

**PELCO**

by Schneider Electric

**INSTALLATION**

# **EH20 Series IP-Enabled Enclosures**



**Installation Manual  
C6603M 8/17**

# Contents

Important Notices .....	3
Regulatory Notices.....	3
Radio and Television Interference .....	3
Korean Class A EMC .....	3
Warranty Statement .....	3
Important Safety Instructions.....	4
Introduction.....	5
Models.....	6
Included Mount .....	6
Optional Mounts .....	6
Accessories .....	6
Getting Started.....	7
EH20 Series Models .....	8
Supplied Parts List .....	8
User-Supplied Parts List .....	8
Product Label.....	8
EH 20 Series Product Overview .....	9
Installation: 24V Models (EH20-2-H).....	10
Installation: Mains Models (EH20-3-H).....	14
Installing the Sun Shield.....	19
Installing the EM20 Mount .....	20
Attaching the EM20 Wall Mount to Other Mount Brackets .....	23

## Important Notices

For more information about Pelco's product-specific important notices and thereto related information, refer to [www.pelco.com/legal](http://www.pelco.com/legal).

## 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).**

## Korean Class A EMC

이 기기는 업무용 (A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시길 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

## Warranty Statement

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

# Important Safety Instructions

1. This product shall be installed by a qualified service person and the installation shall conform to local codes.
2. Read these instructions.
3. Keep these instructions.
4. Heed all warnings.
5. Follow all instructions.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. Installation should be done only by qualified personnel and conform to all local codes.
12. 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.
13. Use only installation methods and materials capable of supporting four times the maximum specified load.
14. Use stainless steel hardware to fasten the mount to outdoor surfaces.
15. An all-pole main switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.
16. A readily accessible disconnect device shall be incorporated in the building installation wiring.

**CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

The product and/or manual may bear the following marks:



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



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

# Introduction

IP-enabled, indoor/outdoor EH20 Series enclosures are designed for use with Sarix®, Sarix Professional, and Sarix Enhanced cameras. The EH20 Series is a rugged and highly reliable camera enclosure with a side-hinged lid and adjustable sun shroud designed for easy installation. Constructed from die-cast aluminum to IK10 and IP66, the EH20 Series enclosure is designed to operate in a wide range of environments and to protect electronic components in temperatures from -30° to 50°C (-22° to 122°F).

This document describes the installation and initial setup procedures to set up your EH20 Enclosure. For more information about operating your camera, refer to the operation manual specific to the product.

**NOTE:** For additional information about product documentation in English and other languages, go to [www.pelco.com](http://www.pelco.com) and navigate to the EH20 Enclosure website.

## Models

EH20	Basic enclosure with die-cast construction: Sun shroud, IP66 and Type 4X, cable entry glands and mounting holes
EH20-M	Enclosure with die-cast construction: Wall mount bracket included, sun shroud, IP66 and Type 4X, cable entry glands and mounting holes
EH20-2-H	Enclosure with die-cast construction: Indoor/environmental, wall mount bracket included, heater and blower, 24 VAC, sun shroud, IP66 and Type 4X, cable entry glands and mounting holes
EH20-3-H	Enclosure with die-cast construction: Indoor/environmental, wall mount bracket included, heater and blower, 100 VAC-240 VAC, sun shroud, IP66 and Type 4X, cable entry glands and mounting holes

## Included Mount

EM20	Wall mount bracket with internal cable management
------	---

## Optional Mounts

EP20	Large pole mount bracket for EM20 wall mount (for poles up to 8-inch diameter)
EC20	Ceiling mount bracket
EP21	Small pole mount for EM20 wall mount (for poles up to 4-inch diameter)

## Accessories

EM20JB	Wall mount junction box for EM20 wall mount
--------	---

# Getting Started

Before installing your EH20 enclosure, thoroughly familiarize yourself with the information in the installation section of this manual.

**NOTE:** Please refer to your camera installation manual for installing and configuring the camera within the enclosure.

## EH20 Series Models

### Supplied Parts List

Qty	Description
1	EH20 Series enclosure
1	EH20 Installation manual
1	Resources sheet
2	PG11 gland fitting with nut
1	EM20 wall mount (except with EH20 base enclosure)
2	¼-20 x .375-inch screws (for sun shroud mounting)
2	¼-inch nylon flat washers (for sun shroud mounting)
1	¼-20 x .375-inch screw (for camera mounting)
1	¼-inch lock washer (for camera mounting)
1	¼-inch steel flat washer (for camera mounting)
1	T30 Torx wrench

### User-Supplied Parts List

In addition to the standard tools and cables required for a video security installation, you will need to provide the following items:

Qty	Description
1	CAT5e or better Ethernet cable
1	Phillips screwdriver
1	Flat-head screwdriver
1	Crimping tool
4	Screws for mounting EM20 wall mount

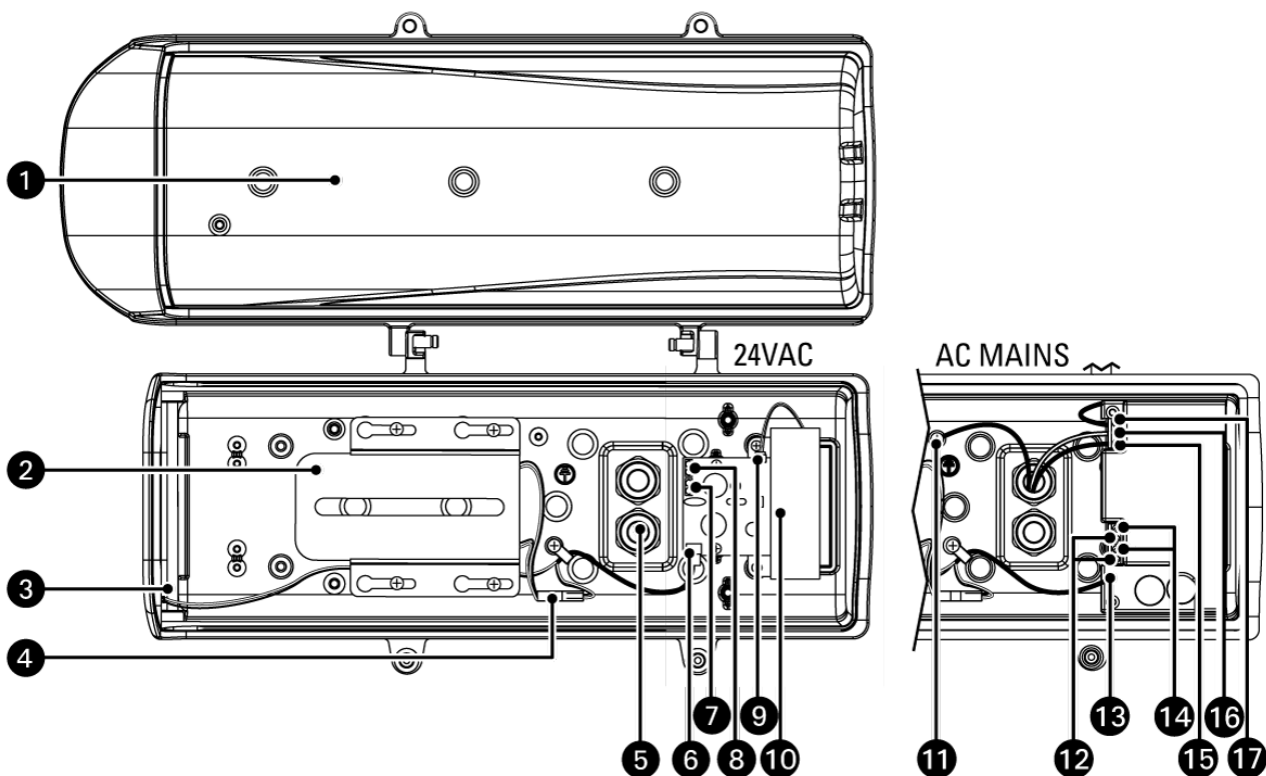
**Note:** The mounting hardware is not provided.

### Product Label

The product label lists the model number, date code, and serial number. This information might be required for setup. A product label is located on the inside cover of the enclosure and on the side the product box.



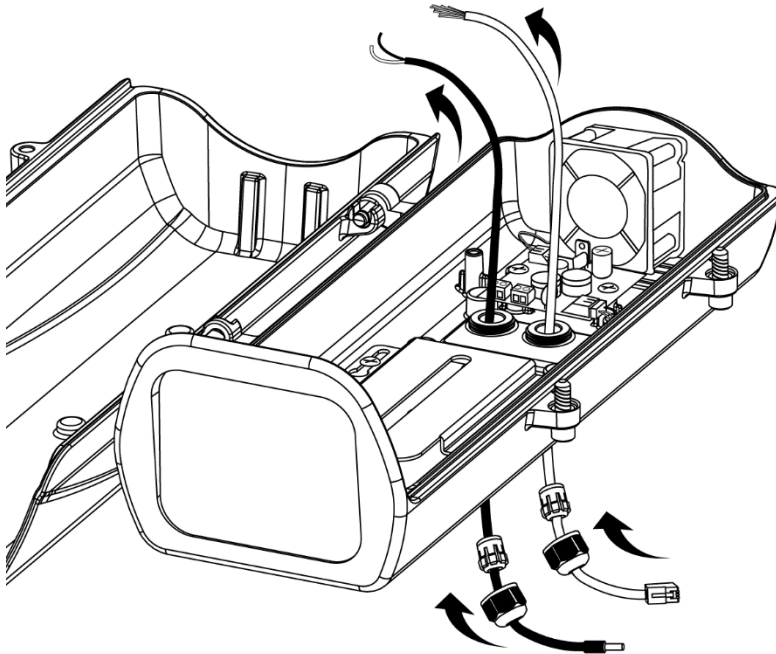
# EH 20 Series Product Overview



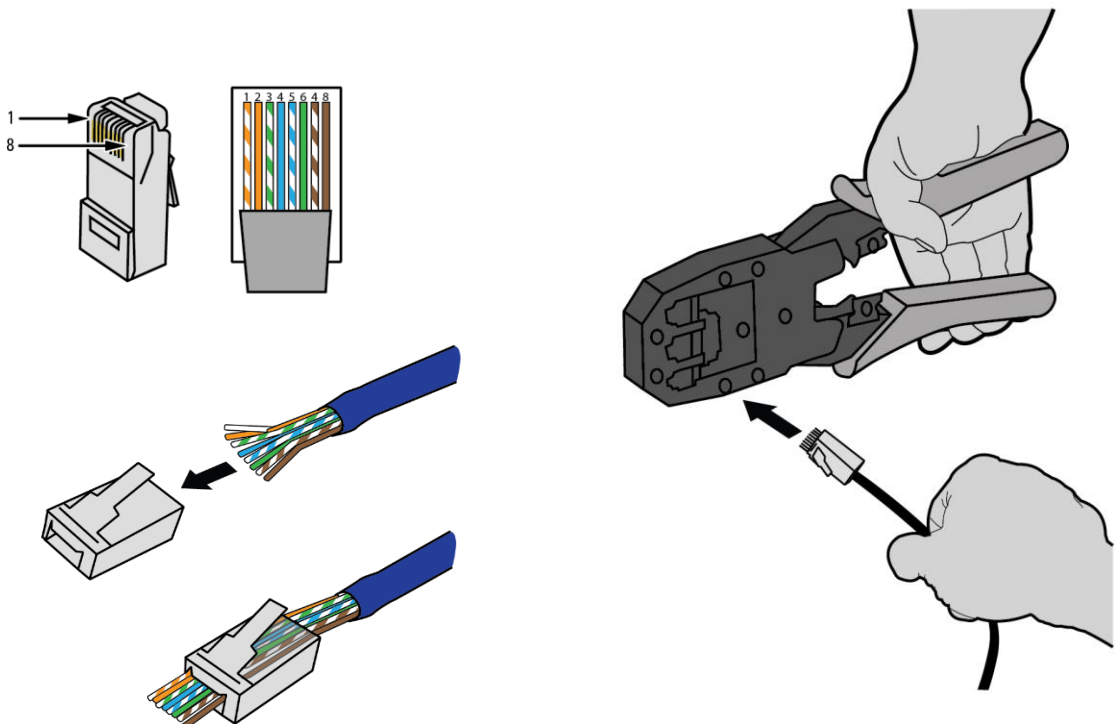
- (1) Enclosure lid
- (2) Camera mounting plate
- (3) Window defogging heater
- (4) Mounting plate heating connector
- (5) Waterproof cable gland
- (6) Heater/defogger power connection
- (7) 24 VAC power in
- (8) 24 VAC power out to camera
- (9) Fan connector
- (10) Fan
- (11) Primary earth ground
- (12) +12 VDC reference ground to camera
- (13) Heater/defogger power connection
- (14) +12 VDC reference ground to camera
- (15) Line/live/hot mains AC input
- (16) Neutral mains AC input
- (17) Earth ground

## Installation: 24V Models (EH20-2-H)

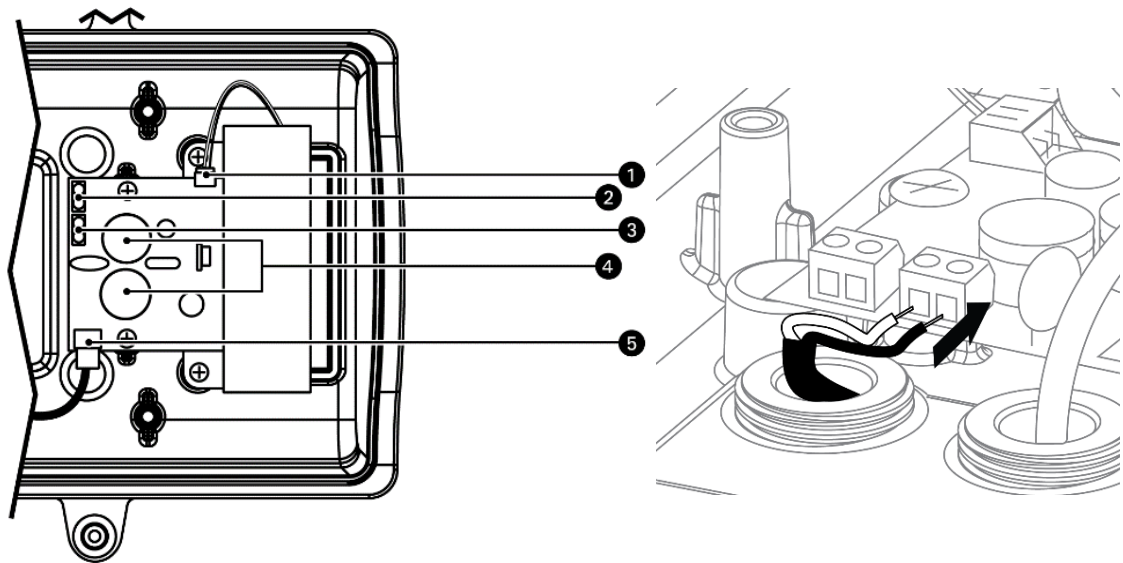
1. For installing an IP camera, pass an Ethernet cable (CAT5E or better) through the gland fitting on the bottom of the enclosure. Please refer to the camera manual for any other types of cameras for installation.



You may need to remove the RJ-45 connector, and use a crimping tool to connect the Ethernet wires to an RJ-45 connector inside the enclosure. Use an Ethernet cable of the width of 5-6.5mm. Follow the T568B pinout show below and make sure both ends of the Ethernet cable match (Straight Through Cable).



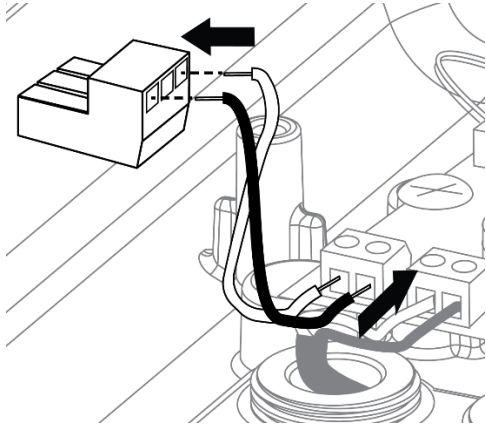
2. Insert the stripped wires from the 24VAC in line into the power input on the electric board as shown below and tighten in place.



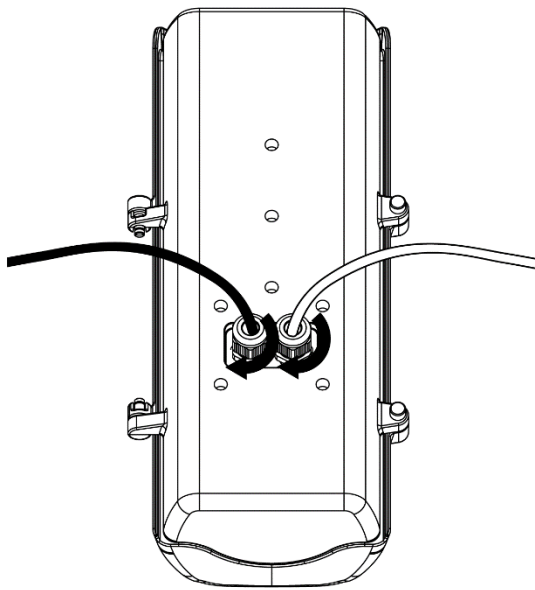
- 1) Fan connector
- 2) 24VAC out
- 3) 24VAC in
- 4) Temperature sensors
- 5) Heater/defogger power connection

Total VA	Wire Gauge			
	20 AWG (0.5 mm <sup>2</sup> )	18 AWG (1.0 mm <sup>2</sup> )	16 AWG (1.5 mm <sup>2</sup> )	14 AWG (2.5 mm <sup>2</sup> )
10	86 m (283 ft)	137 m (451 ft)	218 m (716 ft)	348 m (1142 ft)
20	42 m (141 ft)	68 m (225 ft)	109 m (358 ft)	174 m (571 ft)
30	28 m (94 ft)	45 m (150 ft)	73 m (238 ft)	115 m (380 ft)
40	21 m (70 ft)	34 m (112 ft)	54 m (179 ft)	86 m (285 ft)
50	17 m (56 ft)	27 m (90 ft)	43 m (143 ft)	69 m (228 ft)

3. Connect the 24 VAC out on the board to the power connector provided with your camera as shown below.

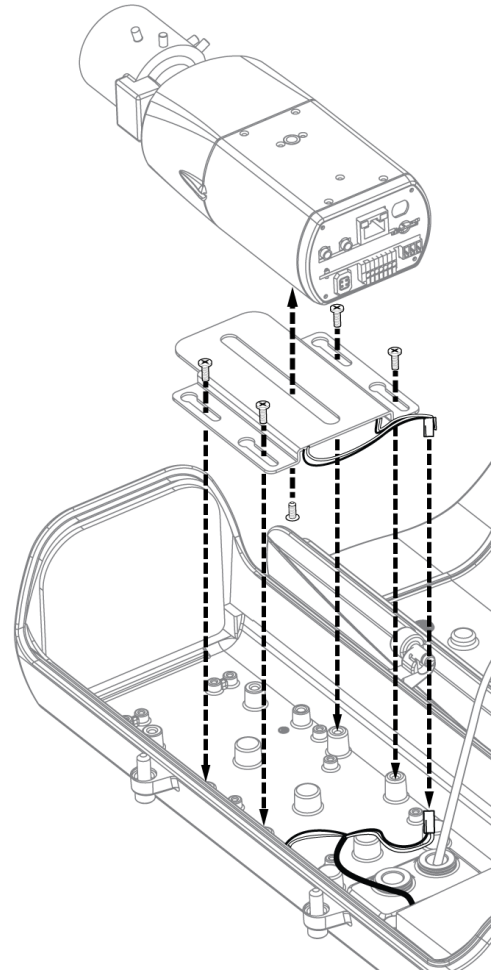


4. When complete, tighten up the gland fitting nuts.

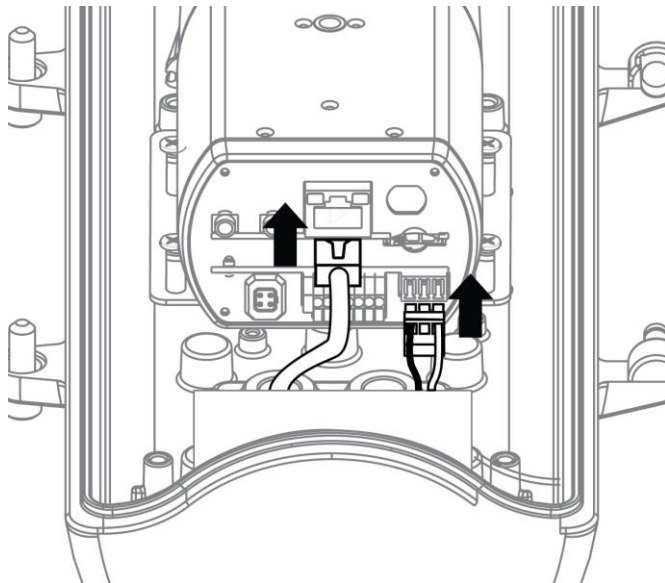


5. Attach the camera mount bracket to your camera using (1) ¼-20 x .375-inch screw, (1) ¼-inch steel flat washer, and the (1) ¼-inch lock washer. Adjust the position of the camera/lens assembly on the mount bracket so that the lens sits as close as possible to the viewing window when it is inside the enclosure.

6. Secure the camera mount bracket to the enclosure by tightening the four screws through the keyhole slots. Connect the plug for the heater on the bottom of the mounting bracket to the socket branching off the wire to the defogger.



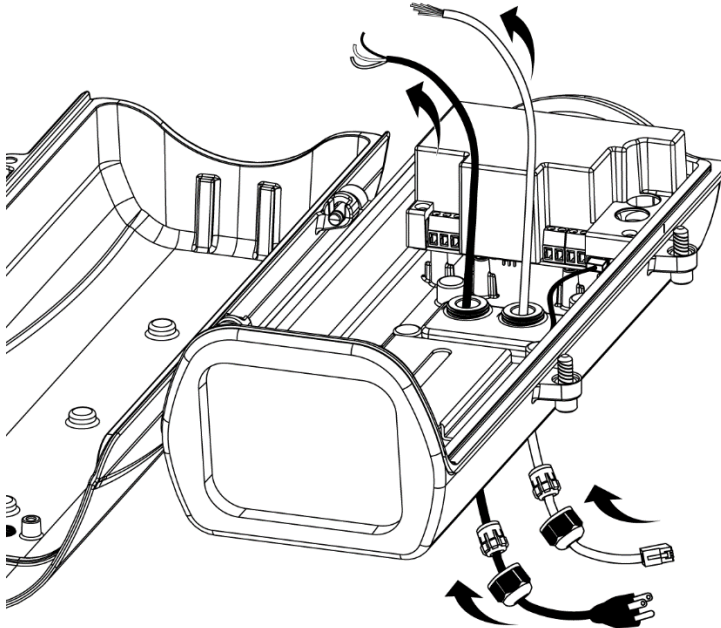
7. Connect the Ethernet cable and power plug to the camera.



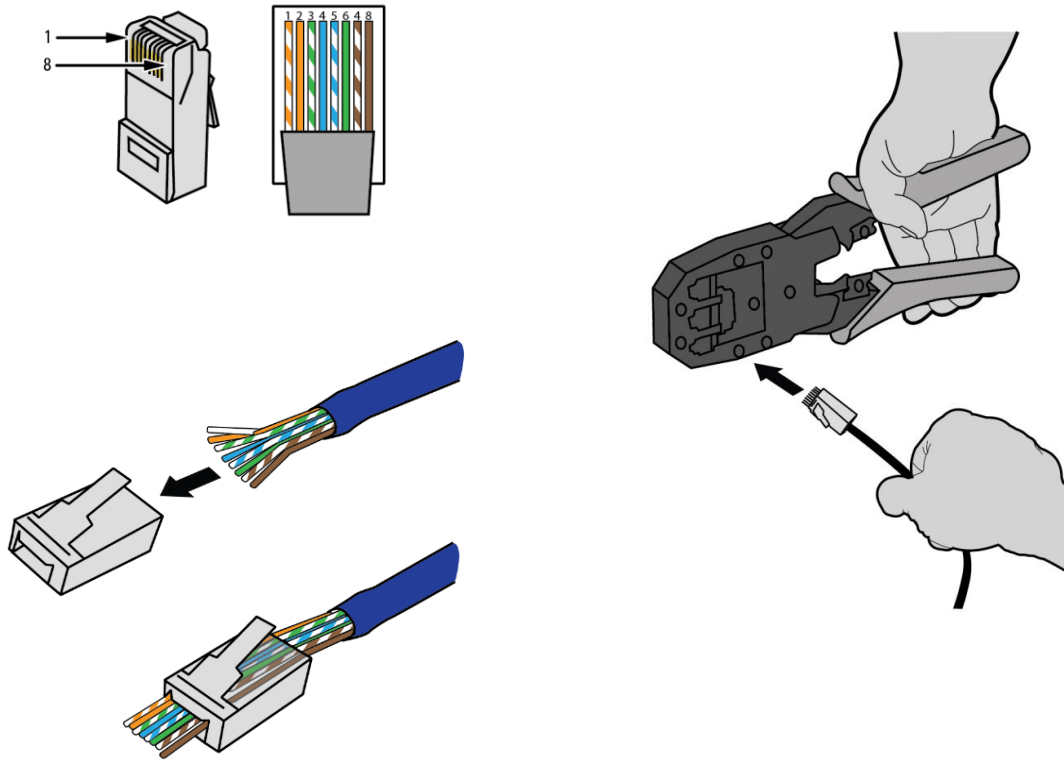
8. Close the lid of the enclosure and push down on the top of the lid while turning the lid securing screws to get the screws started. Use the supplied T30 Torx wrench to tighten the screws.

## Installation: Mains Models (EH20-3-H)

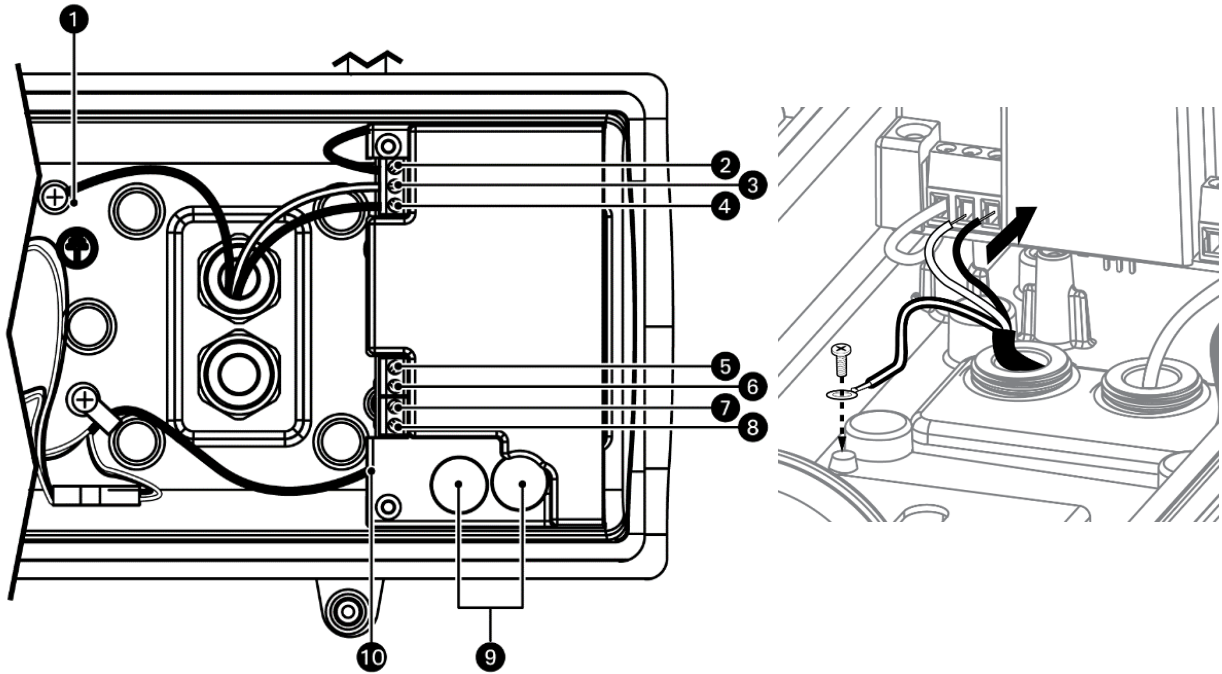
1. For installing an IP camera, pass an Ethernet cable (CAT5E or better) through the gland fitting on the bottom of the enclosure. Please refer to the camera manual for other types of cameras for installation. Pass the Mains wiring through the other gland fitting. For safety reasons, please do not run high voltage wires with low voltage wires through the same gland.



You may need to remove the RJ-45 connector, and use a crimping tool to connect the Ethernet wires to an RJ-45 connector inside the enclosure. Use an Ethernet cable of the width of 5-6.5mm. Follow the T568B pinout shown below and make sure both ends of the Ethernet cable match (Straight Through Cable).



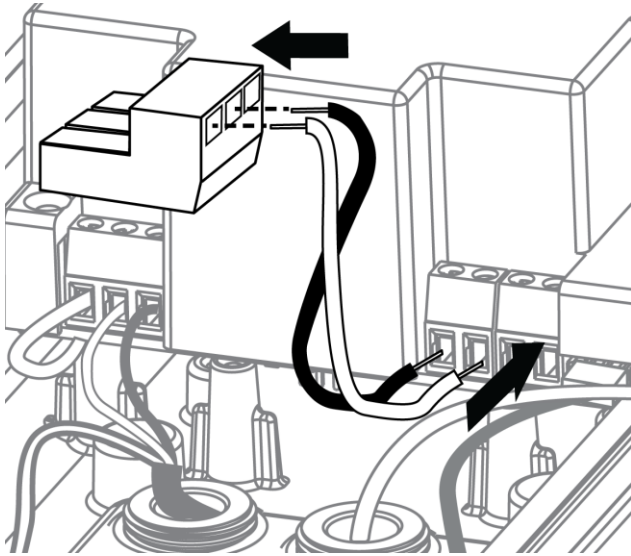
2. Insert the stripped power wires (100-240 VAC) from the mains into the power input on the enclosure as shown below and tighten in place. Attach the earth ground line onto the body of the enclosure. If there are any other wires connected to the earth ground screw, please make sure that the incoming earth ground must be the first wire to contact the enclosure.



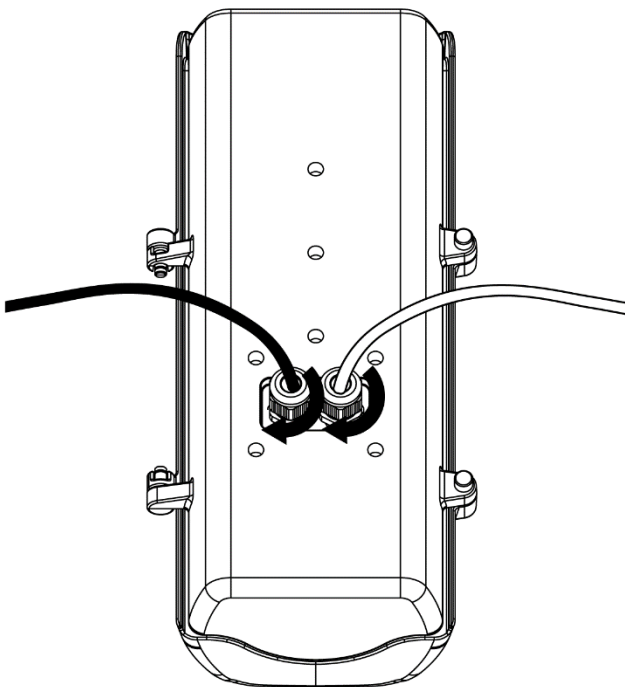
- 1) Earth ground line connection point
- 2) Earth ground line for power module
- 3) Neutral connection
- 4) Live/hot connection
- 5) +12V DC out
- 6) Ground
- 7) +12V DC out
- 8) Ground
- 9) Temperature sensors
- 10) Heater/defogger power connection



3. Connect the 12V DC and Ground to the plug for your camera as shown. Insure the + and ground match up with your camera input.

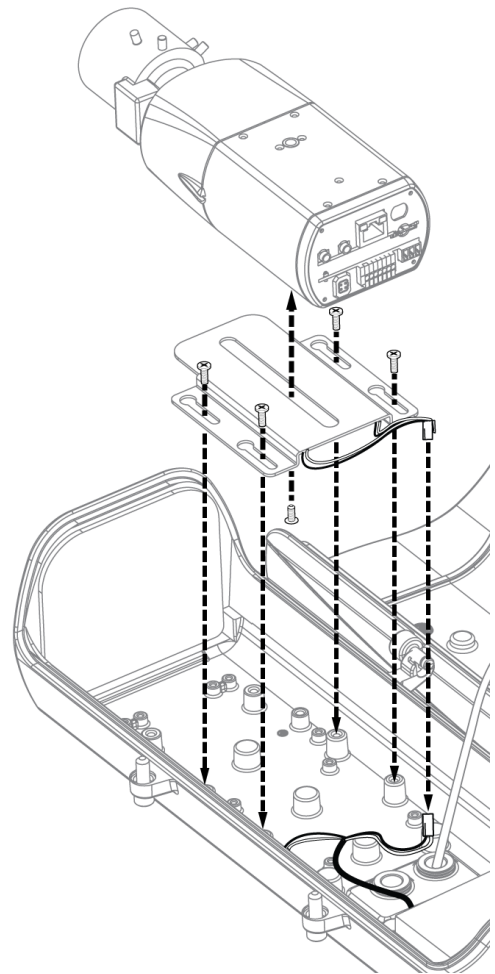


4. When done, tighten up the gland fitting nuts.

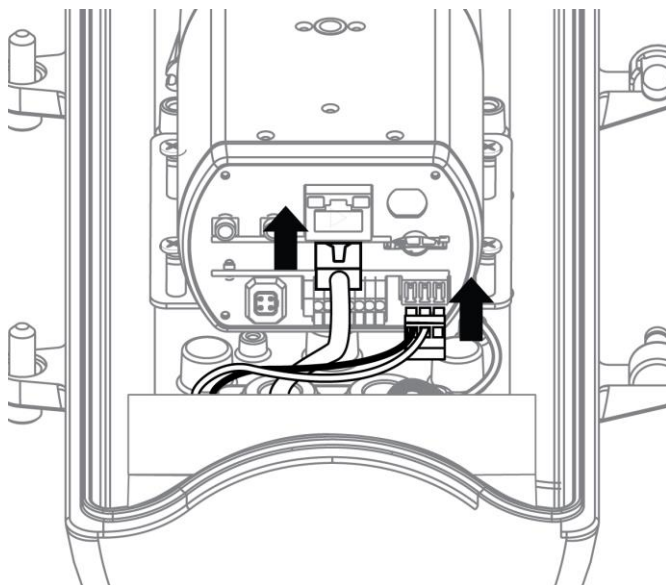


5. Attach the camera mount bracket to your camera using (1) ¼-20 x .375-inch screw, (1) ¼-inch steel flat washer, and the (1) ¼-inch lock washer. Adjust the position of the camera/lens assembly on the mount bracket so that the lens sits as close as possible to the viewing window when it is inside the enclosure.

6. Secure the camera mount bracket to the enclosure by tightening the four screws through the keyhole slots. Connect the plug for the heater on the bottom of the mounting bracket to the socket branching off the wire to the defogger.



7. Connect the Ethernet cable and power plug to the camera.

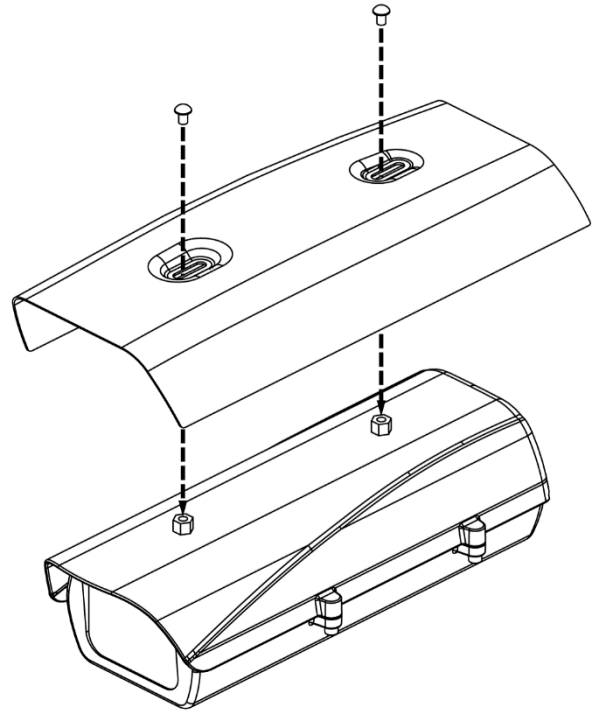


8. Close the lid of the enclosure and push down on the top of the lid while turning the lid securing screws to get the screws started. Use the supplied T30 Torx wrench to tighten the screws

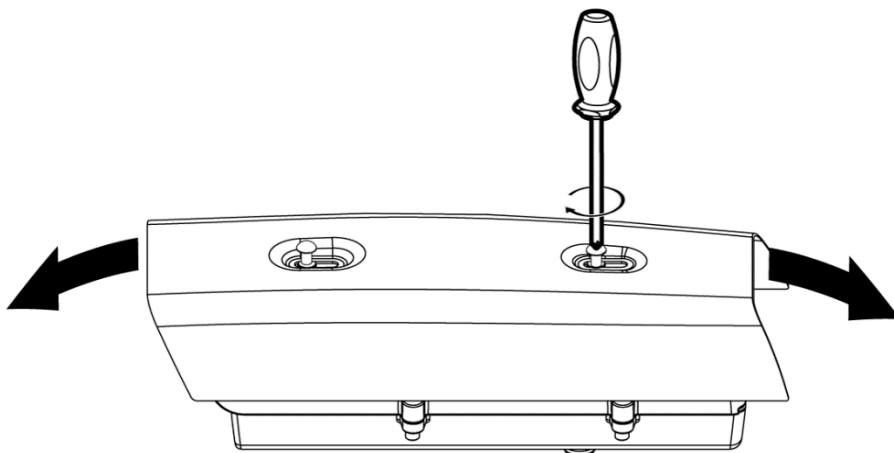
## Installing the Sun Shield

1. If you are installing the EH20 enclosure outdoors it is recommended that you install the sun shield to help lower the internal temperature of the enclosure and keep the glare off the front window.
2. Set the sun shield on top of the hex standoffs on top of the lid as show.

3. Install (1)  $\frac{1}{4}$ -20 x .375-inch screw and (1)  $\frac{1}{4}$ -inch nylon flat washer through each mounting slot on the sun shield and thread the screws into the hex standoffs.

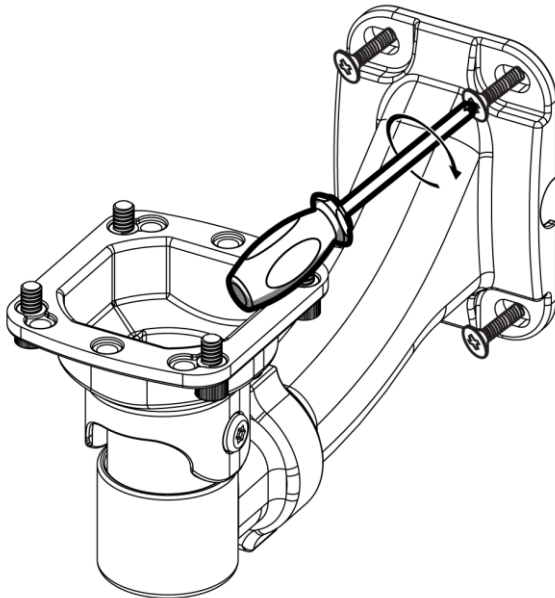


4. Adjust the position of the sun shield forwards or backwards on the enclosure as needed and then tighten the screws using a Philips screwdriver.

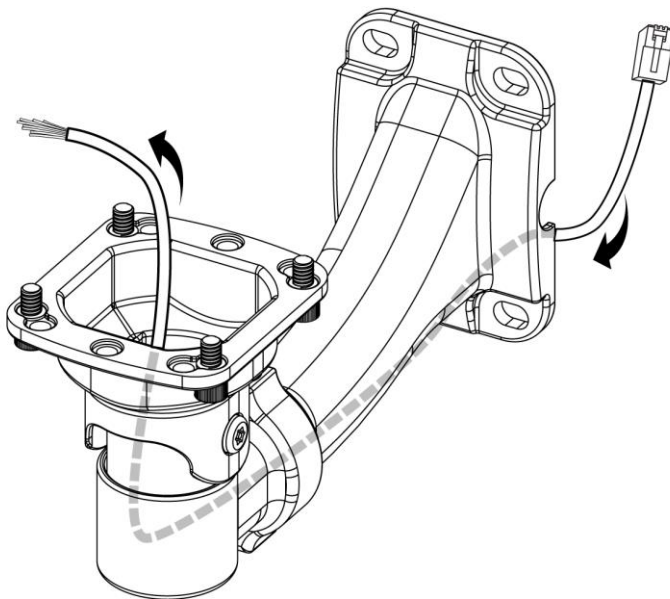


## Installing the EM20 Mount

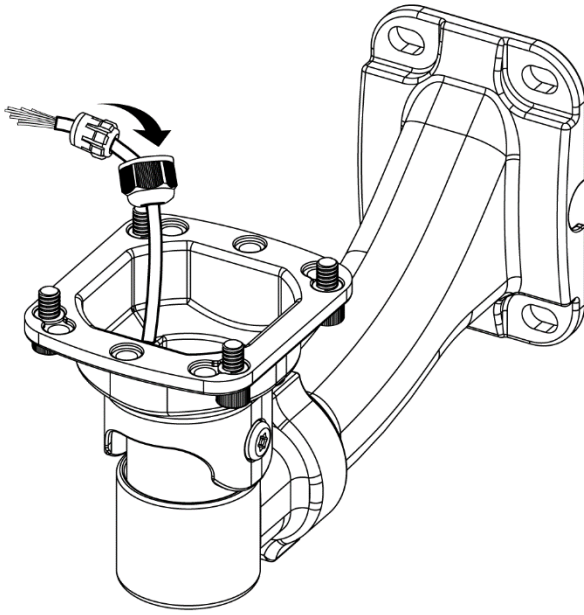
1. Install the EM20 wall mount to a suitable surface. Drill mounting holes and a cable routing hole (if preferred) on the mounting surface. Install the mount using four screws (not supplied) of appropriate type and size for the surface being mounted to.



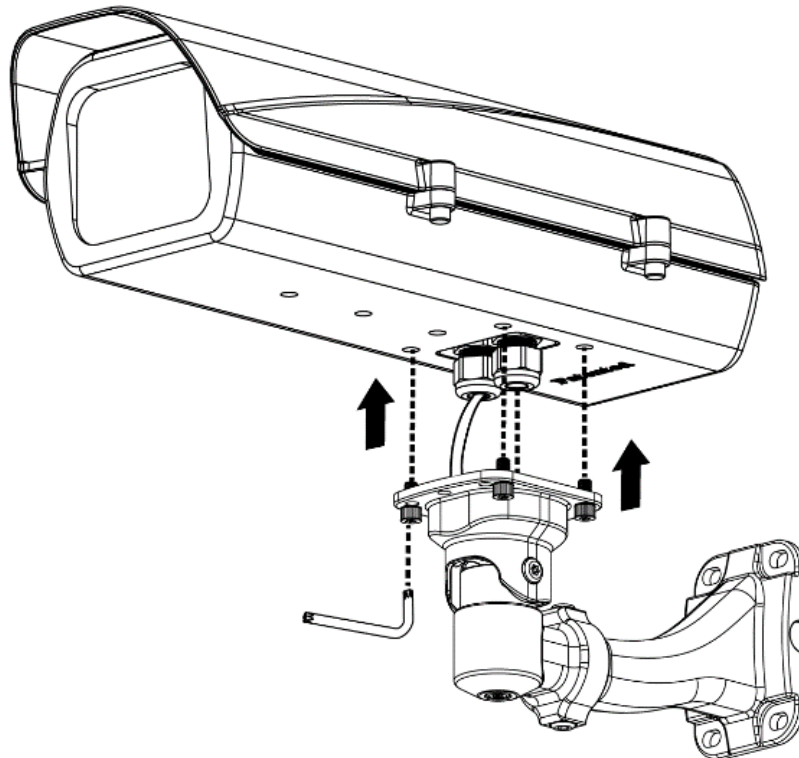
2. Lift the whole enclosure up to the installation position and pass the Ethernet cable through the center of the wall mount. Due to the weight of the enclosure, it is best to have two people mounting the enclosure.



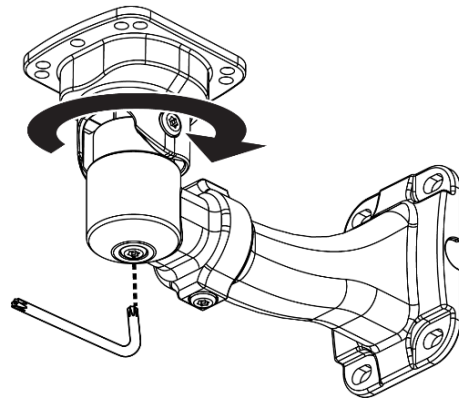
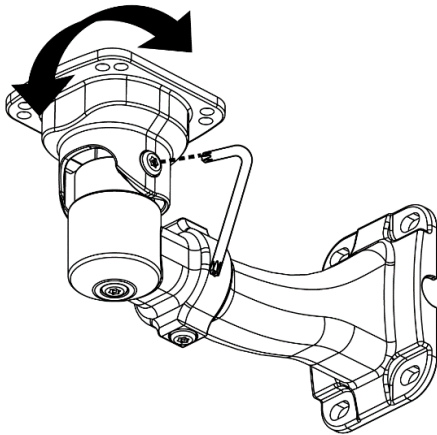
**NOTE:** The Ethernet cable needs to pass through the enclosure's gland fitting nut as shown in the illustration below.



3. Mount the enclosure onto the installed wall bracket, and secure the connection by tightening the four pre-installed 1/4" socket screws using the supplied T30 Torx wrench. Due to the weight of the enclosure, it is best to have two people mounting the enclosure.



4. To adjust the position of the enclosure, use the supplied T30 Torx wrench to loosen the three pan and tilt adjustment screws. Position the enclosure as needed and retighten the three adjustment screws.



## **Attaching the EM20 Wall Mount to Other Mount Brackets**

1. Attach the EM20 wall mount to the EP20, EP21, or EM20JB mounts using the specific installation instructions supplied with those mounts.

## **Pelco Troubleshooting Contact Information**

If the instructions provided fail to solve your problem, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international) for assistance. Be sure to have the serial number and model number available when calling.

Do not try to repair the unit yourself. Leave maintenance and repairs to qualified technical personnel only.





**Pelco by Schneider Electric**

3500 Pelco Way Clovis, California 93612 USA

(800) 289-9100 Tel (800) 289-9150 Fax

+1 (559) 292-1981 International Tel

+1 (559) 348-1120 International Fax

[www.pelco.com](http://www.pelco.com)

Pelco, the Pelco logo, and other trademarks associated with Pelco products referred to in this publication are trademarks of Pelco, Inc. or its affiliates. ONVIF and the ONVIF logo are trademarks of ONVIF Inc. All other product names and services are the property of their respective companies. Product specifications and availability are subject to change without notice.

© Copyright 2015, Pelco, Inc.  
All rights reserved.