

**HS1000 High-Security  
Camera Enclosure**

**Installation/Operation Manual**

**C490M-D (1/96)**

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## REVISION HISTORY

| <b>Manual #</b> | <b>Date</b> | <b>Comments</b>  |
|-----------------|-------------|--|
| C490M           | 5/90        | Original version.  |
| C490M-A         | 12/94       | Revised manual to include new exploded assembly diagram, updated parts list, and modified wall mounting instructions as per ECO# 93-245. |
| C490M-B         | 9/95        | Revised to include wiring instructions for tamper switch and metric equivalents for specifications.                                      |
| C490M-C         | 11/95       | Revised to include updated tamper switch/bracket part numbers and exploded view diagram.   |
| C490M-D         | 1/96        | Revised to include tamper switch installation, specification description and new part numbers per ECO 95-397.                            |

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# INSTALLATION/OPERATION HS1000 HIGH-SECURITY CAMERA 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. The installation method and materials should be capable of supporting 4 times the weight of the enclosure, camera and lens combination.
5. The camera and lens combination shall not exceed 20 lbs (9.06 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.



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

**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 within this manual covers the installation of the HS1000 High Security Camera Enclosure.

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

## 3.0 DESCRIPTION

The HS1000 is a large, high-security camera enclosure designed for indoor “corner mount” installation for such applications as parking garages, prisons, detention cells, etc., requiring maximum protection from vandalism.

Constructed of heavy gauge steel, the HS1000 will accept most 2/3-inch format cameras with fixed focal length lenses ranging in size from 4 mm to 75 mm. There is no exposed mounting hardware securing the HS1000 to its mounting surface. Opening the enclosure can only be accomplished with a specially designed tool, eliminating the possibility of the enclosure being opened by unauthorized personnel. In addition, a factory-installed tamper switch is mounted on the secured access cover.

Designed to fit flush to the ceiling in a corner, an optional hood (HS1000H) allows the HS1000 to be mounted lower on the wall and still retain the integrity of the enclosure. Provisions are made for mounting 4-inch (10.16 cm) speakers on either side of the enclosure. The hinged front is supplied with an impact-resistant Lexan window with adequate area for the installation of an infrared illuminator.

## 4.0 INSTALLATION

Before installing the HS1000 to a wall/ceiling, make certain that the mounting surfaces are able to support the full weight of the enclosure, plus the camera/lens and any other options, (i.e., speakers, infrared illuminators, heater/blower kits and/or hoods).

The tilt table and the tilt table mounting bracket may be removed to provide adequate clearance for mounting the enclosure.

The front cover and bottom plate can be removed from the mounting frame to simplify installation.

**NOTE:** The eight (8) to twelve (12) fasteners required to secure the HS1000 to a wall/ceiling (minimum 3/8-inch diameter fasteners recommended) are not supplied.

#### 4.1 CEILING MOUNTING (FLUSH)

To mount the enclosure to a wall/ceiling, perform the following steps:

1. Open the front cover by removing the four (4) 1/4-20 "Tampruf" screws. A special socket is provided (fits 1/4-inch square drive). The cover hinges down.
2. Using the mounting bracket as a template, mark and drill holes in the mounting surfaces.
3. Attach the enclosure with the required fasteners.
4. Route required cables through the back and/or top of the enclosure.
5. Mount the camera/lens to the tilt table.
6. Make all appropriate connections (i.e., camera power, video (coax), lens, speakers, infrared illuminators, heater/power kits).
7. Position the camera and tighten the 1/4-20 fasteners to secure the tilt table in place.
8. Close the cover and check that all components clear. Secure the cover with the four (4) 1/4-20 "Tampruf" screws provided.

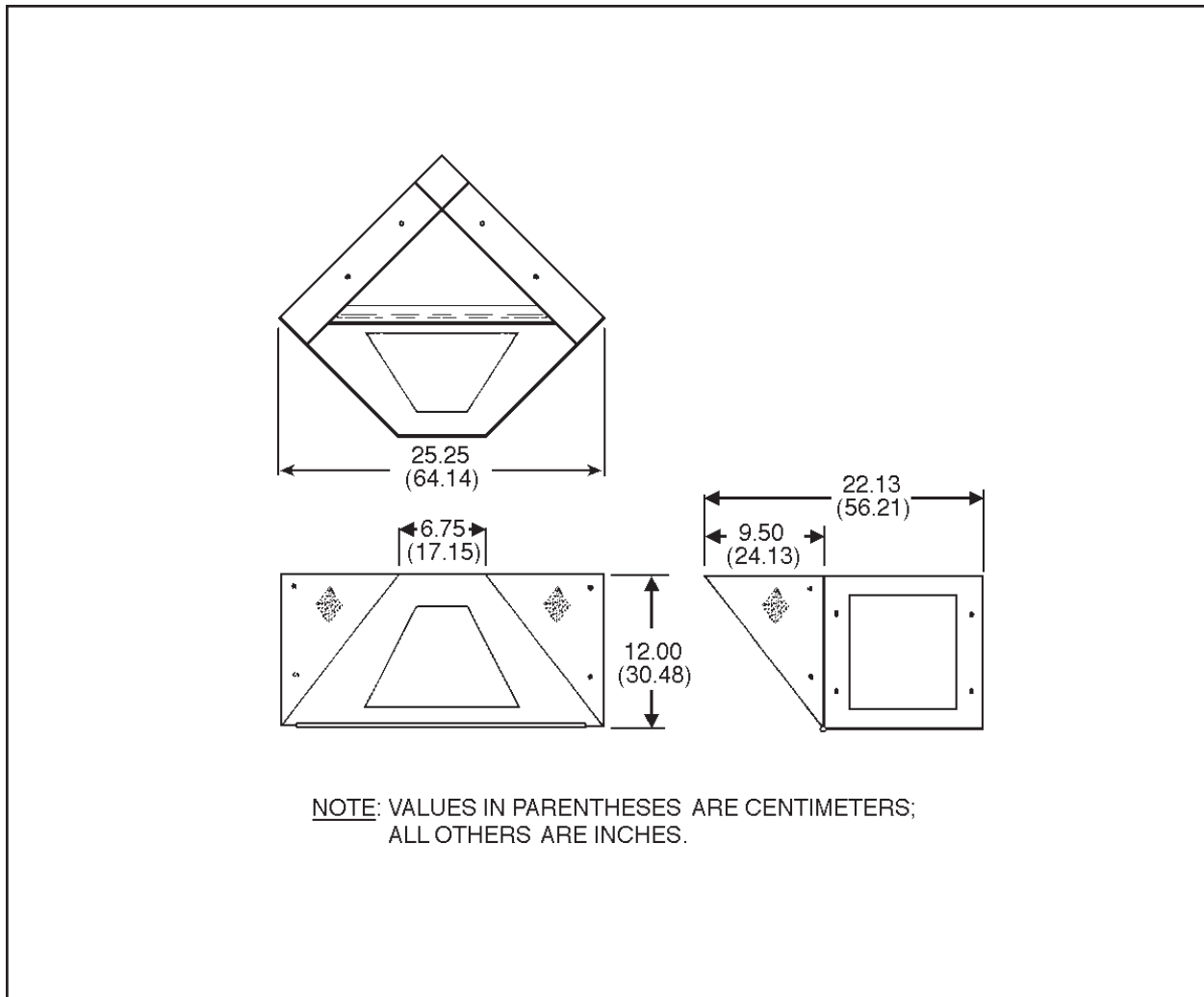


Figure 1. HS1000 Dimension Drawing

## 4.2 MID-WALL MOUNTING

To mount the enclosure mid-wall, use the optional hood, HS1000H, and perform the following steps:

1. Follow steps 1-7 in Section 4.1.
2. Attach the hood to the enclosure with the required fasteners provided (minimum 3/8" diameter recommended).
3. Close the cover and check that all components clear. Secure the cover with the four (4) 1/4-20 "Tampruf" screws provided.

## 4.3 SPEAKER INSTALLATION

The HS1000 provides two (2) positions for mounting small speakers (3" x 3" bolt pattern) to be provided by the user.

The speaker grills are shipped with a cover plate mounted over each on the inside. This plate must be removed prior to speaker installation.

**NOTE:** The speakers mount to the front cover of the enclosure. Be sure to leave an adequate loop of cable to allow the cover to be opened.

## 4.4 OPTIONAL HB6000, HB6000/220, AND HB6024 HEATER/BLOWER KITS

The HB6000, HB6000/220, and HB6024 heater/blower kits require 120 VAC, 230 VAC, or 24 VAC respectively. They provide 80 watts of heat which is thermostatically controlled to turn on at 40°F (4.44° C) and turn off at 60°F (15.56° C). They also provide internal air circulation which is thermostatically controlled to turn on at 110°F (43.33° C) and off at 80°F (26.67° C).

### 4.4.1 Recommended Cable Size

**CAUTION:** When using a single power source for both the camera and accessories, the camera power consumption must be taken into consideration when determining the wire gauge.

The cable sizes listed in the table below, should be considered as the minimum recommended sizes for use with the combination of blower/heater/camera.

### Recommended Cable Sizes

| Model      | Input Voltage | Consumption | Cable Size | Cable Distance         |
|------------|---------------|-------------|------------|------------------------|
| HB6000     | 120 VAC       | 90 watts    | 22 Awg     | 464.7 ft (141.6 m)     |
|            |               |             | 20 Awg     | 738.9 ft (225.2 m)     |
|            |               |             | 18 Awg     | 1,175.5 ft (358.7 m)   |
|            |               |             | 16 Awg     | 1,865.7 ft (568.7 m)   |
| HB6000/220 | 230 VAC       | 90 watts    | 24 Awg     | 1,047.4 ft (319.2 m)   |
|            |               |             | 22 Awg     | 1,666.0 ft (507.8 m)   |
|            |               |             | 20 Awg     | 2,649.2 ft (807.5 m)   |
|            |               |             | 18 Awg     | 4,214.6 ft (1,284.6 m) |
|            |               |             | 16 Awg     | 6,688.8 ft (2,038.7 m) |
| HB6024     | 24 VAC        | 90 watts    | 20 Awg     | 31.5 ft (9.6 m)        |
|            |               |             | 18 Awg     | 50.2 ft (15.3 m)       |
|            |               |             | 16 Awg     | 79.6 ft (24.3 m)       |
|            |               |             | 14 Awg     | 127.0 ft (38.7 m)      |



#### 4.4.2 Heater/Blower Kit Installation

To install the HB6000/HB6000/220/HB6024, perform the following steps (refer to Figure 2).

##### 4.4.2.1 Heater Assembly

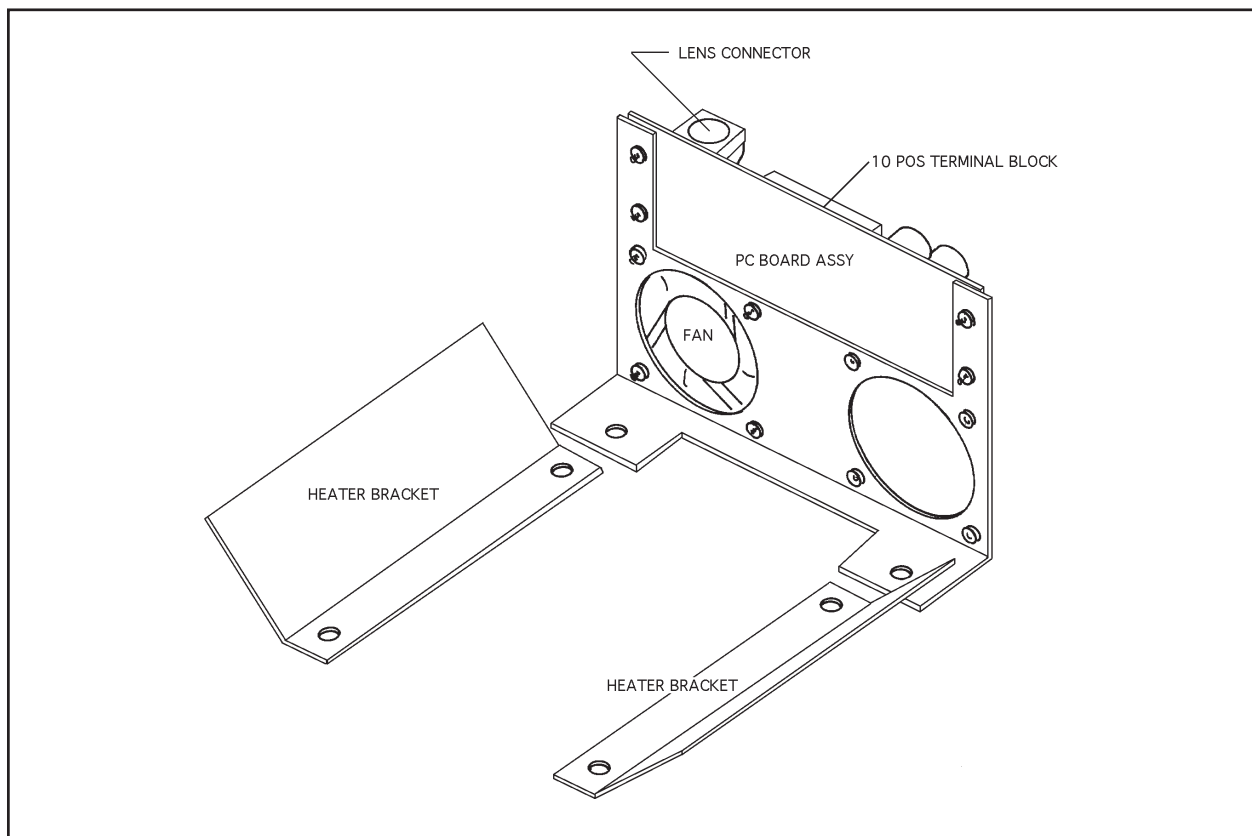
1. Open the cover.
2. The heater bracket is designed to attach to any two (2) adjacent studs used in retaining the window.
3. Remove any two (2) adjacent nuts and washers on both sides of the window.
4. Place the heater brackets on the studs, with the heaters angled away from the window, then replace and tighten the hardware.

##### 4.4.2.2 Blower/PCB Assembly

1. Open the cover.
2. On the HS1000, the blower/PCB bracket is designed to attach to any two (2) adjacent studs used in retaining the bottom plate.
3. Remove any two adjacent nuts and washers retaining the bottom plate to the mounting frame.
4. Place the blower/PCB bracket over the studs, then replace and tighten the hardware.

##### 4.4.2.3 Heater/Blower Wiring

The blower is factory wired to the PCB assembly. Connect the heaters to the PCB assembly as shown in the respective wiring diagrams (Figure 4, Figure 5, or Figure 6). Supply AC line voltage (230 VAC, 120 VAC, or 24 VAC) as shown.



**Figure 2.** HB6000, HB6000/220, and HB6024 Assembly

## 4.5 ELECTRICAL CONNECTION

After the cable has been routed, all wire connections should be made (i.e., video, lens, camera power, heaters). A 6-position terminal block has been provided to assist in this.

**CAUTION:** When a single power source is used for both the camera and accessories, the camera power consumption must be taken into consideration when determining the wire gauge. Also, make certain that all electrical connections are done properly and meet electrical codes.

## 4.6 TAMPER SWITCH INSTALLATION

The HS1000 enclosures come standard from the factory with a tamper switch installed. Should it become necessary to install a replacement switch, refer to Figure 3 for the correct position of the bracket/switch and perform the following steps:

1. Remove the front cover.
2. Install the bracket/switch and secure with lockwashers and nuts.

### 4.6.1 Tamper Switch Wiring

The tamper switch comes with both a “Normally Open” contact and a “Normally Closed” contact.

For a “Normally Open” circuit, use the “open” and “common” terminals; for a “Normally Closed” circuit, use the “closed” and “common” terminals.

## 5.0 CARE AND MAINTENANCE

Maintenance performed at regular intervals will help prolong the operational life and appearance of the equipment.

Clean the Lexan window with a mild nonabrasive detergent in water with a soft cloth regularly to maintain picture clarity. For a heavily soiled window, use vinyl cleaner.

**NOTE:** Pelco offers a 24-hour, seven-day-a-week Technical Assistance Program (TAP) designed to assist any customer with a technical problem involving Pelco equipment whether it's the weekend or late at night. For technical assistance dial (800) 289-9100 and you will be connected to a Pelco TAP member who is trained to answer your questions.

Pelco also guarantees one-day turnaround on any Pelco equipment sent in for repair. This includes warranty and non-warranty items. Refer to the section on warranty and return information in this manual for the proper procedure.

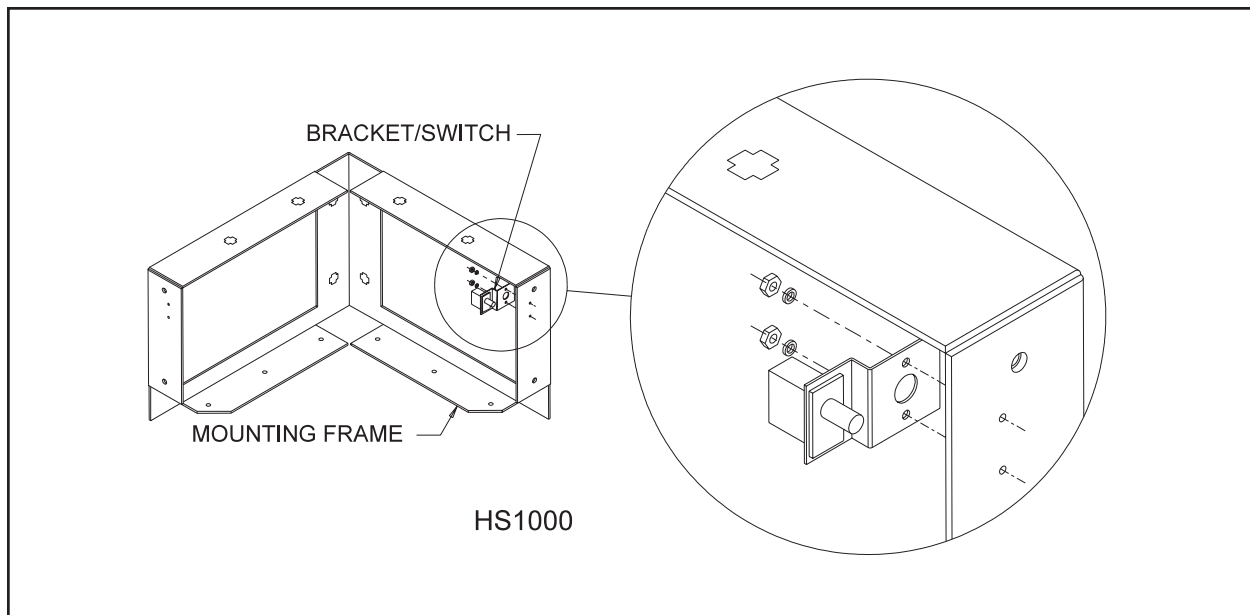
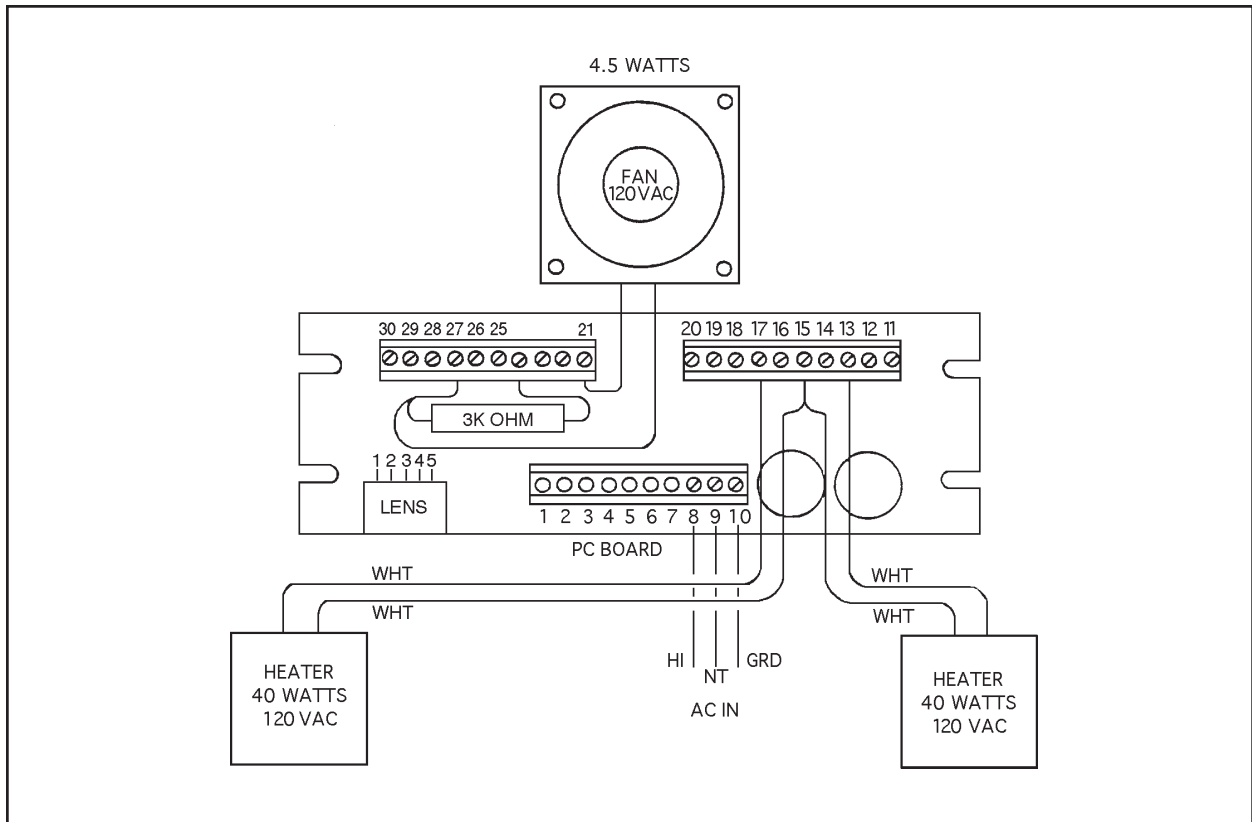
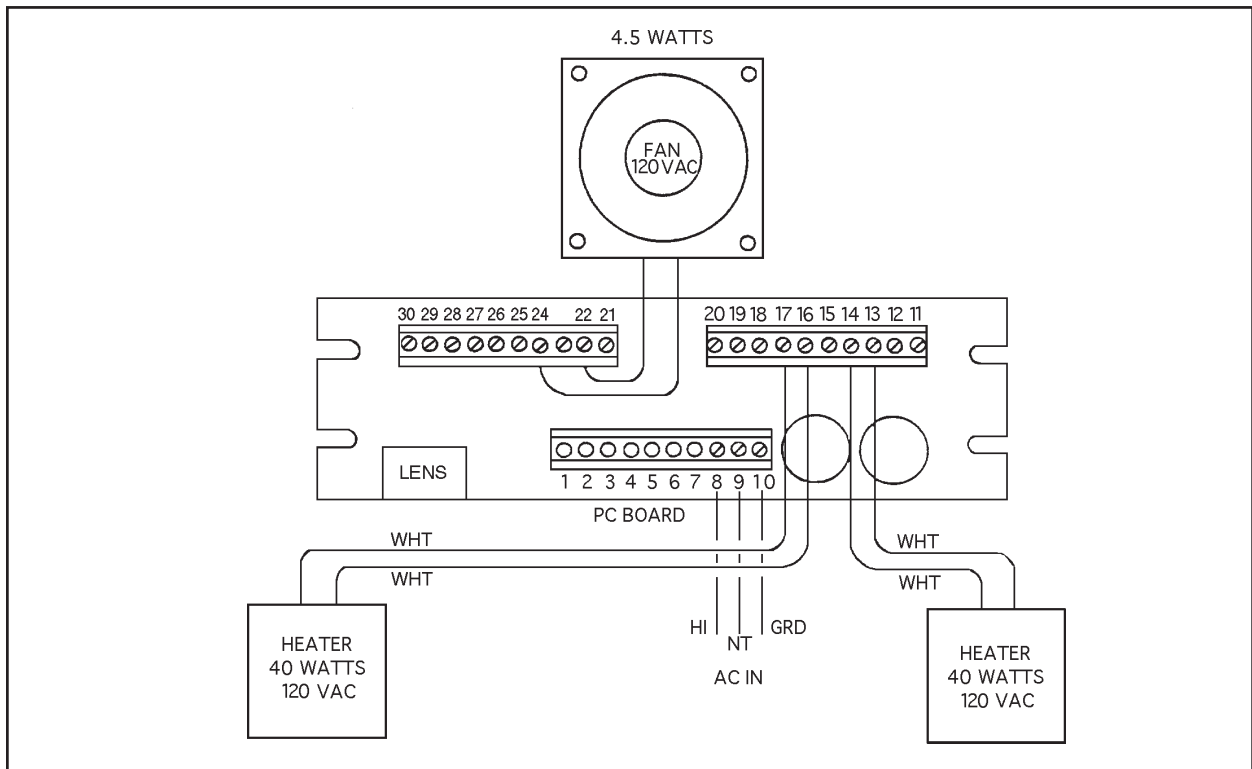


Figure 3. HS1000 Series Tamper Switch Installation



**Figure 4.** HB6000/220 Heater/Blower Kit Wiring Diagram (230 VAC)



**Figure 5.** HB6000 Heater/Blower Kit Wiring Diagram (120 VAC)

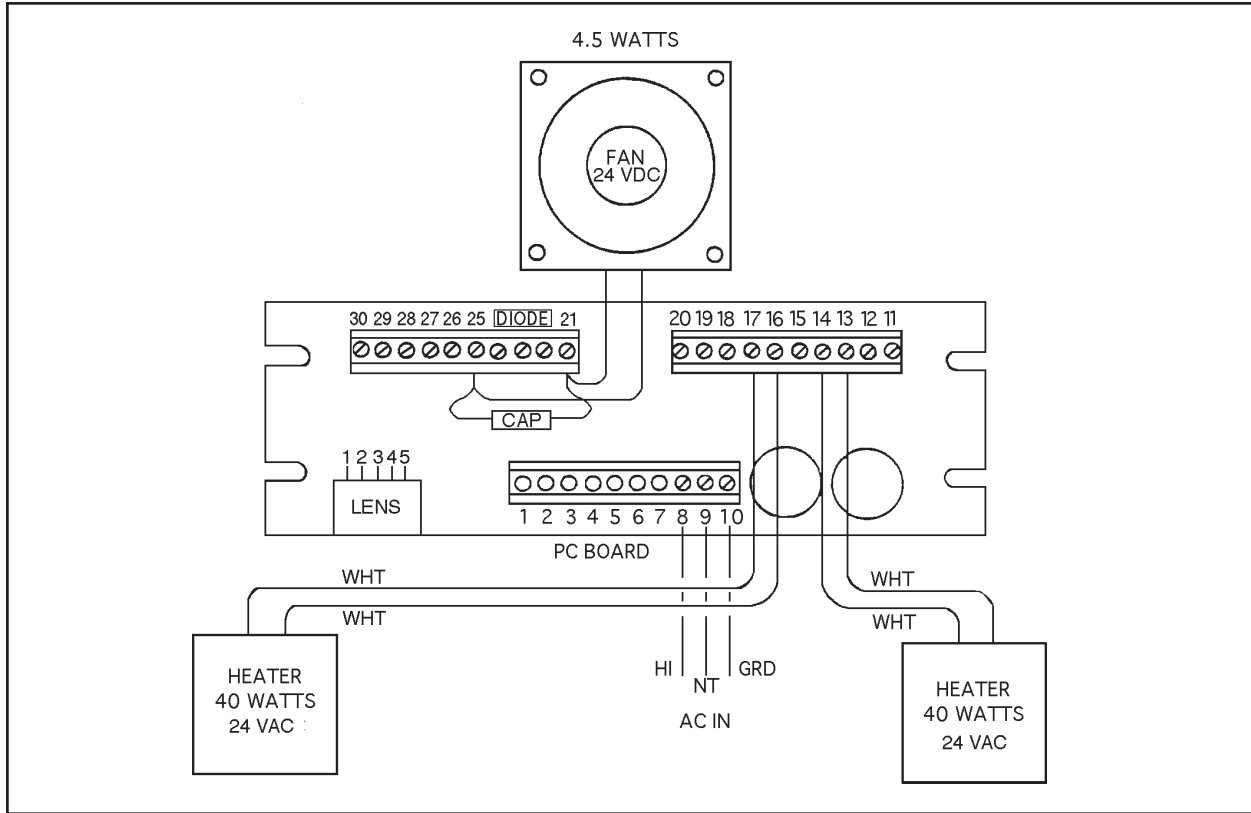
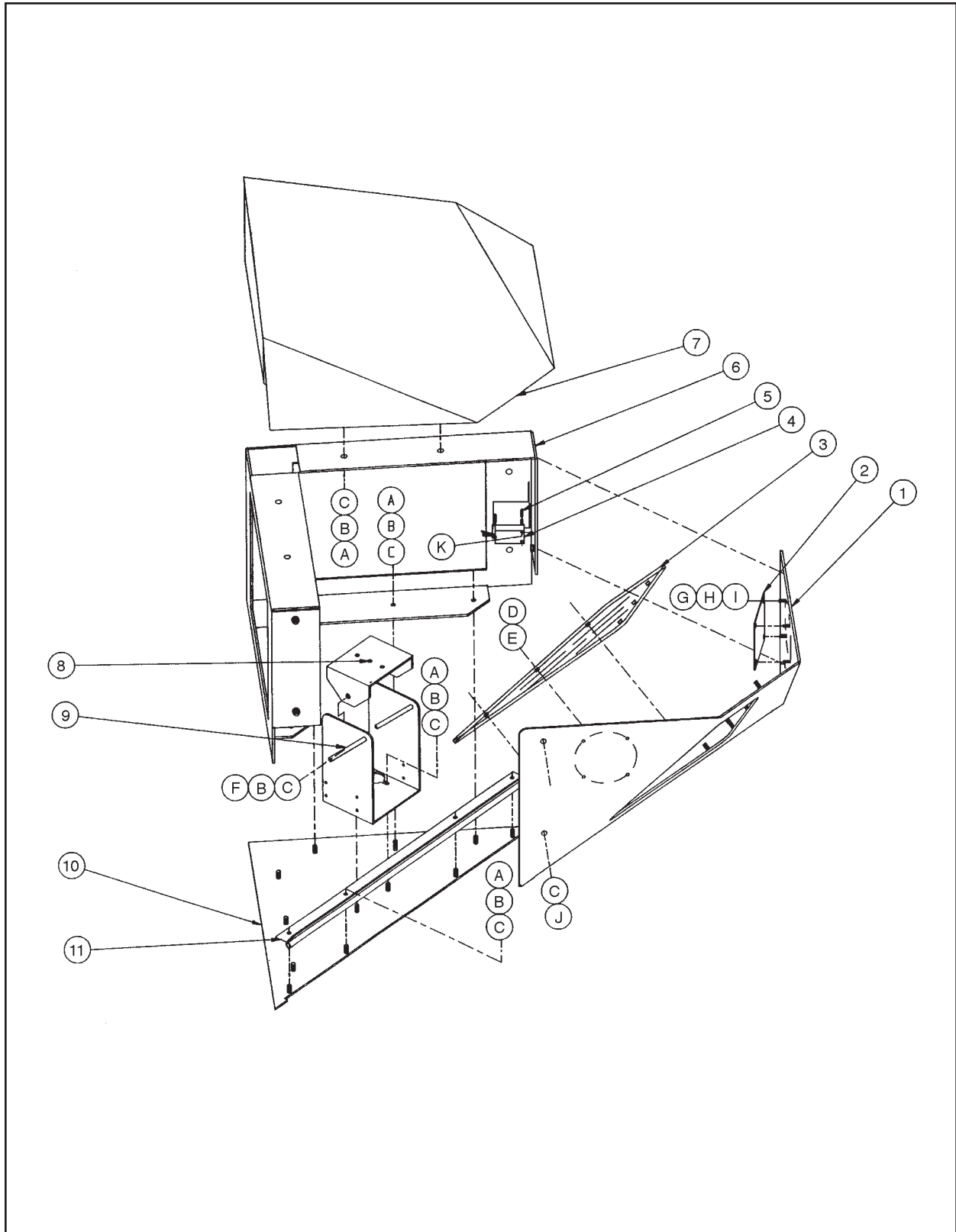


Figure 6. HB6024 Heater/Blower Kit Wiring Diagram (24 VAC)

**6.0 MECHANICAL PARTS LIST FOR HS1000 ENCLOSURE (FIGURE 7)**

| Item No. | Qty | Description                                  | Part Number     |
|----------|-----|--|-----------------|
| 1        | 1   | Plate, Cover, Front                          | HS10004013COMP  |
| 2        | 2   | Plate, Grill, Block-Off                      | HS80004115COMP  |
| 3        | 1   | Window, HS1000, Clear, 12" x 15" x .50"      | HS100010009     |
| 4        | 1   | Switch, Tamper                               | SWI1DM401       |
| 5        | 1   | Bracket, Switch, Break-In                    | HS10004313COMP  |
| 6        | 1   | Bracket, Mounting                            | HS10004011COMP  |
| 7        | 1   | Hood, Mid Wall Mount (optional accessory)    | HS1000H         |
| 8        | 1   | Tilt Table                                   | AH80004013COMP  |
| 9        | 1   | Bracket, Tilt Table Mount                    | AH80004014COMP  |
| 10       | 1   | Plate, Bottom, Corner Mount                  | HS10004005COMP  |
| 11       | 1   | Hinge, Cover                                 | HS10004008COMP  |
| A        | 11  | 1/4-20 Hex, Finished Nut SS                  | ZH1/4-20NUTCH   |
| B        | 13  | Washer, Split Lock, 1/4-inch SS              | ZH1/4WSSL       |
| C        | 17  | Washer, Flat, 3/16-inch SS                   | ZH260X562X65C   |
| D        | 6   | Nut Lock 1/4-20 Nylon Insert Lock Nut        | ZH1/420NUTCHN   |
| E        | 6   | Washer, Fender, 1/4-inch Black Oxide         | ZH255X1.50X62   |
| F        | 2   | Bolt, 1/4-20 x 5/8-inch, Hex C/S SS          | ZH1/420X.625CH  |
| G        | 4   | Nut, Hex, 10-32 SS                           | ZH10-32NUTSH    |
| H        | 4   | Washer, Split Lock, #10 SS                   | ZH10LWSSL       |
| I        | 4   | Washer, Flat, #10 SS                         | ZH204X436X60C   |
| J        | 4   | Screw, 1/4-20 x 1/2", Round, Tampruf, #10 SS | ZH1/4-20X.50SRT |

## 7.0 EXPLODED ASSEMBLY DIAGRAM



**Figure 7.** HS1000 Enclosure Exploded Assembly Diagram

## 8.0 SPECIFICATIONS

### **MECHANICAL**

|                           |   |
|---------------------------|---|
| Window:                   | 1/2" (12.7 mm) thick impact and abrasion resistant clear Lexan  |
| Camera Mounting:          | Adjustable tilt table   |
| Maximum Camera/Lens Size: | Accepts camera/lens combinations (including BNC connector) up to: 12.0" L x 6.0" W x 6.0" H (30.48 cm x 15.24 cm x 15.24 cm)  |
| Enclosure Mounting:       | Twelve (12) .390" (0.99 cm) diameter holes on protected rear surfaces (top and back)  |
| Security:                 | Tamper-resistant screws<br>N.O./N.C. switch contact on cover  |
| Tamper Switch:            | Plunger type door switch with "pull to cheat" feature. N.O./N.C. contacts clearly marked on body of switch. DM electrical rating: 10A, 125V. Plunger type with .20" (0.51 cm) |

### **ELECTRICAL**

|                |   |
|----------------|---|
| Cable Entry:   | Six-position terminal block. Cable entry access through back and top  |
| Tamper Switch: | 1/4" (.63 cm) quick connect. N.O./N.C. clearly marked on switch body. 10A, maximum switching current 125V, maximum switching voltage. |

### **GENERAL**

|               |  |
|---------------|--|
| Construction: | Formed 10 gauge .134" (0.34 cm) steel  |
| Finish:       | Poly vinyl powder coat                 |
| Dimensions:   | See Figure 1                           |
| Environment:  | Indoor, 32° to 120° F (0° to 48.89° C) |
| Unit Weight:  | 40 lbs 13 oz (18.36 kg)                |

## 9.0 MODELS

The HS1000 high-security corner mount enclosure has been designed for installations such as parking garages, prisons, detention cells and many other areas requiring maximum protection from vandalism. Below is a list of available HS1000 enclosure options.

### 9.1 OPTIONS

|            |  |
|------------|--|
| HS1000H    | Hood for mid-wall mounting of HS1000 enclosure.  |
| HB6000     | 120 VAC thermostatically controlled heater and blower.<br><br>Provides 80 watts of heat: activates ON at 40°F (4.44° C); and OFF at 60°F (15.56° C).<br><br>Provides internal air circulation: activates ON at 110°F (43.33° C); and OFF at 80°F (26.67° C). |
| HB6000/220 | Same as HB6000 except operates at 230 VAC.   |
| HB6024     | Same as HB6000 except operates at 24 VAC.  |



## 10.0 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:

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