

INSTALLATION



EH3508/EH3512/EH3515 Series Environmental Enclosure



C478M-M (1/06)

Important Safety Instructions

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

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Only use attachments/accessories specified by the manufacturer.
6. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
7. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
8. Installation should be done only by qualified personnel and conform to all local codes.
9. 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.
10. Use only installation methods and materials capable of supporting four times the maximum specified load.
11. Use stainless steel hardware to fasten the mount to outdoor surfaces.
12. AN ALL-POLE MAINS SWITCH with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.
13. Only use replacement parts recommended by Pelco.
14. **CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

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 EH3508/EH3512/EH3515 Series are indoor/outdoor light-duty camera enclosures designed for use with various cameras on the market and accommodate fixed focal length or motorized zoom lenses, with or without auto-iris operation.

The lid of the enclosure is hinged in the front providing easy access during installation and when camera and lens adjustments are necessary. The camera sled also serves as an elevation block. You can remove, flip, and then reinstall the sled to elevate the camera. All wiring and cabling is brought into the enclosure through adjustable glands at the bottom rear of the enclosure.

The rear link-lock latch can be used with a padlock of suitable size for applications requiring additional security.

MODELS

EH3508	Enclosure, indoor/outdoor, 8.75-inch (22.23 cm) lower body length.
EH3508-1	Same as EH3508 except unit is supplied with 120 VAC heater and defroster, 25 watts.
EH3508-2	Same as EH3508 except unit is supplied with 24 VAC heater and defroster, 20 watts.
EH3508-3	Same as EH3508 except unit is supplied with 230 VAC heater and defroster, 43 watts.
EH3512	Enclosure, indoor/outdoor, 12.75-inch (32.38 cm) lower body length.
EH3512-1	Same as EH3512 except unit is supplied with 120 VAC heater, defroster, and blower, 25 watts.
EH3512-1HD	Same as EH3512 except unit is supplied with 120 VAC heater and defroster, 25 watts.
EH3512-2	Same as EH3512 except unit is supplied with 24 VAC heater, defroster, and blower, 20 watts.
EH3512-2HD	Same as EH3512 except unit is supplied with 24 VAC heater and defroster, 20 watts.
EH3512-3	Same as EH3512 except unit is supplied with 230 VAC heater, defroster, and blower, 43 watts.
EH3512-3HD	Same as EH3512 except unit is supplied with 230 VAC heater and defroster, 43 watts.
EH3515	Enclosure, indoor/outdoor, 15.75-inch (40.00 cm) lower body length.
EH3515-1	Same as EH3515 except unit is supplied with 120 VAC heater, defroster, and blower, 25 watts.
EH3515-1HD	Same as EH3515 except unit is supplied with 120 VAC heater and defroster, 25 watts.
EH3515-2	Same as EH3515 except unit is supplied with 24 VAC heater, defroster, and blower, 20 watts.
EH3515-2HD	Same as EH3515 except unit is supplied with 24 VAC heater and defroster, 20 watts.
EH3515-3	Same as EH3515 except unit is supplied with 230 VAC heater, defroster, and blower, 43 watts.
EH3515-3HD	Same as EH3515 except unit is supplied with 230 VAC heater and defroster, 43 watts.

Installation

The following items are supplied to mount the enclosure:

- 2 1/4-20 x 0.500-inch hex head screws
- 2 Flat washers
- 2 Split washers

The following items are supplied to mount the camera:

- 2 1/4-20 x 0.375-inch Phillips screws

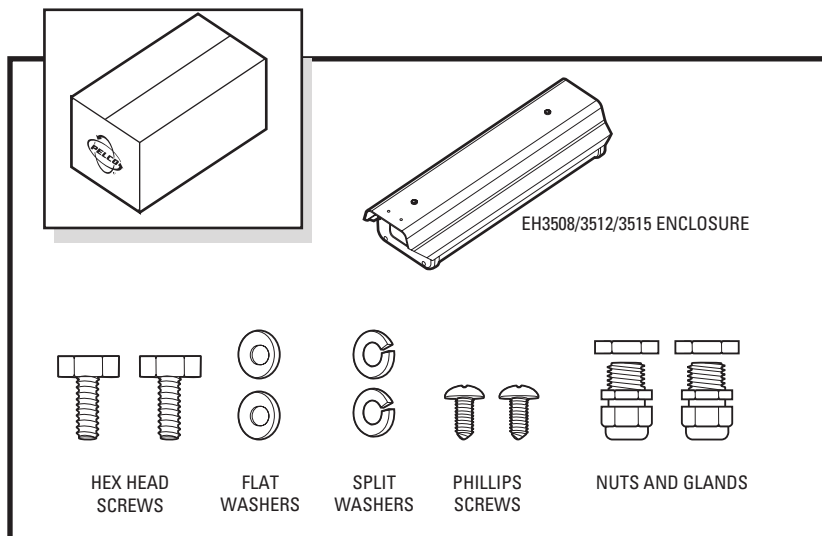


Figure 1. Package Contents

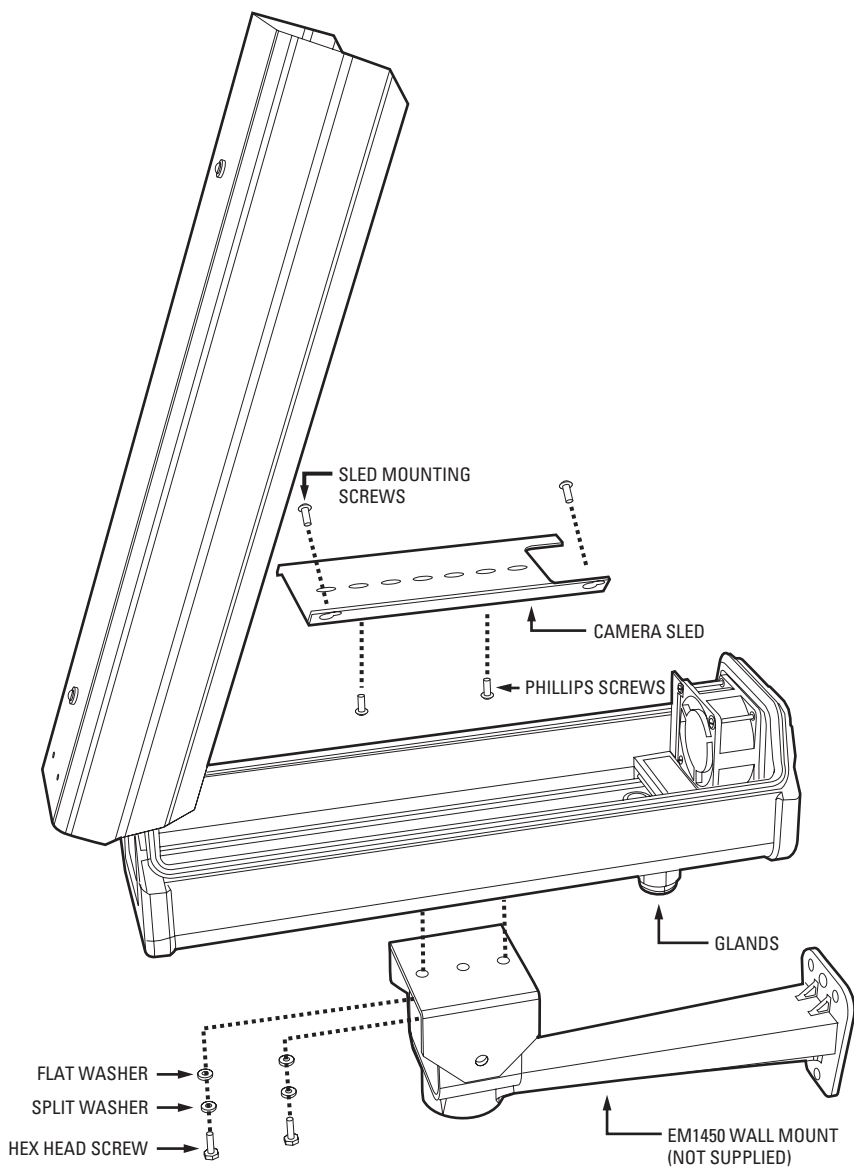


Figure 2. Exploded View of EH3500 Series Assembly

Perform the following steps to install the enclosure, camera, and lens:

1. Unlatch and open the lid.
2. Remove the camera sled from the rail of the enclosure.
 - a. Loosen the screws that hold the camera sled in place.
 - b. Slide the sled forward so it can be lifted out over the screws.
 - c. Remove the sled.
 - d. Remove the parts bag tied to the sled. This includes the hex head screws, flat washers, split washers, glands, and nuts.
3. If you are wiring the enclosure with cable, remove the glands and nuts from the parts bag and install them in the bottom of the enclosure. If you are wiring the enclosure with conduit, do not install the glands.
4. Attach the enclosure body to the appropriate mount using the instructions provided with the mount.

Attach the enclosure through the threaded mounting holes in the bottom of the enclosure. Use the 1/4-20 x 0.500 hex head screws and washers provided (in the parts bag). Completely tighten the screws to attach the enclosure body to the mounting surface.

5. Attach the camera to the sled with the 1/4-20 x 0.375-inch Phillips screws provided (in the parts bag). You can attach the camera to either side of the sled. The side of the sled to which you mount the camera depends on the type of camera and lens you are attaching.

The edges of the sled are bent—one side up and the other side down. On one side of the sled, the lip is wide; on the other side of the sled, the lip is narrow. In a typical installation, you mount the camera so that the holes in the wide lip of the sled fit over the sled mounting screws.

However, you can elevate the sled if you are installing a camera with a low optical center line or a camera with a large diameter lens. To elevate the sled (and therefore elevate the camera), flip the sled over so that the holes in the narrow lip of the sled fit over the sled mounting screws.

6. Move the sled so that the sled mounting screws extend through the narrow part of sled mounting holes, and partially tighten the sled mounting screws.
7. Pull the video and power cables through the glands or conduit on the bottom of the enclosure. Refer to Tables A and B to determine the size of power wire to use. Refer to Table C for the type of video coaxial cable to use.

NOTE: Be sure to route wiring to maintain separation between 120/230 VAC, 24 VAC, and video wiring.

8. Attach the cables to the camera.

9. If the enclosure has accessories that require power, you will need to access the PC board. To remove the cover, insert a screwdriver into the slot on top of the cover and lift the cover off. Connect the power for the accessories to pins 1 and 2 on the PC board (refer to Figures 4, 5, and 6 for information about accessory wiring). If required, connect ground to the stud on the bottom of the enclosure just in front of the PC board. Replace the PC board cover, making sure it snaps securely back into place.

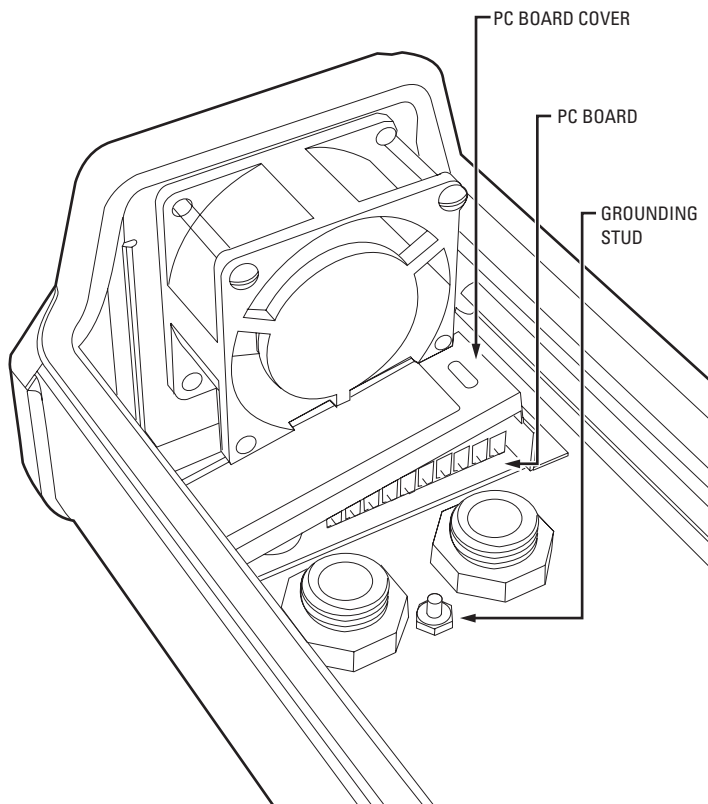


Figure 3. Accessing the PC Board

10. If the camera lens is adjustable, extend the lens to its maximum length; verify that the camera is adjusted with the lens a minimum of 1/2 inch from the enclosure window.
11. Tighten the screws that secure the sled to the enclosure.
12. Adjust the glands for a tight fit around the cables.
13. Close the enclosure lid, and latch.
14. Adjust the camera focus and iris if necessary. If you need to adjust the focus and iris manually, open the enclosure lid, adjust the focus and iris, and close the enclosure lid.

24/120/230 VAC
MODELS

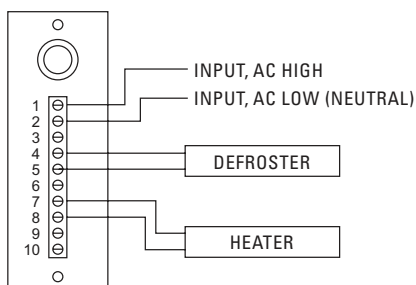


Figure 4. EH3508-1/-2/-3 Wiring Diagram

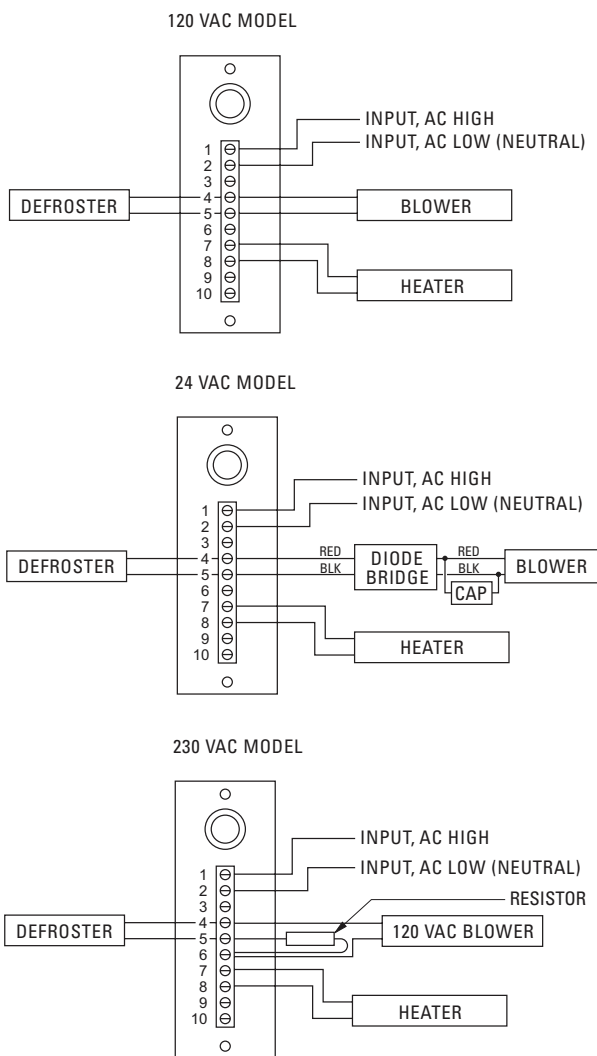


Figure 5. EH3512 Series Wiring Diagram

NOTE: Blower applies to -1/-2/-3 models only.

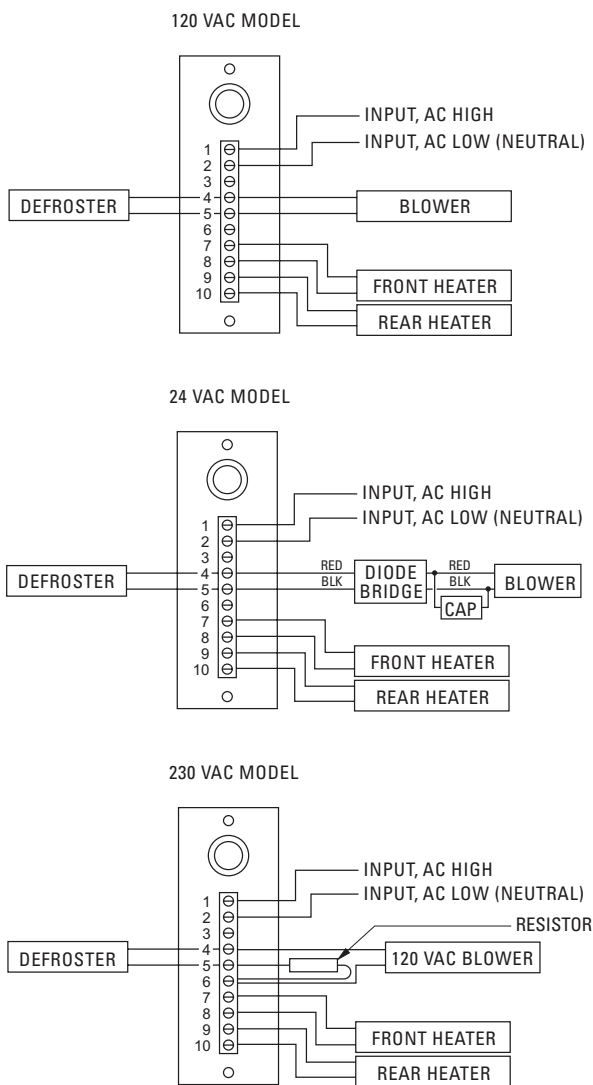



Figure 6. EH3515 Series Wiring Diagram

NOTE: Blower applies to -1/-2/-3 models only.

Table A. Enclosure Accessory Wiring Distances

The following cable sizes are the minimum recommended for sue with the heater and defroster combination in enclosures in the EH3508 Series, and the heater, defroster, and blower combination in enclosures in the EH3512 Series and Eh3515 Series only.

 **WARNING:** When using a single power source for both camera and accessories, consider the camera power consumption when determining the wire gauge. Table A does not include camera power.

Model Number	Input Voltage	Accessories	Max. Power Consumption	Cable Size	Cable Distance
EH3508-1 EH3512-1HD	120 VAC at 60 Hz	Heater Defroster	25 watts	20 AWG	2,782 ft (848 m)
				18 AWG	4,424 ft (1,348 m)
				16 AWG	7,035 ft (2,144 m)
				14 AWG	11,184 ft (3,409 m)
EH3508-2 EH3512-2HD	24 VAC at 60 Hz	Heater Defroster	20 watts	20 AWG	142 ft (43 m)
				18 AWG	225 ft (69 m)
				16 AWG	358 ft (109 m)
				14 AWG	569 ft (173 m)
EH3508-3 EH3512-3HD	230 VAC at 50 Hz	Heater Defroster	43 watts	20 AWG	6,473 ft (1,973 m)
				18 AWG	10,291 ft (2,137 m)
				16 AWG	16,365 ft (4,988 m)
				14 AWG	26,019 ft (7,931 m)
EH3512-1	120 VAC at 60 Hz	Heater Defroster Blower	25 watts	20 AWG	2,782 ft (848 m)
				18 AWG	4,424 ft (1,348 m)
				16 AWG	7,035 ft (2,144 m)
				14 AWG	11,184 ft (3,409 m)
EH3512-2	24 VAC at 60 Hz	Heater Defroster Blower	20 watts	20 AWG	142 ft (43 m)
				18 AWG	225 ft (69 m)
				16 AWG	358 ft (109 m)
				14 AWG	569 ft (173 m)
EH3512-3	230 VAC at 50 Hz	Heater Defroster Blower*	43 watts	20 AWG	6,473 ft (1,973 m)
				18 AWG	10,291 ft (2,137 m)
				16 AWG	16,365 ft (4,988 m)
				14 AWG	26,019 ft (7,931 m)
EH3515-1	120 VAC at 60 Hz	Heater Defroster Blower	25 watts	20 AWG	2,782 ft (848 m)
				18 AWG	4,424 ft (1,348 m)
				16 AWG	7,035 ft (2,144 m)
				14 AWG	11,184 ft (3,409 m)
EH3515-2	24 VAC at 60 Hz	Heater Defroster Blower	20 watts	20 AWG	142 ft (43 m)
				18 AWG	225 ft (69 m)
				16 AWG	358 ft (109 m)
				14 AWG	569 ft (173 m)

Table A. Enclosure Accessory Wiring Distances *(Continued)*

Model Number	Input Voltage	Accessories	Max. Power Consumption	Cable Size	Cable Distance
EH3515-3	230 VAC at 50 Hz	Heater Defroster Blower*	43 watts	20 AWG 18 AWG 16 AWG 14 AWG	6,473 ft (1,973 m) 10,291 ft (2,137 m) 16,365 ft (4,988 m) 26,019 ft (7,931 m)
EH3515-1HD	120 VAC at 60 Hz	Heater Defroster	25 watts	20 AWG 18 AWG 16 AWG 14 AWG	2,782 ft (848 m) 4,424 ft (1,348 m) 7,035 ft (2,144 m) 11,184 ft (3,409 m)
EH3515-2HD	24 VAC at 60 Hz	Heater Defroster	20 watts	20 AWG 18 AWG 16 AWG 14 AWG	142 ft (43 m) 225 ft (69 m) 358 ft (109 m) 569 ft (173 m)
EH3515-3HD	230 VAC at 50 Hz	Heater Defroster	43 watts	20 AWG 18 AWG 16 AWG 14 AWG	6,473 ft (1,973 m) 10,291 ft (2,137 m) 16,365 ft (4,988 m) 26,019 ft (7,931 m)

*Blower and resistor are 4.5 watts each for a total circuit power of 9 watts.

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.)

Total VA	Wire Gauge					Maximum distance from transformer to load
	20 AWG (0.5 mm ²)	18 AWG (1.0 mm ²)	16 AWG (1.5 mm ²)	14 AWG (2.5 mm ²)	12 AWG (4.0 mm ²)	
10	283 (86)	451 (137)	716 (218)	1142 (348)	1811 (551)	
20	141 (42)	225 (68)	358 (109)	571 (174)	905 (275)	
30	94 (28)	150 (45)	238 (72)	380 (115)	603 (183)	
40	70 (21)	112 (34)	179 (54)	285 (86)	452 (137)	
50	56 (17)	90 (27)	143 (43)	228 (69)	362 (110)	

Example: An enclosure that requires 30 VA and is installed 94 feet (28 m) from the transformer would require a minimum wire gauge of 20 AWG.

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

Table C. Video Coaxial Cable Wiring Distances

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

Operation

If your enclosure has a thermostatically controlled heater, the thermostat is set to turn on at 50°F (10°C) and to turn off at 80°F (27°C).

If your enclosure has a blower and/or defroster, they operate continuously.

MAINTENANCE

Regularly scheduled maintenance prolongs the operational life and appearance of the equipment. Clean the window regularly with a soft cloth using a mild, nonabrasive detergent and water to maintain picture clarity.

SERVICE MANUAL

If you need to repair the camera enclosure, obtain a service manual in one of the following ways:

- Go to Pelco's web site at www.pelco.com and find service manual C478SM.
- Contact Pelco's Literature Department and request service manual C478SM.

Specifications

Camera Mounting	Multiple holes on adjustable camera sled; camera sled mounts in threaded strip for easier removal and can be inverted for additional camera elevation
Camera and Lens Size	Accommodates camera and lens combinations (including BNC connector) up to 2.87" W x 3.00" H (7.28 x 7.62 cm) and the following lengths:
	EH3508 6.80" (17.27 cm)
	EH3508-1/-2/-3 5.00" (12.70 cm)
	EH3512 10.25" (26.03 cm)
	EH3512-1/-2/-3 9.00" (22.86 cm)
	EH3512-1HD/-2HD/-3HD 10.00" (25.40 cm)
	EH3515 13.25" (33.66 cm)
	EH3515-1/-2/-3 12.00" (30.48 cm)
	EH3515-1HD/-2HD/-3HD 13.00" (33.02 cm)
Viewing Window	Lexan®, 0.187-inch (4.75 mm) thick, optically clear, impact resistant, MR5 coated (U.L. 94HB rated)
Viewing Area	
EH3508/EH3512/ EH3515	2.25" H x 2.63" W (5.71 x 6.68 cm)
All other models	2.00-inch (5.08 cm) diameter circle
Cable Entry	Two PG13.5 compression glands on bottom at rear of enclosure; 0.47-inch (1.19 cm) maximum cable diameter
Cable Entry Holes	0.875-inch diameter; will accept 0.50-inch (1.27 cm) conduit fitting when compression gland is removed
Latch	Link-lock No. 3, stainless steel, can be secured with padlock (not supplied)

GENERAL

Construction	Extruded and die-cast aluminum body
Dimensions	Refer to Figure 7
Environment	-10° to 120°F (-23° to 49°C)
Weight	
EH3508	2.67 lb (1.21 kg)
EH3508-1/-2/-3	2.76 lb (1.25 kg)
EH3512	3.40 lb (1.58 kg)
EH3512-1/-2/-3/ -1HD/-2HD/-3HD	3.85 lb (1.75 kg)
EH3515	4.10 lb (1.86 kg)
EH3515-1/-2/-3/ -1HD/-2HD/-3HD	4.47 lb (2.03 kg)

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

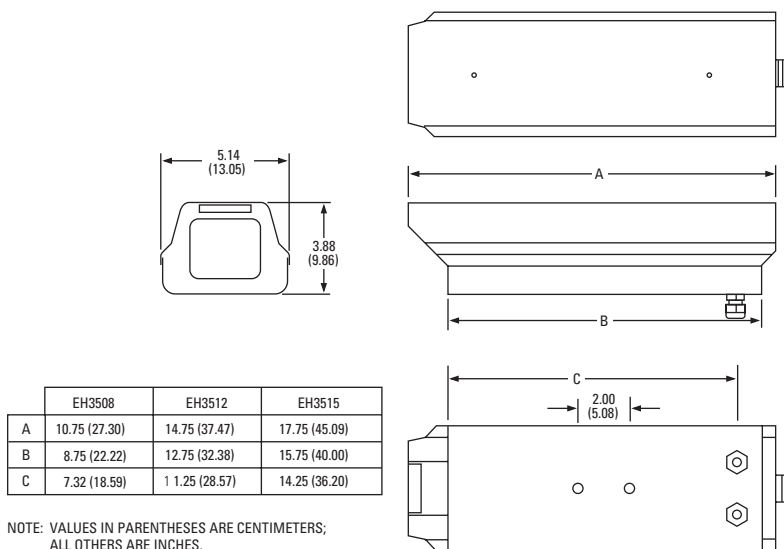


Figure 7. EH3508, EH3512, EH3515 Dimension Drawing



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
C478M-J	6/99	Moved the EH3508 Series enclosures from manual C1435M-A. Updated the description, installation instructions, and specifications. Updated wiring diagrams and dimension drawing. Modified per ECO 99-4749, which changed heater and defroster design.
C478M-K	7/99	Incorporated addendum of July 1, 1999. Added watts to model numbers. Added footnote to explain discrepancy of 230 VAC blower wattage. Revised camera and lens dimensions for heater/defroster models.
C478M-L	11/03	Updated certifications and corrected lens size specification.
C478M-M	1/06	Revised to new format. Modified per ECO 05-10784, which added a PCB cover and a grounding stud to all models. Updated Important Safety Instructions. Added wiring note. Added Figure 1, 2, and 3.

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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.
- Three years on PMCL 200/300/400 Series LCD monitors.
- 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 WW5700 Series window wiper (excluding wiper blades).
- Two years (except lamp and color wheel) on Digital Light Processing (DLP®) displays. The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, Endura™ Series distributed network-based video products, and TW3000 Series twisted pair transmission 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



Worldwide Headquarters
3500 Pelco Way
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