



## CHAPTER 2

# Camera Installation

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This chapter provides information and instructions for installing the Cisco Video Surveillance 6400 IP Camera, and includes the following topics:

- [Installation Guidelines, page 2-1](#)
- [Warnings Before Installation, page 2-2](#)
- [Installing the IP Camera, page 2-3](#)
- [Connecting External Power and I/O Cables, page 2-5](#)
- [Connecting a Waterproof Ethernet Cable, page 2-8](#)
- [Installing the Sun Shield, page 2-9](#)

## Installation Guidelines

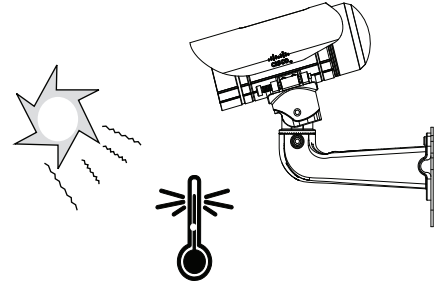
This section describes how to install the IP camera. Before installing, review these guidelines:

- The IP camera requires a network cable and a connection to a standard 10/100BaseT router or switch. To power the IP camera with Power over Ethernet (PoE), a switch must be 802.3af compliant.
- If you are using the IP camera on a network connection that does not provide PoE, you must use a Cisco 12 VDC power adapter (Cisco part number CIVS-PWRPAC-12V) or a third-party 24 VAC power adapter.
- If you are using an input device, output device, or pan/tilt control device, you must configure additional settings after installing and performing the initial set up of the IP camera before the external device can fully operate. For detailed information about these settings, see the *Cisco Video Surveillance 6000 Series IP Camera Configuration Guide*.
- If you do not connect an external device (input, output, or pan/tilt control) when you perform the following installation procedure, you can install any of these devices later.

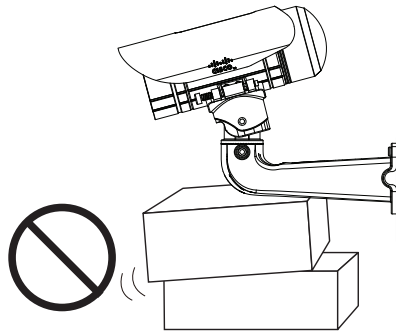
## Warnings Before Installation

- Power off the Network Camera as soon as smoke or unusual odors are detected.
- Refer to your user's manual for the operating temperature.

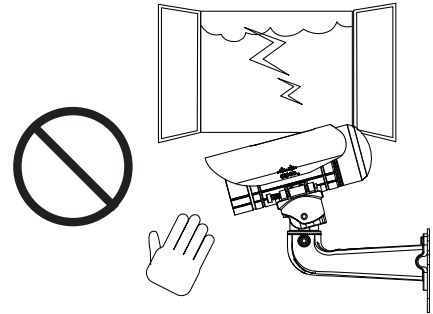
Contact your distributor in the event of this happening.



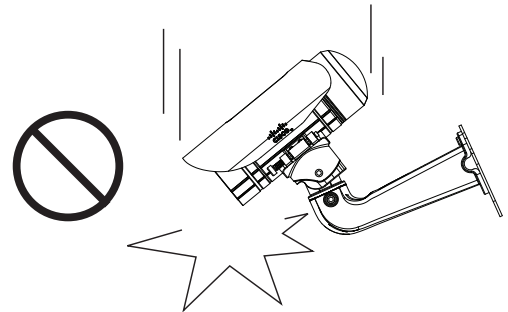
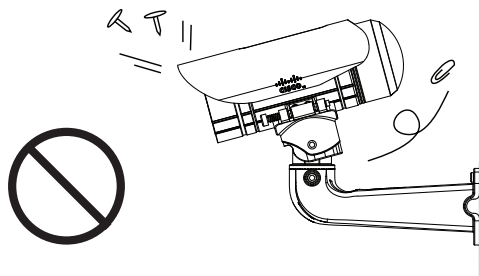
- Do not place the Network Camera on unsteady surfaces.



- Do not touch the Network Camera during a lightning storm.



- Do not insert sharp or tiny objects into the Network Camera.
- Do not drop the Network Camera.



**Warning**

**Installation of the equipment must comply with local and national electrical codes.** Statement 1074



**Warning**

**The power supply must be placed indoors.** Statement 331



**Note**

If you use the IP camera outdoors, place the camera and the power supply in a suitable NEMA enclosure.

**Warning**

**This product must be connected to a power-over-ethernet (PoE) IEEE 802.3af compliant power source or an IEC60950 compliant limited power source.** Statement 353

**Caution**

Inline power circuits provide current through the communication cable. Use the Cisco provided cable or a minimum 24AWG communication cable.

**Note**

The power adapter that you use with the IP camera must provide power that is within +/-10% of the required power.

**Note**

The equipment is to be connected to a Listed class 2, limited power source.

## Installing the IP Camera

To install the Cisco Video Surveillance 6400 IP Camera, perform the following steps.

**Note**

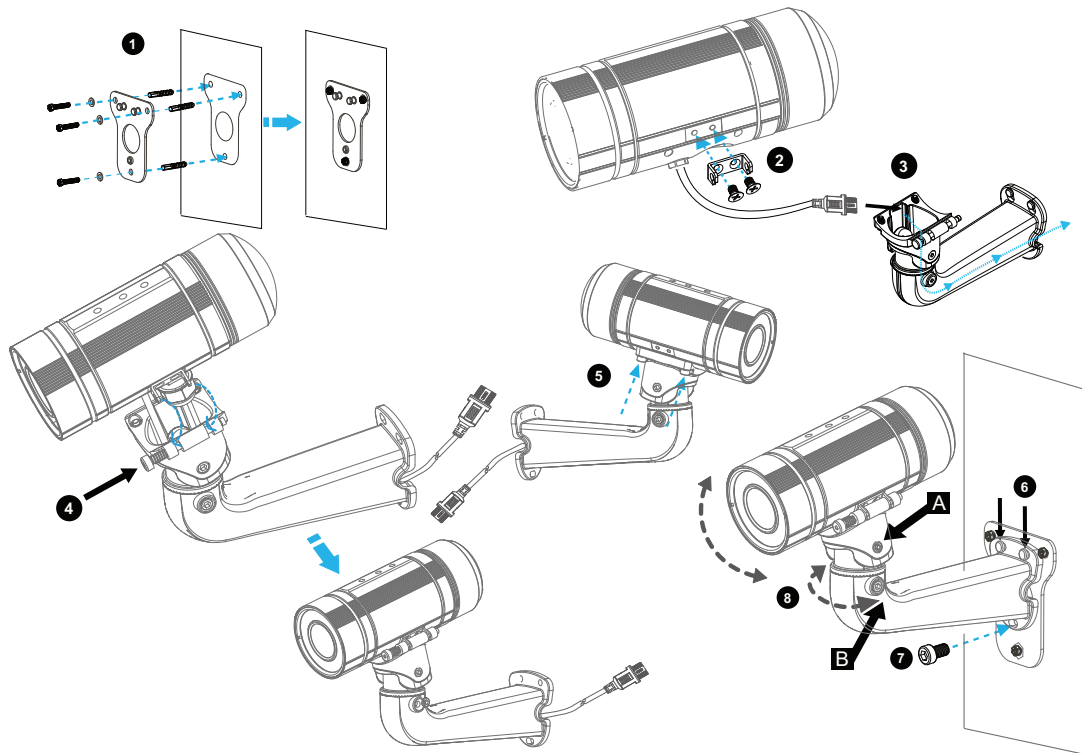
Use [Figure 2-1](#) as a visual reference for the following procedure.

### Procedure

- Step 1** Attach the alignment sticker to the wall. Drill three mounting holes and one larger cabling hole into the wall, hammer the three included wall anchors into the holes, and secure the mounting plate with included screws.
- Step 2** Attach the camera anchor bracket to the side of the IP camera with the two included screws.
- Step 3** (Optional) If you want to use an external power source for the 6400 IP camera, or use external devices such as sensors and alarms, complete the steps in the [“Connecting External Power and I/O Cables” section on page 2-5](#) before continuing to Step 4.
- Step 4** Feed the cable with an RJ 45 jack through the front opening of the wall mount bracket.
- Step 5** Push the spring mortise and hook the camera anchor bracket onto the groove of the wall mount bracket.
- Step 6** Secure the two screws on the other side of the wall mount bracket.
- Step 7** Hang the wall mount bracket on the mounting plate.
- Step 8** Secure the wall mount bracket to the mounting plate with the included screw.
- Step 9** Connect the RJ45 jack to your network using an Ethernet cable, or to ensure a waterproof network connection, complete the steps in the [“Connecting a Waterproof Ethernet Cable” section on page 2-8](#).
- Step 10** Adjust the angle of the wall mount bracket to achieve desired IP camera field of view.
- Step 11** (Optional) Install the sun shield. For more information, see the [“Installing the Sun Shield” section on page 2-9](#).

- Step 12** (Optional) If the camera is being install in an area of high humidity, remove the back cover from the camera, place the included silica gel packet in the camera, and then replace the back cover onto the camera.

**Figure 2-1** IP Camera Installation Steps



#### What to do next

After you install the IP camera, follow the instructions in [Chapter 3, “Performing the Initial Setup of the IP Camera”](#) to access and configure the IP camera.

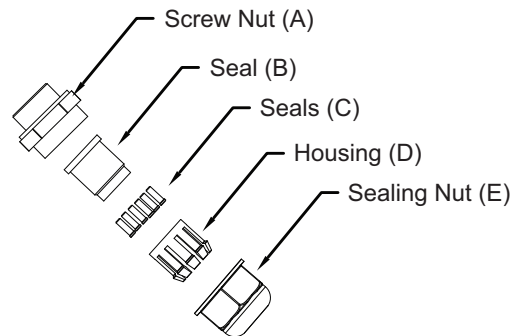
# Connecting External Power and I/O Cables

The 6400 IP camera can be powered using Power over Ethernet (PoE), or by using an external power source. If an external power source is used, a power cable must be connected to the General Purpose I/O (GPIO) terminal block on the IP camera. Additionally, external devices that trigger alarms or respond to alarms can be connected to the GPIO terminal block using I/O cables. To avoid moisture damage to the IP camera, the optional external power cable and I/O cables, which are user-supplied, must pass through a waterproof connector.

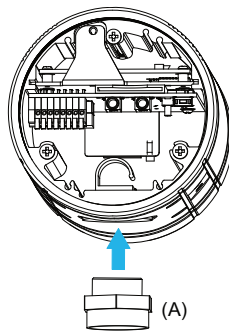
To connect an external power cable or I/O cables for external devices, perform the following steps:

## Procedure

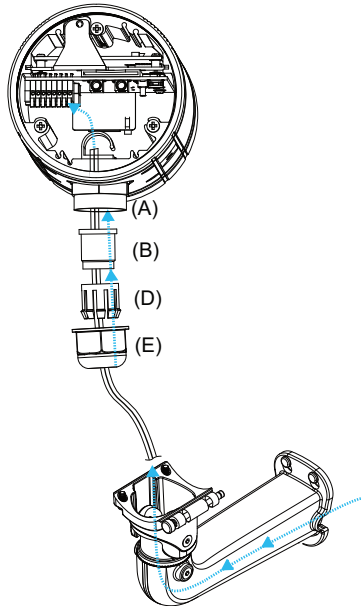
- Step 1** Disassemble the components of the waterproof connector into its individual components as shown below.



- Step 2** Remove the back cover from the IP camera.
- Step 3** Remove the rubber stopper from the bottom of the IP Camera and tightly secure the screw nut (A).



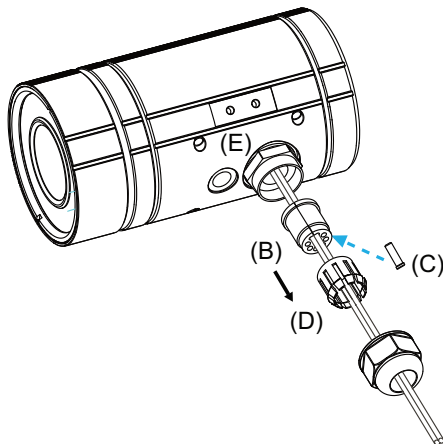
- Step 4** Feed the external power cable and I/O cables through the wall mount bracket and the waterproof connector components (E → D → B → A). Be sure to feed enough cable length through the waterproof connector to connect the cables to the GPIO terminal block.

**Note**

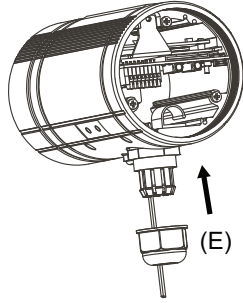
There are seven holes on the seal (B), and the widest hole with a crack on the side is specific for the power cable.

The recommended I/O cable gauge is 2.0 ~ 2.8 mm.

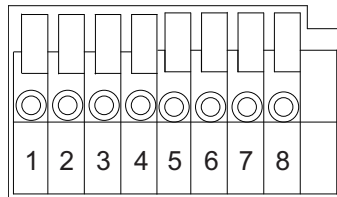
- Step 5** Push the seal (B) into the housing (D), and to avoid moisture, insert the seals (C) into the empty holes on the seal (B).



**Step 6** Secure the sealing nut (E) tightly.



**Step 7** Connect the external power and I/O cables to the GPIO terminal block. The pin locations and descriptions are as follows:



Pin	Description
1	12 VDC-
2	12 VDC+
3	24 VAC
4	24 VAC
5	DI-
6	DI+
7	DO-
8	DO+

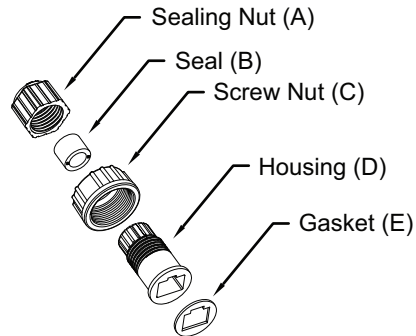
**Step 8** Replace the back cover back onto the camera.

# Connecting a Waterproof Ethernet Cable

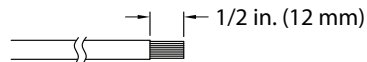
To connect the 6400 IP camera to an Ethernet cable with a waterproof connection, perform the following steps.

## Procedure

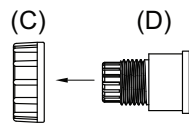
- Step 1** Disassemble the components of the waterproof connector into its individual components as shown below.



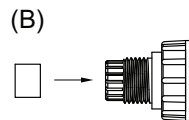
- Step 2** Strip about 1/2 inch (12 mm) of the sheath off the end of an Ethernet cable.



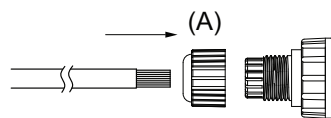
- Step 3** Insert the housing (D) into the screw nut (C).



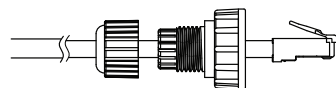
- Step 4** Insert the seal (B) into the housing (D).



- Step 5** Insert the stripped Ethernet cable through the sealing nut (A) and the housing (D).

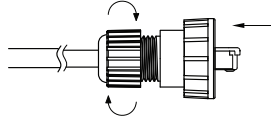


- Step 6** Clamp the cable with an RJ45 plug.

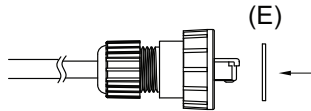




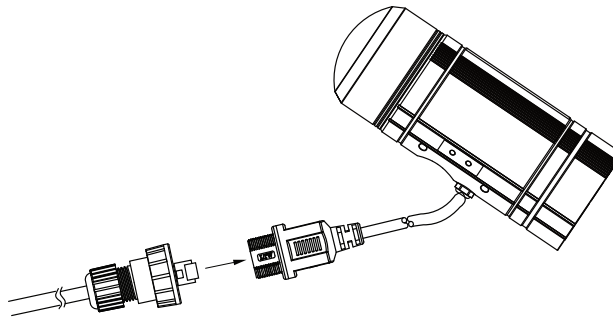
**Step 7** Push the RJ45 plug into the housing (D) and tighten the sealing nut.



**Step 8** Attach the gasket to the front surface of the housing (D).



**Step 9** Connect the Ethernet cable to the RJ45 jack and tighten the waterproof connector.

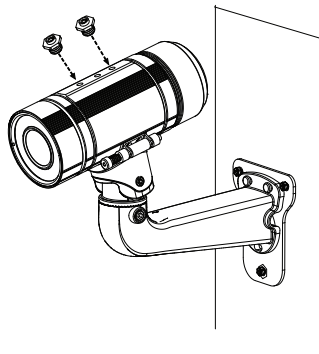


## Installing the Sun Shield

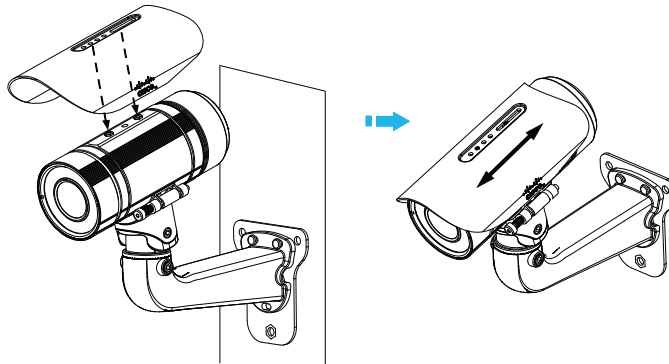
To install the sun shield, perform the following steps.

### Procedure

**Step 1** Attach the two included standoff screws to the top of the 6400 IP camera.



- Step 2** Place the sun shield on top of the two standoff screws and slide it backward or forward to the desired position. Ensure that the holes in the top of the standoff screws are visible through the holes in the sun shield.



- Step 3** Use the two included screws to secure the sun shield to the two standoff screws.

