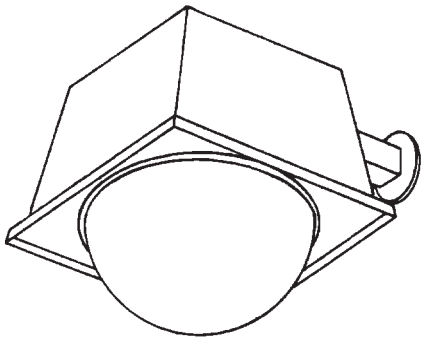

ED28/ED2820 and ED29/ED2920

“Harris Dome” Enclosures

Installation/Operation Manual

C460M-E (7/95)

PELCO • 3500 Pelco Way • Clovis, CA 93612-5699 • USA • www.pelco.com
(800) 289-9100 or (1-559) 292-1981 • FAX (800) 289-9150 or (1-559) 292-3827

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LIST OF ILLUSTRATIONS

Figure **Page**

REVISION HISTORY

Manual #	Date	Comments
C460M	3/89	Original Version.
C460M	6/90	Revision A. Manual separated into two parts: enclosures and pan/tilt. Completely revised to include ED2820RX/PP and ED2820SL-RX/PP models.
C460M	11/90	Revision B. Figure 2-4 revised.
C460M	6/92	Revision C. Completely revised to include the following models: ED2820-3, ED220-PP, ED2820SL/PP, ED2820WX, ED2820SL-WX, and ED29/ED2920 Series.
C460M-D	2/95	Revision D. Parts I and II integrated into one complete manual. Models ED2920-3 added. Figures 3, 4 and 7 revised. New Figure 21 added as per ECO92-216 with installation instructions for ED28KIT. New pan/tilt assembly numbers PT2801000ASSY, PT2801001ASSY, PT2801002ASSY, and PT2801003ASSY incorporated into manual. Incorporated new exploded assembly diagrams and new parts/hardware materials lists.
C460M-E	7/95	Revision E. Manual revised to include the addition of newly-created ED29-3 enclosure as per ECO # 95-195. Items 14 and 25 in section 12.0, parts list, revised.
	6/96	Corrected part number for item number 51 (Connector, 9-position) also relaced Figure 21 (ED28KIT Installation/ Exploded View).
	8/96	Revised Section 7.0, ED28 Mechanical Parts List, regarding part numbers for dome.

INSTALLATION/OPERATION MANUAL
MODEL ED28, ED2820, ED29, ED2920
SERIES "HARRIS DOME" ENCLOSURES

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. The product bears the following marks:

4. Only use replacement parts recommended by PELCO.

5. 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.

7. The weight of the camera/lens should not exceed 15 lbs.

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

SA 1965

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.

SA 1966

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

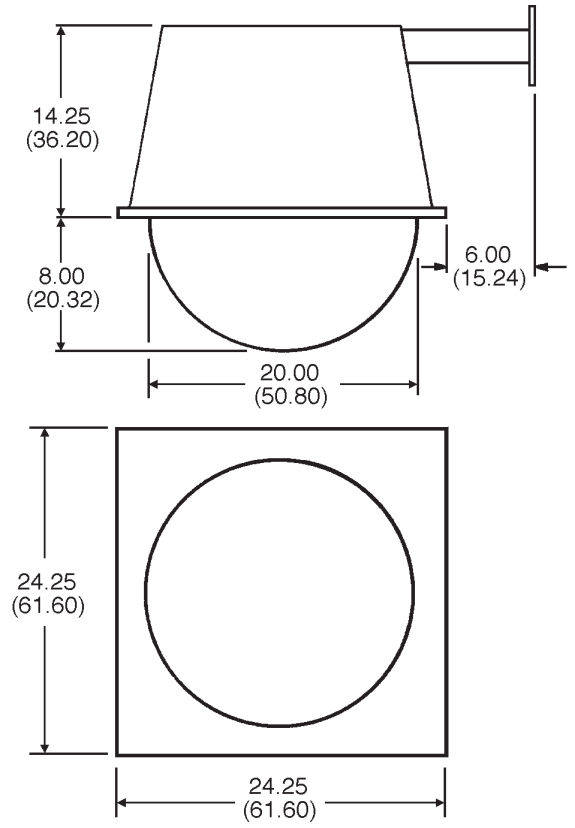
The information contained within this manual covers the Harris Environmental Dome.

3.0 DESCRIPTION

This product was developed outside of PELCO's normal product development process, and outside of normal working hours by Jimmy Harris, Sheet Metal Department Manager. In recognition of this extraordinary effort, PELCO has proudly named this product the Harris Dome.

PELCO's Harris Environmental Dome is a discreet outdoor surveillance enclosure designed to be mounted to any solid wall, vertical surface, or parapet, and completely encloses the pan/tilt and camera/lens to combine concealed 360° surveillance with distortion-free viewing. The black opaque lower dome has a clear viewing slot which effectively camouflages a CCTV security/surveillance system without compromising the quality of the video picture.

The enclosure has been engineered for ease of installation, serviceability, and relocation. The lower dome quickly and easily swings open with the aid of a gas strut for convenient access to the camera and pan/tilt. The pan/tilt can easily be removed for camera/lens service by loosening two hex head fasteners and disconnecting its cable.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

Figure 1. ED28/ED2820 Series Dimension Drawing

4.0 INSTALLATION

4.1 UNPACKING INSTRUCTIONS

The dome and enclosure are shipped in separate cartons. Make sure you have both before installing. Save the shipping cartons and plastic packaging in case any part of the unit has to be returned for credit or repair.

4.2 CONDUCTOR REQUIREMENTS

ED28
ED29 — See the camera manufacturer's specifications sheet.

ED28-1
ED29-1
ED29-3 — Two (2) conductor, plus ground for heater/blower and recommended conductors for camera

ED2820, ED2820-3
ED2920, ED2920-3
ED2820-SL
ED2920-SL — Eleven (11) plus ground for pan/tilt, lens and camera AC, plus two (2) for heater/blower

ED2820-3SL/PP
ED2820SL/PP — Twenty (20), plus ground for pan/tilt, lens and camera AC, plus two (2) for heater/blower

ED2820-PP — Nineteen (19) plus ground for pan/tilt, lens and camera AC, plus two (2) for heater/blower

ED2820-RX
ED2820SL-RX — Coax cable and 120 VAC power cord

ED2820-RX/PP
ED2820SL-RX/PP — Same as ED2820-RX plus 10 conductors for alarms

ED2820-WX
ED2820SL-WX — Twisted pair, coax, and 120 VAC power cord

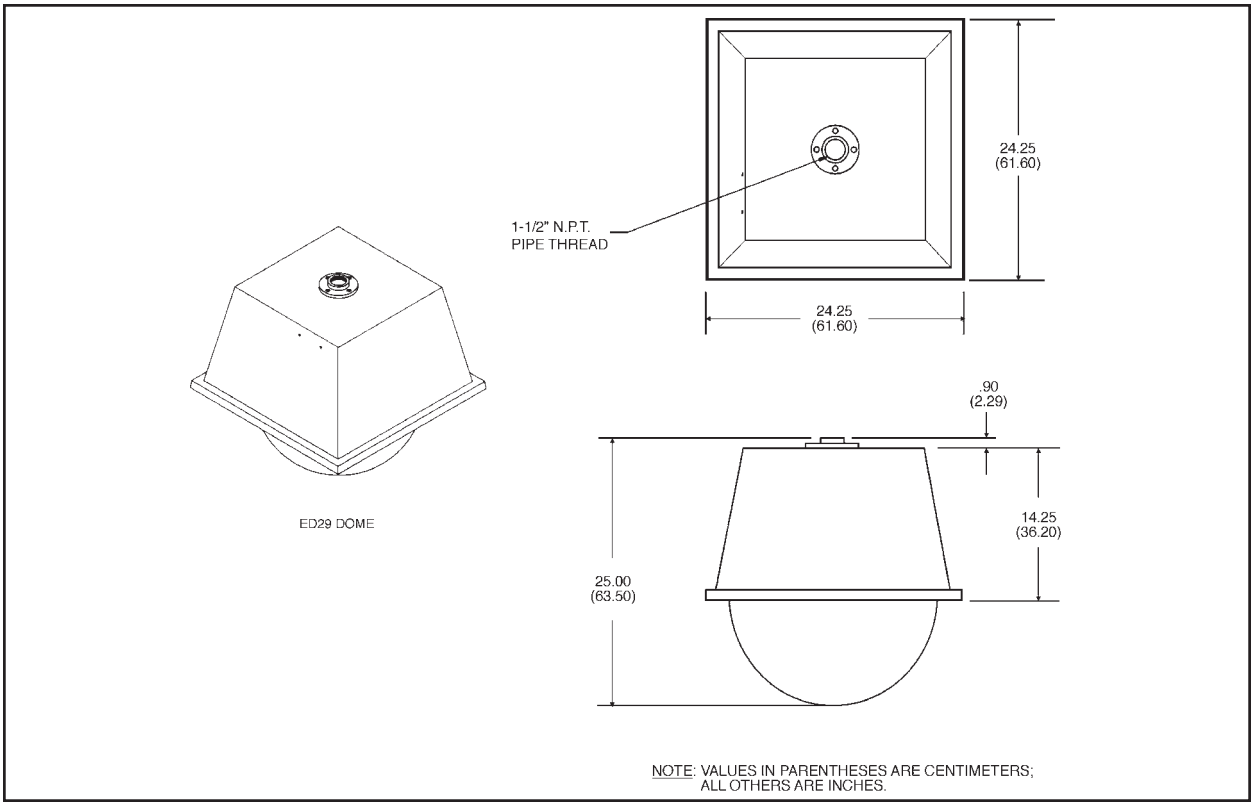


Figure 2. ED29/ED2920 Series Dimension Drawing

4.3 WIRING INSTRUCTIONS

Models ED28-1 and ED29-1

These models are supplied with a factory installed heater/blower and service light. Supply 120 VAC power for the heater/blower and wire according to Figures 3.

Models ED2820-3, ED2820-3SL/PP, ED2920-3, ED29-3

These models are supplied with factory-installed blower/heater and service light. For installation, supply 230 VAC power for the blower/heater and wire according to the diagram in Figure 4.

Models ED2820, ED2820-3, ED2820-SL, ED2820-PP, ED2820SL/PP, ED2820-3SL/PP, ED2920, and ED2920-SL

These Harris Dome models without receiver include the PT2801000ASSY,PT2801001ASSY, PT2801002ASSY or PT2801003ASSY pan/tilt assemblies which are pre-wired for all control functions — pan/tilt, motorized zoom lens, camera power (24 VAC) and video. All connections are made at the input connector, eliminating the need for wiring harnesses made in the field. Wire the control cable per Section 9.3 using the applicable wiring diagrams in Figures 16 through 18, and supply the necessary power.

Models ED2820-RX, ED2820SL-RX, ED2820-RX/PP, ED2820SL-RX/PP, ED2920-RX and ED2920SL-RX

When wiring the dome models with integral Coaxitron receiver listed above, connect the coax to the controller and plug the receiver into a 120 VAC power supply.

In addition, the ED2820-RX/PP and ED2820SL-RX/PP include preset position feedback capabilities. These packages are equipped with PT2801002ASSY and PT2801003ASSY pan/tilts and have the Coaxitron receiver installed and pre-wired to the pan/tilt. Since these versions include 8 alarm inputs and 1 alarm output, be sure to wire them according to the diagram in Figure 6.

Models ED2820-WX and ED2820SL-WX

To wire Harris Dome models ED2820-WX and ED2820SL-WX with integral Wiretron receiver, connect the twisted pair and coax to the controller and plug the receiver into a 120 VAC power supply.

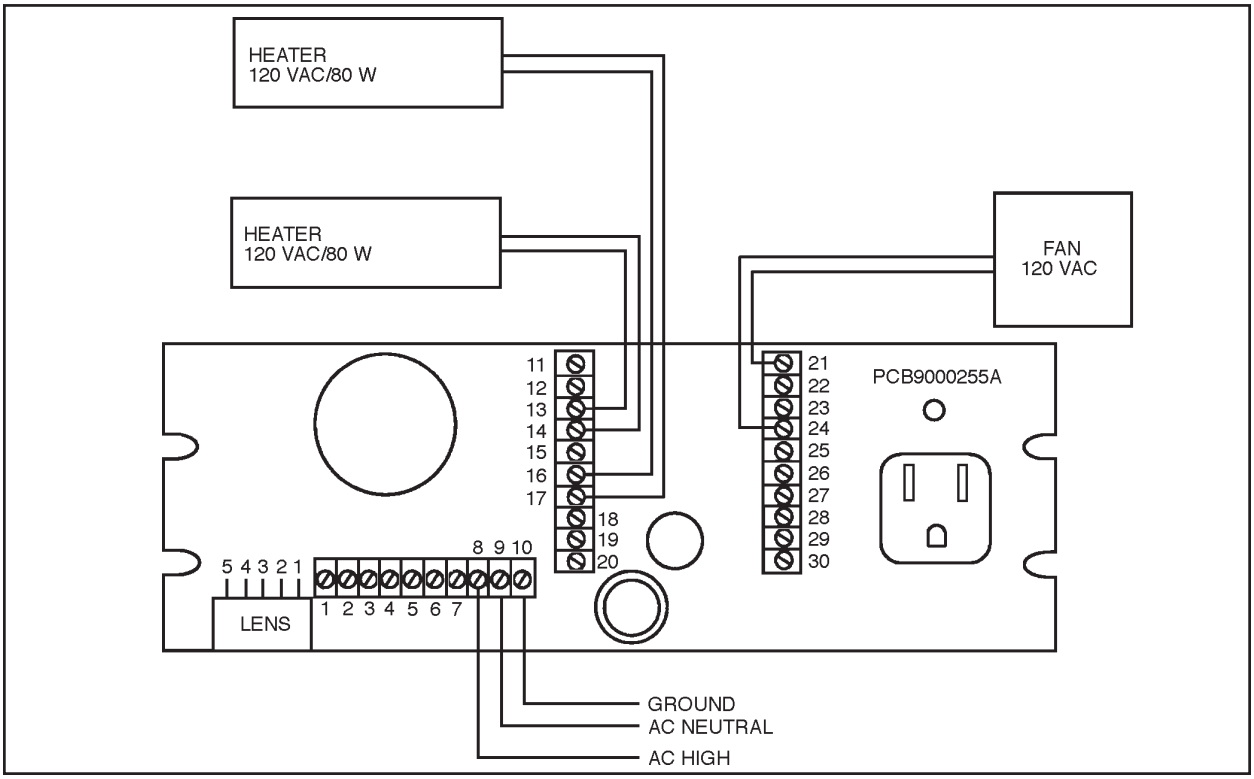


Figure 3. Heater/Blower Wiring Diagram (120 VAC)

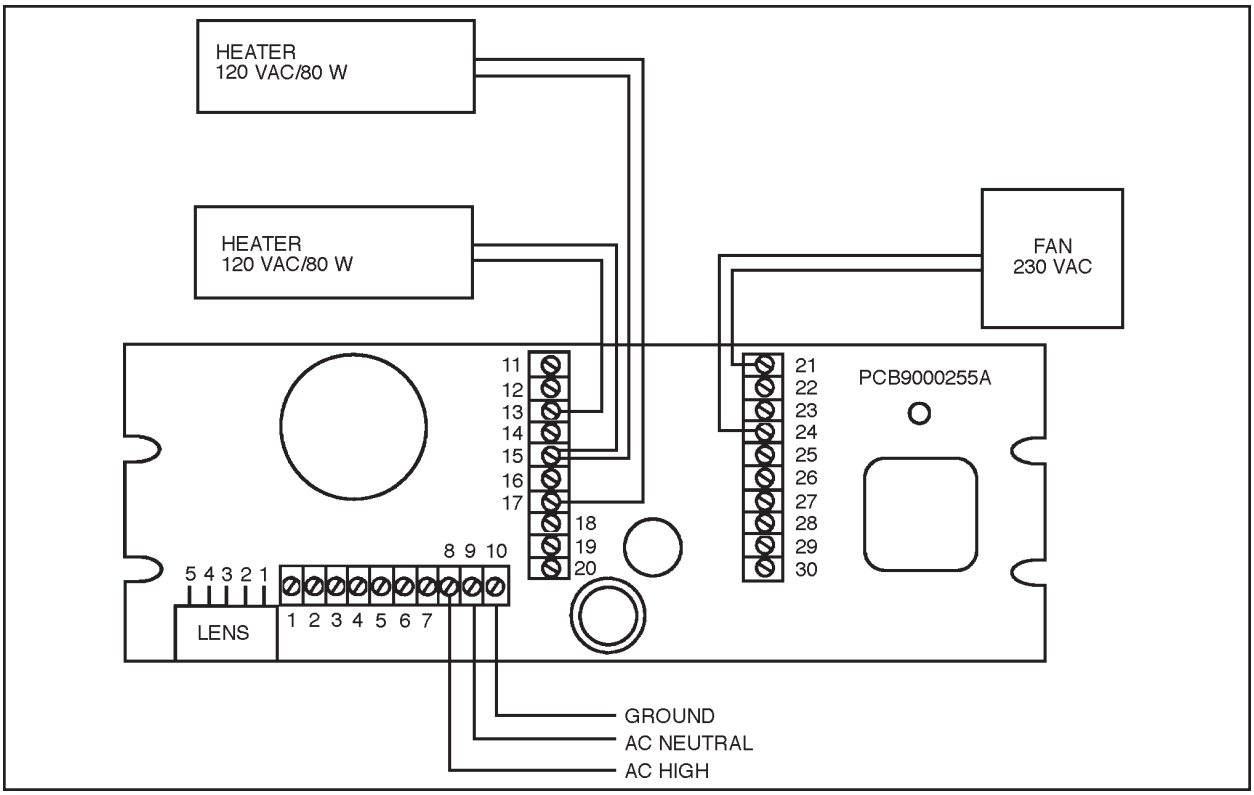


Figure 4. Heater/Blower Wiring Diagram (230 VAC)

Wiring Pin Assignments Figure 3

Number	Function	Number	Function	Number	Function
1	Iris	11	Not Used	21	Fan
2	Zoom	12	Not Used	22	Not Used
3	Focus	13	Heater #2	23	Not Used
4	Lens Common	14	Heater #2	24	Fan
5	Manual Iris	15	Not Used	25	Not Used
6	Not Used	16	Heater #1	26	Not Used
7	Camera On	17	Heater #1	27	Not Used
8	AC Input High	18	AC High	28	Connected to #6
9	AC Input Neutral	19	AC Neutral	29	Not Used
10	Ground	20	Ground	30	Camera

Wiring Pin Assignments Figure 4

Number	Function	Number	Function	Number	Function
1	Iris	11	Not Used	21	Fan
2	Zoom	12	Not Used	22	Not Used
3	Focus	13	Heater #2	23	Not Used
4	Lens Common	14	Not Used	24	Fan
5	Manual Iris	15	Connect Heaters 1 & 2	25	Not Used
6	Not Used	16	Not Used	26	Not Used
7	Camera On	17	Heater #1	27	Not Used
8	AC Input High	18	AC High	28	Connected to #6
9	AC Input Neutral	19	AC Neutral	29	Not Used
10	Ground	20	Ground	30	Camera

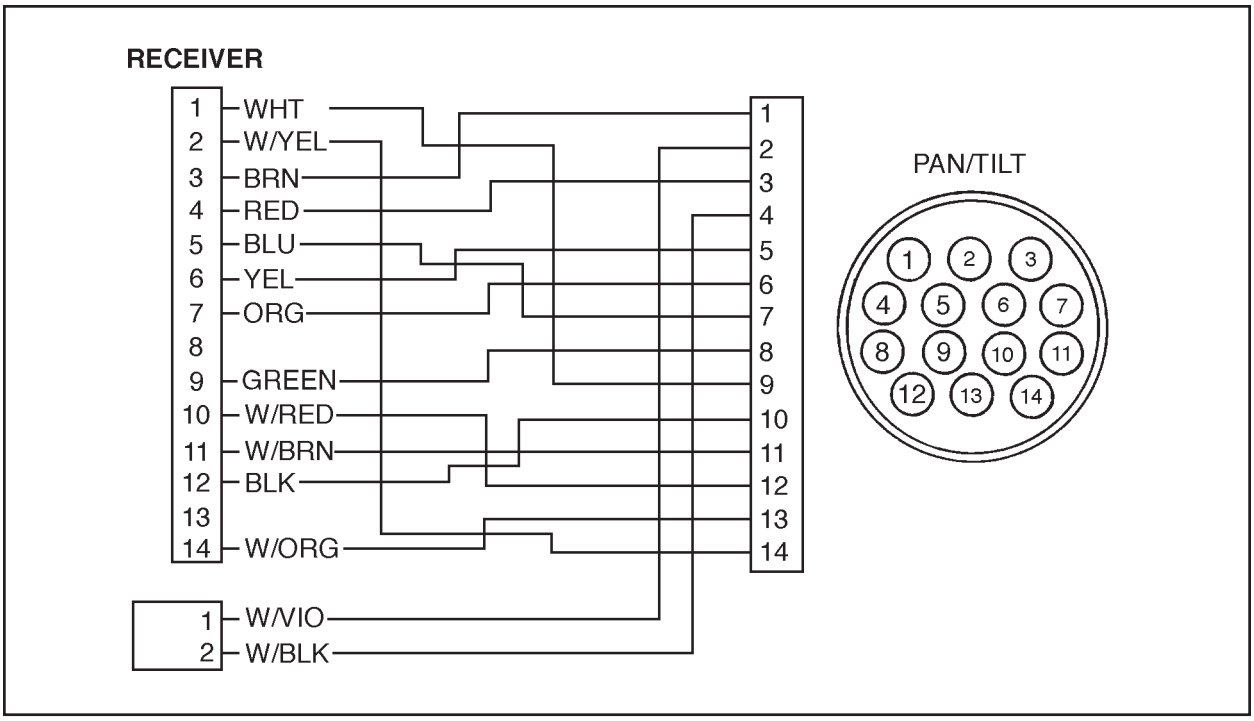
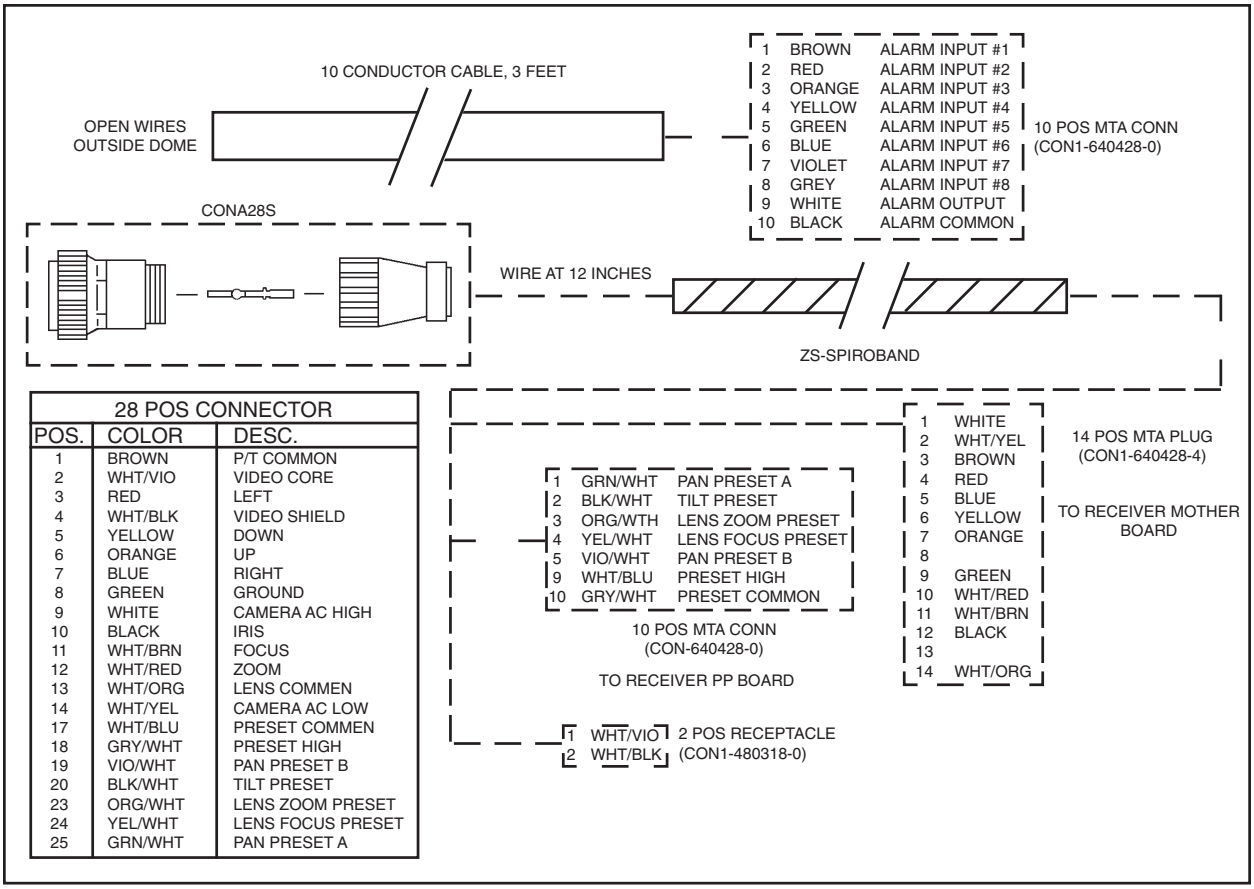


Figure 5. Receiver/Pan and Tilt Wiring Harness (Non-PP)



28 POS CONNECTOR

POS.	COLOR	DESC.
1	BROWN	P/T COMMON
2	WHT/VIO	VIDEO CORE
3	RED	LEFT
4	WHT/BLK	VIDEO SHIELD
5	YELLOW	DOWN
6	ORANGE	UP
7	BLUE	RIGHT
8	GREEN	GROUND
9	WHITE	CAMERA AC HIGH
10	BLACK	IRIS
11	WHT/BRN	FOCUS
12	WHT/RED	ZOOM
13	WHT/ORG	LENS COMMEN
14	WHT/YEL	CAMERA AC LOW
17	WHT/BLU	PRESET COMMEN
18	GRY/WHT	PRESET HIGH
19	VIO/WHT	PAN PRESET B
20	BLK/WHT	TILT PRESET
23	ORG/WHT	LENS ZOOM PRESET
24	YEL/WHT	LENS FOCUS PRESET
25	GRN/WHT	PAN PRESET A

Figure 6. Receiver/Preset Pan and Tilt With Alarm Output Wiring Diagram

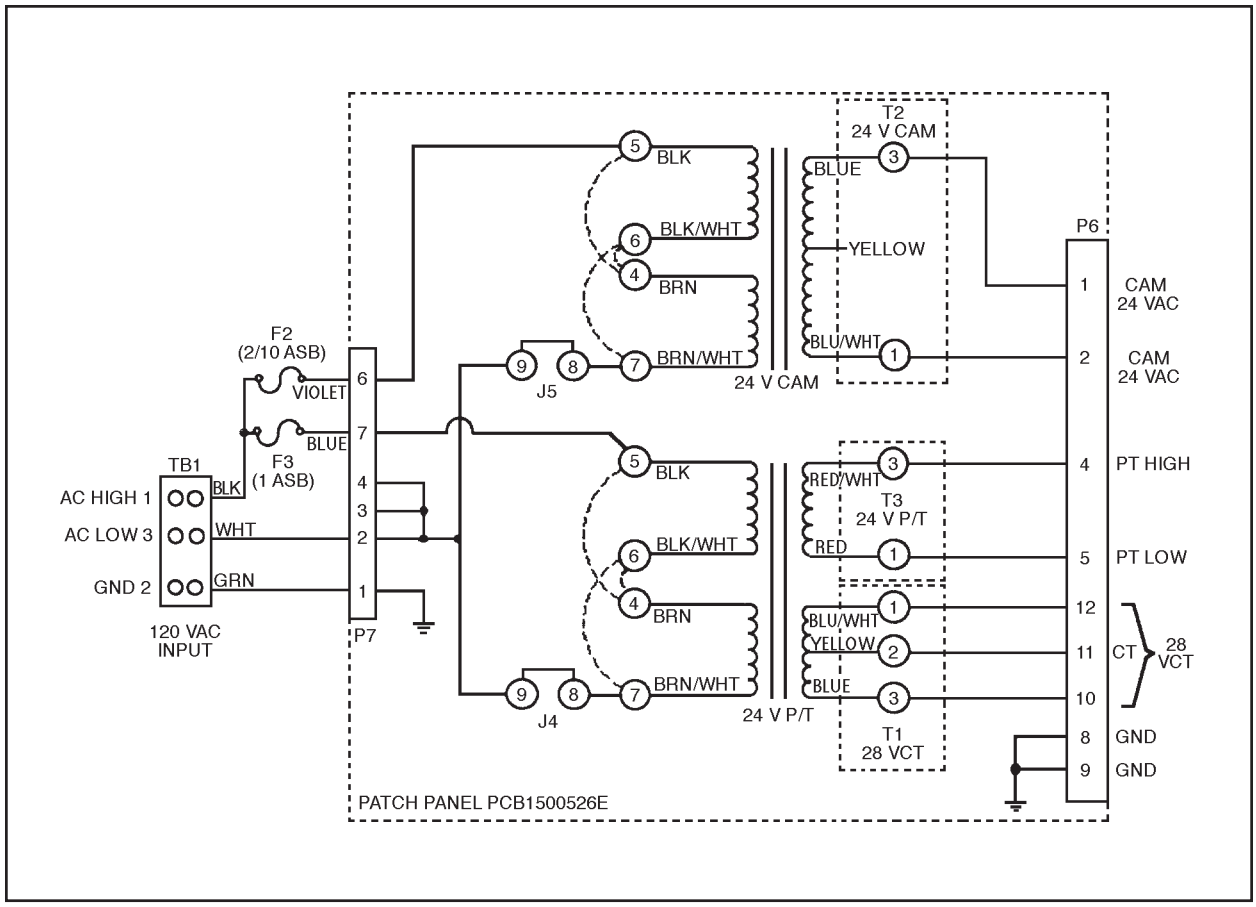


Figure 7. Coaxitron/Wiretron Power Patch (CX9024RX/WX8024RX) Wiring Schematic

4.4 INSTALLATION INSTRUCTIONS

The Harris Dome is supplied in three (3) configurations: as a passive dome (for use as a dummy dome or with a fixed camera), with a factory installed pan/tilt, or with a factory installed pan/tilt and receiver/driver.

CAUTION: Make certain that the mounting surface is capable of supporting the full load of the mount, pan/tilt, camera/lens, and enclosure.

Handle the lower dome with care so as not to scratch or get fingerprints on the viewing window.

When installing a dome with an integral pan/tilt, loosen the two (2) fasteners and remove the pan/tilt to reduce the total weight of the unit.

When the pan/tilt is removed, mount the camera/lens (see Figure 8) and make the electrical connections to the pan/tilt (camera power, video, lens).

When closing the dome, be sure the drive tab on the dome engages the slot on the drive arm of the pan/tilt.

WARNING: Do not rotate pan/tilt by hand. Rotate by controller only.

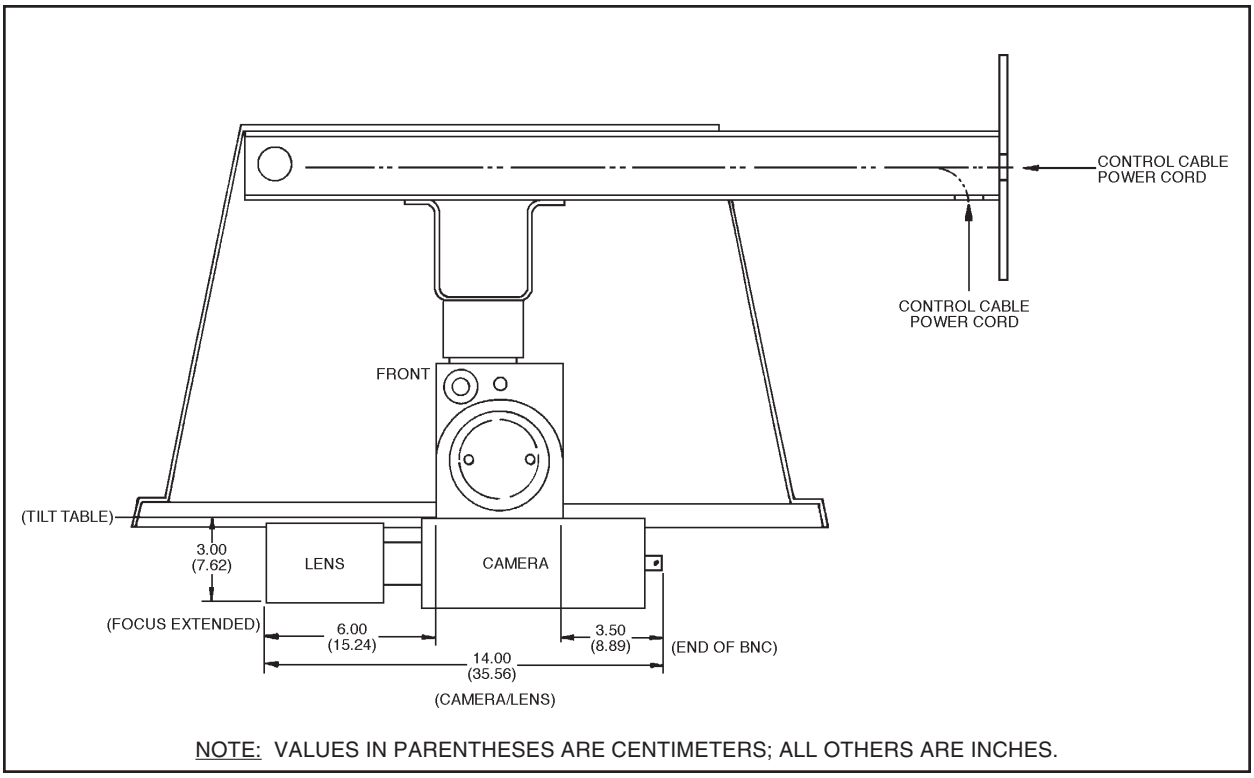


Figure 8. Camera/Lens Mounting

4.4.1 Mounting the ED28/ED2820 Series

4.4.1.1 Wall Mounting

The ED28/ED2820 series may be mounted directly to a wall or vertical surface. To attach the enclosure to a vertical surface, perform the following (see Figure 9):

1. Using the enclosure or the template supplied (see Figure 12), mark the location of the four (4) mounting holes. If the control and power cables are to pass through the mounting surface, mark the large center hole as well.

2. Drill four (4) mounting holes according to the fasteners being used (minimum 5/16-inch diameter, not supplied).

3. Mount the enclosure to the surface using the required fasteners. If needed, route the control cables through the mounting structure.

4. Install pan/tilt with camera/lens.

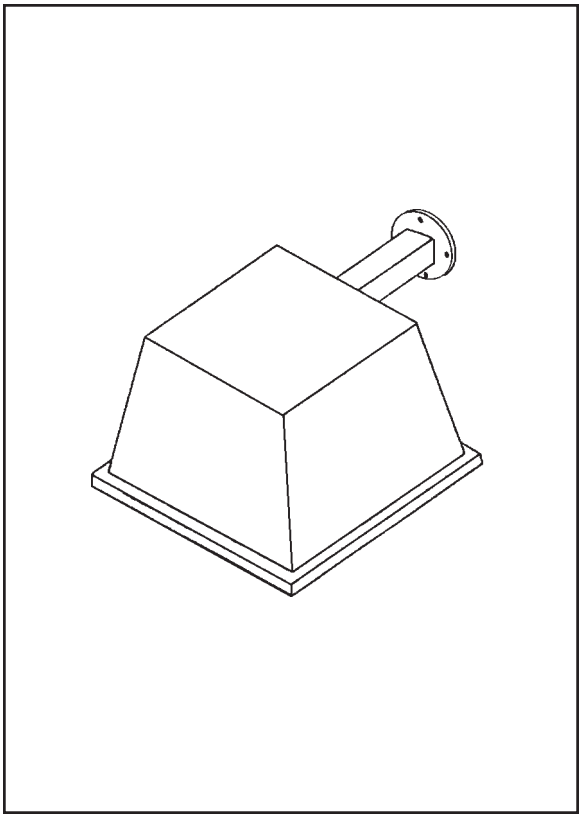


Figure 9. Wall Mounting

4.4.1.2 Corner Mounting

The ED28/ED2820 series may be mounted to the outside corner of a structure using the CM100 Corner Mount Adapter.

To attach the enclosure to an outside corner, perform the following steps (see Figure 10):

1. Secure the CM100 corner mount adapter as stated in the installation manual provided with the mount.

2. Mount the enclosure to the CM100 using four (4) 1/4-inch diameter fasteners.

3. Route the power cord and control cables through the hole in the mount arm and make the necessary connections.

4. Install the pan/tilt with the camera/lens mounted.

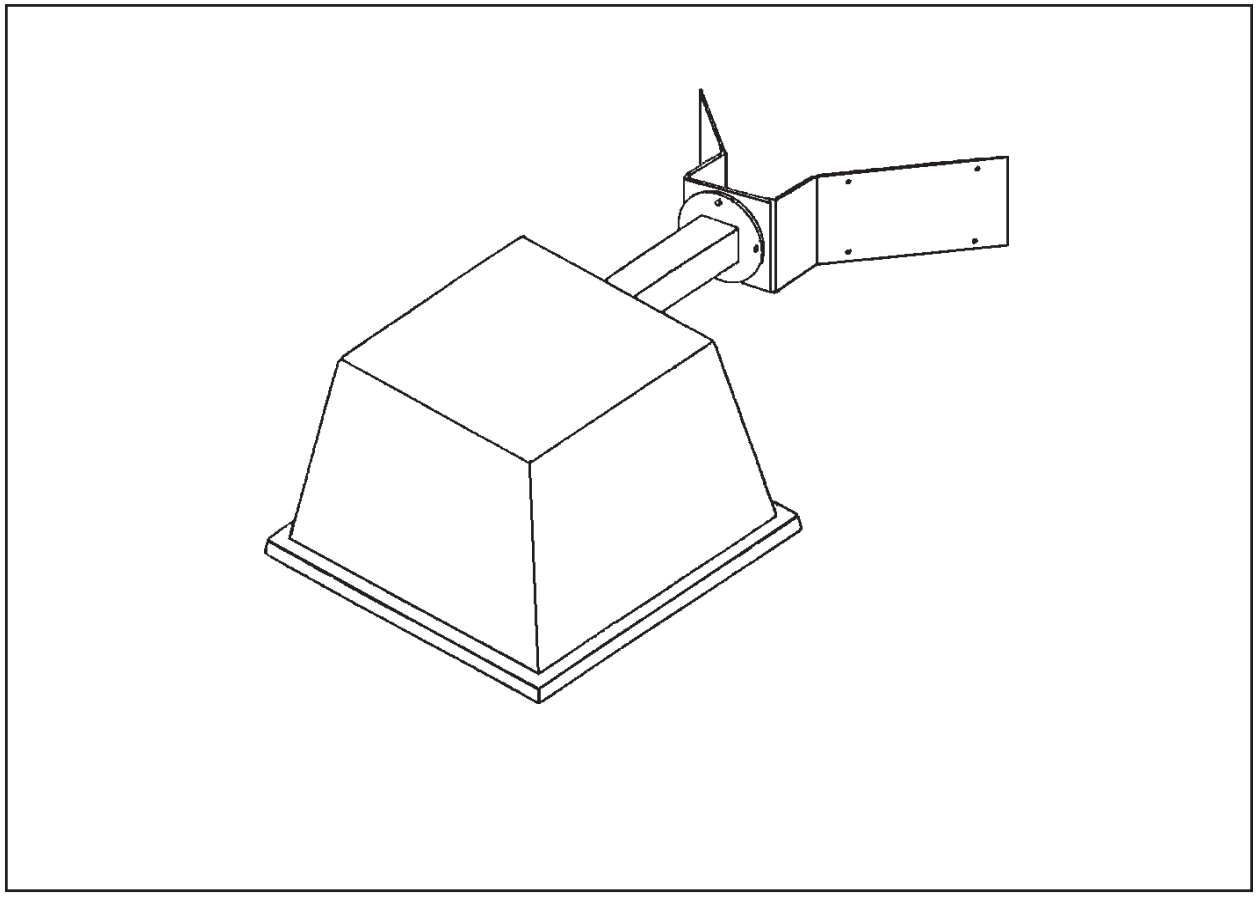
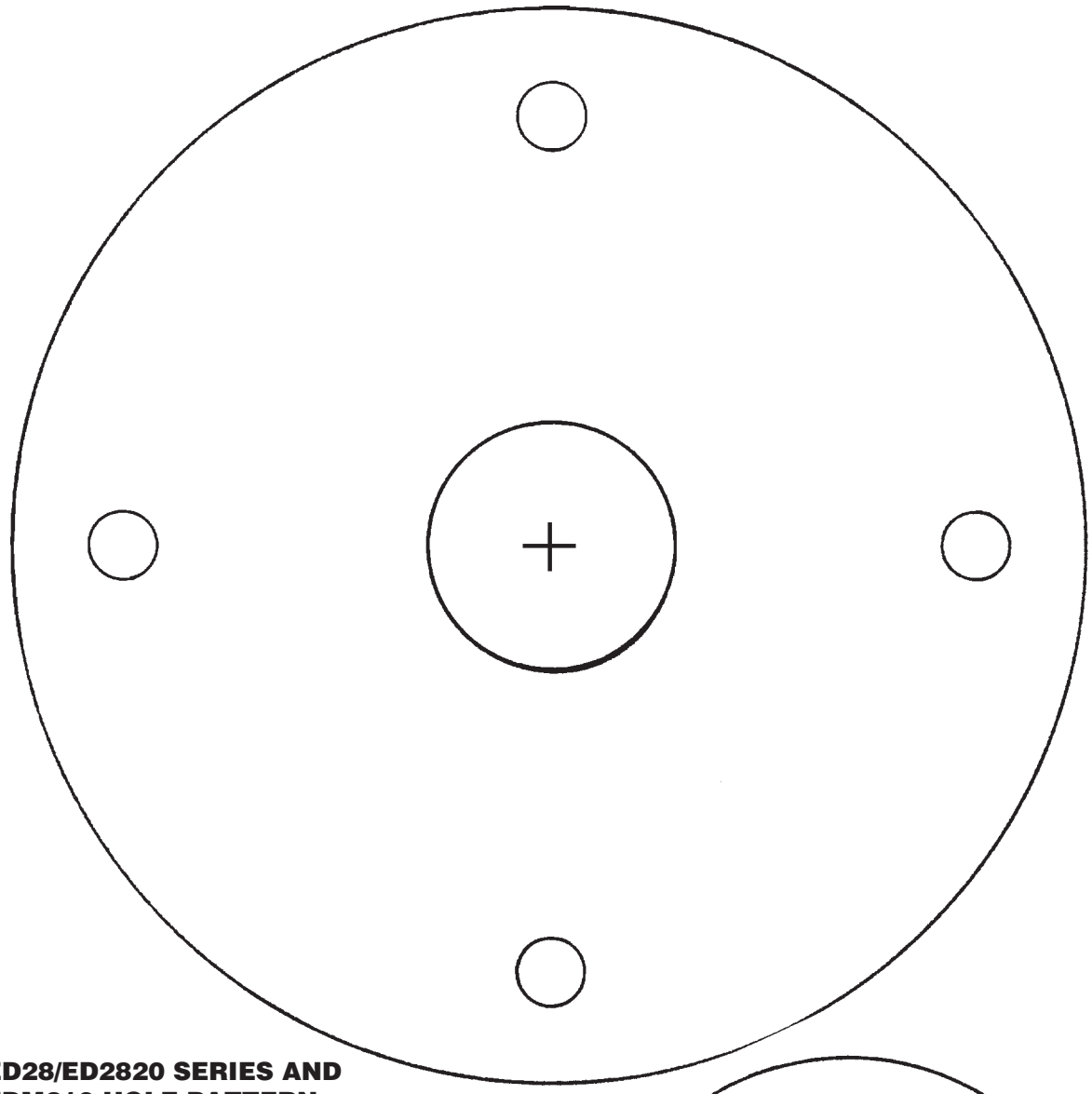
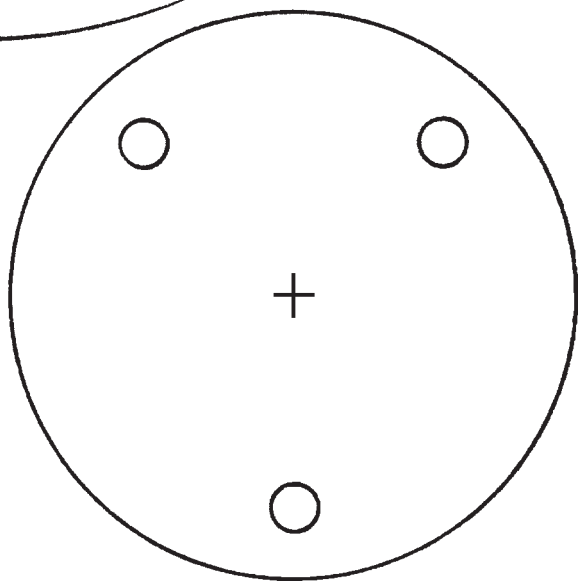


Figure 10. Corner Mounting



ED28/ED2820 SERIES AND EDM210 HOLE PATTERN



ST1 HOLE PATTERN

Figure 11. Mounting Templates

4.4.1.3 EDM210 Mounting Extension

When needed, the ED28/ED2820 series dome may be mounted 10 inches (25.4 cm) farther from the mounting surface with the use of the EDM210 mounting extension. It should be noted that in areas with heavy snowfall or high winds, the ST1 support strut should also be used.

To attach the enclosure to a vertical surface and incorporate the EDM210, perform the following steps (see Figure 12):

1. Using the enclosure, EDM210, or the template supplied (see Figure 11), mark the location of the four (4) mounting holes. If the control and power cables are to pass through the mounting surface, mark the large center hole as well.
2. Drill the mounting holes according to the fasteners being used (minimum 5/16-inch diameter, not supplied, quantity 4).
3. Mount the enclosure to the EDM210 with the required fasteners. Route the cables through the extension.
4. Mount the enclosure/extension to the mounting surface using the required fasteners. If needed, route the control cables through the mounting structure.
5. Install the pan/tilt with camera/lens.

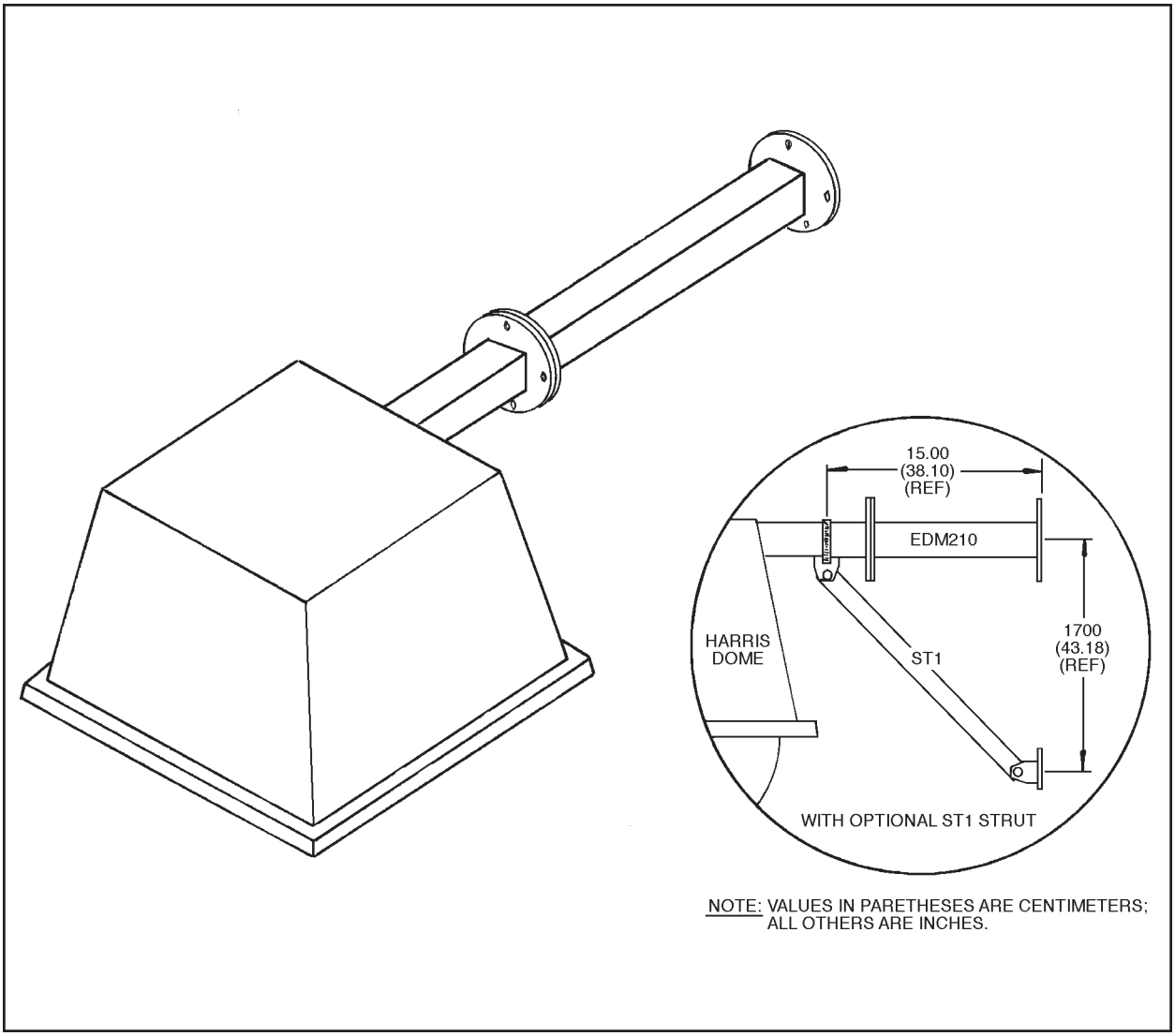


Figure 12. EDM210 Mounting Extension Installation

4.4.1.4 Parapet or Pole Mounting

When mounting to a parapet, use of the PP200/PPI200 parapet mount or PP300/PP301 parapet corner mounts is recommended. The ED28/ED2820 series dome may be mounted to other standard PELCO mounts, including the PP100 Parapet Mount or the PA102 Pole Mount.

These mounts can be used in conjunction with the EDM210 mount extension and the ST1 strut. (See Figure 12.)

Follow the mounting instructions enclosed with the appropriate mount and then proceed as stated in Section 4.4.1.2, step 3 or Section 4.4.1.3, step 3, as required.

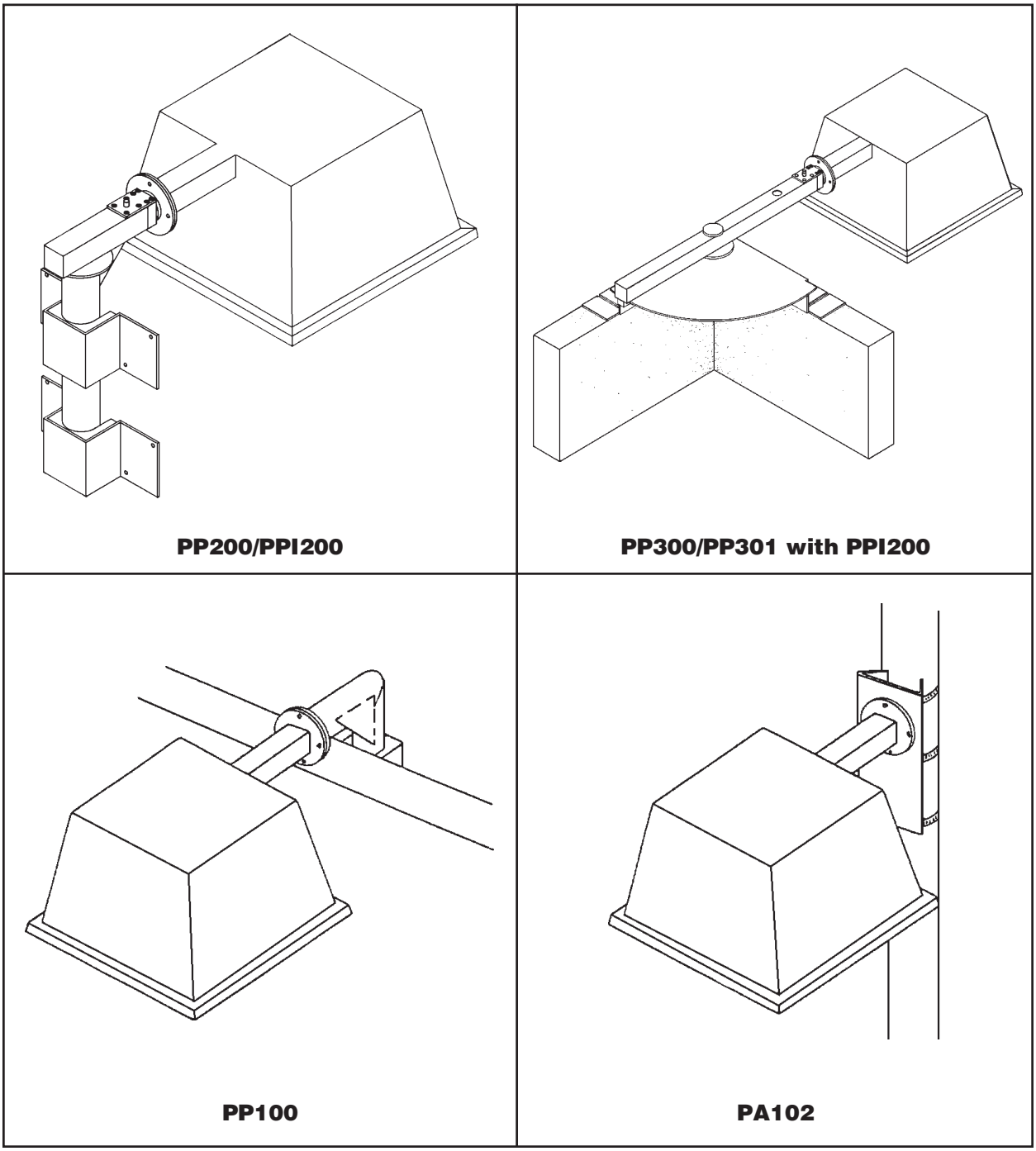


Figure 13. ED28/ED2820 Series Parapet or Pole Mounting

4.4.2 Mounting the ED29/ED2920 Series

The ED29/ED2920 Series domes require a suitable length of 1-1/2-inch NPT threaded pipe (not supplied) for mounting. The dome can be attached to any wall or ceiling capable of supporting the full weight of the mount, pan/tilt, camera/lens, and enclosure. We suggest using the MRWA wall mount or MRCA ceiling mount. Follow the instructions provided with the mount.

4.5 LIMIT/STOP ADJUSTMENTS

To adjust the pan/tilt limits, refer to Section 8.4, of this manual.

5.0 CARE AND MAINTENANCE

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

IMPORTANT: The lower dome of the Harris Dome is an optical surface. When cleaning the inner surface of the dome and viewing window, treat as carefully as you would a fine camera lens.

1. If dust or other debris accumulates on the inside of the lower dome, remove them with clean air pressure. Compressed air cans are available from commercial photographic equipment and supply dealers.

WARNING: Do not use water, liquid or spray cleaners of any kind on coated inner-surface of dome.

2. Clean the outer surface of the dome and the inner surface of the viewing window with a nonabrasive cleaning cloth and antistatic cleaner that is safe for use on acrylic plastic. Do not use kerosene or similar substances that can scratch the surface.

5.1 RECOMMENDED EQUIPMENT AND TOOLS

1. Voltmeter or Ohmmeter
2. Allen Wrench Set
3. Wrench Set
4. Flat Blade and Phillips Head Screw Drivers
5. Pliers, Long Nose

5.2 SERVICE TIPS

Some common problems encountered with pan/tilt systems include miswiring, overloading, and not using the units for the correct applications. If a failure occurs, it is recommended that the following procedures be used.

1. If the pan/tilt ceases to operate, turn the control unit off and remove the AC cord from the outlet.

2. Check the fuse in the control unit using either a voltmeter or ohmmeter. If open (blown), replace with the proper recommended fuse.

3. Replace the AC cord in the outlet and turn the control on. If the fuse continues to open (blow), turn the unit off.

4. Check the control cable between the control unit and pan/tilt for shorts, high resistance, or opens.

5. If the control cable is found to be good, replace the connector to the control unit, leave the connector off the pan/tilt, and replace the fuse.

6. Operate the control unit when it is disconnected from the pan/tilt. If the fuse continues to "blow" the fault is in the control. Refer to the appropriate service manual for the control being used.

7. Check the wiring harness in the pan/tilt for shorts.

8. If the wiring harness is found to be good, then the problem is internal to the unit; consult factory.

6.0 ED28 EXPLODED ASSEMBLY DIAGRAM

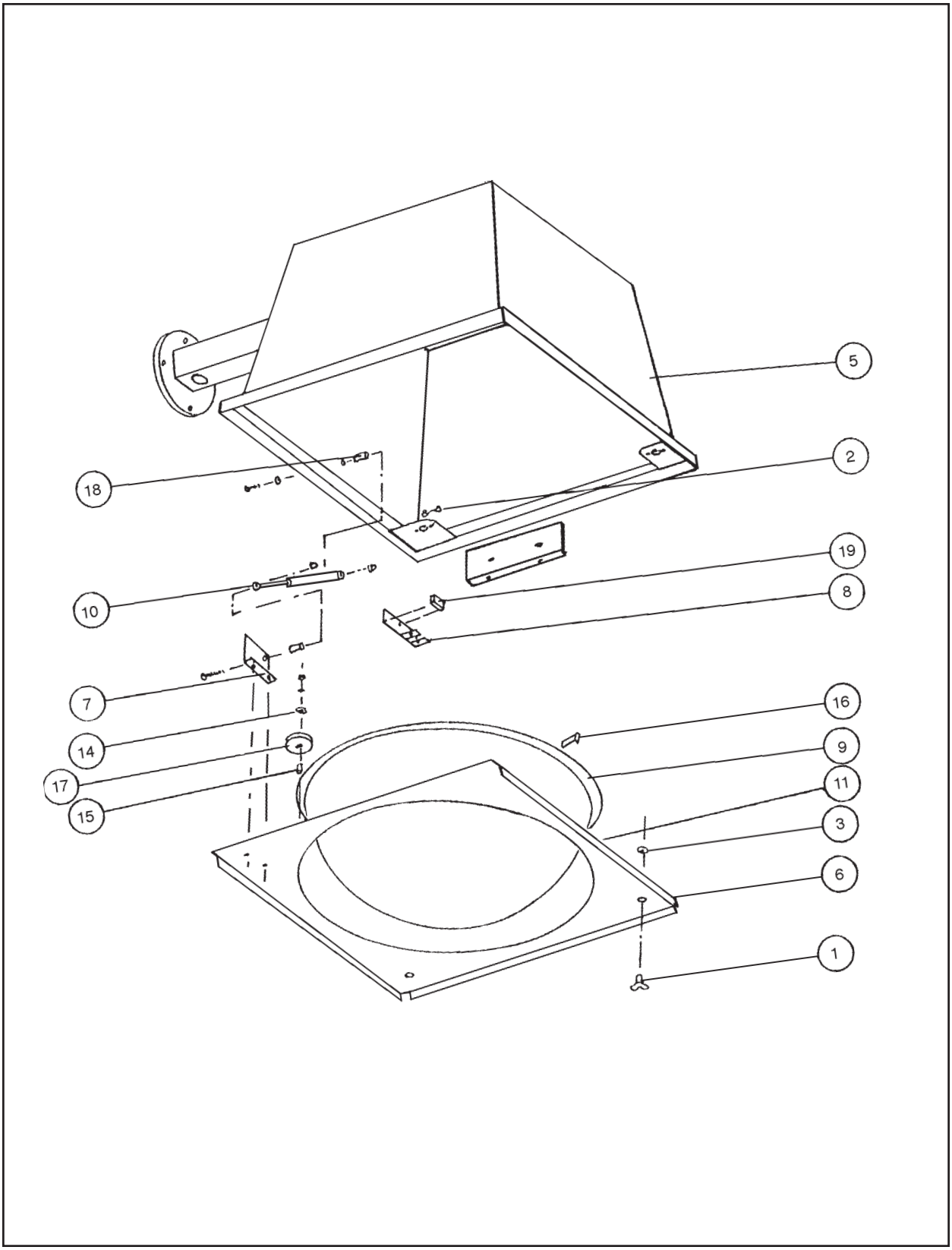


Figure 14. ED28 Exploded Assembly Diagram

7.0 ED28 MECHANICAL PARTS LIST

The following parts list corresponds to the exploded assembly diagram in Figure 14.

Item	Qty	Description	Part Number
1	2	Fastener	ED210000
2	2	Receptacle	ED210001
3	2	Retainer	ED210002
4	1	Holder, Lamp (not shown)	ED210020
5	1	Back Box Assy	ED28001001WA
6	1	Plate, Front	ED28004003COMP
7	1	Bracket, Cylinder	ED28004011COMP
8	1	Bracket, Switch, Service Light	ED28004031COMP
9	1	Dome, Clear 20"	ED282006*
10	1	Cylinder gas spring, 20#	EH550010020
11	6	NP Gasket, Poron	EH550010033
12	1	Lamp, C-7, 120 VAC (not shown)	LAP7C7
	1	Lamp, S-6, 230VAC (not shown)	LAP10S6/10
13	4	Gasket, Filter Foam (not shown)	ED210006
14	8	Bushing	SB310005
15	4	Spacer, .250 OD x .375"	SB310007
16	1	Dome Drive Tab	SB34006COMP
17	4	Roller, Delrin, Black	SB34020COMP
18	2	Spacer, 5/16 OD x .375"	SPA8542
19	1	Switch	SWIV3L
20	4	Cable Tie, 2" (not shown)	WIRCABLETIE2
21	4	Mount, Cable Tie (not shown)	WIRCABLETIEMT-2
22	2	Nut, Wing,1/4-20 (not shown)	ZH1/4-20NUTSW
23	2	Nut, Acorn (not shown)	ZH10-32NUTCA
24	1	Washer, #5610-22-60 (not shown)	ZH200X437X62N
25	4	Roller O-ring (not shown)	ED210100**

* Part number is for the dome only. To order the complete dome assembly, specify the part number ED28DOME-CLP, which includes items 9 and 16.

** O-ring is not used with domes that have a flange diameter of 21.32 inches ± .030 inches.

8.0 INSTALLATION

In order to ensure proper wiring and system operation of all components, it is highly recommended that the pan/tilt and the associated control equipment be tested in your facility before field installation is attempted. Assemble the mating connector as outlined in Figure 15 and wire the control cable according to the applicable diagrams provided in Figures 16 through 17 for all models except ED28, ED28-1, ED29, ED29-1 and models with integral receiver (RX or WX). Models with integral receiver are pre-wired at the factory.

8.1 WIRING

When using a Coaxitron or Wiretron Control System, consider using the C1906 and C1925 factory assembled pretested cables which are wired for inverted applications.

NOTE: If you are not using the C1906 or C1925 pretested cables, you must reverse the left/right and up/down function pins shown in Figures 16 through Figure 18.

Cable distances should not exceed the distances specified in Section 8.2, Conductor/Cable Requirements. Cable fabrication must be in accordance with Figure 15. The following are some recommended common installation practices.

1. Always use jacketed stranded multiconductor interconnecting cable between the control and the pan/tilt unit, with additional conductors than needed for future servicing and or additions.

2. Always use color-coded conductors for ease of wiring and to identify functions at a later date.

3. Keep a wiring diagram with the system for later use and reference.

8.2 CONDUCTOR AND CABLE REQUIREMENTS

Conductors

Conductor requirements are as listed, plus coax cable.

(Standard or SL pan/tilt)
PT2801000ASSY
PT2801001ASSY: Pan/Tilt (5 plus ground)
Lens (4)
Camera AC (2)

(Standard pan/tilt with presets)
PT2801002ASSY: Pan/Tilt (9 plus ground)
Lens (8)
Camera AC (2)

(SL pan/tilt with presets)
PT2801003ASSY: Pan/Tilt (10 plus ground)
Lens (8)
Camera AC (2)

Cable Distances — Hard-Wire Controls

Pan/Tilt Functions

	5 Conductors	6 Conductors*
20 Awg	110 feet (33.5 m)	210 feet (64 m)
18 Awg	180 feet (54.8 m)	330 feet (100 m)
16 Awg	290 feet (88.3 m)	530 feet (161 m)

*Using 2 conductor common

Camera Power

Consult the camera manufacturer for transformer power distances.

NOTE: A relay box (RB24) is available to extend the operating distance (control to relay box) up to 13,000 feet (3,962 m) utilizing 16 Awg wire.

Cable Distances — Coaxitron

Up to a maximum of 750 feet (228 m) on a single coax (RG59/U) from the receiver to the transmitter.

NOTE: To extend the distance to 3,000 feet (914m) on RG59/U coax, use the PELCO EA2000 Half Duplex Equalizing Amplifier.

Cable Distances — Wiretron

Maximum recommended distances from the receiver to the transmitter using twisted pair, unshielded cable are as follows:

22 Awg	5 miles (8 km)
20 Awg	10 miles (16 km)

8.3 CONNECTOR ASSEMBLY

Installation and/or testing will require you to assemble the connector parts provided. Fabricate the interconnecting cable according to the following steps (reference Figure 15).

1. Slide part A of the cable clamp (item 1) over the end of the cable (item 1, part C) with the threaded end of the cable clamp facing the connector (item 5).

2. If the cable has a diameter less than 1/2 inch (1.3 cm), slide the rubber boot (item 2) over the end of the cable and pull through the cable clamp to so that the boot encases the cable and forms a good seal.

3. Strip back the cable jacket approximately 1-1/4 inches (3.2 cm) and separate the individual conductors (item 3).

4. The contact pins supplied with the mating connector are the "crimp" type which may also be soldered if you so desired (item 4).

5. After crimping or soldering the contact pins to the conductors, push them into the proper holes in the connector until they snap in place.

NOTE: Contacts cannot be removed from the connector without the use of the appropriate AMP extraction tool which is available from PELCO.

6. Slide part A of the cable clamp toward the connector and screw the parts together. Attach part B (item 1) onto part A and connect both parts with the screws provided.

7. Connect the cable assembly to the unit and seat the connector by twisting the locking collar until it snaps into position.

Refer to Figures 16-18 for the appropriate wiring diagram.

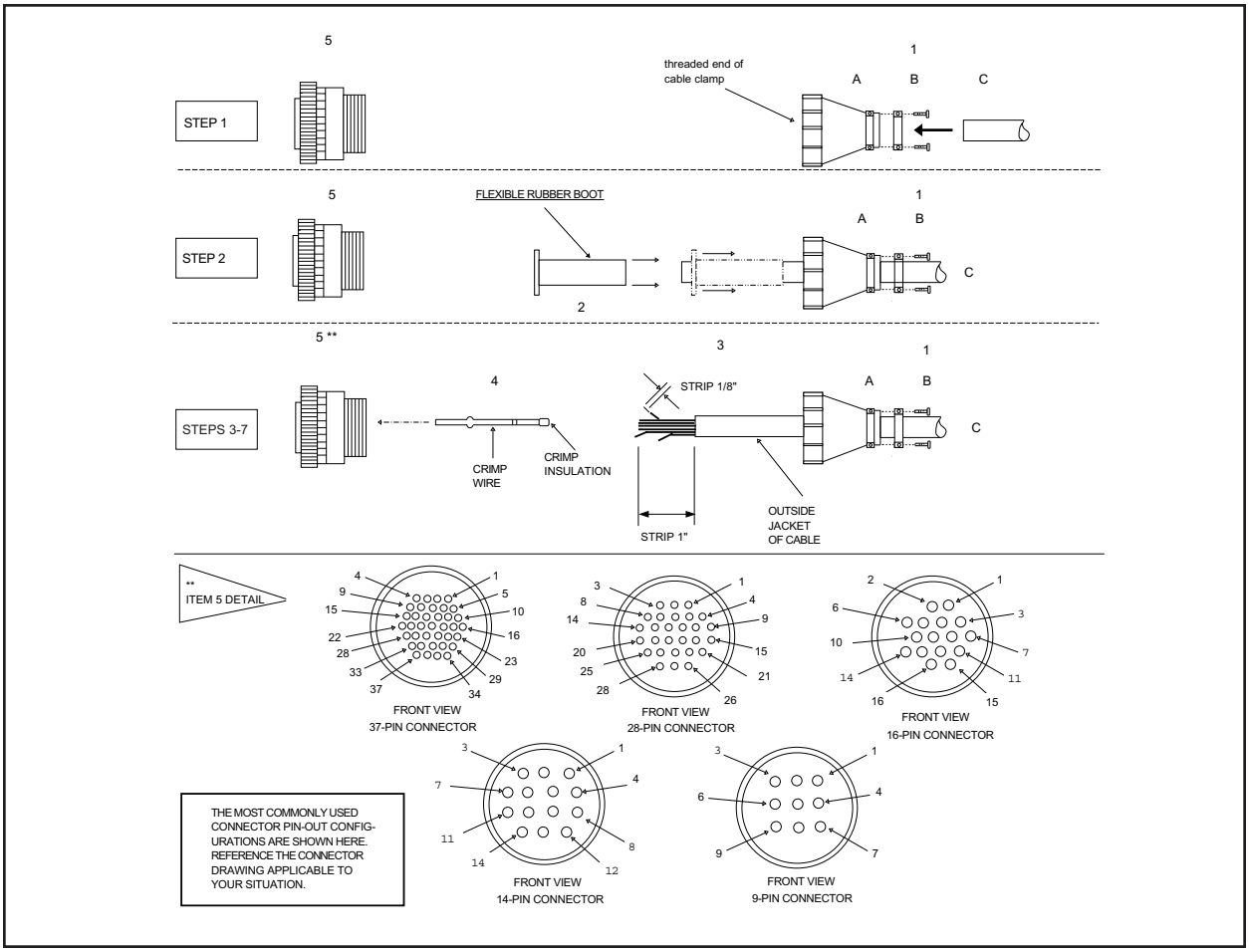
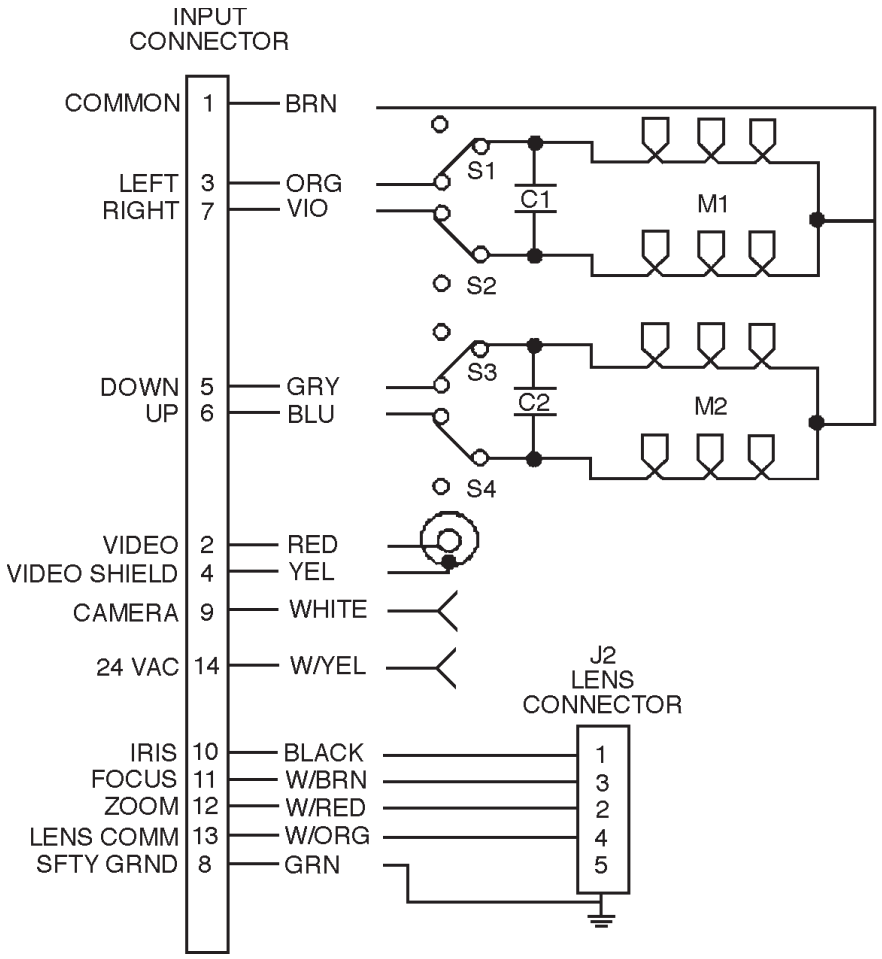


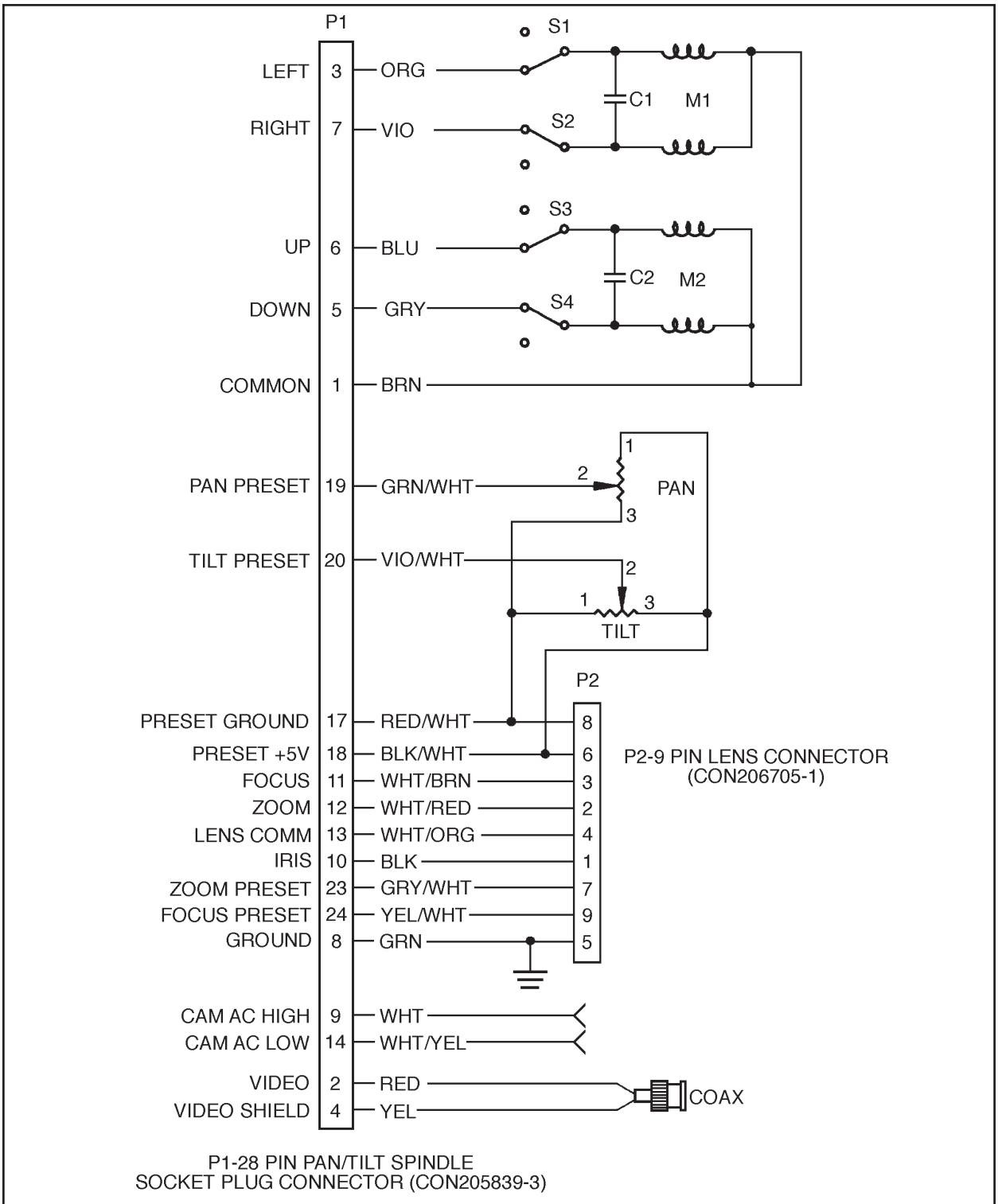
Figure 15. Connector Assembly



QTY	SYMBOL	DESCRIPTION	MANUFACTURER	PART NUMBER
2	C1,C2	CAPACITOR,15 MFD,100V	SPRAGUE	CAPU0015.0/100N
1	M1	PAN MOTOR	PELCO	2508001
1	M2	TILT MOTOR	PELCO	PS78001
1	J2	CONNECTOR	HIRSCHMANN	CONMAB6100
14	—	CONNECTOR PINS	AMP	CON66102-7
4	S1-S4	SWITCH	MICROSWITCH	SWI1SM1
1	—	INPUT CONNECTOR	AMP	CON206044-1
1	—	MATING CONNECTOR ASSY	AMP	CONA14S
1	—	ACTUATOR	MICROSWITCH	SWIJS138B
1	—	LENS MATING CONNECTOR	HIRSCHMANN	CONMAS6100

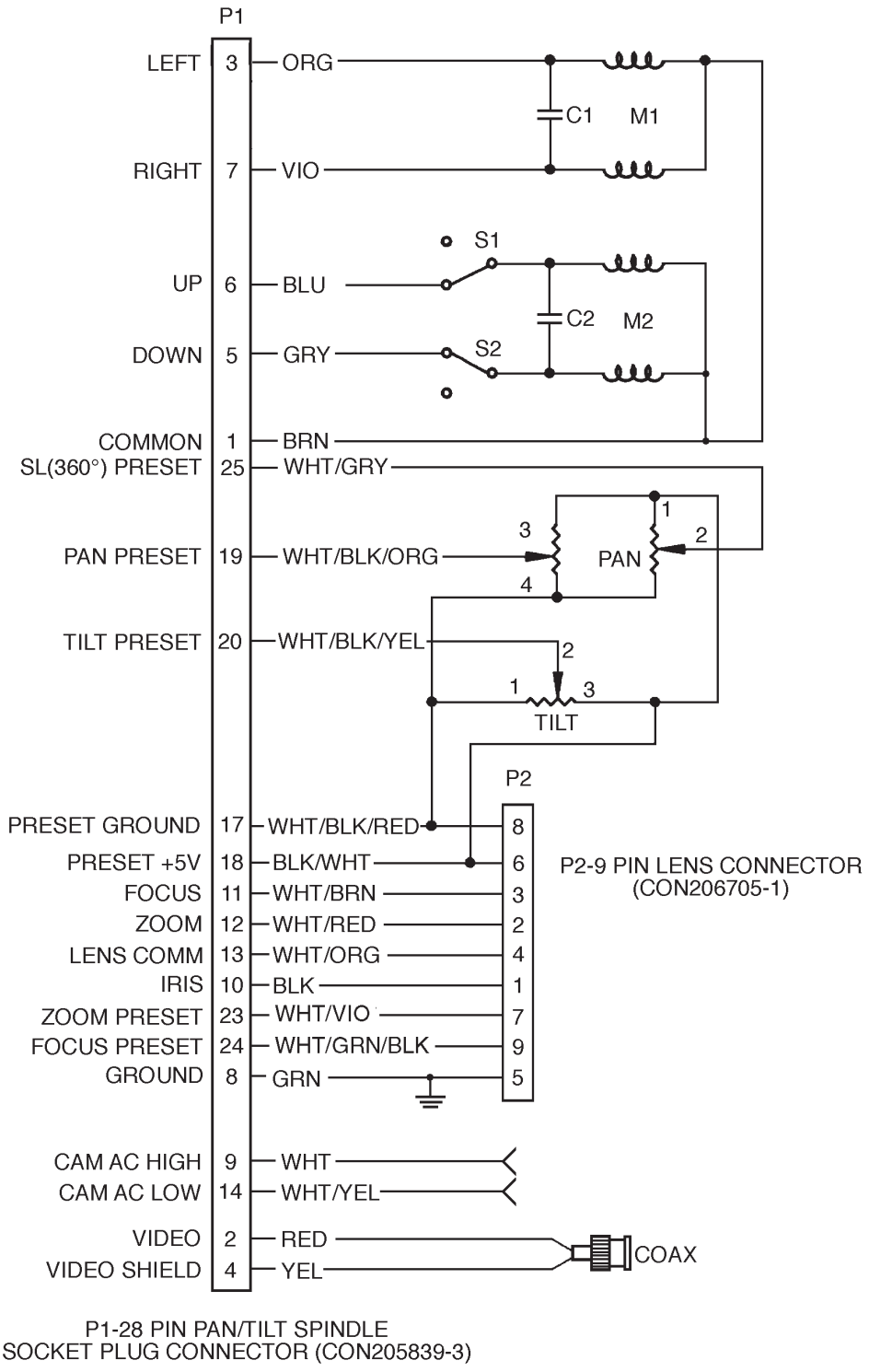
Note: For **non-receiver models only**, you must reverse the left/right and up/down function pins shown above if you are not using the C1906 or C1925 pretested cables.

Figure 16. PT2801000ASSY/PT2801001ASSY Wiring Diagram (Standard or SL Models)



Note: For **non-receiver models only**, you must reverse the left/right and up/down function pins shown above if you are not using the C1906/PP or C1925/PP pretested cables.

Figure 17. PT2801002ASSY Wiring Diagram
(Standard with Presets)



Note: For **non-receiver models only**, you must reverse the left/right and up/down function pins shown above if you are not using the C1906/PP or C1925/PP pretested cables.

Figure 18. PT2801003ASSY Wiring Diagram
(SL with Presets)

8.4 LIMIT/STOP ADJUSTMENTS

WARNING: Do not operate pan/tilt without limit stops.

Do not remove or reposition the fixed actuator on the non-SL. DAMAGE WILL OCCUR.

NOTE: SL models are not equipped with pan limit stops. (Disregard steps 1-5 below).

To set limit stops, perform the following steps (refer to Figure 19).

1. Loosen the pan limit stops.

2. Turn the control unit "on." Pan the unit to the right until the desired right pan limit is reached.

3. Move the right pan limit stop until it touches the pan limit switch actuator. Move the stop a slight distance further against the actuator until it "clicks", indicating opening of the limit switch. Lock the stop in place.

4. Pan the unit to the desired "left" position. Adjust the left pan limit stop as described in step 3.

5. Pan left and right to both limit stops and check for exact positioning. Tighten both stops securely.

6. Remove the end cup from the left side of the tilt table. Loosen the tilt limit stop screws and tilt the table, using the joystick, to the desired "up" position.

7. Move the "up" limit stop until it touches the tilt limit switch actuator and "clicks". Lock the stop in place.

8. Tilt the table to the desired "down" position and set the stop in the same manner.

9. Tilt the table up and down and check for exact positioning. Tighten both stops securely. Replace the side cover.

After the unit has been tested and stops aligned, turn off the control and disconnect the AC cord from the outlet. Remove the multiconductor cable from both the pan/tilt and control unit. This cable can then be used for installation by cutting the test cable and splicing the ends onto the installation cable at the job site. Splice the ends, color-to-color, onto the cable in the field, using the terminal blocks at each end.

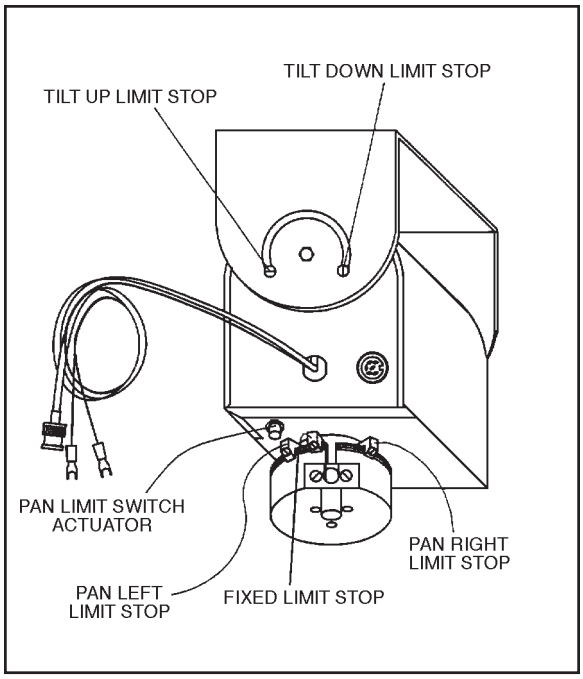


Figure 19. Limit Stops

9.0 OPERATIONAL TEST

9.1 CONTROL

Connect the cable assembly between the pan/tilt and the control unit. Plug the control unit into the AC outlet and switch the unit on.

Move the joystick to the UP position. Observing the "Front" label on the pan/tilt, the front of the tilt table should move up. Move the joystick to the DOWN position, and the front of the tilt table should move down. Releasing the joystick should allow it to return to center and the tilt table should immediately stop moving.

Move the joystick to the LEFT position and the complete top assembly should rotate counterclockwise. With the joystick moved to the RIGHT position, the unit will rotate clockwise.

Both the pan and tilt motors are protected from mechanical over-travel by electrical limits which stop the motors.

9.2 AUTO/RANDOM SCAN OPERATION

The pan/tilt will function in the Auto/Random mode with the addition of the appropriate PELCO control system. The pan/tilt has no additional limit switches or relays for auto scan operation and is, therefore, only compatible with current sensing auto/random type circuits employed in our control systems.

10.0 MAINTENANCE

10.1 RECOMMENDED EQUIPMENT AND TOOLS

1. Voltmeter or Ohmmeter
2. Allen Wrench Set
3. Wrench Set
4. Flat Blade and Phillips Head Screwdrivers
5. Pliers, Long Nose

10.2 SERVICE TIPS

Some common problems encountered with pan/tilt systems include miswiring, overloading, and not using the units for the correct application. Should a failure occur, it is recommended that the following procedures be used.

1. If the pan/tilt ceases to operate, turn the control unit off and remove the AC cord from the outlet.

2. Check the fuse in the control unit using either a voltmeter or ohmmeter. If open (blown), replace with the proper recommended fuse.

3. Replace the AC cord in the outlet and turn the control on. If the fuse continues to open (blow), turn the unit off.

4. Check the control cable between the control unit and pan/tilt for shorts, high resistance, or opens.

5. If the control cable is found to be good, replace the connector to the control unit, leave the connector off the pan/tilt, and replace the fuse.

6. Operate the control unit when it is disconnected from the pan/tilt. If the fuse continues to "blow" the fault is in the control. Refer to the appropriate service manual for the control being used.

7. Check the wiring harness in the pan/tilt for shorts.

8. If the wiring harness is found to be good, then the problem is internal to the unit; consult factory.

Refer to Figures 16 through 18, if necessary.

11.0 EXPLODED ASSEMBLY DIAGRAM (Model PT2801000ASSY)

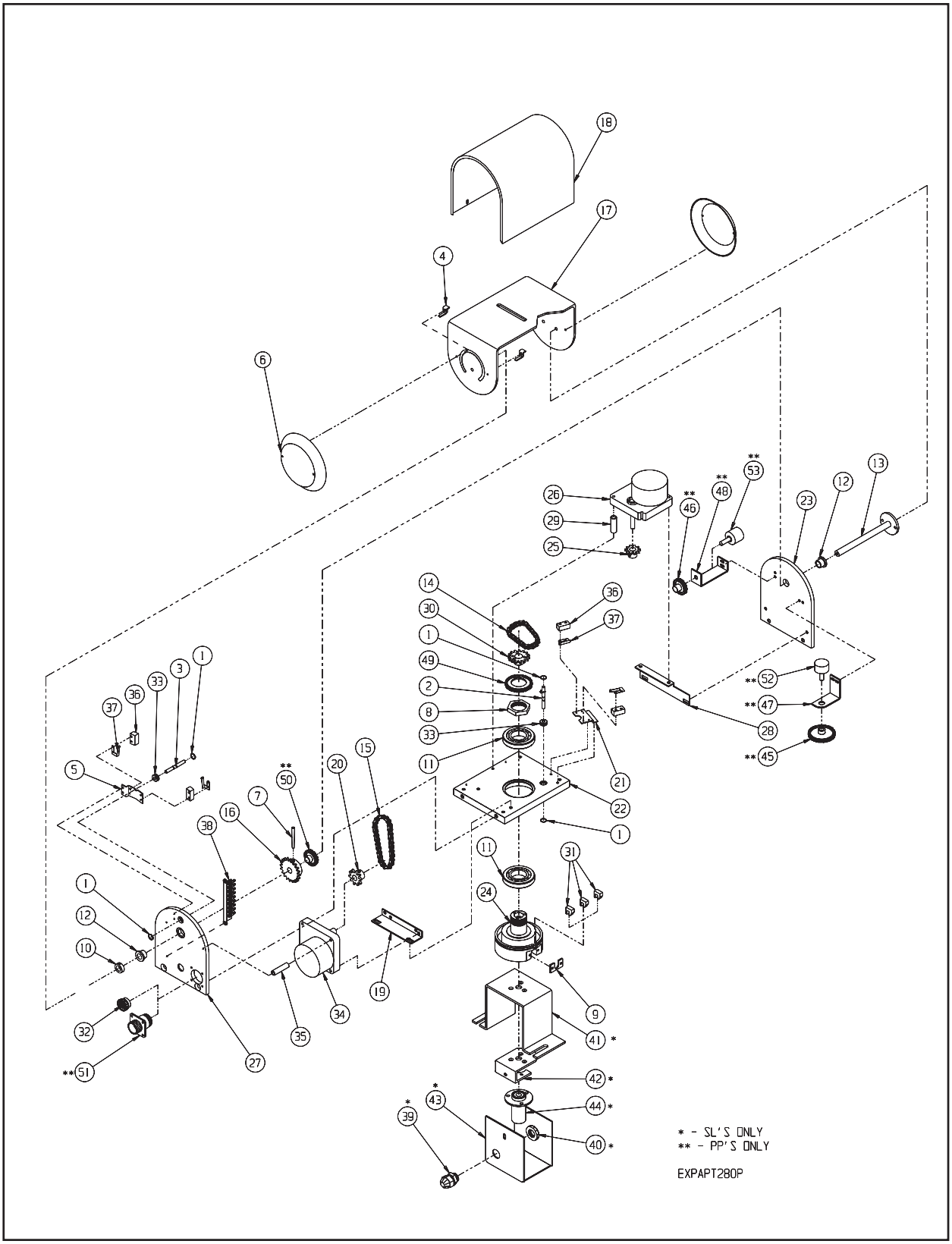


Figure 20. Exploded Assembly Parts Diagram (Model PT2801000ASSY)

11.1 EXPLODED HARDWARE DIAGRAM (Model PT2801000ASSY)

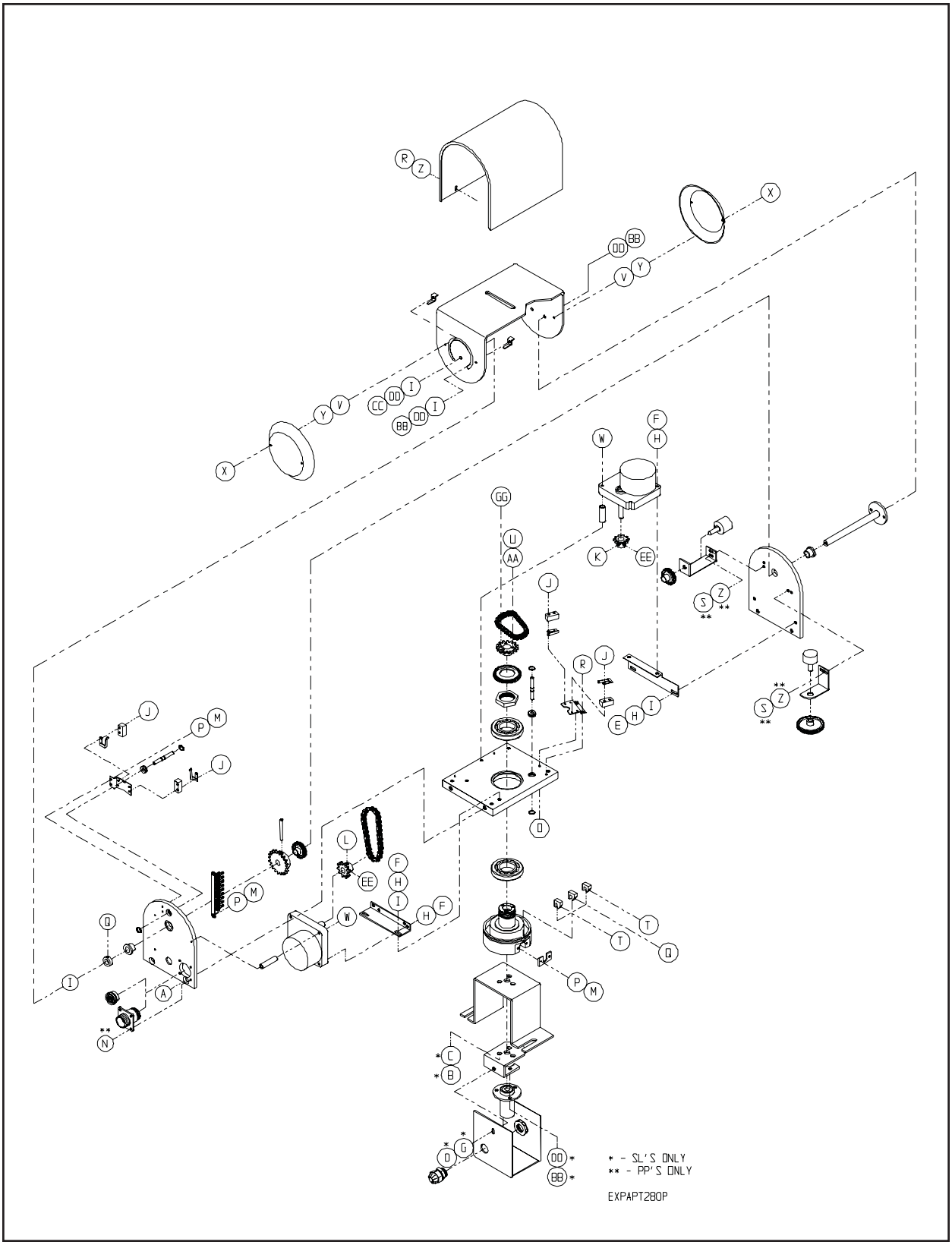


Figure 21. Exploded Assembly Hardware Diagram (Model PT2801000ASSY)

12.0 MECHANICAL PARTS LIST (PT2801000ASSY)

The following parts list corresponds to the exploded assembly diagram in Figure 20.

Item	Qty	Description	Part Number
1	4	Ring, Snap #Q2-18	15510000
	2	Ring, Snap #Q2-18 (SL)	15510000
2	1	Pin, Pan Limit (Non-SL)	1554049COMP
	1	Pin, Pan Limit (P/PP Only)	2804003COMP
3	1	Pin, Tilt Limit	1554049TCOMP
4	2	Tilt Limit Stop	1554050COMP
5	1	Bracket, Tilt Limit	1554052COMP
6	2	Cover Plate, Tilt	1554053COMP
7	1	Pin, #1 X 1-1/4 Taper	17510000
8	1	Nut, Spindle	25010002
9	1	Clamp, Cable (SL Only)	2504007COMP
10	1	Spacer, Tilt Collar	2504015COMP
11	2	Bearing, Pan Spindle	2506000
12	2	Bearing, Tilt FB68-31/4	2506001
13	1	Tilt Shaft Assembly	2701002COMP
14	1	Chain Assembly, Pan	2801010COMP
15	1	Chain Assembly, Tilt	2701004COMP
16	1	Sprocket, 25B20-3/8 W/SS	27012008
17	1	Tilt Table	2704003COMP
18	1	Cover	2704004COMP
19	1	Bracket, Pan & Tilt Motor, Black	2704006COMP
20	1	Sprocket, Motor	2704010COMP
21	1	Bracket, Pan Limit (Non-SL Only)	2704051COMP
22	1	Plate Bottom	2704100COMP
23	1	Sideplate, Pan	270412COMP
24	1	Spindle	274105COMP
25	1	Sprocket, 25B13-3/8	28012011
26	1	Motor, Pan 2-RPM, 24 VAC	2804001COMP
27	1	Plate, Side Tilt (Non PP)	2804002COMP
	1	Plate, Side Tilt (PP)	2804102COMP
28	1	Bracket, Pan Motor	2804012COMP
29	1	Spacer, Pan Motor	2804013COMP
30	1	Sprocket, Pan Spindle	2804019COMP
31	3	Limit Stop, Pan	5804006COMP
32	1	Connector, 6-Position (SL and P Only)	CONMAB6100
33	2	Gromet, Neoprene	GRO2172N
	1	Gromet, Neoprene (SL)	GRO2172N
34	1	Motor, 24 VAC, 1-RPM	PS78001
35	1	Spacer, 5/16 Dia X 1.25 #10 Clear	SPA8548
36	4	Switch, Micro	SWI1SM1
	2	Switch, Micro (SL)	SWI1SM1
37	4	Switch Actuator W/Insulator	SWIJS138B
	2	Switch Actuator W/Insulator (SL)	SWIJS138B
38	1	Terminal Strip, 7-pin (Non-PP)	TRS2007
	1	Terminal Strip, 9-pin (PP Only)	TRS2009
39	1	UL, Gland SL-9	EH400010003
40	1	UL, Nut	EH400010004
41	1	Bracket, PM200C	PM200C4000COMP
42	1	Bracket, Slip Ring (SL/PP)	SL28004101COMP
	1	Bracket, Slip Ring (P/PP)	SL28004001COMP
43	1	Cover, Slip Ring	SL28004100COMP
44	1	Ring, Slip for Preset (SL/PP)	250010000
	1	Ring, Slip 24-inch Leads (SL)	28010000

Item	Qty	Description	Part Number
45	1	Gear, SP Delrin (SL/PP)	280010016
	1	Gear, 1.875 Plastic (P/PP)	PT250010002
46	1	Gear, SP Delrin	28010017
47	1	Bracket, Pot Pan (P/PP)	2804014COMP
	1	Bracket, Pot Pan (SL/PP)	2804117COMP
48	1	Bracket, Pot Pan	2804015COMP
49	1	Gear, Preset Pan Spindle	2804016COMP
50	1	Gear, Preset Tilt Shaft	2804020COMP
51	1	Connector, 9-position (PP Only)	CON206705-1
52	1	Pot, Dual Arm Pre Res (SL/PP)	POTDARM010.0K
	1	Pot, Precision, 10K (P/PP)	POT010.0K
53	1	Gear, 1.875 Plastic (P/PP)	POT10.0K

12.1 MECHANICAL HARDWARE LIST (PT2801000ASSY)

The following parts list corresponds to the exploded assembly diagram in Figure 21.

Item	Qty	Description	Part Number
A	4	Bolt, 1/4-20 X 5/8 Phil Flat SS	ZH1/420X.625SFS
B	3	Screw, 1/4-20 X 5/8 Hex C/S SS (SL Only)	ZH1/420X.625CH
C	3	Washer, Split Lock Medium (SL Only)	ZH1/4LWSSL
D	1	Screw, 10-32 X 3/8 Pan Phil SS (SL Only)	ZH10-32X.375SPP
E	2	Screw, 10-32 X 7/16 Socket Head C/S SS	ZH10-32X.437CS
F	6	Screw, 10-32 X 1/2 Socket Head C/S SS	ZH10-32X.500CS
G	1	#10 Internal Tooth Lockwasher (SL Only)	ZH10LWSIS
H	8	Washer, Split Lock #10 SS Medium	ZH10LWSSL
I	8	Washer, Flat #10 SS	ZH204X436X60C
J	8	Screw, 2-56 X 4/16 Pan Phil SS	ZH2-56X.437SPP
	4	Screw, 2-56 X 4/16 Pan Phil SS (SL)	ZH2-56X.437SPP
K	1	Set Screw, 10/32 X 1/8 Socket Knurl Blk	ZH10-32X.187S
L	1	Set Screw, 10/32 X 3/16 Socket Knurl Blk	ZH3/8-24X.375SS
M	6	Screw, 4-40 X 1/4 Pan Phil SS	ZH4-40X.250SPP
N	4	Screw, 4-40 X 3/8 Pan Phil (PP Only)	ZH4-40X.375SPP
O	1	Screw, 4-40 X 5/8 Pan Phil SS	ZH4-40X.625SPP
P	6	#4 Internal Tooth Lockwasher SS	ZH4LWSIS
Q	2	Set Screw, 6-32 X 3/16 Socket Knurl Blk	ZH6-32X.187S
R	4	Screw, 6-32 X 1/4 Pan Phil SS	ZH6-32X.250SPP
S	4	Screw, 6-32 X 3/8 Socket C/S SS	ZH6-32X.375CS
T	2	Screw, 6-32 X 3/8 Pan Phil SS	ZH6-32X.375SPP
U	3	Screw, 6-32 X 1/2 Socket C/S	ZH6-32X. 500CS
V	4	Set Screw, 6-32 X 3/4 SS	ZH6-32X.750SS
W	2	Screw, 6-32 X 2 Pan Phil SS	ZH6-32X2.00SPS
X	4	Nut, 6-32 Acorn SS	ZH6-32NUTCA
Y	4	Nut, Hex 6-32 SS	ZH6-32NUTSH
Z	7	#6 Internal Tooth Lockwasher (PP Only)	ZH6LWSIS
	3	#6 Internal Tooth Lockwasher (P Only)	ZH6LWSIS
AA	3	Washer, Split Lock #6 SS Med	ZH6LWSSL
BB	6	Screw, 8-32 X 3/8 Pan Phil SS (SL Only)	ZH8-32X.375SPP
	3	Screw, 8-32 X 3/8 Pan Phil SS (P Only)	ZH8-32X.375SPP
CC	1	Screw, 8-32 X 5/8 Pan Phil SS	ZH8-32X.375SPP
DD	7	Washer, Internal Star (SL Only)	ZH8LWSIS
	4	Washer, Internal Star (P Only)	ZH8LWSIS
EE	1	Pin, Roll 3/32 X 1/2	ZHPIN3/32X1/2R
FF	1	Pin, Roll 3/32 X 1/2	ZHPIN3/32X3/4R
GG	1	Pin, Dowel 1/8 X 5/8 Hardened Steel	1510001

13.0 ENCLOSURE MODELS

ED28	Harris environmental discreet surveillance enclosure with black opaque lower dome with clear viewing window for outdoor applications. Fixed camera mount supplied. (UL, CE)
ED28-1	Same as ED28 except supplied with factory installed heater/blower and service light. (UL)
ED2820	Harris environmental discreet surveillance system factory assembled with PT2801000ASSY pan/tilt assembly. Heater/blower and service light are standard features. (UL)
ED2820-3	Same as ED2820 except 230 VAC blower, heater and service light.
ED2820-PP	Same as ED2820 except supplied with PT2801002ASSY pan/tilt assembly with preset positioning capabilities. (UL)
ED2820-RX	Harris environmental discreet surveillance system factory assembled with PT2801000ASSY pan/tilt and Coaxitron receiver/driver. Heater/blower and service light are standard features. (UL)
ED2820-RX/PP	Same as ED2820-RX except supplied with PT2801002ASSY preset position feedback pan/tilt assembly. (UL)
ED2820-SL	Same as ED2820 except supplied with PT2801001ASSY pan/tilt assembly with 360° pan rotation. (UL)
ED2820SL/PP	Same as ED2820-SL except supplied with PT2801003ASSY pan/tilt assembly with 360° pan rotation and preset positioning capabilities. (UL)
ED2820-3SL/PP	Same as ED2820SL/PP except 230 VAC blower/heater and service light.
ED2820SL-RX	Same as ED2820-RX except supplied with PT2801001ASSY pan/tilt assembly with 360° pan rotation. (UL)
ED2820SL-RX/PP	Same as ED2820SL-RX except supplied with PT2801003ASSY pan/tilt assembly with 360° pan rotation and preset positioning capabilities. (UL)
ED2820-WX	Same as ED2820-RX except has Wiretron receiver/driver.
ED2820SL-WX	Same as ED2820-WX except supplied with PT2801001ASSY pan/tilt assembly with 360° pan rotation. (UL)
ED29	Same as ED28 except pendant mount version.
ED29-1	Same as ED28-1 except pendant mount version.
ED29-3	Same as ED29-1 except 230 VAC blower/heater with service light. (CE)
ED2920	Same as ED2820 except pendant mount version. (UL)
ED2920-3	Same as ED2920 except 230 VAC blower/heater and service light.
ED2920-RX	Same as ED28280-RX except pendant mount version.
ED2920-SL	Same as ED2820-SL except pendant mount version. (UL)
ED2920SL-RX	Same as ED2820SL-RX except pendant mount version. (UL)

NOTE: ED29/ED2920 Series domes require a suitable length of 1-1/2" NPT threaded pipe for mounting.

13.1 OPTIONS

ED28KIT	Installation kit; required to retrofit ED28, ED28-1, ED29, or ED29-1 dome with pan/tilt assembly. (See Section 17.)
TI2800	Low temperature kit; thermal insulation with two 80 watt heaters to allow operation in temperatures below -10°F (-23°C).

14.0 ENCLOSURE SPECIFICATIONS

MECHANICAL

Enclosure

Dome Drive: Dome rides on rollers and is driven by drive arm of pan/tilt

Max. Camera/Lens Length: 14.0 inches (35.5 cm)

ELECTRICAL

Enclosure (All models except ED28/ED29)

Input Voltage: 120 VAC 50/60Hz (or 230 VAC, 50/60 Hz for ED2820-3 and ED2820-3SL/PP, ED29-3)

Power Requirements: 180 vA (or 185 vA for ED2820-3 and ED2820-3SL/PP only)

Blower: 80 cfm at 13 watts (or 90 cfm at 15 watts for ED2820-3 and ED2820-3SL/PP only)

Heaters: Two (2) at 80 watts each

Service Light: One (1) at 7 watts (or One (1) at 10 watts for ED2820-3 and ED2820-3SL/PP only)

Power Cable Requirements: 3-wire grounded, 18 Awg (supplied on "RX" versions only)

Receiver

(Models ED2820-RX, ED2820SL-RX, ED2820-RX/PP, ED2820SL-RX/PP, ED2820-WX, ED2820SL-WX, ED2920-RX, and ED2920SL-RX only)

Power Cord: 3 wire grounded, 18 Awg (supplied)

Cables:

Coaxitron
Video: RG59 with BNC jack
Control: RG59 with BNC jack

Wiretron
Video: Coax
Control: Twisted pair, unshielded

Input Voltage: 120 VAC, 50/60Hz

Power Requirements: 79 vA (receiver only)

Fuse Protection: 3 AG type

Control Method: 15-pulse train (pulse width modulated) superimposed on the video signal during the vertical interval by the control transmitter. Pulse train occupies one TV line period.

Input Video Line: 1 v p-p nominal; 2v p-p maximum at less than 75% APL; 1.5v p-p maximum at 90% APL.

System Bandwidth: Less than 2 dB down at 10 MHz

Operating Distance: 750 feet (228m) on RG59U
1,500 feet (457m) on RG6
1,800 feet (548m) on RG11
(75 ohm coax required)

GENERAL

Enclosure Dimensions: See Figures 1 and 2

Construction:
Upper Box: Formed aluminum
Lower Dome: Acrylic hemisphere with distortion free viewing window

Finish: Polyvinyl powder coat

Weight:
ED28: 25 lbs (11.34 kg)

ED28-1: 27 lbs (12.25 kg)

ED2820, ED2820-3
ED2820-SL,
ED2820-3SL/PP,
ED2820SL/PP: 35 lbs (15.75 kg)

ED2820-RX,
ED2820SL-RX,
ED2820SL-RX/PP,
ED2820-WX,
ED2820SL-WX: 42 lbs (18.90 kg)

ED29,
ED2920 Series: 47 lbs (21.291 kg)

Temp. Range: -10°F to 140°F (-23°C to +60°C)

15.0 PAN/TILT ASSEMBLIES

15.1 ASSEMBLY DESCRIPTION

The pan/tilt assembly is a "mini" light duty pan/tilt for loads up to 15 lbs (6.8 kg) and is factory pre-wired for all control functions (pan and tilt, motorized zoom lens, 24 VAC camera power, and video). All connections are made at the input connector, eliminating the need for wiring harnesses. This greatly reduces installation time, while increasing reliability and serviceability.

15.2 ASSEMBLY MODELS

PT2801000ASSY Mini light-duty pan/tilt, 24 VAC, with 0-355° pan and tilt

PT2801001ASSY Mini light duty pan/tilt with 360° pan rotation, 24 VAC

PT2801002ASSY Same as PT2801000ASSY except with position feedback modification which allows pan/tilt to be automatically positioned to various preset positions

PT2801003ASSY Same as PT2801001ASSY except with position feedback modification which allows pan/tilt to be automatically positioned to various preset positions

16.0 ASSEMBLY SPECIFICATIONS

MECHANICAL

Pan: Movement in horizontal plane:
PT2801000ASSY,
PT2801002ASSY 0-355° @ 10°/sec ±1°

PT2801001ASSY,
PT2801003ASSY 360°

Tilt: ±90° movement in vertical plane at 3°/sec ±.5°
(no load condition)

Maximum Load: 15 lbs (6.8 kg)

ELECTRICAL

Input Voltage: 24 VAC required for pan/tilt

Power Requirements: Running
Pan — .31 amp (7.5 vA)
Tilt — .38 amp (9.2 vA)

Starting
Pan — .47 amp (11.2 vA)
Tilt — .56 amp (13.5 vA)

Maximum Current: 2 amps per conductor (SL models only)

Connectors:
Pan/Tilt Amp CPC type (mate supplied). Installed onto a pigtail exiting from base of pan/tilt (all functions — camera power, lens, video, pan/tilt).

Lens: Hirschmann MAB6100

Video: BNC

Camera Power: Spade lugs

Motors: Two-phase induction type. Continuous duty, instantaneous reversing

Limit Switches: Pan — 5 amp
Tilt — 5 amp
External adjustment

Cable Distances: (See Section 8.2)

GENERAL

Construction: Aluminum

(Product specifications subject to change without notice.)

17.0 PAN/TILT ASSEMBLY INSTALLATION

This section covers the installation of the ED28KIT in retrofitting a non-pan/tilt-equipped ED28 and ED28-1 or ED29/ED29-1/ED29-3 Harris Dome with a pan/tilt assembly unit. Please read through and understand the installation instructions before proceeding with the installation.

NOTE: When installing a pan/tilt unit to a dome enclosure, it is recommended that one of the following pan/tilt assembly units be used in the installation:

PT2801000ASSY – for non-PP operation
PT2801001ASSY – for SL operation
PT2801002ASSY – for PP operation
PT2801003ASSY – for SL/PP operation

(The pan/tilt assembly must be ordered separately.)

Before proceeding with the installation, make sure you have the following:

(1) P/T assembly mounting bracket, PM200C4000COMP

(1) Dome Drive Bracket, SB34105COMP

See Figure 21 for the assorted mounting hardware part numbers and quantities.

NOTE: If you are working with a SL (360°) pan/tilt assembly unit (PT2801001ASSY, or PT2801003ASSY), skip to step 2 in the following instructions.

1. Install the pan and tilt assembly mounting bracket to the top of the pan and tilt unit using the (3) mounting screws and washers as shown in Figure 21.

   Make sure the bracket is oriented such that when the pan and tilt assembly is mounted to it, the front of the pan and tilt unit will face toward the viewing slot in the enclosure dome.

2. Install the dome drive bracket to the top of the pan and tilt assembly using the (2) mounting screws and washers as shown in Figure 21.

   Again, make sure the dome drive bracket is oriented correctly so the front of the pan and tilt assembly will face the viewing slot in the dome enclosure.

3. Mount the pan and tilt assembly, with the installed dome drive bracket and the assembly mounting bracket, to the inside of the enclosure. Make sure the direction of the pan and tilt assembly is oriented properly.

4. Make sure all hardware is tightened securely.

5. Make the proper electrical connections.

NOTE: Refer to Installation/Operation manual C460M for complete wiring and operation information.

6. Close the dome, aligning the dome drive bracket with the drive tab on the edge of the dome.

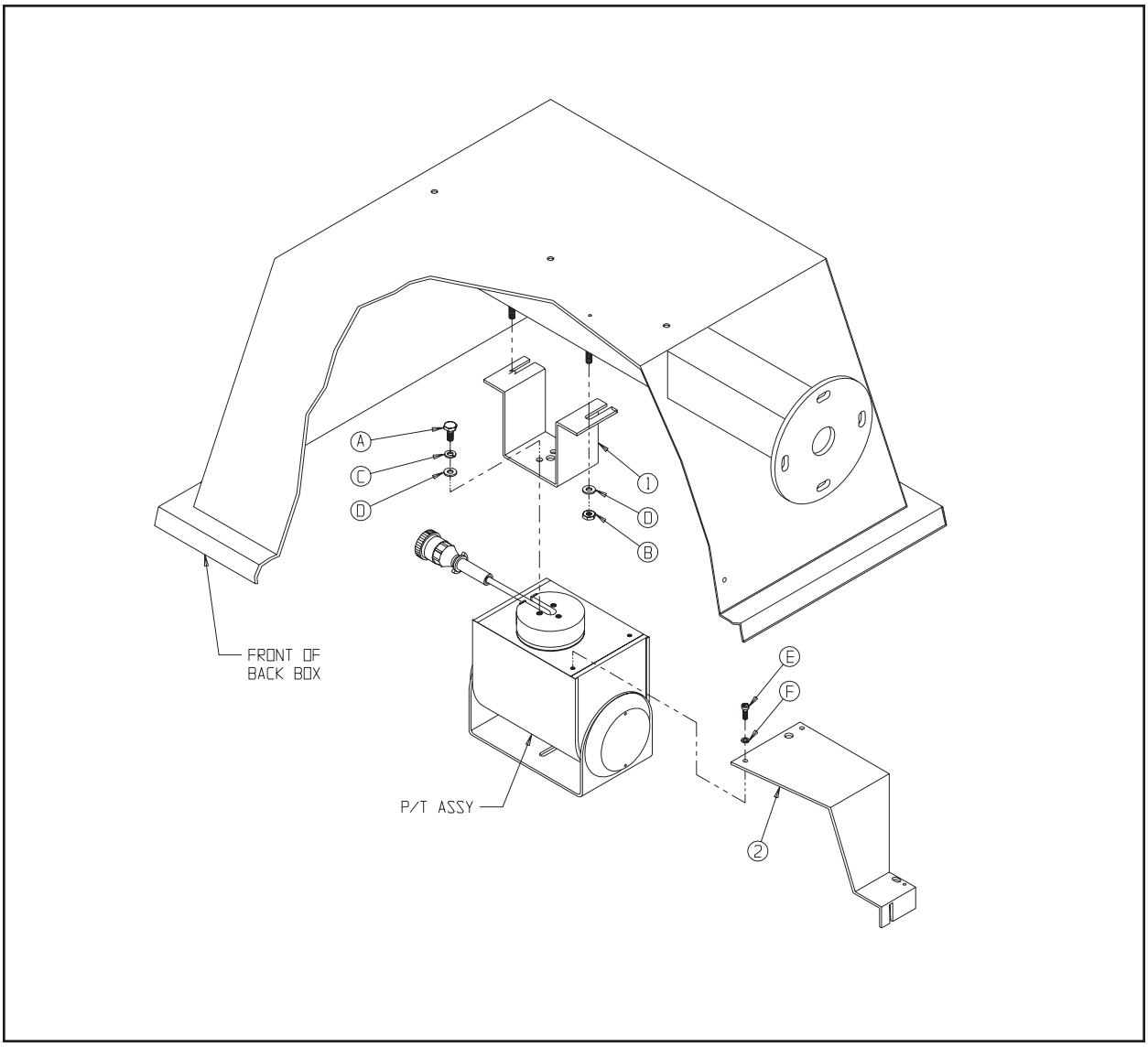


Figure 21. ED28KIT Installation/Exploded View

Exploded Assembly Parts List

Item	Qty	Description	Part Number
1	1	Bracket	PM200C4000COMP
2	1	Dome drive bracket	SB34105COMP
A	3	Bolt, 1/4-20 x 5/8" hex C/S	ZH1/4-20X.625CH
B	2	Nut lock, 1/4-20, nylon insert SS	ZH1/420NUTCHN
C	3	Washer, split lock, 1/4" SS	ZH1/4LWSSL
D	5	Washer, flat, nylon	ZH260X562X65C
E	2	Screw, 10-32 x 3/8", pan phil SS	ZH10-32X.375SPP
F	2	Washer, split lock #10 SS	ZH10LWSSL

18.0 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

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.