 Install the miniature coaxial cable on the camera. Attach the camera and lens to the tilt table with the 1/4-20 screw and washers (supplied).



- 2 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.
- 3 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

## SPECIFICATIONS

### **MECHANICAL**

Construction  
Back Box: Aluminum  
Mounting Bracket: Steel

Dimensions: See dimension drawings

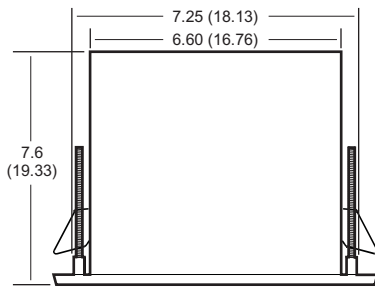
### **GENERAL**

Environment: Indoor and outdoor

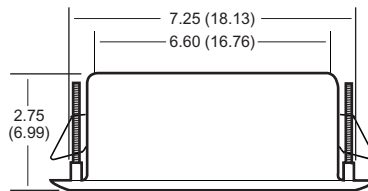
Operating Temperature: 32° to 120°F (0° to 49°C)

Weight:  
BBDF5-F: 2.80 lb (1.27 kg)  
BBDF5L-F: 3.00 lb (1.36 kg)  
BBDF5S-F: 1.75 lb (.80 kg)

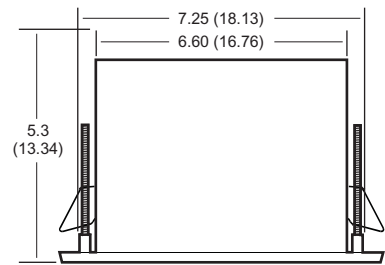
*(Design and product specifications subject to change without notice.)*



**BBDF5L-F**



**BBDF5S-F**



**BBDF5-F**

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 Pelco manufactured cameras (CC3500/CC3600 and MC3500/MC3600 Series); two years on all other cameras.
- Three years on Genex® Series (multiplexers, server, and keyboard).
- Two years on cameras and all standard motorized or fixed focal length lenses.
- Two years on Legacy®, Camclosure™ Camera Systems, CM6700/CM6800/CM8500/CM9500/CM9740/CM9760 Matrix, DF5 and DF8 Series Fixed Dome products.
- Two years on Spectra®, Esprit™, and PS20 Scanners, including when used in continuous motion applications.
- Two years on WW5700 series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders.
- 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:*

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

*If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico:*

**Intermediate Consignee**  
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USA*

**Ultimate Consignee**  
*Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699  
USA*

### REVISION HISTORY

Manual #	Date	Comments
C1495M	12/98	Original version.
C1496M-A	2/02	Added model BBDF5L-F and updated manual to new format.



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