

HS5000/HS5001

**High Security/Harsh Environment
Enclosure**

Installation/Operation Manual

C489M-A (1/96)

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REVISION HISTORY

<u>Manual #</u>	<u>Date</u>	<u>Comments</u>
C489M	1/91	Original manual.
C489M-A	1/96	Revision A. Revised to include HS5001 model.

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INSTALLATION/OPERATION MANUAL HS5000/HS5001 HIGH SECURITY/ HARSH ENVIRONMENT ENCLOSURE

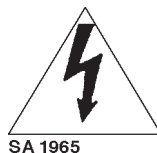
1.0 WARNINGS

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 (4) times the weight of the enclosure, pan/tilt, camera and lens combination.
6. The camera and lens combination shall not exceed 20 lbs (9.07 kg).

The product may bear the following marks:

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



CAUTION:
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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.

2.0 SCOPE

The information contained within this manual covers the HS5000/HS5001 High Security/Harsh Environment Camera Enclosure.

Installation should be in accordance with all applicable local and national electric codes, utilizing approved materials only.

3.0 DESCRIPTION

The HS5000/HS5001 is a high security/harsh environment camera enclosure designed for installations such as automated mining/excavation equipment, prisons, detention cells, etc., requiring maximum protection from vandalism.

Constructed from plate aluminum, the enclosure will accept two (2) 2-piece cameras with fixed focal length lenses. An impact resistant, .50" (12.7 mm) thick Lexan window with Margard is supplied with the enclosure.

The unique "floating" camera sled is shielded from both vibration and electricity from the enclosure body.

The HS5000 comes with a factory installed "interval" wiper/washer unit mounted behind a protective "stone guard" and is equipped with a 20 watt heater to maintain internal temperatures. All HS5000 accessories operate at 12 VDC.

The HS5001 comes from the factory *without* a wiper/washer or heater unit installed; however, three optional heater units which operate at 120, 230 or 24 VAC, respectively, are available for use with the HS5001. Operation at 12 VDC is also possible when the 24 VAC heater unit is installed.

3.1 POWER REQUIREMENTS

HS5000

Heater: 20 watts
Wiper: 3 watts
Washer: 30 watts

HS5001

With heater unit installed:
120/230/24 VAC heater ----- 40 watts
12VDC ----- 20 watts
(available if used with 24 VAC heater)

3.2 RECOMMENDED CABLE SIZE

HS5000

The following cable sizes are the minimum recommended for use with this enclosure (wiper/washer/heater).

12 VDC at 53 watts	
22 Awg	8 ft (2.43 m)
20 Awg	13 ft (3.96 m)
18 Awg	21 ft (6.40 m)
16 Awg	34 ft (10.36 m)

HS5001

The following cable sizes are the minimum recommended for use with the HS5001 when used with the 24 VAC heater unit installed operating at 12 VDC.

12 VDC at 20 watts	
22 Awg	20 ft (6 m)
20 Awg	30 ft (9.14 m)
18 Awg	50 ft (15.24 m)
16 Awg	80 ft (24.38 m)

Cable requirements for HS5001 VAC operation are listed in the table below—camera power considerations not included because of the many variations possible.

Model Number	Input Voltage	Power Consumption	Cable Size	Cable Distance
EHWD10087	120 VAC at 60Hz	40 watts	20 Awg	1,773 ft (540.4 m)
			18 Awg	2,821 ft (859.8 m)
			16 Awg	4,477 ft (1,364.6 m)
EHHK10087	24 VAC at 60Hz	40 watts	20 Awg	70 ft (21.3 m)
			18 Awg	112 ft (34.1 m)
			16 Awg	179 ft (54.5m)
HTR40W230V2X2	230 VAC at 60Hz	40 watts	20 Awg	6,514 ft (1,985.5 m)
			18 Awg	10,364 ft (3,158.9 m)
			16 Awg	16,449 ft (5,013.7 m)

4.0 INSTALLATION

Before installing the HS5000/HS5001, make certain that the mounting surface is able to support the full load of the enclosure plus all other equipment such as camera, lens, etc.

NOTE: The fasteners required to secure the enclosure to a mounting surface are not supplied.

4.1 HS5000 WIPER/WASHER/HEATER CONNECTION

The wiper/washer/heater units are factory pre-wired for 12 VDC operation and only require a 12 VDC supply (5 amp minimum) be connected to the red positive (+) and black negative (-) leads provided at the rear of the enclosure through the conduit hole.

A section of fluid tubing exits the enclosure also (1/8" I.D. x 1/4" O.D. vinyl). This tube must be connected to a supply of water and/or cleaning solution (which must be compatible with GE Lexan with Margard).

Refer to Figure 1 for proper connections.

4.2 HS5001 HEATER CONNECTION

Heater connections for all models used with the HS5001 are wired the same. Refer to Figure 2 for proper wiring connections.

The heaters are all thermostatically controlled. They are activated ON at 40°F (4.44°C) and are activated OFF at 60°F (15.56°C).

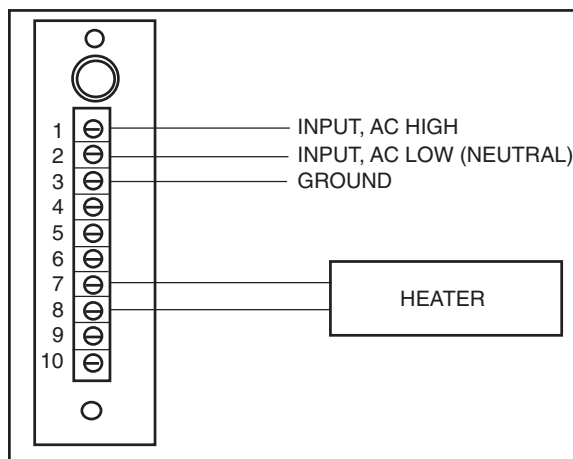


Figure 2. Wiring Diagram for HS5001 Heaters

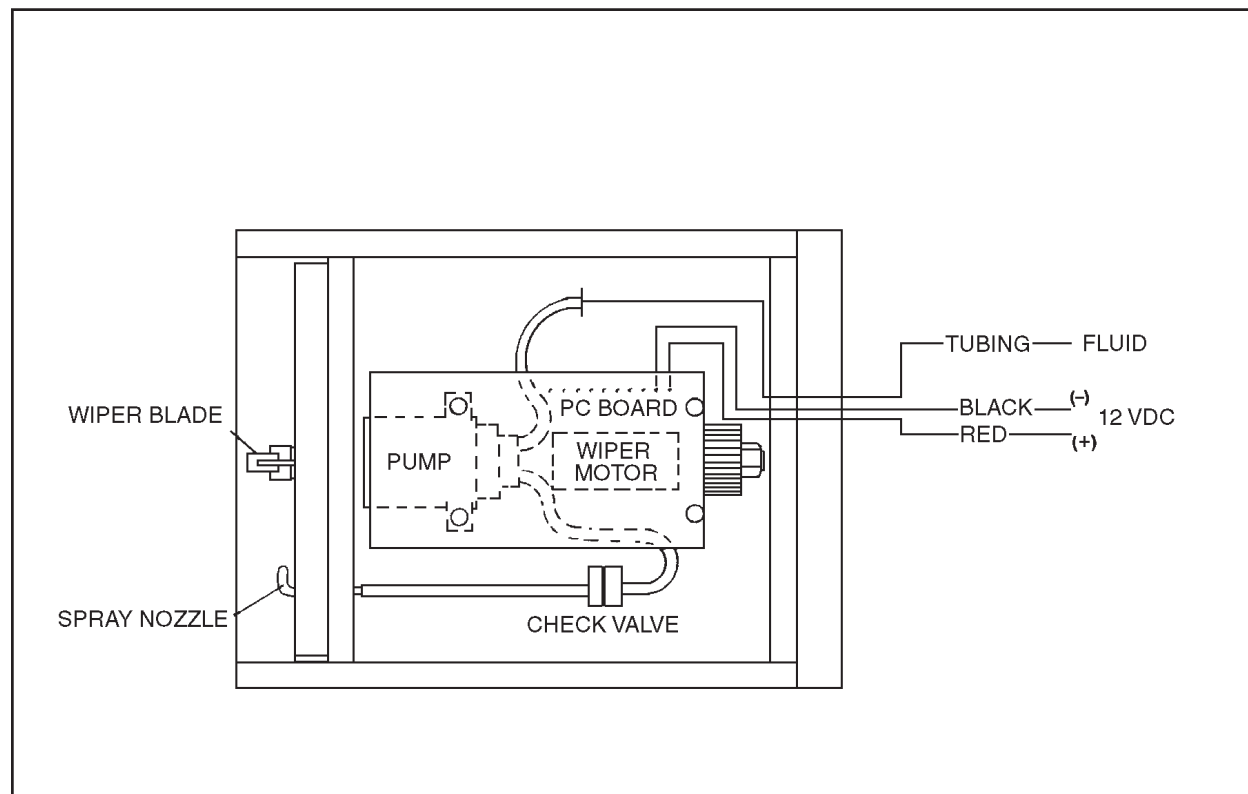


Figure 1. HS5000 Wiper/Washer/Heater Connections

4.3 CAMERA/LENS INSTALLATION

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

1. Remove the lid by removing the eight (8) 10-32 x 1/2" socket head cap screws.
2. Remove two (2) 6-32 x 3/8" socket head cap screws from the rear of the PC board. This will allow the PC board to be pivoted out of the way.
3. Remove four (4) 8-32 x 5/8" socket head cap screws that hold the camera sled to the enclosure. These screws pass through the center of the isolation pads.
4. Remove the camera sled from the enclosure by tilting the front end up and sliding the sled forward and out.
5. Attach the camera/lens assembly to the sled. The front of the lens should not extend more than 1/8" beyond the front of the sled. Place the nylon washer (supplied) under the camera head and attach with the 1/4-20 screw supplied.
6. Replace the camera/lens/sled assembly into the enclosure and attach it with the four (4) 8-32 x 5/8" socket head cap screws.
7. Replace with PC board and attach it with the two (2) 6-32 x 3/8" socket head cap screws.
8. Route the camera head interconnect cable through the 3/4" conduit hole behind each camera (in the rear plate) and attach.
9. Replace the lid and attach with the eight (8) 10-32 x 1/2" socket head cap screws.

4.4 HS5001 HEATER INSTALLATION

1. Follow steps one (1) through four (4) of section 4.3 to remove the camera/lens sled.
2. Remove the "peel and stick" cover to expose the adhesive backing on the heater pad and position pad on bottom, front edge of sled (end of sled closest to window).
3. Reinstall sled and route wires from heater to terminal block; connect wiring per Figure 2 on page 3.

4.5 ENCLOSURE MOUNTING

Secure the enclosure to the mounting surface with suitable fasteners (not supplied).

5.0 CARE AND MAINTENANCE

Regularly scheduled maintenance will help prolong the operational life and appearance of the equipment.

Clean the viewing window regularly with a soft cloth, using a mild, non-abrasive detergent and water solution to help maintain picture clarity. (Note that cleaning solution must be compatible with GE Lexan with Margard.)

6.0 EXPLODED ASSEMBLY DRAWING

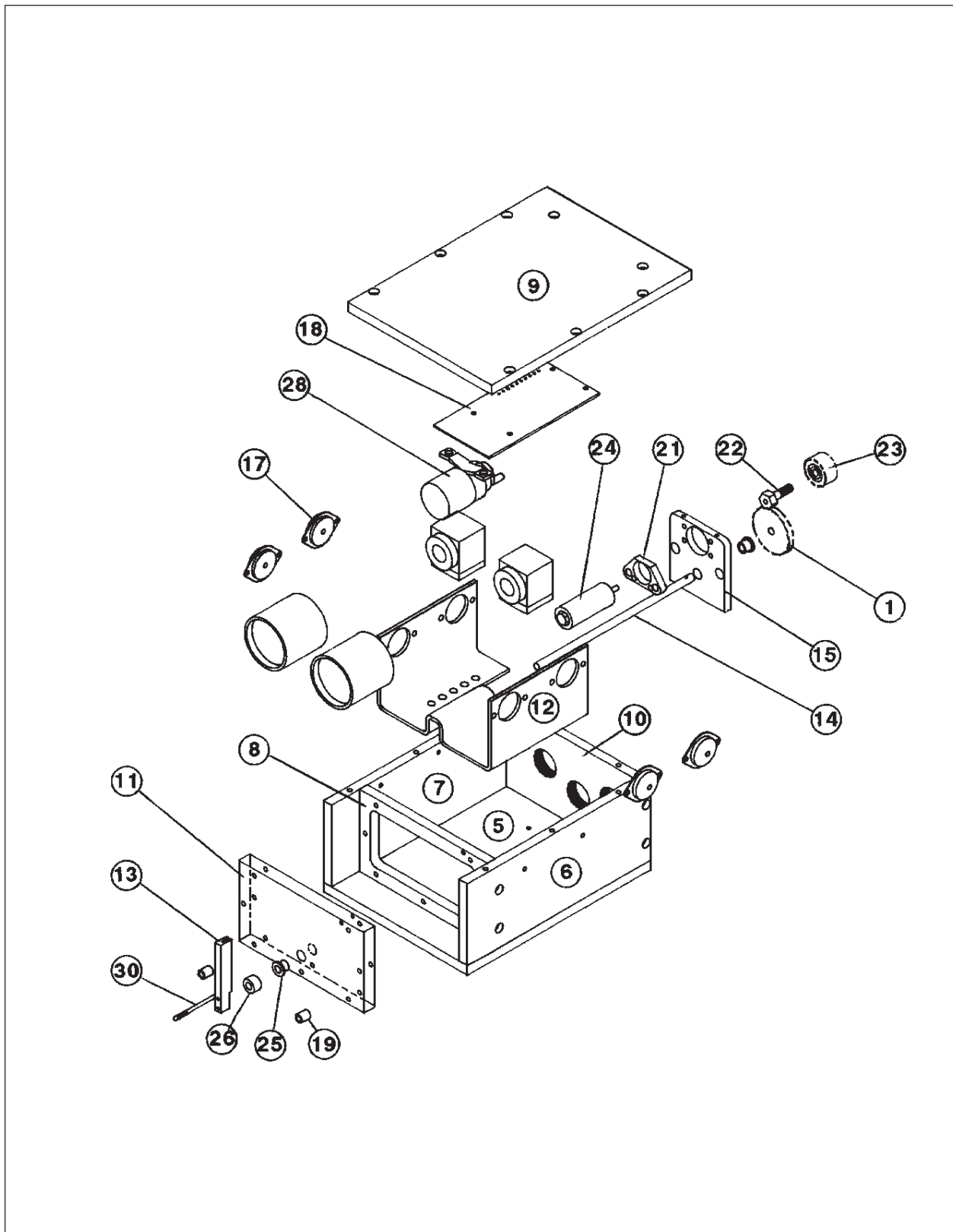


Figure 3. HS5000/HS5001 Exploded Assembly Drawing

7.0 MECHANICAL PARTS LIST

The following parts list corresponds to the exploded assembly drawing in Figure 3.

Item	Quantity	Description	Part Number
1	1	Gear, shaft, drilled	HS50004055COMP
2	1	Heater blanket, 2" x 2" 24V, 40 W (not shown)	EHHK10087
3	1	Bolt, 1/4" x 1-1/2" (not shown)	HS500010000
4	1	Stone guard (not shown)	HS500010005
5	1	Base plate	HS50004001COMP
6	1	Side plate, right	HS50004002COMP
7	1	Side plate, left	HS50004003COMP
8	1	Window frame plate	HS50004004COMP
9	1	Plate, lid	HS50004005COMP
10	1	Plate, rear	HS50004007COMP
11	1	Window, HS5000	HS50004008COMP
		HS5001	HS50004009COMP
12	1	Plate, camera/lens, HS5000	HS50004020COMP
		HS5001	HS50004021COMP
13*	1	Wiper arm	HS50004050COMP
14*	1	Wiper shaft	HS50004056COMP
15	1	Plate, motor mount wiper	HS50004057COMP
16*	1	Squeegee, wiper (now shown)	HS50004060COMP
17	4	Lordmount	LOD100PD/4
18	1	PC board assembly, wiper/washer/heater (HS5000)	PCB9000261ASSY
		PC board assembly, W/O wiper/washer (HS5001)	PCB9000301BASSY
19	2	NP spacer, 5/16 O.D. x .375", #10 clear	SPA8542
20*	3	Washer spring (not shown)	TV10000
21*	2	Motor mount	TV10A4000COMP
22*	1	Shaft motor	TV10A4001COMP
23*	1	Lens gear motor, molded	TV300010001
24*	1	Lens motor w/300:1 reduction	TV8001
25*	2	Bearing, flanged	WW550010001
26*	1	Collar arm	WW55004005COMP
27*	12	Vinyl tubing 1/8" I.D. x 1/4 O.D. x in. (not shown)	WW6610007
28*	1	Pump, washer fluid, 12 VDC	WW6610030
29*	1	Check valve (not shown)	WW6610035
30*	1	Spray tube	WW664015COMP
31*	1	Lock nut, 1/4-20 nylon (now shown)	ZH1/420NUTCHN
32*	2	Cable clamp, 3/16" (not shown)	ZH8911

* These parts are applicable to the HS5000 enclosure only.

8.0 SPECIFICATIONS

Input Voltage:	
HS5000	12 VDC
HS5001	120/230/24VAC; optional 12VDC input if using 24VAC heater unit.
Cable Entry:	Two (2) .75" (1.91 cm) conduit holes
Window:	.5" (12.7 mm) thick, impact and abrasion resistant Lexan
Camera Mounting:	Removable camera sled with isolation mounts (4)
Maximum Camera/Lens:	
Length	5.00" (12.7 cm)
Width:	2.00" (5.08 cm)
Height:	2.50" (6.35 cm)
Construction:	Aluminum, 6061-T6 3/8" thick plate Mechanical Fastening
Finish:	Polyester powder coat
Dimensions:	See Figure 4
Weight:	10 lbs 10 oz (4.82 kg)
Shipping Weight:	12 lbs (5.44 kg)

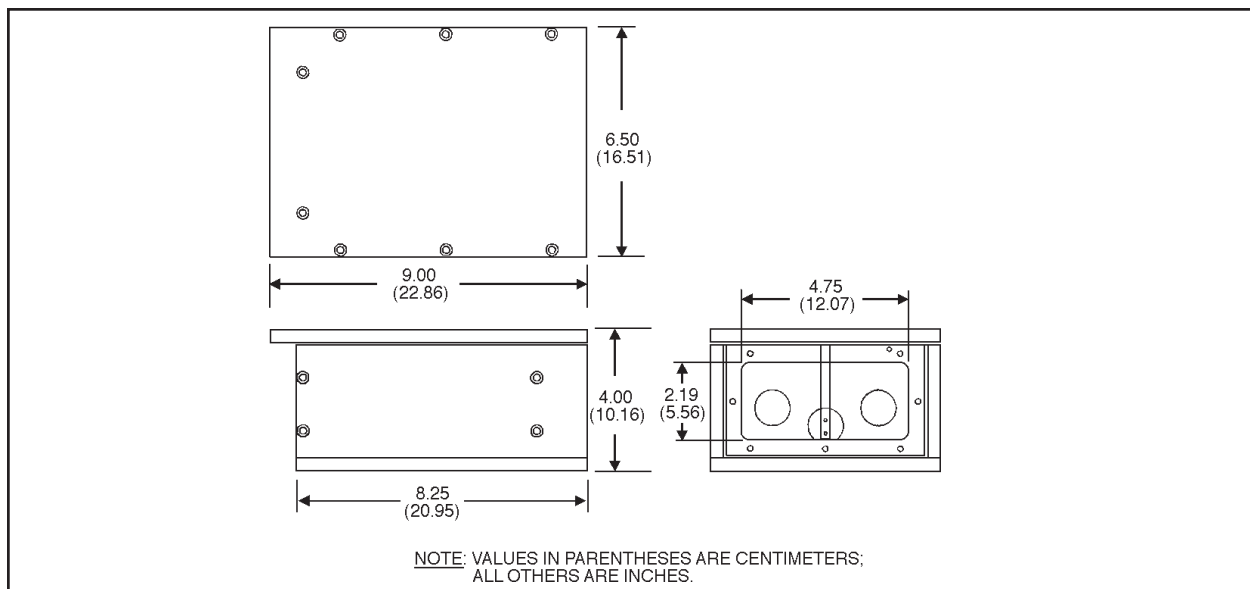


Figure 4. HS5000/HS5001 Dimension Drawing

9.0 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 WW5700 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