



Outdoor Hemispheric Mounting on a Straight Wall using the Tilted Mount

Installation Guide

For Models:

KCM-7911

2013/12/03

Table of Contents

- Cabling Options 3**
- Installation Procedures 3**
 - Step 1: Prepare the Tilted Mount..... 3**
 - Step 2: Prepare the Camera 4**
 - Step 3: Prepare for Waterproof Installation 5**
 - Step 4: Connect the Cable(s)..... 6**
 - Waterproof Solution with Naked Cable 6
 - Waterproof Solution with Conduit..... 9
 - Step 5: Install the Camera to the Tilted Mount 14**
 - Step 6: Close the Cover 14**
 - Step 7: Access the Camera Live View..... 15**
- Appendices 16**
 - Connecting a Power Adaptor (Optional)..... 16**
 - Connecting DI/DO Devices (Optional)..... 18**
 - Connecting Audio In / Out Devices (Optional) 21**
- Safety Information..... 22**

Cabling Options

It is highly recommended to mount the camera with a 10° tilt so there would be maximum coverage of the floor in the field of view. The camera can be mounted on a straight wall using the Tilted Mount accessory. There are two cabling options:

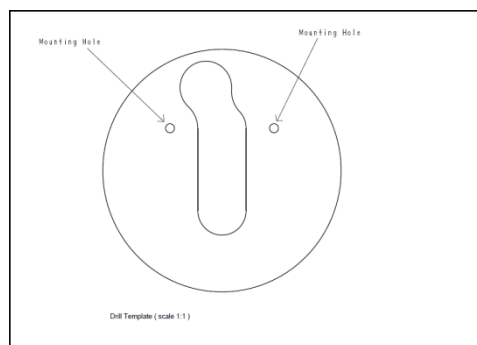
- Cable goes through the wall
- Cable goes along the wall

Installation Procedures

This section covers the step-by-step procedures in mounting the camera on a straight wall using the Tilted Mount accessory and the cables go through the wall.

Step 1: Prepare the Tilted Mount

1. Using the drill template (included in the Tilted Mount package), mark the location of the two (2) screw holes on the wall. If necessary, drill the holes and insert the plastic plugs.



IMPORTANT! Note that the tilted mount must be installed with the pre-cut cable hole facing up.

2. Determine how the cables will be routed: ***pass through a hole on the wall*** or ***along the wall***.
 - ***If the cables will pass through the wall***, drill the cable hole on the wall.
 - ***If the cables will be routed along the wall***, skip this step.

3. Install the tilted mount using the two (2) supplied screws.



Step 2: Prepare the Camera

1. **If the cables will pass through the wall**, remove the cap covering the bottom hole of the camera, and attach the cap to the side hole to close it. The network cable will pass the bottom hole to the camera. **If the cables will be routed along the wall**, skip this step.



2. Loosen the three (3) screws using the supplied hex wrench.





3. Lift to open the cover.



NOTE: Do not abruptly lift the cover; it is attached to the camera body with a spring wire.

Step 3: Prepare for Waterproof Installation

The camera comes with two (2) glands used for waterproof installation: Cable gland and Conduit Gland. Determine the type of waterproof solution that is applicable to your installation requirements and prepare the necessary accessories or purchase extra materials.

Cable Gland	Conduit Gland
 <p>For use with an EXTERIOR-GRADE Ethernet cable. Exterior-grade Ethernet cables are already waterproof.</p>	 <p>For use with 3/8" flexible conduit. Recommended when an exterior-grade Ethernet cable is not available or when other input/output devices or an external power adaptor will be connected to the camera.</p>

Step 4: Connect the Cable(s)

There are two ways to do the waterproof cabling installation:

- **Waterproof with Naked Cable:** This installation uses the supplied cable gland and an **exterior-grade** Ethernet cable (not supplied). Exterior-grade cables are already waterproof and thus, do not require a conduit. To use this solution, see [Waterproof Solution with Naked Cable](#) below.
- **Waterproof with Conduit:** This installation uses the supplied conduit gland and a **3/8"** flexible conduit (not supplied). This is the recommended solution if other input / output devices or an external power adaptor will be connected to the camera. To use this solution, see [Waterproof Solution with Conduit](#) on page 9.

Waterproof Solution with Naked Cable

This section describes the procedures to waterproof the cabling connections using an exterior-grade Ethernet cable.

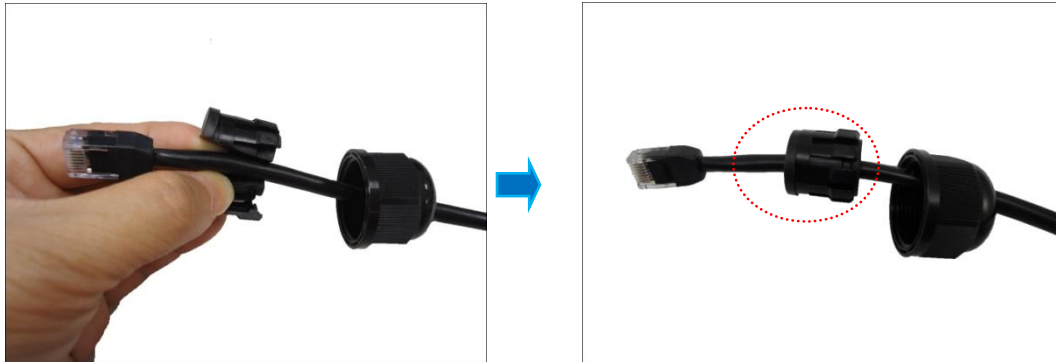
1. Disassemble the cable gland as shown below:



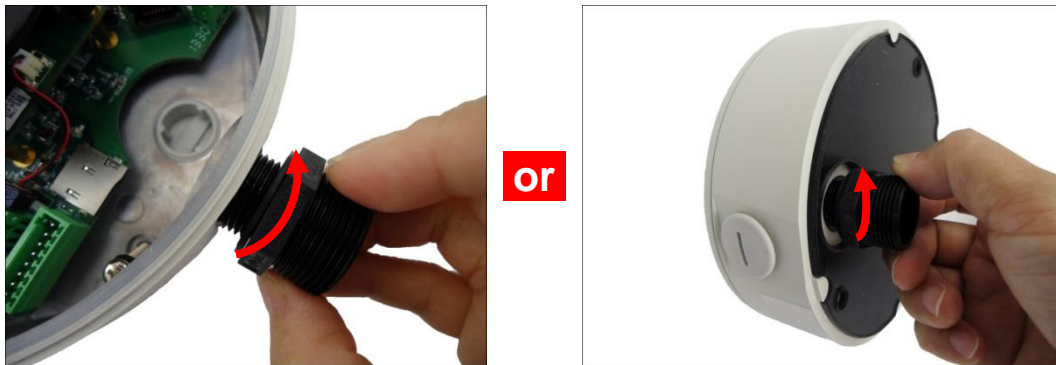
2. Insert the clamping nut into the Ethernet cable.



3. Insert the sealing insert with claw.



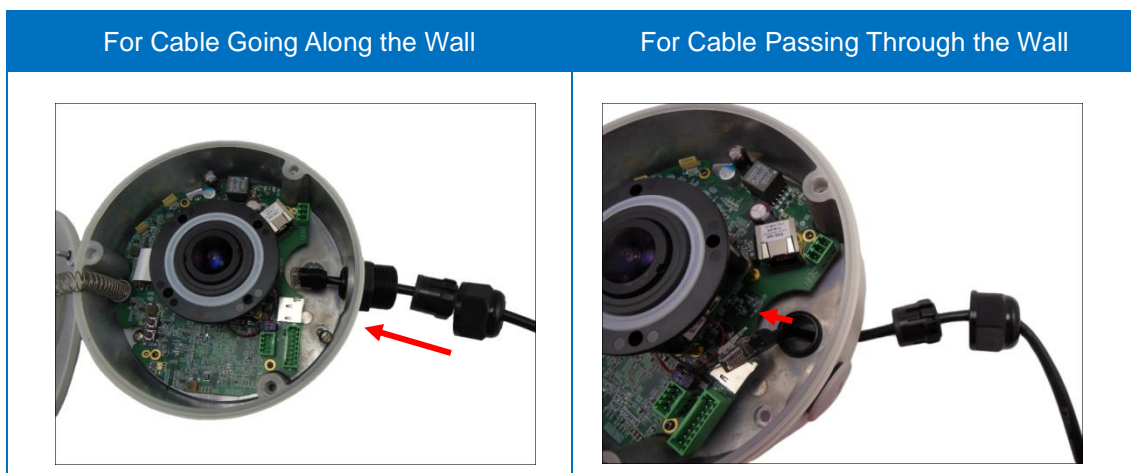
4. If the cable will be routed along the wall, attach the cable gland body to the side hole of the camera. If the cable will pass through a hole on the wall, attach the cable gland body to the bottom hole of the camera.

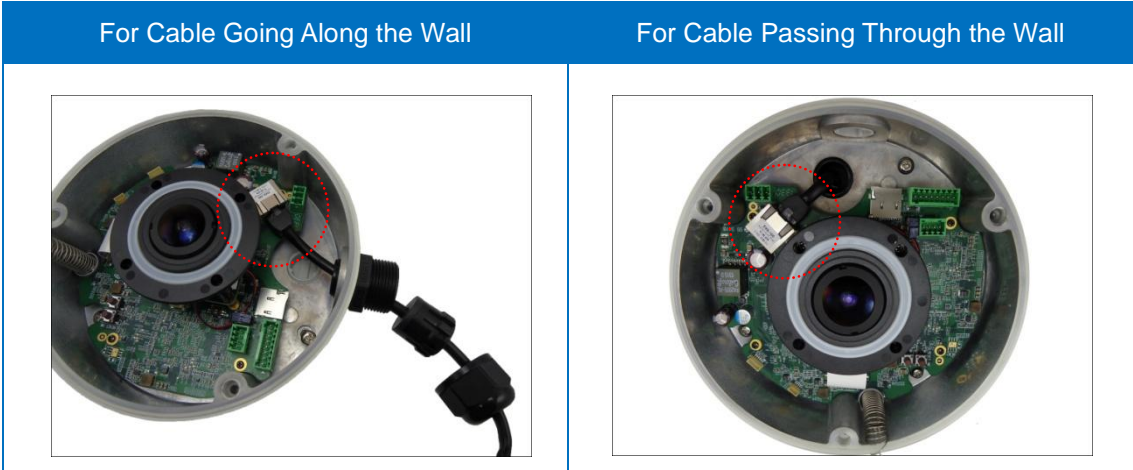


Attach to Camera Side Hole

Attach to Camera Bottom Hole

5. Insert the Ethernet cable through the cable gland body and connect it to the Ethernet port of the camera.





6. Insert the sealing insert with claw into the cable gland body and then attach the clamping nut to complete the cable solution.

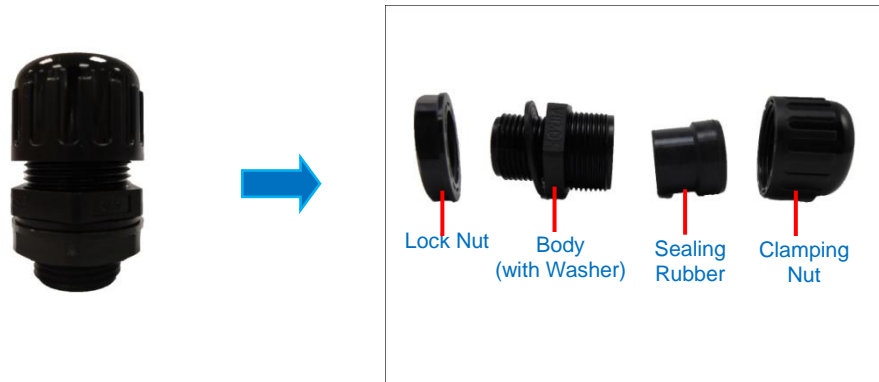


NOTE: Make sure the clamping nut is tightly attached to the cable gland body.

Waterproof Solution with Conduit

This section describes the procedures to waterproof the cabling connections using a flexible conduit with 3/8" trade size (not supplied). This is the recommended solution when connecting an external power adaptor, audio in/out, or digital input/output (DI/DO) devices to the camera.

1. Disassemble the cable gland as shown below:



2. Pull the Ethernet cable and other cables (if any) through the flex conduit.

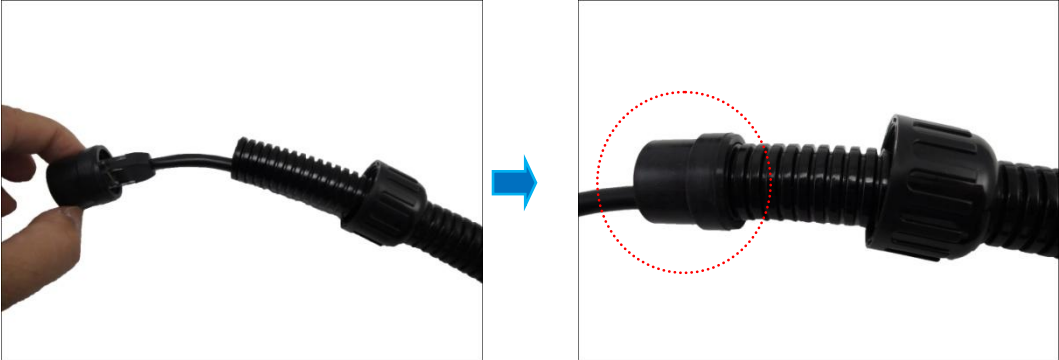


NOTE: To connect an external power adaptor, audio in/out, or digital input/output (DI/DO) devices, insert the cables without connectors through the flex conduit together with the Ethernet cable at this point.

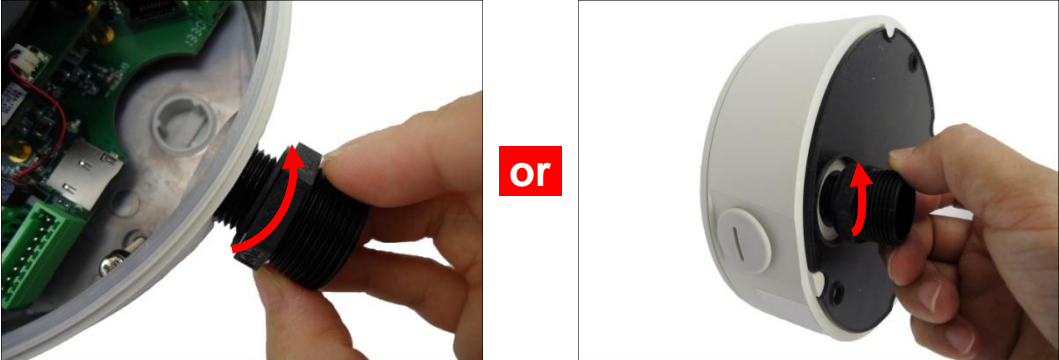
3. Insert the clamping nut through the flex conduit.



4. Insert the sealing rubber and attach it at the end of the flex conduit.



5. If the cable will be routed along the wall, attach the conduit gland body (with washer) to the side hole of the camera. If the cable will pass through a hole on the wall, attach the conduit gland body (with washer) to the bottom hole of the camera.

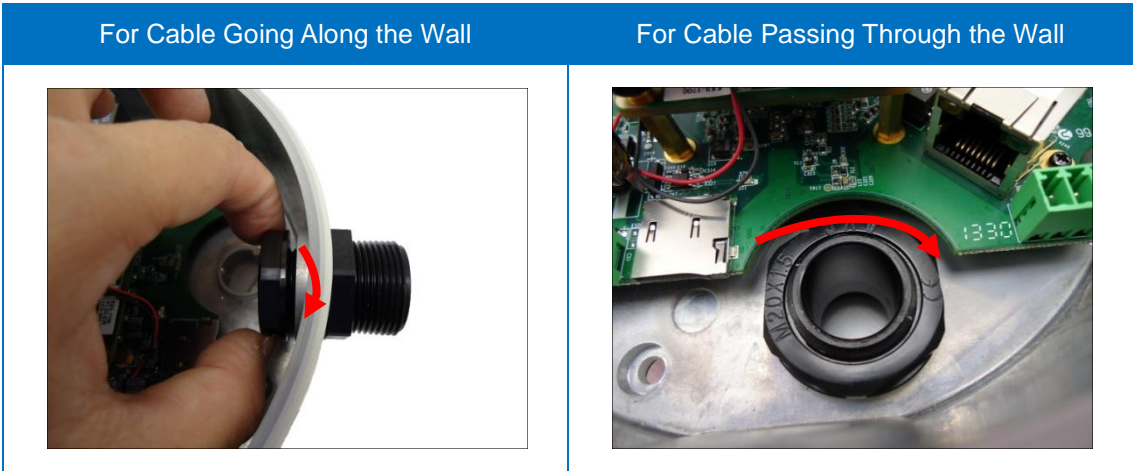


Attach to Camera Side Hole

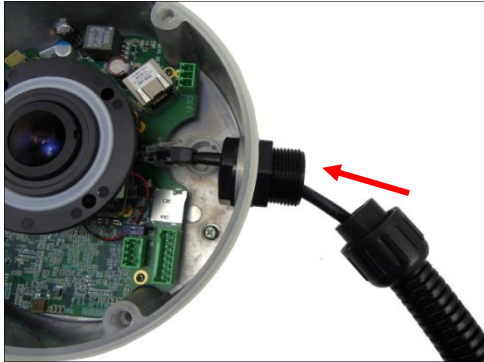
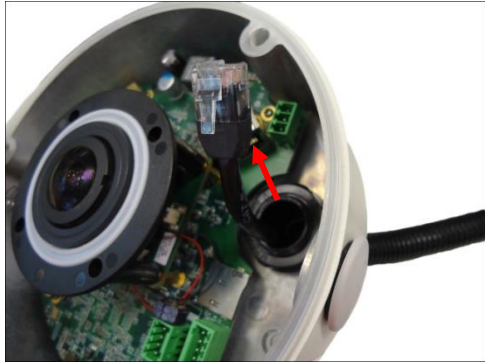

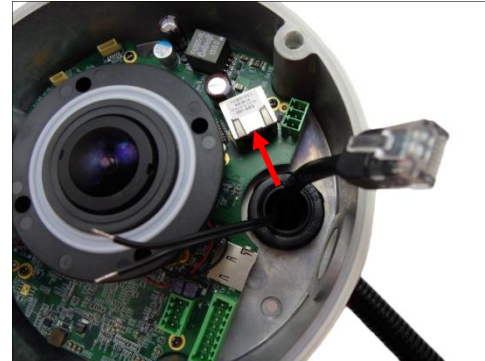
Attach to Camera Bottom Hole

NOTE: Make sure the washer is attached to the conduit gland body.


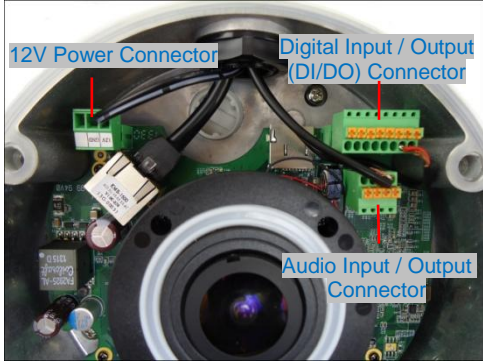
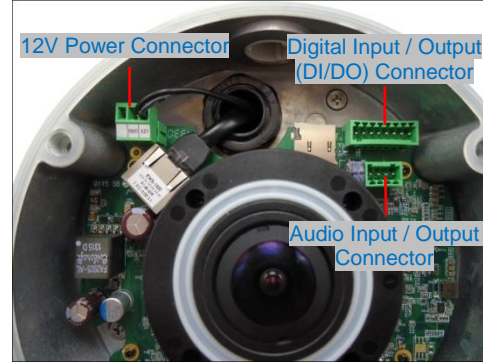
6. Attach the lock nut to secure the conduit gland body to the camera.



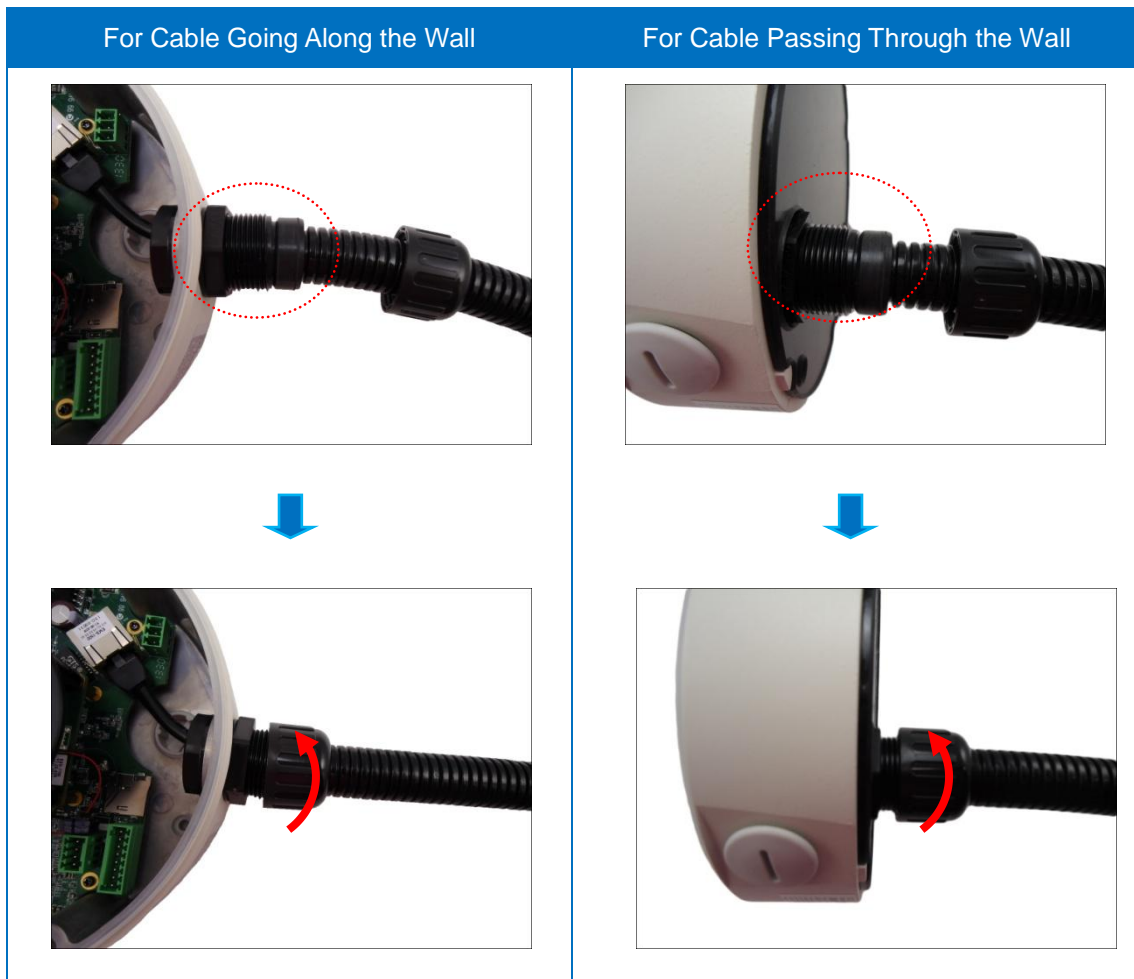
7. Insert the Ethernet cable and other cables (if any) through the conduit gland body.

For Cable Going Along the Wall	For Cable Passing Through the Wall
 <p data-bbox="429 768 625 795">Ethernet Cable Only</p>	 <p data-bbox="987 768 1184 795">Ethernet Cable Only</p>
<p data-bbox="478 840 555 891">or</p>	<p data-bbox="1034 840 1110 891">or</p>
 <p data-bbox="319 1285 737 1312">Ethernet and External Power Adaptor Cable</p>	 <p data-bbox="887 1285 1305 1312">Ethernet and External Power Adaptor Cable</p>

- 8. Connect the Ethernet cable to the Ethernet port of the camera. If connecting other cables, such as an external power adaptor, audio in/out or DI/DO devices, connect the terminal blocks at this point and connect them to the corresponding connectors of the camera (see *Appendices* on page 16 for more information).

For Cable Going Along the Wall	For Cable Passing Through the Wall
	
or	or
	

9. Insert the sealing rubber into the conduit gland body and attach the clamping nut to complete the cable solution.



NOTE: Make sure the clamping nut is tightly attached to the conduit gland body.

Step 5: Install the Camera to the Tilted Mount

1. If necessary, insert a memory card into the card slot of the camera.
2. Attach the camera to the tilted mount using the three (3) screws supplied in the tilted mount package.



NOTE: Make sure the mounting screws have rubber rings. If the screws you received do not have rubber rings, please contact your local sales agents or our [Customer Help Desk \(CHD\)](#) for support.

Step 6: Close the Cover

Tighten the three (3) screws to secure the cover.



Final installation looks like the illustration below.



Cable Passes Through the Wall

or



Cables Goes Along the Wall

Step 7: Access the Camera Live View

For information on how to access the camera Live View, download the camera Hardware Manual from the website (<http://www.acti.com>).

Appendices

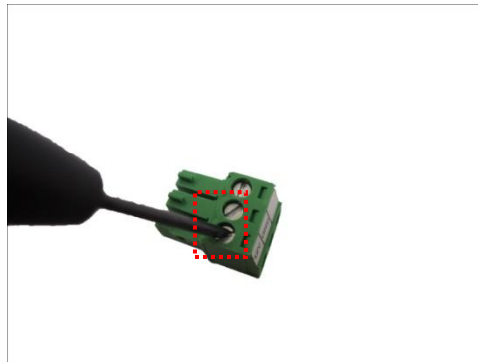
This section describes the procedures in preparing the external devices that you can connect to the camera. The camera supports DC12V power input, Digital Input and Output (DI/DO) and Audio Input and Output devices using the bundled terminal blocks. The use of these devices, however, is optional.

Connecting a Power Adaptor (Optional)

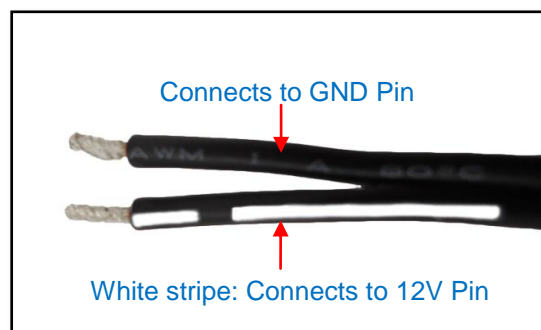
The camera consumes 9.6W power when powered by a Power over Ethernet (PoE) switch that is IEEE802.3af compliant. In case of using a non-PoE switch or your PoE switch has limited power supply, you can purchase a power adaptor and directly connect the camera to a power outlet. The power adaptor must be connected to the supplied terminal block before use.

To do this, follow the procedures below:

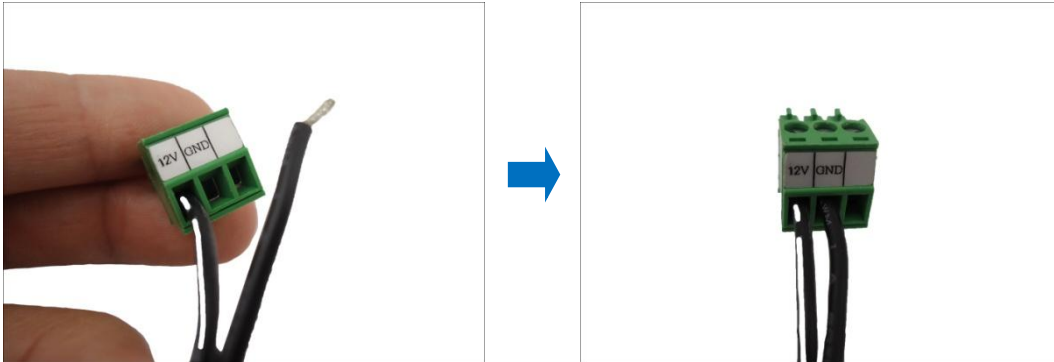
1. Loosen the screws of the **12V** and **GND** pins of the power terminal block.



2. Take note that a standard power adaptor cable has two (2) different wires:



3. Connect the wire with the white stripe to the **12V** pin and the other to the **GND** pin.



4. Tighten the screws of the **12V** pin and the **GND** pins to secure the wire connection.



5. Set the prepared power adaptor for connection later. Below is an example of a power adaptor with an attached terminal block.



NOTE: The power adaptor is not bundled in the package.

Connecting DI/DO Devices (Optional)

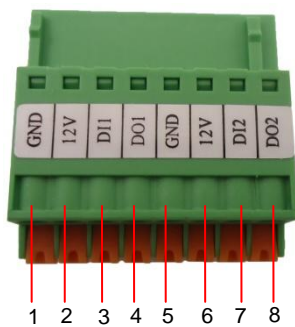
Depending on your surveillance needs, you may connect digital input or output devices to your camera to trigger events or notifications.

Digital Input (DI) devices can be used to notify the camera about an activity in the camera site. DI can be triggers of events. For example, you can connect a “panic button” to the camera; as such when the panic button is pressed, the alarm signal will be sent through the camera. Other common DI device applications are emergency button, smoke detector, passive infrared sensor, etc.

Digital Output (DO) devices are external devices that are activated by the camera upon an event inside the camera. For example, you can connect an “alarm horn” to the camera; as such when an event occurs inside the camera (e.g. detected intruder), the alarm horn will sound. Other common DO device applications are motion-triggered lights, electric fence, magnetic door locks, etc.

You can connect up to two DI and two DO devices to your camera.

Press and hold the orange tab as you insert the wire through the pin slot, then release the orange tab to secure the wire.



To connect input devices (DI), map the pins to one of the pin combinations below:

Device	Pin		Mapping Instructions
Digital Input 1 (DI1)	1	GND	Connect the wires of the first input device to GND (Pin 1) and DI1 (Pin 3).
	3	DI1	
Digital Input 2 (DI2)	5	GND	Connect the wires of the second input device to GND (Pin 5) and DI2 (Pin 7).
	7	DI2	

To connect output devices (DO), map the pins to one of the pin combinations below:

Device	Pin	Mapping Instructions
Digital Output 1 (DO1)	2	Connect the wires of the first output device to 12V (Pin 2) and DO1 (Pin 4).
	4	
Digital Output 2 (DO2)	6	Connect the wires of the second output device to 12V (Pin 6) and DO2 (Pin 8).
	8	

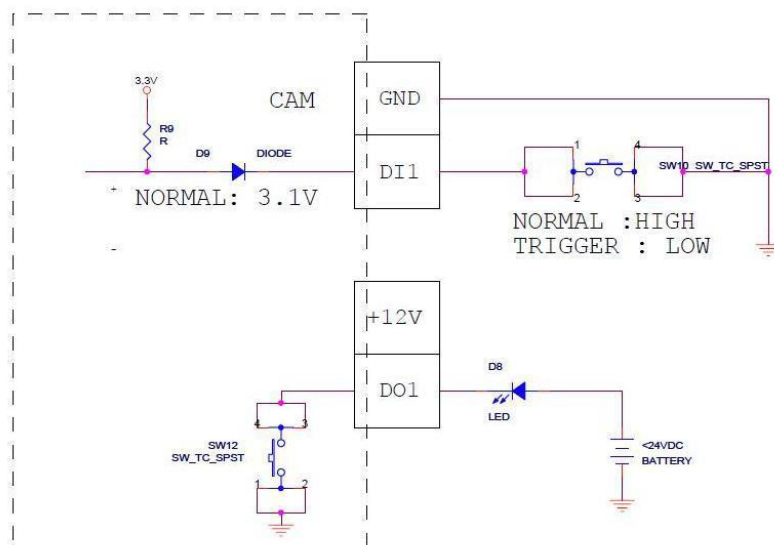
The table below shows the DI/DO connection specifications:

Device			
DI	Connection design		TTL - compatible logic levels
	Voltage	To trigger (low)	Logic level 0: 0V ~ 0.4V
		Normal (high)	Logic level 1: 3.1V ~ 30V
	Current		10mA ~ 100mA
DO	Connection design		Transistor (Open Collector)
	Voltage & Current		< 24V DC, < 100mA

Typical Connection

Based on these specifications, if the DI device has a voltage of 0V ~ 30V or the DO device has a voltage of < 24V (<100mA), then the camera can supply internal power to these devices and there is no need to connect the DI/DO device to an external power source.

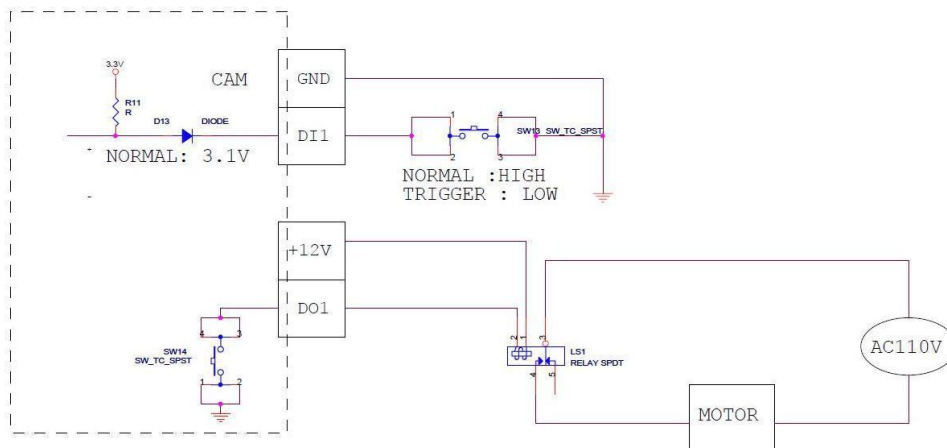
In this case, wire connection to Pins 1 to 4. Use the **GND** and **DI1** pins to connect a DI device and use the **12V** and **DO1** pins to connect a DO device. See wiring scheme below:



Consequently, to connect a second DI or DO device, wire the connection to Pins 5 to 8.

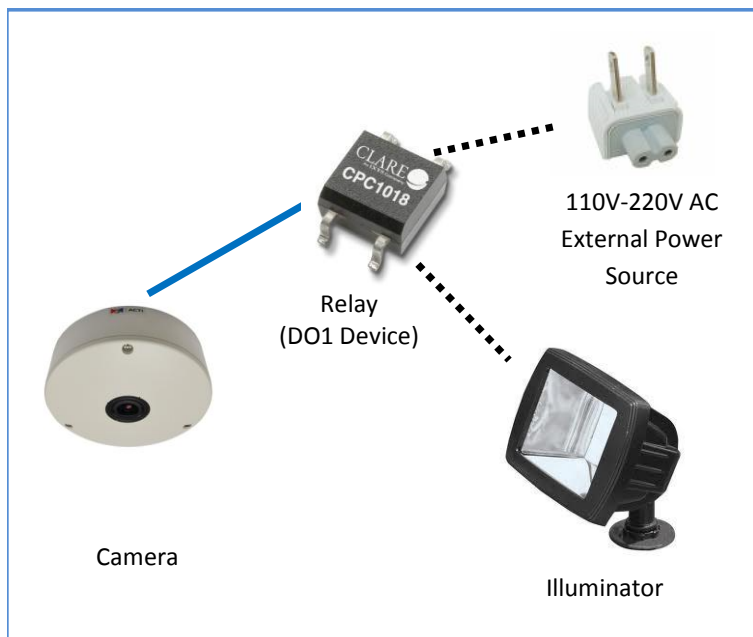
High Voltage DO Device Connection

Even though the camera provides 12V power, this may not be enough for some high voltage DO devices, such as a ceiling light or a motor that opens or closes a gate. In this case, there is a need to connect an external relay. See wiring scheme below:



Note that when choosing an appropriate relay, please refer to its specifications and make sure they match the above design. The triggering circuit voltage has to be around 12V DC and the switch-controlled circuit voltage has to match the external power supply (e.g. 110V AC or 220V AC).

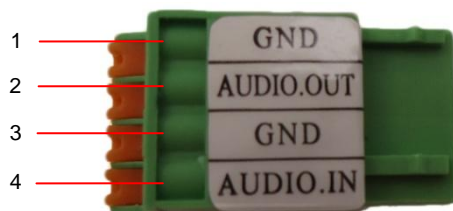
The illustration below is a graphic example of connecting a relay to a high voltage DO device.



NOTE: For more information on DI/DO connections, please refer to the Knowledge Base article [All about Digital Input and Digital Output](http://www.acti.com/kb/detail.asp?KB_ID=KB20091230001) downloadable from the link below (http://www.acti.com/kb/detail.asp?KB_ID=KB20091230001).

Connecting Audio In / Out Devices (Optional)

Depending on your surveillance needs, you may connect audio input or output device, such as an active microphone or speaker, to your camera. In this case, you need to connect the audio input/output device to the supplied audio terminal block.



To connect audio input / output devices, map the pins to one of the pin combinations below:

Device	Pin		Mapping Instructions
Audio Output	1	GND	Connect the wires of the audio output device to GND (Pin 1) and AUDIO.OUT (Pin 2).
	2	DI1	
Audio Input	3	GND	Connect the wires of the audio input device to GND (Pin 3) and AUDIO.IN (Pin 4).
	4	DI2	

Press and hold the orange tab as you insert the wire through the pin slot, then release the orange tab to secure the wire.

NOTE: For more information about AUDIO in connections, please refer to the Knowledge Base article [How to Use Audio-in of ACTi Cameras](http://www.acti.com/support/KnowledgeBase/outside/detail.asp?KB_ID=KB20100114003), downloadable from the link below (http://www.acti.com/support/KnowledgeBase/outside/detail.asp?KB_ID=KB20100114003).

Safety Information

Read these instructions

You should read all the safety and operating instructions before using this product.

Heed all warnings

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

Trademarks

All names used in this manual are probably registered trademarks of respective companies.

Liability

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Do not use accessories not recommended by the manufacturer

Only install this device in a dry place protected from weather

Servicing

Do not attempt to service this video product yourself. Refer all servicing to qualified service personnel.

Damage Requiring service

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

- 1) When the power-supply cord or plug is damaged
- 2) If liquid has been spilled, or objects have fallen into the video product.
- 3) If the inner parts of video product have been directly exposed to rain or water.
- 4) If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage, and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine if the video product is in proper operating condition.