



EH2500 Series Dust-Tight Enclosure



C1473M-C (4/05)

Contents

Important Safety Instructions	5
Description	6
Models	6
Installation	7
Enclosure Mounting	7
Camera and Lens Installation	8
Power and Camera Connections	8
Reassemble the Enclosure	10
Maintenance	10
Specifications	12

List of Illustrations

1	Typical Fixed Wall Mounting	7
2	Typical Fixed Ceiling Mounting	7
3	Typical Pan/Tilt Wall Mounting	7
4	Typical Pan/Tilt Ceiling Mounting	7
5	Enclosure Input Voltage 24 VAC	9
6	Enclosure Input Voltage 120/230 VAC	10
7	EH2500 Series Dimension Drawing	13

List of Tables

A	Video Coaxial Cable Requirements	11
B	24 VAC Wiring Distances	11

Important Safety Instructions

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.

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.

Only use replacement parts recommended by Pelco.

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.

Description

The EH2500 Series enclosures are sealed, dust-tight, and waterproof camera enclosures designed to protect a CCTV camera and lens from adverse environmental conditions.

The EH2500 Series feature a sled for camera mounting and a “T” handle on the rear plate to assist in removing the rear plate during installation and servicing.

All models will accept CCD cameras with fixed focal length or motorized zoom lenses.

MODELS

EH2508	Indoor/outdoor enclosure, 8-inch (20.32 cm) length
EH2508-1/-2/-3	Same as EH2508 except has 120/24/230 VAC heater
EH2512	Indoor/outdoor enclosure, 12-inch (30.48 cm) length
EH2512-1/-2/-3	Same as EH2512 except has 120/24/230 VAC heater
EH2515	Indoor/outdoor enclosure, 15-inch (38.10 cm) length
EH2515-1/-2/-3	Same as EH2515 except has 120/24/230 VAC heater

Installation

The following items are supplied:

Qty	Description
-----	-------------

- | | |
|---|--|
| 1 | EH2500 Series enclosure |
| 1 | Hex wrench, 3/32" (Pelco # ZT-ALLEN3/32) |
| 1 | Hex wrench, 5/64" (Pelco # ZT-ALLEN5/64) |
| 1 | 1/4" x 1" O.D. fender washer |
| 1 | Desiccant bag |
| 2 | 1/4-20 x .375-inch Phillips pan head screws and flat washers (for camera mounting; only one screw and washer required) |

ENCLOSURE MOUNTING

The enclosure can be mounted to a wall/ceiling/pedestal mount, or pan and tilt. For proper installation, refer to the instructions supplied with the mount or pan and tilt. The enclosure should be attached to the mount or pan/tilt by a minimum of two 1/4-20 fasteners (not supplied).

Always use a service loop, as shown in Figures 1, 2, 3, and 4 to prevent water from entering the enclosure.

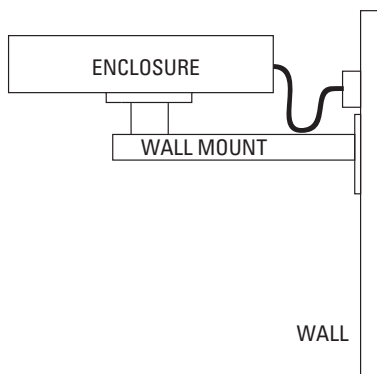


Figure 1. Typical Fixed Wall Mounting

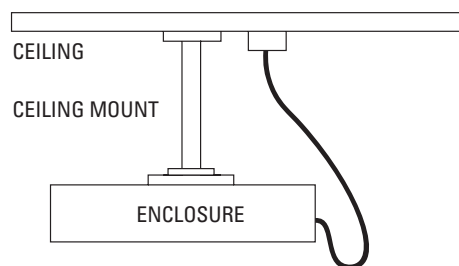


Figure 2. Typical Fixed Ceiling Mounting

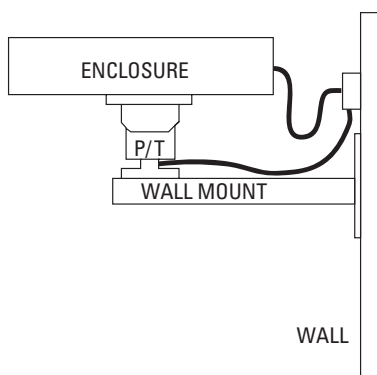


Figure 3. Typical Pan/Tilt Wall Mounting

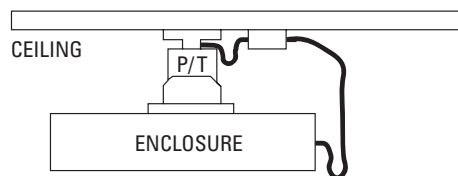



Figure 4. Typical Pan/Tilt Ceiling Mounting

CAMERA AND LENS INSTALLATION

To install the camera and lens, perform the following steps:

1. Use the supplied 5/64-inch hex wrench and loosen the screws located on the back of the enclosure.
2. Pull on the "T" handle and slide the camera sled out of the enclosure.

 **WARNING:** If you have a model with a heater, disconnect the heater wiring connectors before removing the camera sled from the enclosure. Damage to the heater wires may occur if the sled is pulled out too far before the wiring connectors are separated.

3. Mount the camera and lens onto the camera sled by doing the following:
 - a. Extend the lens to the maximum length before positioning the camera and lens.
 - b. Position the camera and lens so that they do not extend beyond the track.
 - c. Attach the camera and lens to the camera sled with the supplied fender washer, and one 1/4-20 x .375-inch Phillips pan head screw and washer.

POWER AND CAMERA CONNECTIONS

NOTE: To prevent the entrance of dust or water, proper cabling must be used when wiring the enclosure. Use of flat cable or multiple cables will prevent the proper seal of the liquidtight gland connectors. Outdoor-rated sheathing should cover multiple cables. It is especially important that you seal an unused gland connector.

To make all power and camera connections, follow the steps below:

1. If you have a heater, add the camera's wattage to the wattage of the heater (the heater consumes 15 watts.) Maximum camera input voltage must not exceed 240 VAC, and maximum camera power consumption must not exceed 10 watts.
2. Determine the size of the wire to use. If you are using 24 VAC, refer to Table B.
3. Bring power wires for the heater and camera into the enclosure.
4. Connect the enclosure input power, camera input power, and video cable (refer to Figure 5 and Figure 6).

NOTES:

- The wiring diagram in Figure 5 (24 VAC) and Figure 6 (120/230 VAC) are for applications where the input voltage for the enclosure and camera are different. For example, the enclosure input voltage is 120 VAC and the camera input voltage is 24 VAC.
- However, you may have an application where the input voltage for the enclosure and camera are the same. For example, the enclosure input voltage is 120 VAC and the camera input voltage is 120 VAC. In applications where the input voltage for the enclosure and camera are the same, wire the terminal block as follows:
 - (1) Connect the input power for the enclosure to terminal 3 (AC LINE) and terminal 4 (AC NEUTRAL).
 - (2) Connect a jumper wire from terminal 1 to 3 and a jumper wire from terminal 2 to 4.
- 5. Connect the ground wire for the enclosure power to the ground stud on the back of the enclosure. Refer to Tables A and B for information on wiring size and distances.
- 6. Attach the wires from the camera to the two-pin camera power connector (provided). Connect the two camera power connectors together.
- 7. If the camera input voltage is 120 VAC/230 VAC, ground the camera to the ground stud located on the camera sled.

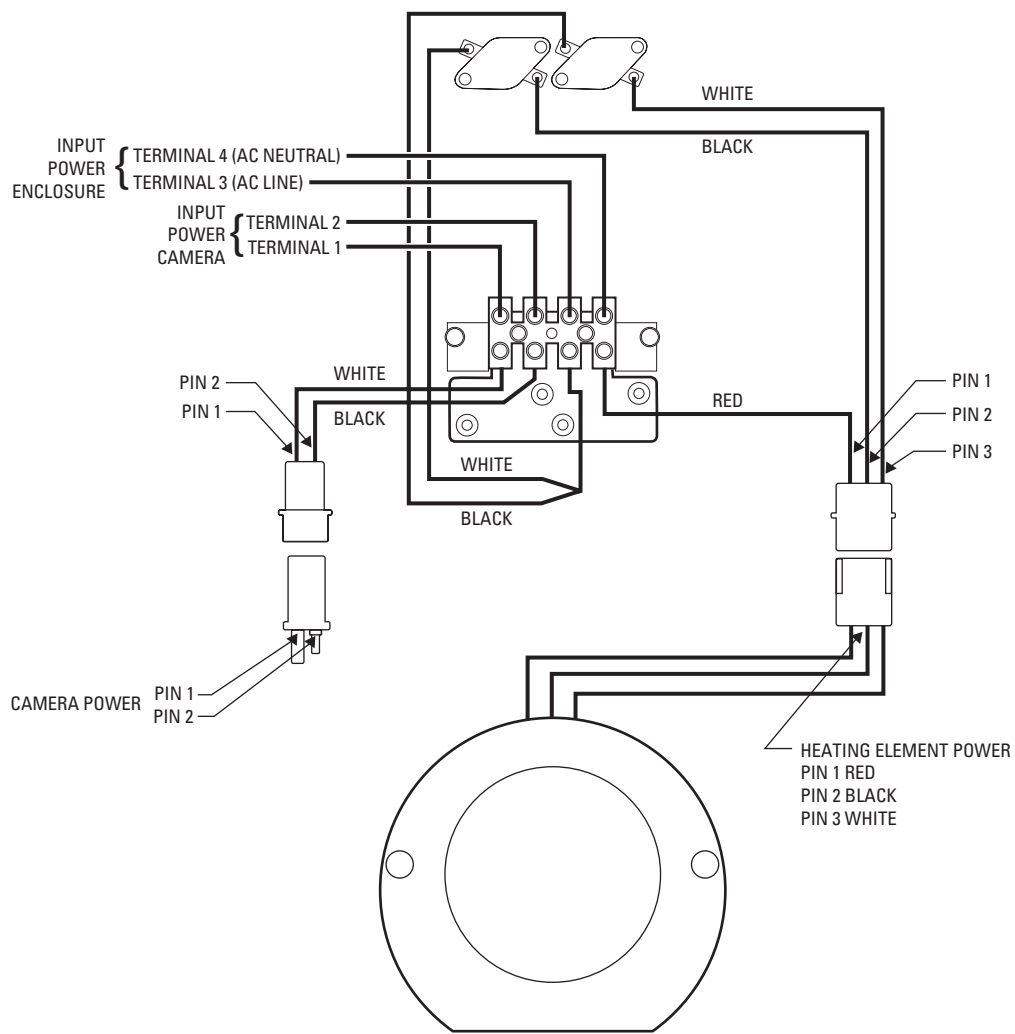


Figure 5. Enclosure Input Voltage 24 VAC

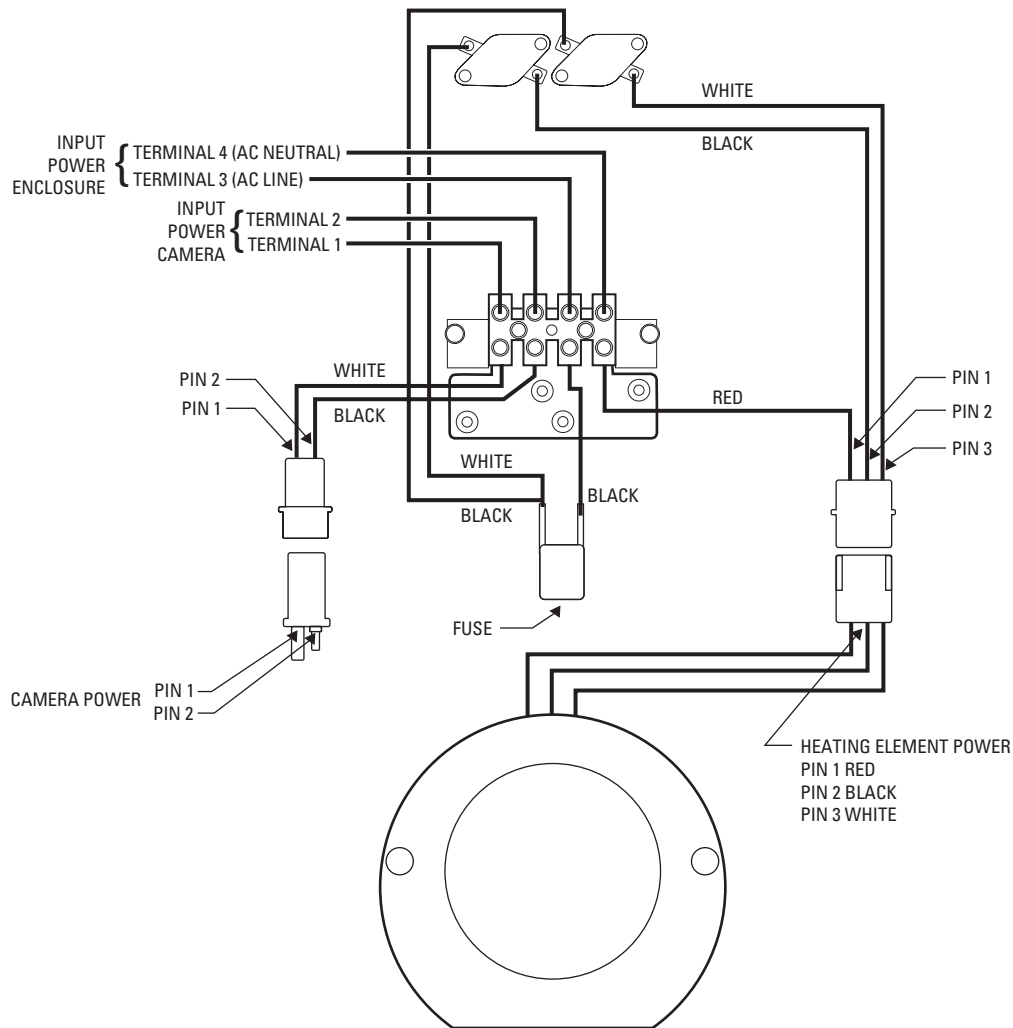


Figure 6. Enclosure Input Voltage 120/230 VAC

REASSEMBLE THE ENCLOSURE

1. Place the desiccant bag in the enclosure.
2. Slide the camera sled back into the enclosure.
3. Reinstall the screws in the rear plate.

MAINTENANCE

Regularly scheduled maintenance is not required. Clean the outer surface of the enclosure with a nonabrasive cleaning cloth and antistatic cleaner. Clean the viewing window with a mild nonabrasive soap and water to maintain picture clarity. Do not use kerosene or similar substances that may damage the surface.

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)

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

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.)

Table B. 24 VAC Wiring Distances

Total VA	Wire Gauge					
	20 (0.5 mm ²)	18 (1.0 mm ²)	16 (1.5 mm ²)	14 (2.5 mm ²)	12 (4.0 mm ²)	10 (6.0 mm ²)
10	283 (86)	451 (137)	716 (218)	1142 (348)	1811 (551)	2880 (877)
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)
90	31 (9)	50 (15)	79 (24)	126 (38)	201 (61)	320 (97)
100	28 (8)	45 (13)	71 (21)	114 (34)	181 (55)	288 (87)
110	25 (7)	41 (12)	65 (19)	103 (31)	164 (49)	261 (79)
120	23 (7)	37 (11)	59 (17)	95 (28)	150 (45)	240 (73)
130	21 (6)	34 (10)	55 (16)	87 (26)	139 (42)	221 (67)
140	20 (6)	32 (9)	51 (15)	81 (24)	129 (39)	205 (62)
150	18 (5)	30 (9)	47 (14)	76 (23)	120 (36)	192 (58)
160	17 (5)	28 (8)	44 (13)	71 (21)	113 (34)	180 (54)
170	16 (4)	26 (7)	42 (12)	67 (20)	106 (32)	169 (51)
180	15 (4)	25 (7)	39 (11)	63 (19)	100 (30)	160 (48)
190	14 (4)	23 (7)	37 (11)	60 (18)	95 (28)	151 (46)
200	14 (4)	22 (6)	35 (10)	57 (17)	90 (27)	144 (43)

Maximum distance from transformer to load

Specifications

MECHANICAL

Camera Mounting	Multiple mounting holes on removable camera sled
Latching	Two captivated screws
Maximum Camera/Lens Size	Accepts camera and lens combinations (including BNC connector) up to the following:
EH2508	6.25" L x 2.75" W x 2.75" H (15.88 x 6.99 x 6.99 cm)
EH2508-1/-2/-3	5.25" L x 2.75" W x 2.75" H (13.34 x 6.99 x 6.99 cm)
EH2512	10.25" L x 2.75" W x 2.75" H (26.04 x 6.99 x 6.99 cm)
EH2512-1/-2/-3	9.25" L x 2.75" W x 2.75" H (23.50 x 6.99 x 6.99 cm)
EH2515	13.25" L x 2.75" W x 2.75" H (33.66 x 6.99 x 6.99 cm)
EH2515-1/-2/-3	12.25" L x 2.75" W x 2.75" H (31.12 x 6.99 x 6.99 cm)
Viewing Window	2.50" (6.35 cm) diameter, 0.375" (0.95 cm) thick Lexan®
Cable Entry	Two liquidtight gland connectors

ELECTRICAL

Input Voltage	120 VAC, 24 VAC, 230 VAC for heater
Connector	Terminal block, 4-position
Heater	120 VAC, 24 VAC, 230 VAC; 15 watts, dual-element heater is thermostatically controlled Heater operates as a defogger; activates ON at 70°F (21°C), OFF at 85°F (29°C) Heater operates as a defroster; activates ON at 40°F (4°C), OFF at 67°F (19°C)

GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Indoor/outdoor
Operating Range	-50° to 122°F (-46° to 50°C)
Unit Weight	
EH2508	2.95 lb (1.34 kg)
EH2508-1/-2/-3	3.10 lb (1.41 kg)
EH2512	3.75 lb (1.70 kg)
EH2512-1/-2/-3	3.90 lb (1.77 kg)
EH2515	4.63 lb (2.10 kg)
EH2515-1/-2/-3	4.83 lb (2.19 kg)
Dimensions	See Figure 7

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

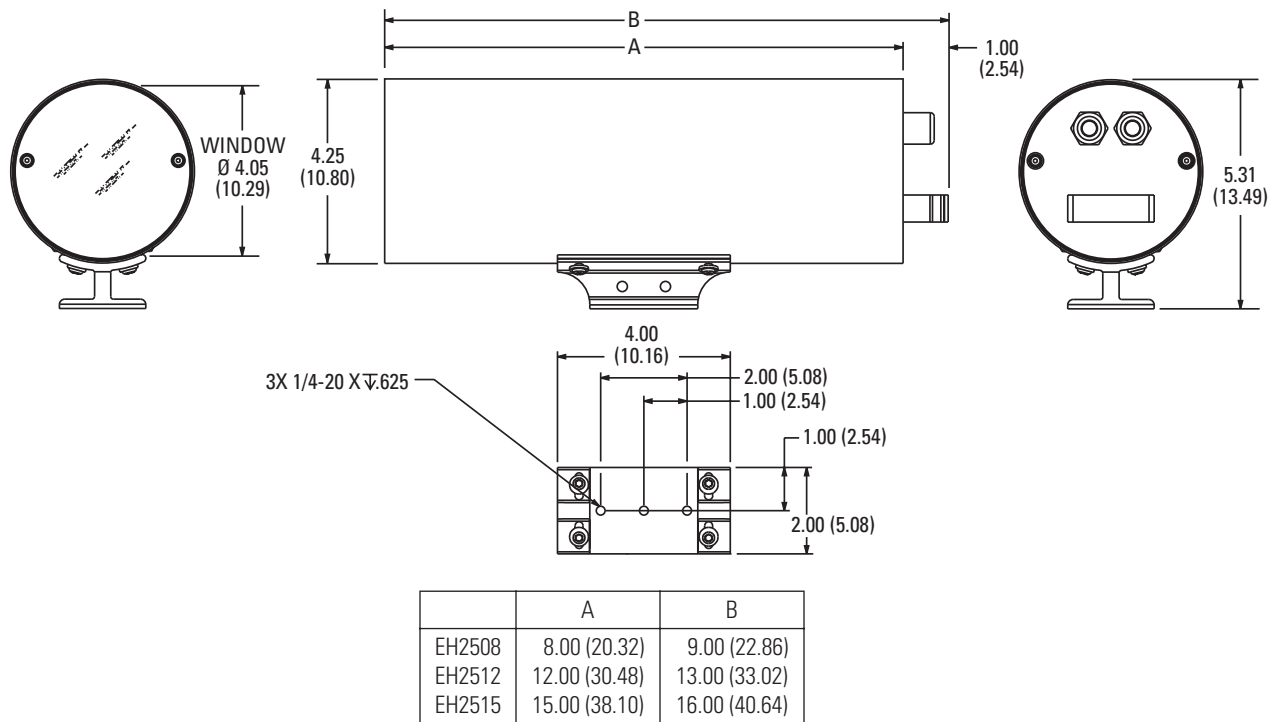


Figure 7. EH2500 Series Dimension Drawing

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 CC3651H-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 VW5700 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

REVISION HISTORY

Manual #	Date	Comments
C1473M	1/98	Original version.
C1473M-A	9/98	Rev. A. Completely revised. Removed Section 2.2, Options. Revised wiring instructions to clarify wiring with the same power input and wiring with different power input per ECO #98-3780. Revised Figure 5, EH2500 Series Wiring Diagram, per ECO #98-3879 to show more descriptive labeling of individual functions. Removed Section 3.4, Sun Shroud Installation and Section 7.0, Exploded Assembly Diagram. Created Sun Shroud manual (C1474M) and Service/Maintenance manual (C1473SM).
	7/00	Revised Figure 5 for new heater elements per ECO #00-6032. Removed Table A and Troubleshooting section. Changed to new format.
C1473M-B	10/04	Revised camera and lens installation per ECO #04-9848. Product redesigned to fit CC3610/CC3710/CC3770/MC3610/MC3710 Series cameras. Updated layout to new format.
C1473M-C	4/05	Revised wiring connections and diagram per ECO 04-10623.



Worldwide Headquarters
3500 Pelco Way
Clovis, California 93612 USA

USA & Canada
Tel: 800/289-9100
Fax: 800/289-9150

International
Tel: 1-559/292-1981
Fax: 1-559/348-1120

www.pelco.com

ISO9001

United States | Canada | United Kingdom | The Netherlands | Singapore | Spain | Scandinavia | France | Middle East