



by **Schneider** Electric

# I N S T A L L A T I O N

## Esprit<sup>®</sup> Enhanced IP Positioning System



**Esprit Enhanced (ES6230) Models**

**C1354M-D (1/19)**

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# Important Notices

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## LEGAL NOTICE

SOME PELCO EQUIPMENT CONTAINS, AND THE SOFTWARE ENABLES, AUDIO/VISUAL AND RECORDING CAPABILITIES, THE IMPROPER USE OF WHICH MAY SUBJECT YOU TO CIVIL AND CRIMINAL PENALTIES. APPLICABLE LAWS REGARDING THE USE OF SUCH CAPABILITIES VARY BETWEEN JURISDICTIONS AND MAY REQUIRE, AMONG OTHER THINGS, EXPRESS WRITTEN CONSENT FROM RECORDED SUBJECTS. YOU ARE SOLELY RESPONSIBLE FOR INSURING STRICT COMPLIANCE WITH SUCH LAWS AND FOR STRICT ADHERENCE TO ANY/ALL RIGHTS OF PRIVACY AND PERSONALTY. USE OF THIS EQUIPMENT AND/OR SOFTWARE FOR ILLEGAL SURVEILLANCE OR MONITORING SHALL BE DEEMED UNAUTHORIZED USE IN VIOLATION OF THE END USER SOFTWARE AGREEMENT AND RESULT IN THE IMMEDIATE TERMINATION OF YOUR LICENSE RIGHTS THEREUNDER.

## REGULATORY NOTICES

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

### CAN ICES-3 (A)/NMB-3(A)

## WARRANTY STATEMENT

For information about Pelco's product warranty and thereto related information, refer to [www.pelco.com/warranty](http://www.pelco.com/warranty).

## VIDEO QUALITY CAUTION

### Frame Rate Notice Regarding User-Selected Options

Pelco systems are capable of providing high quality video for both live viewing and playback. However, the systems can be used in lower quality modes, which can degrade picture quality, to allow for a slower rate of data transfer and to reduce the amount of video data stored. The picture quality can be degraded by either lowering the resolution, reducing the picture rate, or both. A picture degraded by having a reduced resolution may result in an image that is less clear or even indiscernible. A picture degraded by reducing the picture rate has fewer frames per second, which can result in images that appear to jump or move more quickly than normal during playback. Lower frame rates may result in a key event not being recorded by the system.

Judgment as to the suitability of the products for users' purposes is solely the users' responsibility. Users shall determine the suitability of the products for their own intended application, picture rate and picture quality. In the event users intend to use the video for evidentiary purposes in a judicial proceeding or otherwise, users should consult with their attorney regarding any particular requirements for such use.

## OPEN SOURCE SOFTWARE NOTICE

This product includes certain open source or other software originated from third parties that is subject to the GNU General Public License (GPL), GNU Library/Lesser General Public License (LGPL) and different and/or additional copyright licenses, disclaimers, and notices.

The exact terms of GPL, LGPL, and some other licenses are provided to you with this product. Please refer to the exact terms of the GPL and LGPL at <http://www.fsf.org> (Free Software Foundation) or <http://www.opensource.org> (Open Source Initiative) regarding your rights under said license. You may obtain a complete corresponding machine-readable copy of the source code of such software under the GPL or LGPL by sending your request to [digitalsupport@pelco.com](mailto:digitalsupport@pelco.com); the subject line should read *Source Code Request*. You will then receive an email with a link for you to download the source code.

This offer is valid for a period of three (3) years from the date of the distribution of this product by Pelco.

# Description

The Esprit® Enhanced Series network positioning system features a built-in, Web-based viewer for live video streaming to a standard Web browser (for example, Microsoft® Internet Explorer® or Mozilla® Firefox®).

The system features open architecture connectivity to third-party software. Pelco offers an application programming interface (API) and software development kit (SDK) that enables third-party systems to interface with Pelco's IP systems. The Esprit Enhanced Series is also compatible with VideoXpert, Endura® (2.0 or later), and Digital Sentry® systems to record, manage, configure, and view multiple live streams.

## Operating Temperature Range:

–45° to 60°C (–50° to 140°F) ambient for sustained system operation or 74°C (165.2°F) absolute maximum ambient per NEMA TS-2; within two hours after power-up, the entire unit can de-ice and be operational from a temperature of –25°C (–13°F). Cold start from –40°C.

## SYSTEM MODEL NUMBERS

Enclosure Type	Non IR		200m IR		IR + White Light	
	HPoE, 24 VAC, 48 VDC	100 to 240 VAC	48 VDC	100 to 240 VAC	48 VDC	100 to 240 VAC
Standard	ES6230-02	ES6230-05	—	—	—	—
With Wiper	ES6230-12	ES6230-15	ES6230-12-R2	ES6230-15-R2	ES6230-12-RWUS	ES6230-15-RWUS
Pressurized and Wiper	ES6230-12P	ES6230-15P	ES6230-12P-R2	ES6230-15P-R2	ES6230-12P-RWUS	ES6230-15P-RWUS

## SUPPLIED PARTS LIST

### Qty Description

- 1 Screw connector (all models)
- 1 Snap-on cable ferrite
- 1 20-pin terminal plug for AUX

## INSTALLATION TOOLS AND PARTS NOT SUPPLIED

### Qty Description

- 1 Network cable
- 1 Phillips screwdriver
- 1 Standard flat head screwdriver
- 1 7/16-inch wrench
- 1 Esprit mount
- 1 Mounting hardware
- 1 5/32-inch hex bit or Allen key

## USING THE WEB INTERFACE

You can find information about the web interface for your camera on [www.pelco.com](http://www.pelco.com).

# Installation

## OVERHEAD CLEARANCE PROVISIONS

When installing the Esprit Enhanced system, allow for sufficient clearance between the top of the unit and overhead obstructions. This will prevent interference when the enclosure is driven to its maximum elevation of 40 degrees.

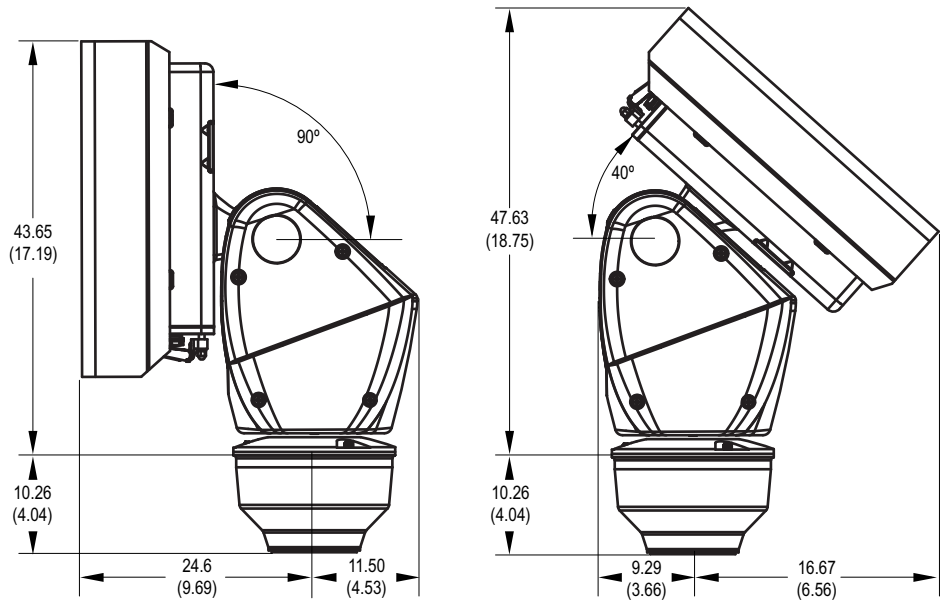


Figure 1. Clearance for Overhead Obstruction

## ILLUMINATOR PROTECTIVE FILM

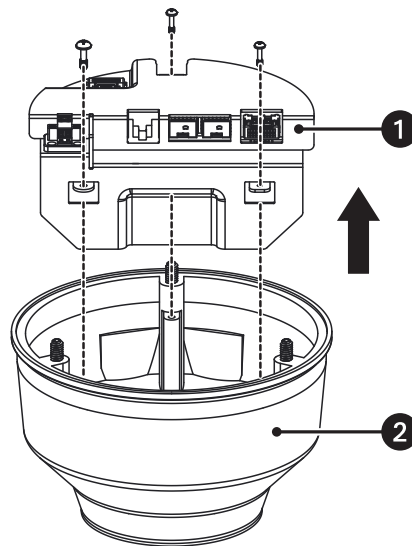
Once the Esprit Enhanced System installation is complete, remove the black illuminator protective film coverings. (These film covering are in place to protect the eyes of technicians during pre-installation configuration.)



Figure 2. Protective Film Covering an White Illuminator (left), Protective Film Covering an IR Illuminator (right)

## INSTALLING THE 24 VAC/48 DC/HPOE POWER MODULE

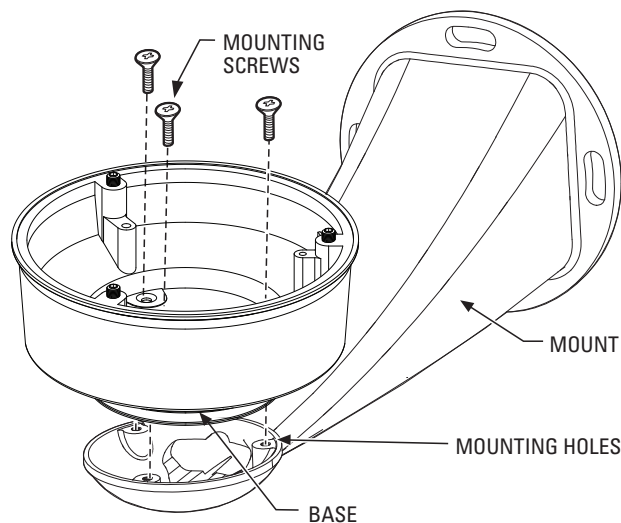
1. Install the Esprit mount; refer to the installation manual supplied with the mount for instructions.
2. Remove the power module assembly from the base of the device by loosening the three Phillips screws and lifting the module.



**Figure 3.** Removing the 24 VAC /48 DC/HPoE Power Module Assembly

- 1 Power Module Assembly
- 2 Base

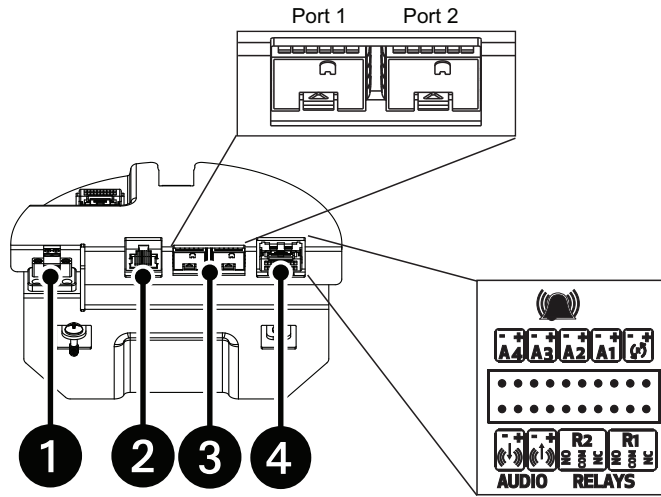
3. Attach the base of the device to an Esprit mount:
  - a. Refer to the Esprit Enhanced Mounts Installation manual to complete the installation.
  - b. Align the mounting holes on the base with the holes on the mount.
  - c. Attach the base of the device to the mount using the three flathead screws supplied with EPP2 and EWM mounts.



**Figure 4.** Attaching the Base to a Mount

4. Route the wires and network cable through the center of the Esprit mount.
5. Connect power using the supplied 2-pin screw connector using 16-20 AWG wire gauge. Connect the Cat5e cable to the RJ-45 connector and/or connect the SFP module(s). Connect AUX (optional). Refer to *Connecting AUX (optional)* on page 10.

**NOTE:** No grounding lug or screw is provided.

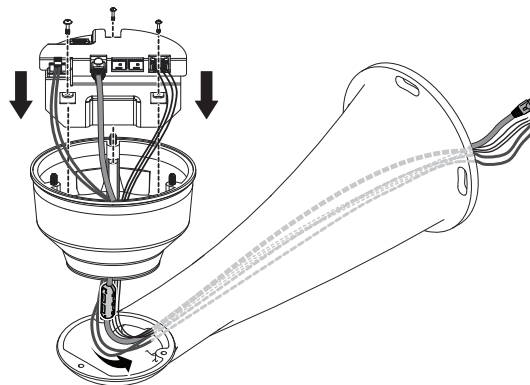


**Figure 5. Wiring Connections: 24 VAC**

- 1 Connects 24 VAC or 48 DC power to the system
- 2 Connects HPoE power to the system and connects the system to IP network
- 3 Connects 1 or 2 SFP modules (SFP Port 1 will auto-detect either 100 Mbps and 1 Gbps speeds. SFP Port 2 follows the speed of Port 1 and requires a module in Port 1. Ensure the same speed transceivers are being used if both ports are utilized.)
- 4 Connects up to 2 relays, 4 alarms, audio, and reset using 20-26 AWG wire

Power Wire Description	
Label	Function
+	+24 VAC or +48 VDC
-	-24 VAC, -48VDC, or DC GND

6. Attach the included ferrite to the network cable as close as possible to the RJ-45 connector to reduce radio frequency electrical interference on the network cable. The cable should have one turn/loop around the ferrite core.
7. Reinstall the power module assembly into the base. The power module assembly can be positioned in the mount base in only one orientation.



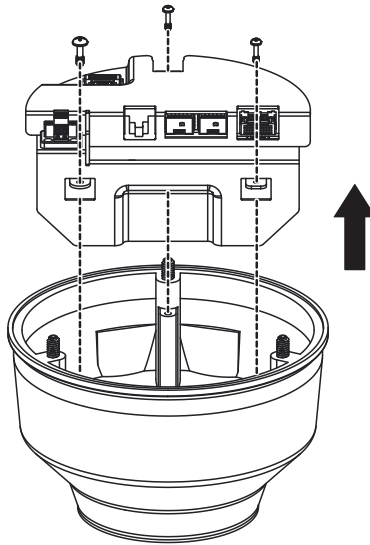
**Figure 6. Reinstalling the Power Module**

8. Turn on the power. If the light turns on, turn off the power, and proceed with installation.

## INSTALLING THE 100-240 VAC POWER MODULE

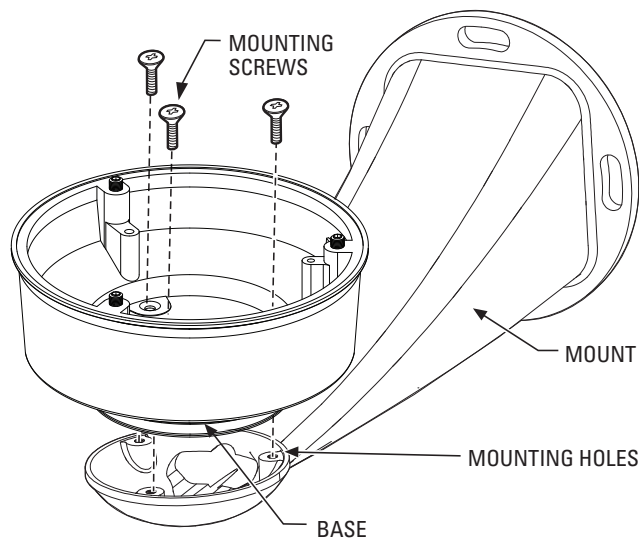
### NOTES:

- The AC Mains unit shall be connected to a two pole circuit breaker rated maximum 15A or 20A.
  - This product requires a surge protector device (SPD) or surge arrestor as part of the installation to address transient overvoltages exceeding Overvoltage Category II, 2500 Vpk.
  - High voltage wires must be covered by 0.4 mm thick UL recognized tubing.
  - Ethernet and AUX cables must be covered by 0.4 mm thick UL recognized tubing.
1. Make sure your power is turned off while connecting the power module.
  2. Remove the power module from the base of the device by loosening the three Phillips screws and lifting the module.



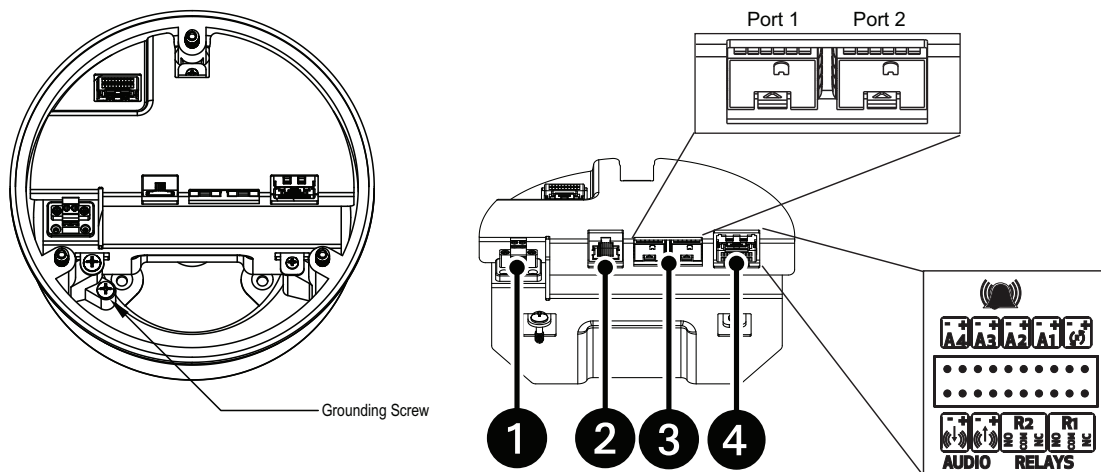
**Figure 7. Removing the Power Module**

3. Attach the base of the device to an Esprit mount (EWM or EPP2) using the three flathead screws supplied with the EPP2 and EWM mounts (Refer to the Esprit Enhanced Mounts Installation manual for additional steps.).



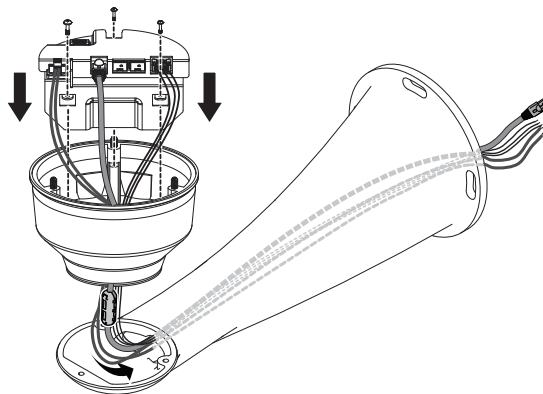
**Figure 8. Attaching the Base to a Mount**






**Figure 9. Grounding Screw (left) and Wiring Connections: 100 to 240 VAC (right)**

- 1 Connects 100 to 240 VAC power to the system
  - 2 Connects the system to IP network
  - 3 Connects 1 or 2 SFP modules (SFP Port 1 will auto-detect either 100 Mbps and 1 Gbps speeds. SFP Port 2 follows the speed of Port 1 and requires a module in Port 1. Ensure the same speed transceivers are being used if both ports are utilized.)
  - 4 Connects up to 2 relays, 4 alarms, audio, and reset using 16-20 AWG wire
4. Route the wires and cables through the center of the Esprit mount. Reinstall the power module into the base. The power module can be positioned in the mount base in only one orientation.



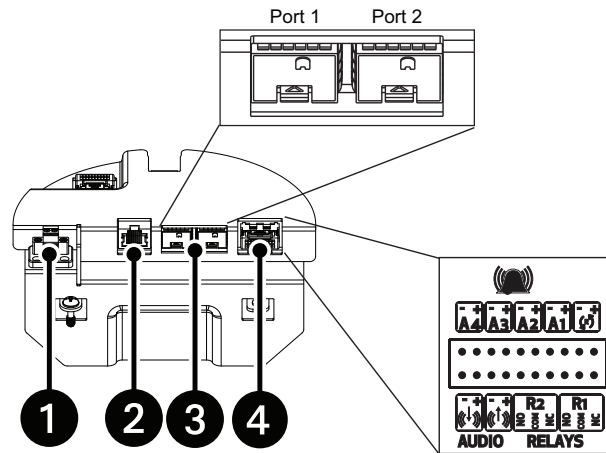
**Figure 10. Reinstalling the Power Module**

5. Connect wires and cables.
  - a. Connect to power. Use the supplied 2-pin screw connector to connect the AC line and neutral using 16 AWG wire. Use the pre-installed grounding lug and screw to connect Ground to the unit using 12-16 AWG wire.

Power Wire Description	
Label	Function
<b>L</b>	Line
<b>N</b>	Neutral
	Earth Ground

- b. Connect the Cat5e cable to the RJ-45 connector and/or connect SFP module(s). Attach the included ferrite to the network cable as close as possible to the RJ-45 connector to reduce radio frequency electrical interference on the network cable. The cable should have one turn/loop around the ferrite core.
  - c. Connect AUX (optional). Refer to Connecting to Aux (below).
6. Install mount; refer to the installation manual supplied with the mount for instructions.
7. Turn on the power. If the light turns on, turn off the power, and proceed with installation.

## CONNECTING AUX (OPTIONAL)



**Figure 11. Wiring Connections: 100 to 240 VAC**

- 1 Connects 100 to 240 VAC power to the system
- 2 Connects the system to IP network
- 3 Connects 1 or 2 SFP modules (SFP Port 1 will auto-detect either 100 Mbps and 1 Gbps speeds. SFP Port 2 follows the speed of Port 1 and requires a module in Port 1. Ensure the same speed transceivers are being used if both ports are utilized.)
- 4 Connects up to 2 relays, 4 alarms, audio, and reset using 20-26 AWG wire

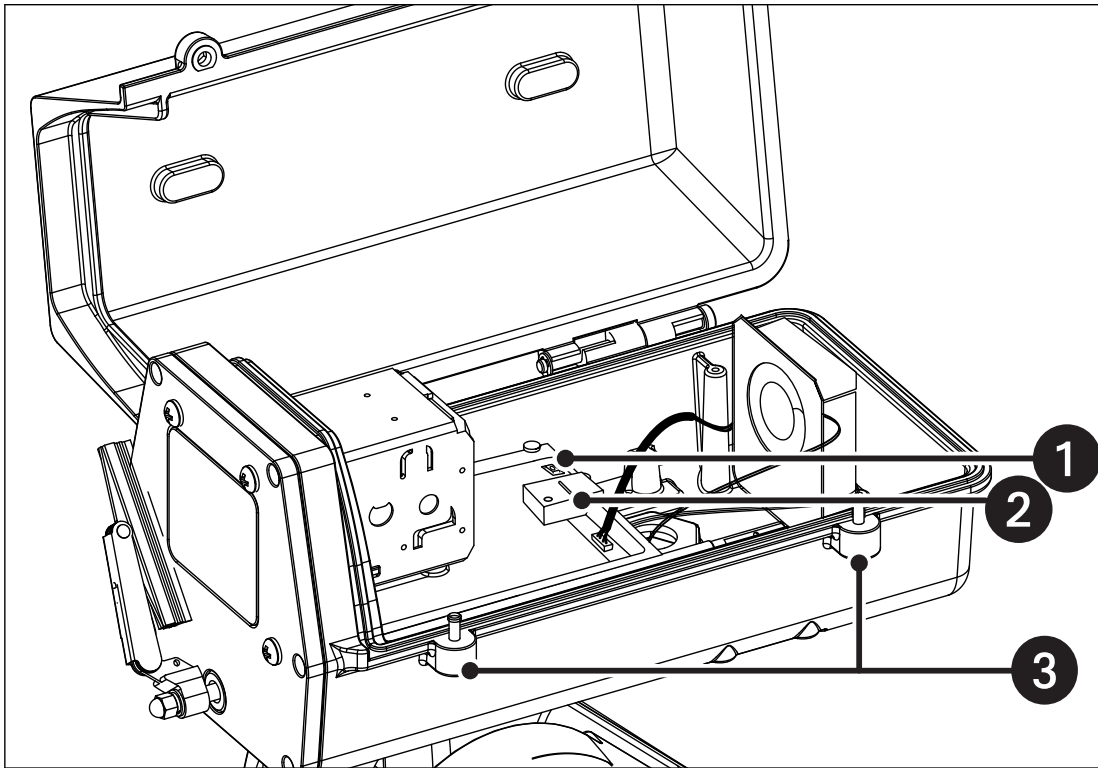
Relay, Alarm, Audio, and Reset Connections		
	Designation	Function
Relays	R2	Relay 2 N.C.
		Relay 2 COM
		Relay 2 N.O.
	R1	Relay 1 N.C.
		Relay 1 COM
		Relay 1 N.O.
	Reset	
Alarms 	A1	Alarm 1
	A2	Alarm 2
	A3	Alarm 3
	A4	Alarm 4
Audio		Audio In
		Audio Out

*Note: All relays are specified for 32 VDC, 0 to 20mA (signal only).*

## INSTALLING AND REMOVING AN SD CARD

**NOTE:** It is recommended to power down the unit before installing an SD card, but this is not necessary. You should use an unformatted SD card for best results.

1. Unscrew the two screws on the camera enclosure (See #3 in Figure 11) using a 5/32-inch hex bit (not supplied) to open the lid.
2. Insert/remove the SD card into/from the connector located behind the camera (See #2 in Figure 11) (**NOTE:** Orientation of the SD card as identified by the label on the panel.).



**Figure 12.** SD Card Installation

- ① Reset button\* (Reboots the camera or restores the camera's factory default settings.)
- ② SD card slot
- ③ Lid screws

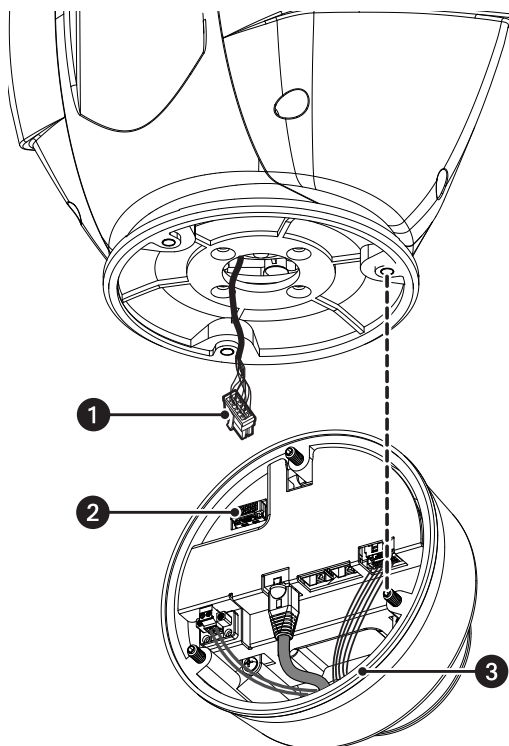
\*When the Esprit unit is reset, it will go through a calibration causing the unit to move.

3. Close the lid and torque the screws to 3N·m.

## INSTALLING THE PAN AND TILT MODULE

1. Connect the male system connector, located on the bottom of the pan/tilt, to the female system connector, located on the transformer and power module.
2. Align the screw hole of the pan/tilt with the stud of the power module.
3. Attach the pan/tilt to the base with three 1/4-20 nuts and washers (supplied).

**NOTICE:** When installing the pan/tilt, avoid damaging the base gasket and male system connector cable during installation. Damaging the gasket may create a water ingress point, which could cause the gasket to leak.



**Figure 1. Installing the Pan/Tilt Module**

- 1 Male System Connector
- 2 Female System Connector
- 3 Base Gasket

### REVISION HISTORY

Manual #	Date	Comments
C1354M-A	11/17	Original version.
C1354M-B	5/18	Added Caution graphic.
C1354M-C	10/18	Added new model numbers.
C1354M-D	1/19	Added references to Esprit Enhanced Mounts Installation manual.

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