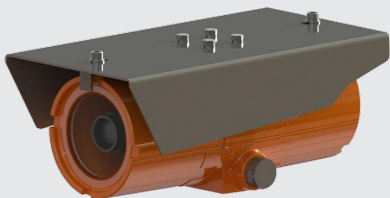


# WISENET



## **Explosion Proof Network Camera**

### Installation Manual

TNO-X6072EPT1-Z  
TNO-X6322EPT1-Z  
TNO-X8072EPT1-Z  
TNO-P9072EPT1-Z



Produced in partnership by Spectrum Camera Solutions LLC & Hanwha Techwin America.

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Release Date: 02/10/2020

Document Name TNO-XnnnnEPT1-Z INSTALLATION MANUAL

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<b>Revision Record</b>		
<b>Rev.</b>	<b>Description</b>	<b>Date</b>
0	Initial Release	02/10/2020

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## **Patent Notice:**

Manufactured under United States US Patent 9917428

## **Trademark Information:**

Spectrum Camera Solutions LLC and its logo(s) are trademark(s) of Spectrum Camera Solutions LLC.

## **Description:**

The TNO-XnnnnEPT1-Z series includes a full range of powder-coated aluminum camera stations specifically designed for hazardous area applications. This series utilize the most robust and advanced camera technologies available.



**SPECTRUM**  
CAMERA SOLUTIONS



SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY  
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA  
SERIAL: 1001-01-01-2020

**FM**  
C US  
APPROVED

MADE IN USA

CERT NO.  
FM18US0262X & FM18CA0126X  
MODEL: F103-XNB-6000-BD  
INPUT: IEEE 802.3af, Type 3 7.5W;  
8-28vac, 25W

CE 2809

US: Class I Division 1 Groups BCD T6 Ta= -40°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -40°C to +55°C, Type 4X, IP66  
Canada: Class I Division 1 Groups BCD T6 Ta= -50°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -50°C to +55°C, Type 4X, IP66  
Class I, Zone 1, AEx/Ex db IIB+H2 T5 Gb Ta= -50°C to +55°C, Type 4X, IP66  
Zone 21, AEx/Ex tb IIIC T85°C Db Ta= -50°C to +55°C, Type 4X, IP66  
II 2 G Ex db IIB+H2 T5 Gb Ta= -50°C to +55°C, IP66  
II 2 D Ex tb IIIC T85°C Db Ta= -50°C to +55°C, IP66  
CERT NO. FM18ATEX0073X & IECEx FMG 18.0029X

 WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT. INSTALL SEAL WITHIN 18 inches. For Zones, install seal at entry. WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTION. USE 80°C OR HIGHER RATED CONDUCTORS.

 AVERTISSEMENT: NE PAS OUVRIR LORSQU'ENERGISE OU QUAND UNE ATMOSPHERE EXPLOSIVE PEUT ETRE PRESENTE. Les joints de fermeture sont obligatoires dans une distance de 18 pouces. Pour les zones, installez un sceau à l'entrée. AVERTISSEMENT - RISQUE DE CHARGE ELECTROSTATIQUE POTENTIEL - VOIR LES INSTRUCTIONS. UTILISEZ DES CONDUCTEURS COTÉS DE 80° C OU PLUS.





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CAMERA SOLUTIONS



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8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA  
SERIAL: 1001-01-01-2020

**FM**  
C US  
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MADE IN USA

CERT NO.  
FM18US0262X & FM18CA0126X  
MODEL: F103-XNB-6005-BD  
INPUT: IEEE 802.3af, Type 3 8W;  
8-28vac, 25W

CE 2809

US: Class I Division 1 Groups BCD T6 Ta= -40°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -40°C to +55°C, Type 4X, IP66  
Canada: Class I Division 1 Groups BCD T6 Ta= -50°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -50°C to +55°C, Type 4X, IP66  
Class I, Zone 1, AEx/Ex db IIB+H2 T5 Gb Ta= -50°C to +55°C, Type 4X, IP66  
Zone 21, AEx/Ex tb IIIC T85°C Db Ta= -50°C to +55°C, Type 4X, IP66  
II 2 G Ex db IIB+H2 T5 Gb Ta= -50°C to +55°C, IP66  
II 2 D Ex tb IIIC T85°C Db Ta= -50°C to +55°C, IP66  
CERT NO. FM18ATEX0073X & IECEx FMG 18.0029X

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**SPECTRUM**  
CAMERA SOLUTIONS



SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY  
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA  
SERIAL: 1001-01-01-2020

**FM**  
C US  
APPROVED

MADE IN USA

CERT NO.  
FM18US0262X & FM18CA0126X  
MODEL: F103-XNB-8000-BD  
INPUT: IEEE 802.3af, Type 3 8.5W;  
8-28vac, 25W

CE 2809

US: Class I Division 1 Groups BCD T6 Ta= -40°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -40°C to +55°C, Type 4X, IP66  
Canada: Class I Division 1 Groups BCD T6 Ta= -50°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -50°C to +55°C, Type 4X, IP66  
Class I, Zone 1, AEx/Ex db IIB+H2 T5 Gb Ta= -50°C to +55°C, Type 4X, IP66  
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II 2 G Ex db IIB+H2 T5 Gb Ta= -50°C to +55°C, IP66  
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 AVERTISSEMENT: NE PAS OUVRIR LORSQU'ENERGISE OU QUAND UNE ATMOSPHERE EXPLOSIVE PEUT ETRE PRESENTE. Les joints de fermeture sont obligatoires dans une distance de 18 pouces. Pour les zones, installez un sceau à l'entrée. AVERTISSEMENT - RISQUE DE CHARGE ELECTROSTATIQUE POTENTIEL - VOIR LES INSTRUCTIONS. UTILISEZ DES CONDUCTEURS COTÉS DE 80° C OU PLUS.







## **STANDARDS-**

The equipment is manufactured in accordance with the IECEx scheme, the ATEX Directive 2014/34/EU and with the following standards :

IEC 60079-0:2011  
IEC 60079-1:2014  
IEC 60079-31:2013  
IEC 60529:2013  
EN 60079-0:2012 + A11:2013  
EN 60079-1:2014  
EN 60079-31:2014  
EN 60529:1991 + A1:2000 + A2:2013  
ANSI/ISA 60079-0:2013  
ANSI/UL 60079-1:2015  
ANSI/ISA 60079-31:2015  
ANSI/IEC 60529:2004  
CAN/CSA-C22.2 No. 60079-0:2015  
CAN/CSA-C22.2 No. 60079-1:2016  
CAN/CSA-C22.2 No. 60079-31:2015  
CAN/CSA-C22.2 No. 60529:2016

Specific Conditions of Use:

- The flameproof joints of the equipment are not intended to be repaired. Consult the manufacturer if dimensional information on the flameproof joints is necessary.
- Follow the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the surface of the equipment in Group II and III environments.

 **NOTE:** Use a clean cloth dampened with pure water for cleaning.

## **CERTIFICATIONS-**

CERT NO. FM18US0262X & FM18CA0126X

US: Class I Division 1 Groups BCD T6 Ta= -40°C to +55°C, Type 4X, IP66

Class II/III Division 1 Groups EFG Ta= -40°C to +55°C, Type 4X, IP66

Canada: Class I Division 1 Groups BCD T6 Ta= -50°C to +55°C, Type 4X, IP66

Class II/III Division 1 Groups EFG Ta= -50°C to +55°C, Type 4X, IP66

Class I, Zone 1, AEx/Ex db IIB+H2 T5 Gb Ta = -50°C to +55°C, Type 4X, IP66

Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -50°C to +55°C, Type 4X, IP66

CERT NO. FM18ATEX0073X & IECEx FMG 18.0029X




II 2 G Ex db IIB+H2 T5 Gb Ta = -50°C to +55°C, IP66

II 2 D Ex tb IIIC T85°C Db Ta = -50°C to +55°C, IP66




# DOCUMENT SYMBOLS

The following symbols are used throughout this manual to alert users to potential hazards or important information. **Failure to heed the warnings and cautions listed herein can lead to injury and equipment damage.**

Symbol	Label	Description
	<b>WARNING:</b>	Consists of conditions, practices, or procedures that must be observed to prevent personal injury and/or equipment damage.
	<b>CAUTION:</b>	Risk of electric shock or high temperature parts may result in injury if proper precautions are not taken.
	<b>NOTE:</b>	Emphasizes important or essential information.

## Locating Information:


 **NOTE:** *In the interest of completeness, manuals and drawings included with the system may provide information pertaining to options not included with your equipment. Information in application notes supersedes general information in these documents. Information can be located in this manual using any of the following aids.*



# How to use this Manual

## General Manual:

This manual is intended to be used in conjunction with installed equipment manual from internal equipment manufacturer.

 Note: In the event of a conflict between the requirements of this general installation manual and the internal equipment manual, the safety and installation procedures described in this manual shall take precedence.

## Safety Considerations:

This information that must be read and understood by all persons installing, using, or maintaining this equipment. This manual is designed to aid personnel in the correct and safe installation, operation, and maintenance of the systems described. Personnel must consider all actions and procedures for potential hazards or conditions that may not have been anticipated in the written procedures. If a procedure cannot be performed safely, it must not be performed until appropriate actions can be taken to ensure the safety of equipment and personnel. The procedures in this manual are not designed to replace or supersede required or common-sense safety practices. All safety warnings listed in any documents applicable to equipment and parts used in or with the system described in this manual must be read and heeded before commencing work on any part of the system.



***NOTE: Refer to all ATEX, CSA, IECEX, NEC, NFPA and FM certificates for any Special Conditions of Use. If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule of the certificate.***



***NOTE: Review all material and safety information in this manual and install in accordance with this document and all other applicable ATEX, CSA, IECEX, NEC, NFPA70 Installation Methods and FM and National standards.***



***Warning- Failure to follow appropriate safety procedures or appropriate use of the equipment described in this manual can lead to injury of personnel or equipment damage.***



***Warning – Explosion Hazard– Do not open equipment unless power has been removed or the area is known to be non-hazardous.***





# General Safety and Operating Information:

General safety and operating information applicable to electrical equipment installed within hazardous locations. This information must be understood by all persons installing, using, or maintaining the electrical equipment. This information is designed to aid personnel in safe installation, operation, and maintenance of the "TNO-XnnnnEPT1-Z" Series equipment. It is not designed to replace or limit appropriate safety measures applicable to work performed by personnel. Any additional safety and operating measures that are required must be determined by and followed by personnel performing work on the electrical equipment.



***WARNING: Deviation from the specified instructions or procedure steps can result in injury to personnel, equipment malfunction or equipment damage.***



***WARNING: Return unit to factory for any repairs or replacement of parts, customer not permitted to repair. This will void all warranties and hazardous area certification(s) if unauthorized repair occurs.***

## General Precautions:

Slip resistant gloves and protective eyewear (glasses with side shields or goggles as appropriate) should be worn when installing and servicing any part of electrical equipment. Hot components should be allowed to cool before servicing if possible. Other appropriate equipment or clothing must be used as required by the type of work performed. All applicable regulations and procedures must be followed for the work performed. Before beginning any work on the equipment, carefully consider all the potential hazards and ensure that appropriate measures are taken to prevent injury to personnel or equipment damage.



***CAUTION: Failure to allow adequate cooling of electrical equipment components with hot surfaces before opening the enclosure can lead to injury of personnel or equipment damage.***

***CAUTION: Electrical equipment components may be hot even when power is not applied. Take appropriate precautions to prevent injury from contact with hot items.***



# General Safety and Operating Information:

## Electrical Power:

The "TNO-XnnnnEPT1-Z" Series IP cameras operate from a variety of power options including IEEE 802.3af compliant POE devices.

The power supply used with this product shall fulfill the requirements for Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN/UL 62368-1 or IEC/EN/UL 60950-1 or Listed Class II Power Source Equipment. The product shall be grounded either through a shielded network cable (STP) or other appropriate method.

## Camera Location:

The "TNO-XnnnnEPT1-Z" Series IP camera must be installed in a suitable location away from impacts, heavy vibration and extreme heat. The "TNO-XnnnnEPT1-Z" Series camera must not be installed in an area classification for which it is not rated. The "TNO-XnnnnEPT1-Z" Series camera must be attached securely and appropriately to a wall or supporting structure.



**CAUTION:** The electrical cover should never be removed unless power is removed (for at least 5 minutes) from the unit or the area is known not to contain hazardous gases.

## **NOTE:**

- The product shall be installed by a trained professional.
- The product shall be used in compliance with local laws and regulations.
- Store the product in a dry and ventilated environment.
- Avoid exposing the product to shocks or heavy pressure.
- Do not install the product on unstable brackets, surfaces or walls.
- Use only applicable tools when installing the product. Using excessive force with power tools could cause damage to the product.
- Do not use chemicals, caustic agents, or aerosol cleaners.
- Use a clean cloth dampened with pure water for cleaning.
- Use only accessories that comply with the technical specification of the product. These can be provided by Spectrum, Hanwha, or a third party.



# General Safety and Operating Information:

## Installation:

The installation must be realized in accordance with IEC/EN 60079-14 and/or in accordance with the national requirements. This equipment must be installed and used only by qualified personnel, having knowledge concerning electrical equipment for use in potentially explosive areas containing gas and/or dust. Qualified personnel must have knowledge regarding the types of explosion protection. This equipment is intended to be used in zone 1, 2, 21 and 22 for groups IIB+H2 and IIIC with temperature class T5 or T85°C, it is necessary to verify if this equipment is in accordance with the atmosphere where it is installed.

## Connections:

Electric parameters power control unit Maximum supply voltage:  
POE+ IEEE 802.3at/af, and AC/DC 12-28 Volts 25W

The terminals are suitable for solid and stranded wires.- \*See wiring Diagram Page

### **Cable Glands:**

The cable entry must be made in order not to alter the specific properties of terminal housing compartment. The connection to the external circuits must be realized by cable glands or pipe fittings covered by a separate certificate(s). If a cable gland is not used, or an entry is open, the entry must be closed by a stopping plug covered by a separate certificate. The diameter of the cable gland is  $\frac{3}{4}$  inch NPT.

This equipment can be used with different voltage and power, the nominal parameters are specified in the manual.

Cable: cable must be tested and certified for temperatures of 80°C or higher.

**Fiber Cable:** Use a suitably certified optical fiber cable and internal connections shall comply with requirements of IEC/EN 60079-15

## Equipment Modifications:

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components.

Unauthorized equipment changes or modifications will invalidate all applicable regulatory certifications and approvals.



# SPECIFICATIONS

---

**CERTIFICATIONS of Models: TNO-X6072EPT1-Z  
TNO-X8072EPT1-Z  
TNO-X6322EPT1-Z**

FM18US0262X & FM18CA0126X  
US: Class I Division 1 Groups BCD T6 Ta= -40°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -40°C to +55°C, Type 4X, IP66  
Canada: Class I Division 1 Groups BCD T6 Ta= -50°C to +55°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG Ta= -50°C to +55°C, Type 4X, IP66  
Class I, Zone 1, AEx/Ex db IIB+H2 T5 Gb Ta = -50°C to +55°C, Type 4X, IP66  
Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -50°C to +55°C, Type 4X, IP66  
II 2 G Ex db IIB+H2 T5 Gb Ta = -50°C to +55°C, IP66  
II 2 D Ex tb IIIC T85°C Db Ta = -50°C to +55°C, IP66  
CERT NO. FM18ATEX0073X & IECEx FMG 18.0029X

---

**ELECTRICAL REQUIREMENTS of Model TNO-X6072EPT1-Z**

<b>POWER INPUT/CONSUMPTION</b>	<u>Camera:</u> IEEE 802.3af Type 3 7.5W <u>Heating:</u> ; 8-28vdc, 25W
------------------------------------	---

**ELECTRICAL REQUIREMENTS of Model TNO-X8072EPT1-Z**

<b>POWER INPUT/CONSUMPTION</b>	<u>Camera:</u> IEEE 802.3af Type 3 8W <u>Heating:</u> ; 8-28vdc, 25W
------------------------------------	---

**ELECTRICAL REQUIREMENTS of Model TNO-X6322EPT1-Z**

<b>POWER INPUT/CONSUMPTION</b>	<u>Camera:</u> IEEE 802.3af Type 3 8.5W <u>Heating:</u> ; 8-28vdc, 25W
------------------------------------	---

---

**Environmental Conditions  
(Equipment must be powered)**

**OPERATIONONAL CONDITIONS**

**USE** For Indoor and Outdoor Use

---



# SPECIFICATIONS

TNO-XnnnnEPT1-Z Series Casing Material Specifications	
ALUMINUM	15lbs



**NOTE: Spectrum Camera Solutions, LLC is NOT responsible for any misuse or improper installation of product, assumes no liability for special or consequential damages caused by use or misuse or improper installation of its products sold and assumes no liability for injury from use or misuse or improper installation of its products or attached products.**

**Power Source Specification For TNO-X6072EPT1-Z, TNO-X8072EPT1-Z, TNO-X6322EPT1-Z**

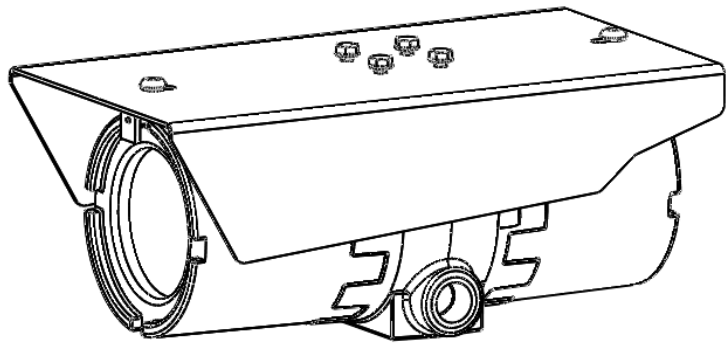
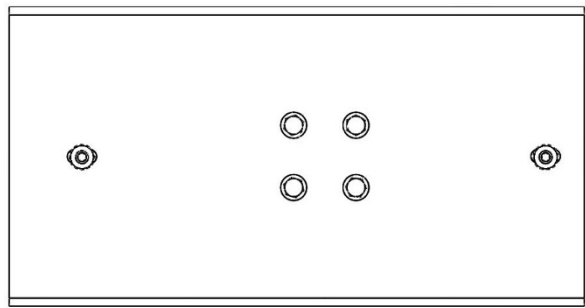
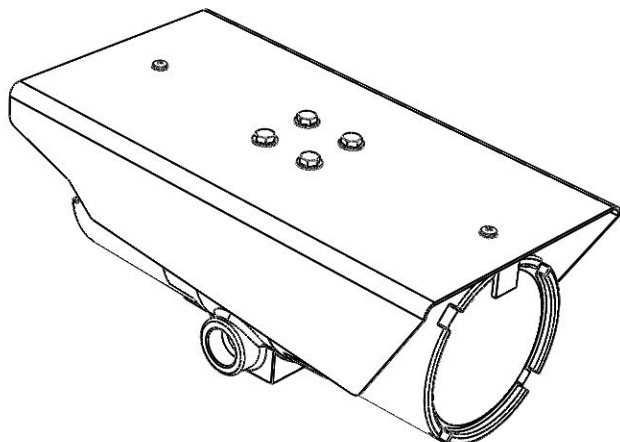
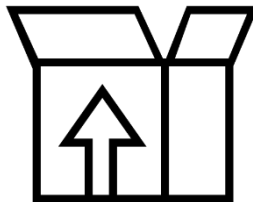
The power supply used with this product shall have a rated output voltage within voltage range of 8-28 V DC. The power supply shall also fulfill one of the following requirements: • Safety Extra Low Voltage (SELV) according to clause 2.2 of IEC/EN/UL 60950-1 and Limited Power Source (LPS) according to clause 2.5 of IEC/EN/UL 60950-1 or CEC/NEC Class 2 source of supply as defined in the Canadian Electrical Code, CSA C22.1 and National Electrical Code, ANSI/NFPA 70 • Class 1 electrical energy source (ES1) and Class 2 power source (PS2) rated output power limited to ≤100 W according to IEC/EN/UL 62368-1. When used with Power over Ethernet (PoE) the Power sourcing equipment (PSE) shall comply with IEEE 802.3af/802.3at and Limited Power Source (LPS) according to clause 2.5 of IEC/EN/UL 60950-1 or annex Q of IEC/EN/UL 62368-1.

**Grounding Specification For TNO-XnnnnEPT1-Z**

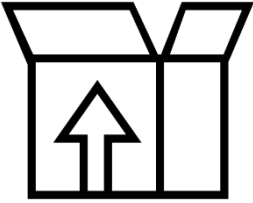
For U.S zones, the internal grounding connection shall be used and the external grounding connection shall be a supplemental ground connection. The product shall be grounded either through a shielded network cable (STP) or other appropriate method.



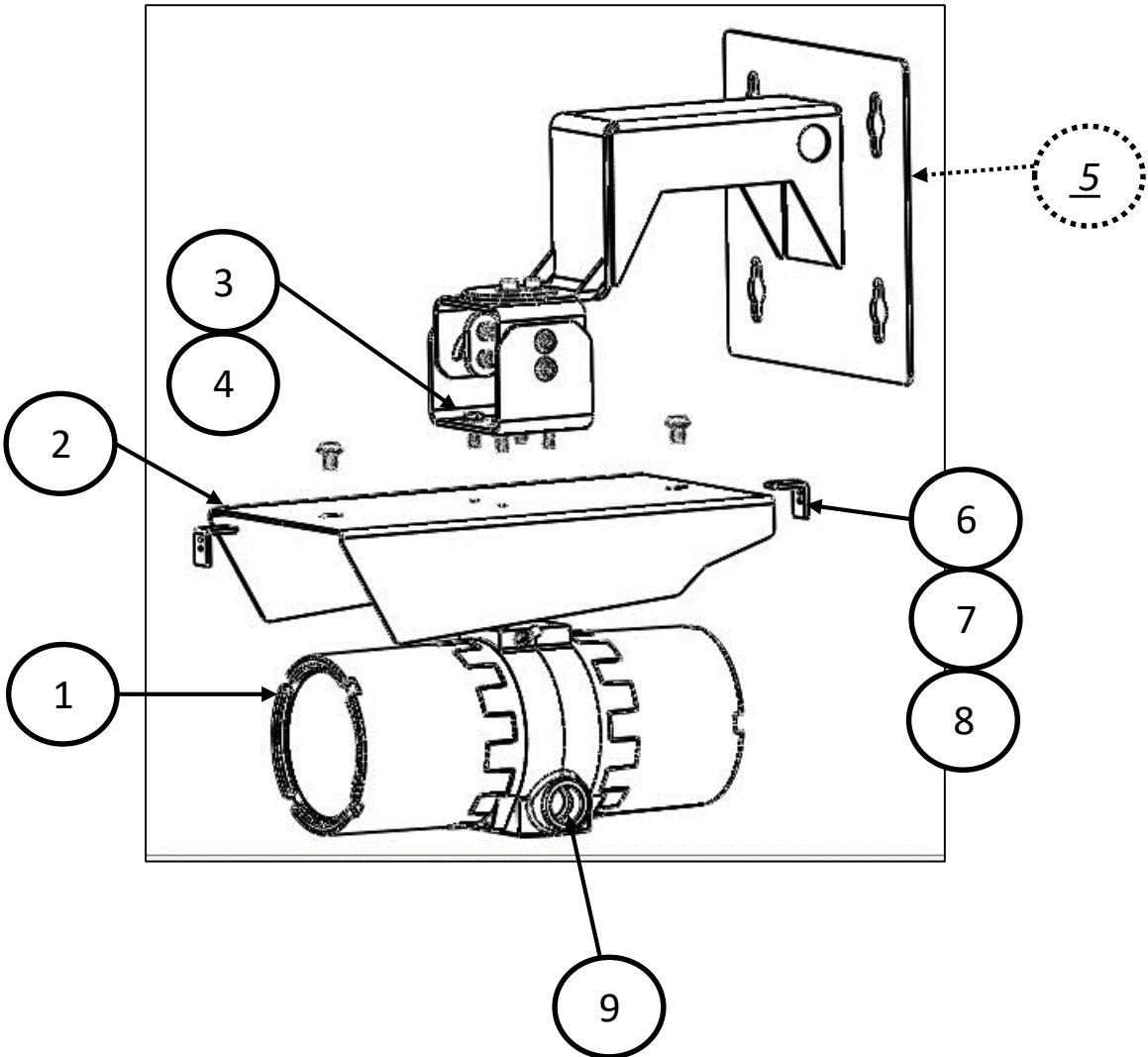
# UNBOXING



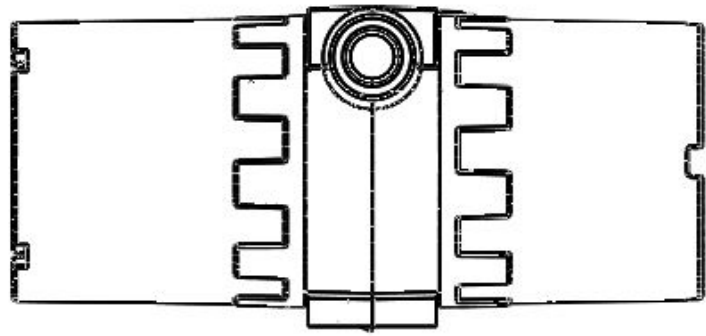
# HARDWARE



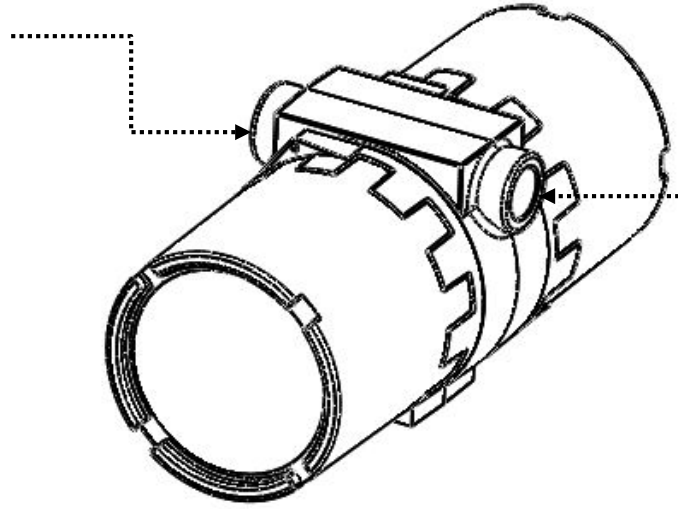
- 1- (QTY 1) TNO-XnnnnEPT1-Z - CAMERA ASSEMBLY
- 2- (QTY 1) SUN SHIELD
- 3- (1 SET) .250-20 HEX SCREW
- 4- (1 SET) SPLIT LOCK WASHER
- 5- *HT-F1XX-WM (WALL MOUNT NOT INCLUDED)*
- 6- (QTY 2) SUN SHIELD STOP
- 7. ( 1 SET) .3125-18 PAN HEAD SCREW
- 8. (1 SET) LOCK WASHER
- 9. (QTY 1) CMP 781DT25 BREATHER DRAIN\* OPTIONAL
- 10. (QTY 1) R1.3/4.20.N 3/4"NPT to M20 EX reducer



# WIRING ENTRIES



3/4" NPT PORT



3/4" NPT PORT

Conduit Entries are 3/4 inch NPT Use appropriate adapter to keep ingress protection



**CAUTION:** Ensure power is disconnected prior to connecting





# INSTALLATION

2. Loosen set screw and remove 1/4-20 hex screws then lift the sunshield from the camera housing. Tabletop Figure 2.1

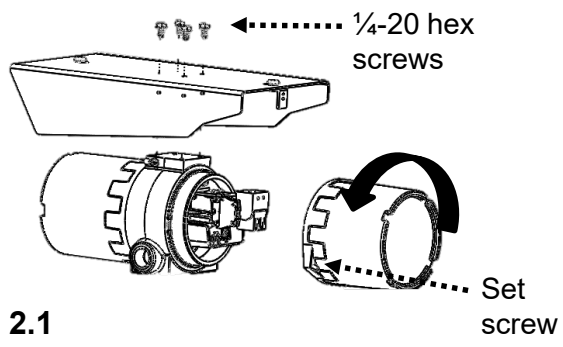


Figure 2.1

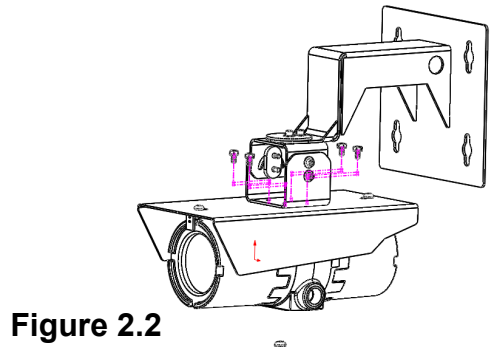


Figure 2.2

-If wall mounted, remove sunshield stop. ....> 

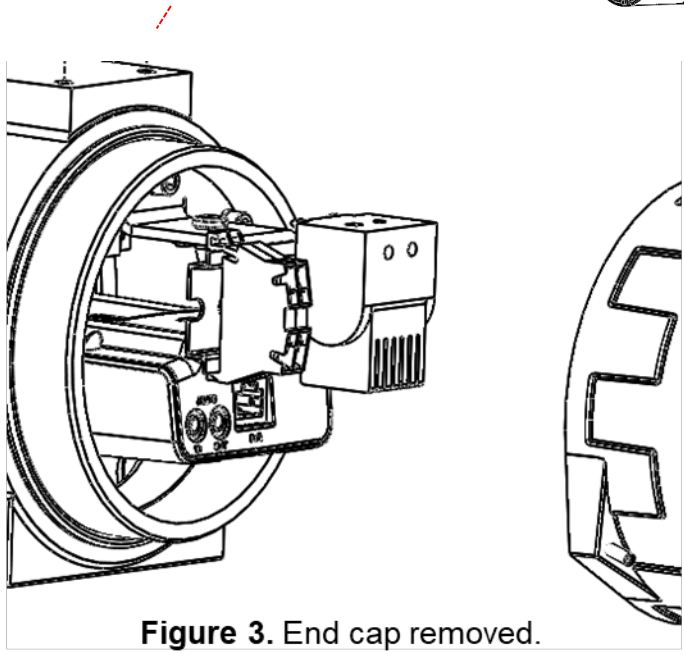
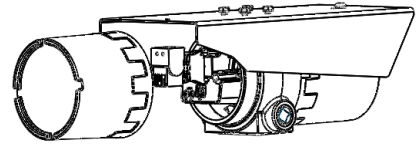


Figure 3. End cap removed.

3. Unscrew end cap from housing, revealing terminal blocks and the rear of the camera. The style of the camera may vary from that shown.



# INSTALLATION

4. Push release on terminal block and insert positive 12-28vdc connection into terminal block (+A) , release to secure. Do the same for negative dc connection into terminal block (-B).

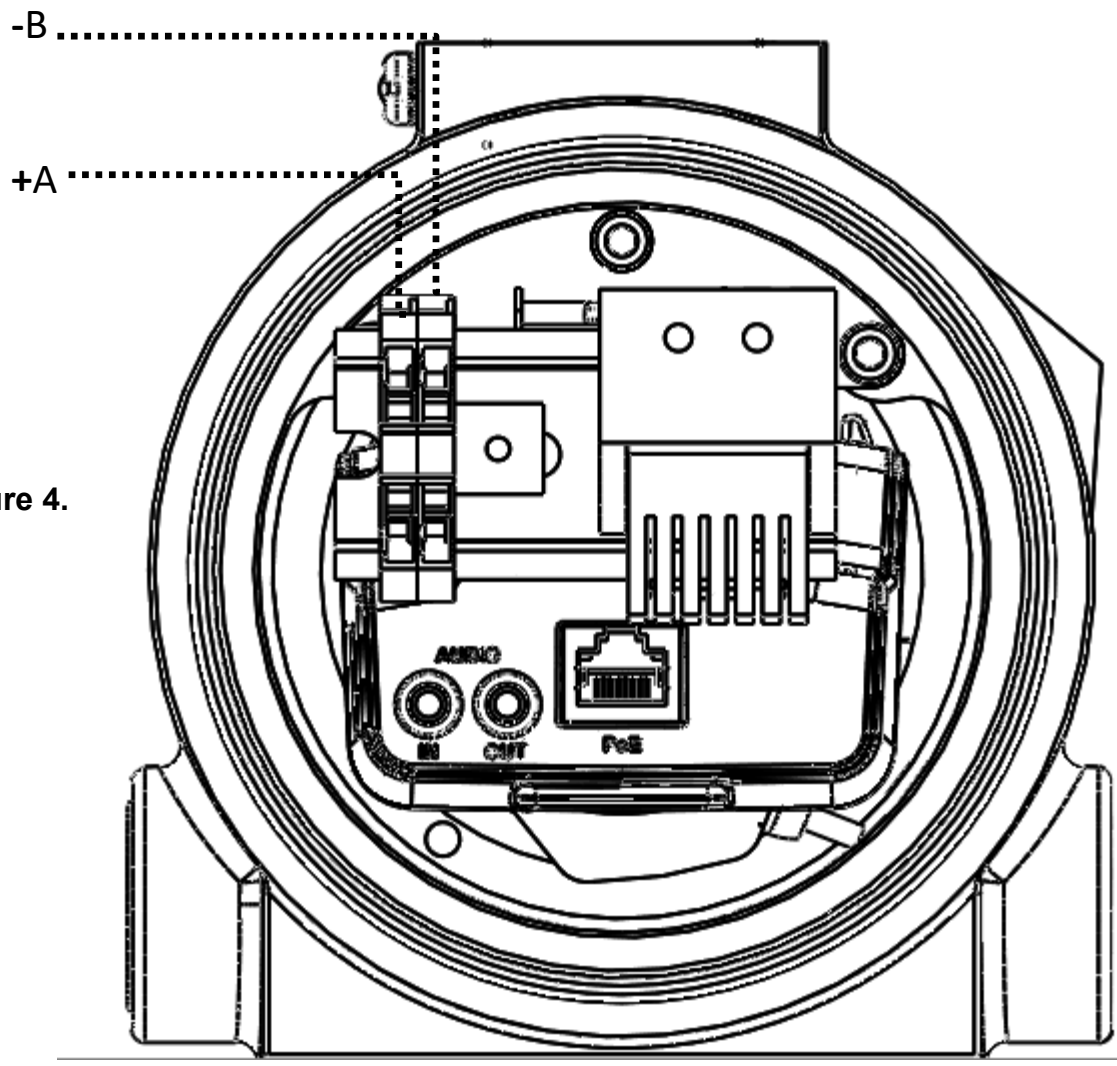


Figure 4.

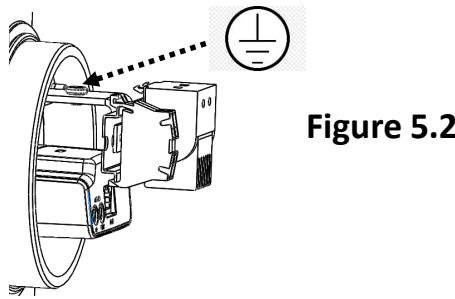
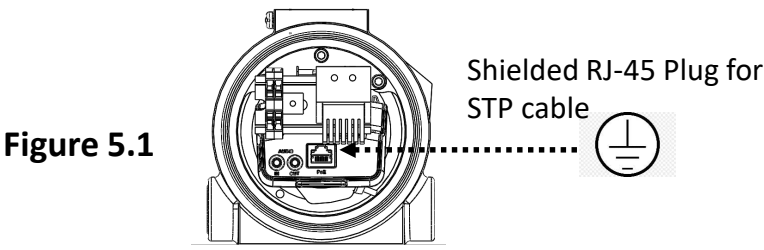


# INSTALLATION

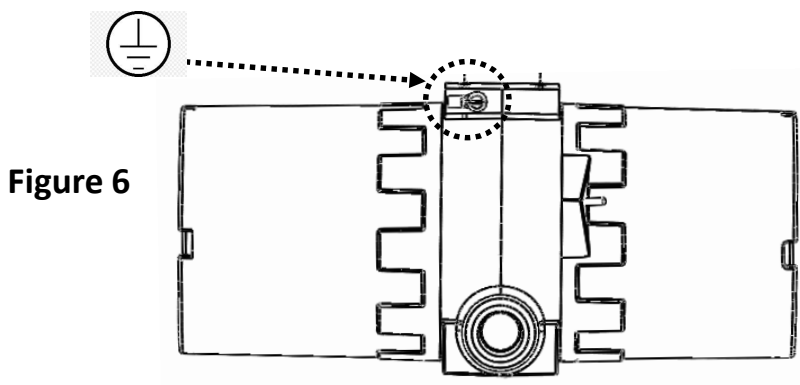
5. The product shall be grounded either through a shielded network cable (STP) or other appropriate method.

5.1 Crimp RJ-45 using T568B color code then plug Cat6 POE into the RJ-45 Port located on the back of the Camera.

5.2 Internal grounding screw 5850-6 SLBHUC 10-24x 1/4 ZS ZGR



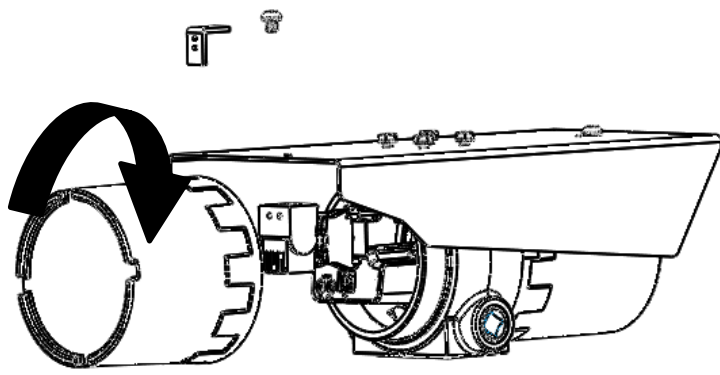
6. Connect external ground. For U.S zones, the internal grounding connection shall be used, and the external grounding connection shall be a supplemental ground connection. External ground wire connection is suitable for up to 3.25 mm (#8AWG)



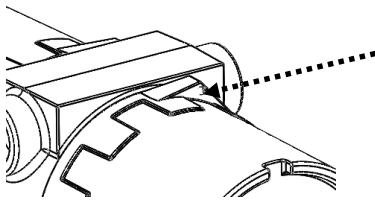
# INSTALLATION

- 7. Ensure threads and gaskets are free of dirt and debris.
- 8. Reinstall TNO-XnnnnEPT1-Z end cap by hand to tighten by turning clockwise until hand tight and gasket is seated

**Figure 8.**

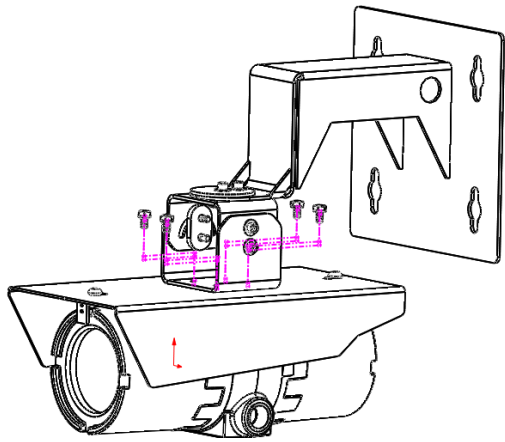


- 9. Tighten both set screws on the end cap and lens cap ends of the housing.



**Figure 9.** Set Screw (same on lens cap)

- 10. Install HT-F1XX-WM wall mount (optional accessory).



**Figure 10.**

- 11. Remove Protective film after installation. If protective film is not removed in timely manor damage to lens is likely to occur with UV exposure

- 12. Apply power. For internal equipment startup procedures, setting changes, and troubleshooting guides, reference the Hanwha camera manual included with the "TNO-XnnnnEPT1-Z" Series Cameras. If the included copy is lost, please contact [support@spectrumcamera.com](mailto:support@spectrumcamera.com) or [support@hanwhasecurity.com](mailto:support@hanwhasecurity.com) for a PDF copy.



# DISMANTLING & MAINTENANCE

## Dismantling:

All repairs of explosion-proof equipment must be made according the specified criteria of IEC/EN 60079-19 rule by qualified personnel, having knowledge concerning electrical equipment for potentially explosive areas containing gas and/or dust. Qualified personnel must have knowledge regarding the types of explosion protection.

## Maintenance:

The maintenance must be realized in accordance with IEC/EN 60079-17 and/or in accordance with the national requirements.

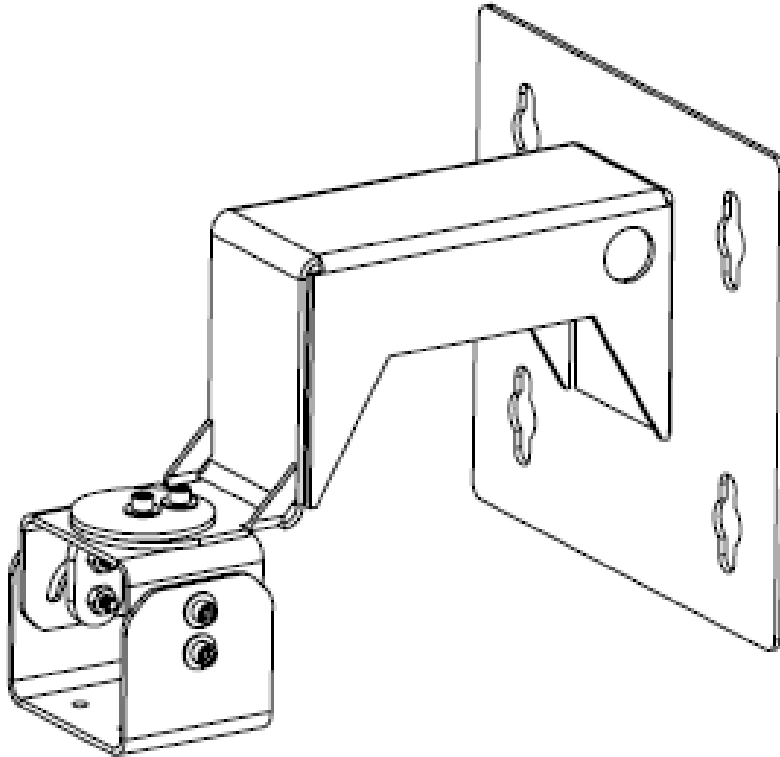
Cleaning lens- Washdown lens with water first to avoid partials scratching the surface. Clean lens with damp microfiber cloth with mild dish soap and water. Lastly, apply coating of Repel (by Unelko corporation) surface cleaner. Never use harsh chemicals or abrasive towels.

Replacing the battery- The Hanwha product has had the battery removed and affects the operation of the RTC. It is recommended to configure the NTP setting to ensure the clock is correct.

For support please email [support@spectrumcamera.com](mailto:support@spectrumcamera.com)



# HT-F1XX-WM Wall Mount



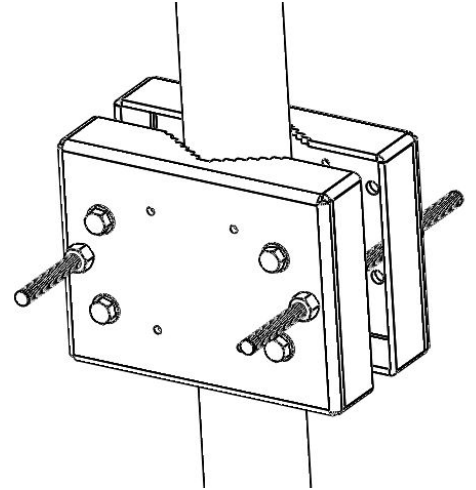
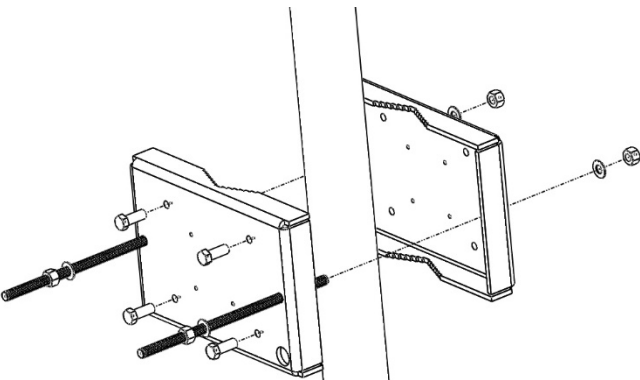
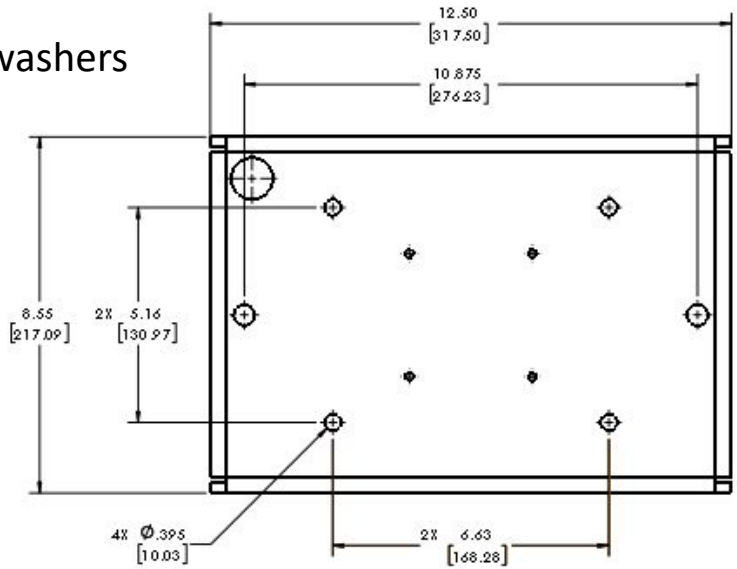
# HT-SPMA-SD Pole Mount Adapter

## HARDWARE

QTY 4 7/8-20 18-8 Bolts

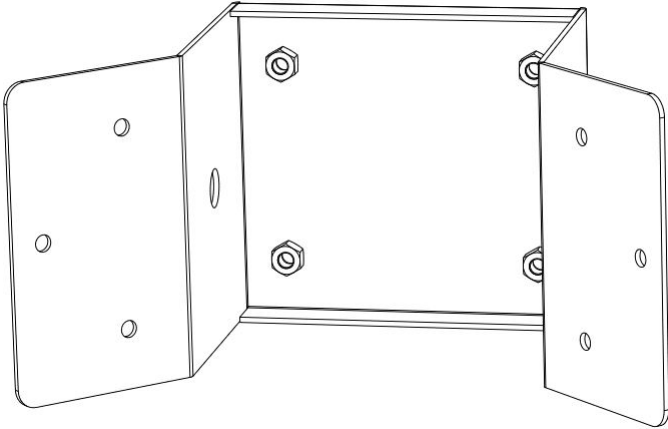
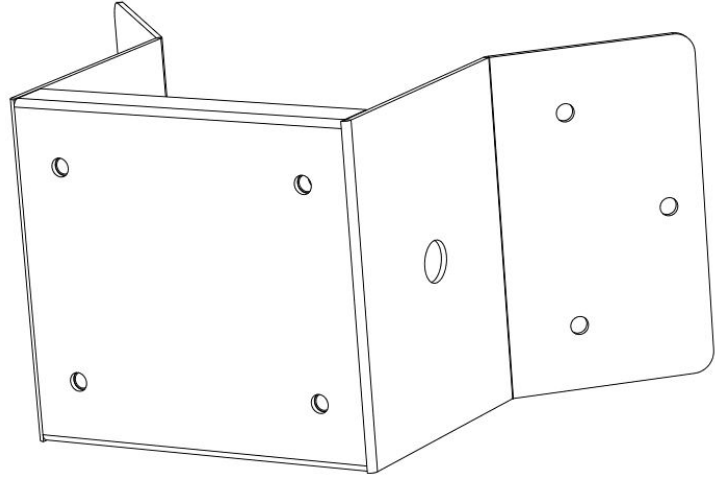
QTY 2 12in all thread with nuts and washers

QTY 2 A1612 sides



# HT-SD-CM Corner Mount

HARDWARE-  
QTY 4 7/8-20 18-8 Bolts

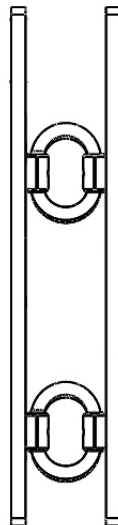
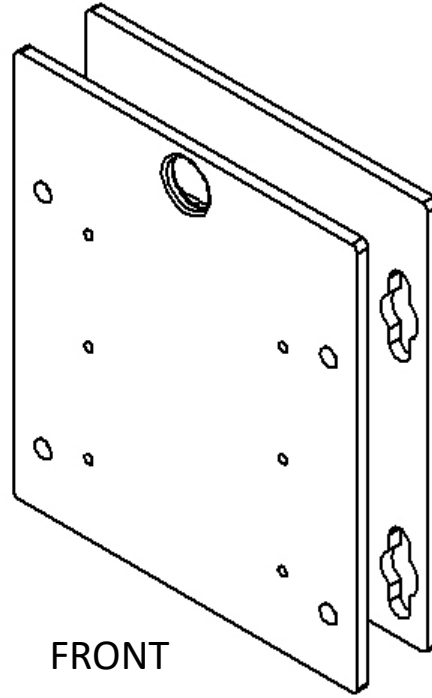
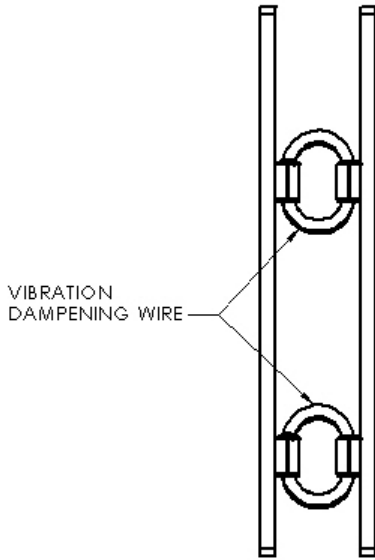




# SD-VM Vibration Mount

HARDWARE-

QTY 4 7/8-20 18-8 Bolts

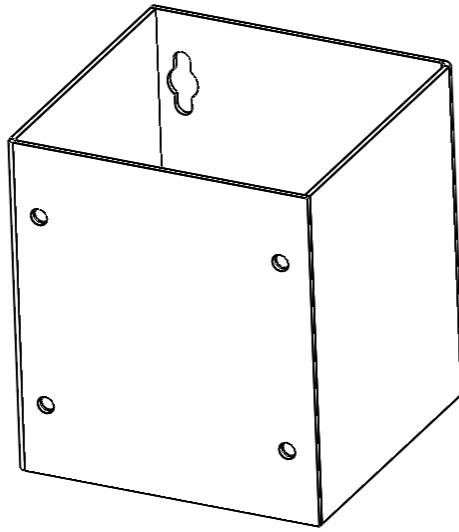


# SD-SO Standoff Mount

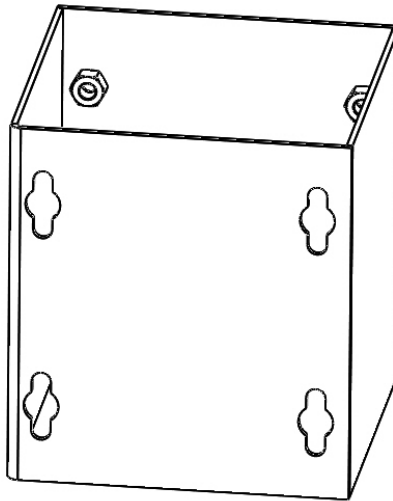
HARDWARE-

QTY 4 7/8-20 18-8 Bolts

FRONT

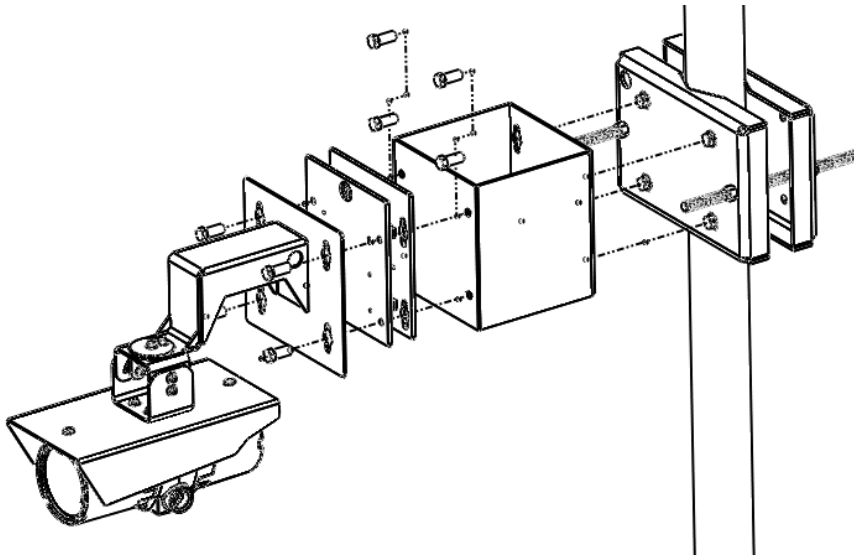


BACK

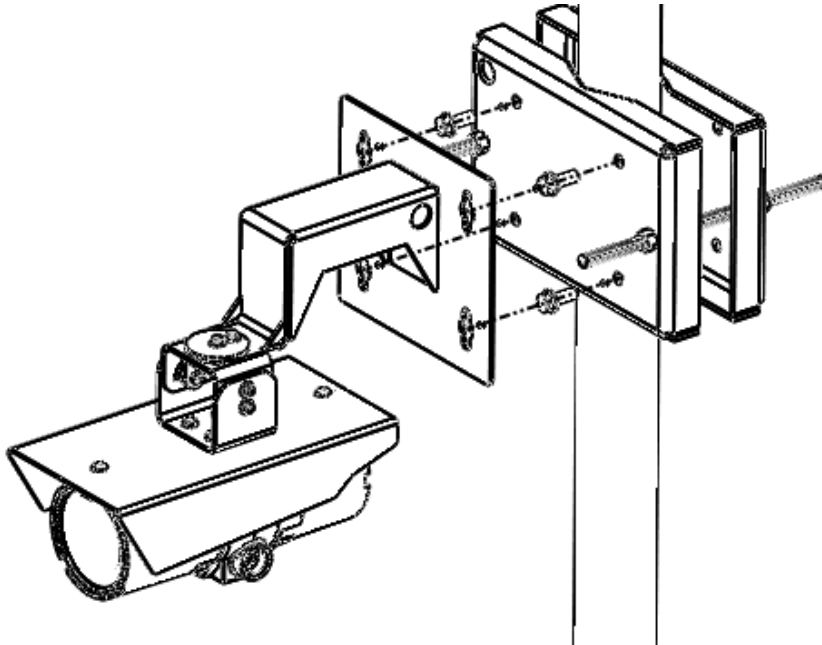


# Accessory Mounting Diagram

HT-F1XX-WM+SD-VM+SD-SO+HT-SD-PMA



HT-F1XX-WM+HT-SD-PMA



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