



# **Explosion-proof Dome**

## **Quick Start Guide**

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### **About this Manual**

This manual is applicable to Explosion-proof Dome.

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only.

The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website (<http://www.hikvision.com>).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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## Regulatory Information

### FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC compliance:** This equipment has been tested and found to comply with the limits for 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.

### FCC Conditions

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU and the ATEX Directive 2014/34/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

For more information, see: [www.recyclethis.info](http://www.recyclethis.info).



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information, see: [www.recyclethis.info](http://www.recyclethis.info).


### Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

### Warning:

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Intended Use of the Dome

ATEX:  II 2G Ex db IIC T6 Gb / II 2D Ex tb IIIC T80°C Db

IECEX: Ex db IIC T6 Gb /Ex tb IIIC T80°C Db IP68

Hazardous Area Classification: Zone 1, Zone 2, Zone 21, Zone 22

IP Degree: IP68 (1m, 1h)

Ex Standards:

IEC 60079-0: 2017 EN IEC60079-0: 2018

IEC 60079-1: 2014 EN 60079-1: 2014

IEC 60079-31: 2013 EN 60079-31: 2014

**Special Conditions for Safe Use**

1. Repairs of the flameproof joints may only be made by the manufacturer or on behalf of the manufacturer and his own responsibility. Repair in compliance with the values of IEC 60079-1 is not accepted.
2. The earth connection facility shall be connected reliably.
3. Explosion-Proof Spherical Camera shall be installed to avoid a risk of ignition from electrostatic discharge.

**Explosion-proof Dome Nameplate**

<h2 style="margin: 0;">Explosion-proof Dome</h2>	
<b>Product Model:</b> xxxxxxxxxxxx	
<b>Protection Level:</b> IP68 (1m/1h) <b>Temperature:</b> -30°C~ +60°C	
<b>Working Voltage:</b> DC12V	<b>Max Power :</b> 25W
<b>Product No.:</b> xxxxxxxxxxxx	<b>Date of Production:</b> xxxxxx
<b>SEV 20 ATEX 0415 X</b>	<b>IECEX NEP 20.0018X</b>
 <b>II 2 G Ex db IIC T6 Gb</b>	<b>Ex db IIC T6 Gb</b>
 <b>II 2 D Ex tb IIIC T80°C Db</b>	<b>Ex tb IIIC T80°C Db</b>
	
<p>WARNING: DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT POTENTIAL ELECTROSTATIC CHARGING HAZARD-SEE INSTRUCTIONS</p>	
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## Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into **Warnings** and **Cautions**:

**Warnings:** Neglecting any of the warnings may cause serious injury or death.

**Cautions:** Neglecting any of the cautions may cause injury or equipment damage.

	
<b>Warnings</b> Follow these safeguards to prevent serious injury or death.	<b>Cautions</b> Follow these precautions to prevent potential injury or material damage.



### Warnings

- Grounding: The both internal and external earthing shall be connected reliably.
- All the electronic operation should be strictly compliance with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.
- Make sure that the power has been disconnected before you wire, install or disassemble the device. Never wire, install or disassemble the device in explosive environment.
- To avoid fire danger caused by electrostatic charge, never touch or wipe the device in explosive environment. Perform the wiping and replacing accessories only under non-explosive environment with the provided glove.
- When the device is installed on wall or ceiling, the device shall be firmly fixed.
- If smoke, odors or noise rise from the device, turn off the power at once and unplug the power cable, and then contact the service center.
- If the device does not work properly, contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)



### Cautions

- If the camera fails to synchronize local time with that of the network, you need to set up camera time manually. Visit the camera (via web browser or client software) and enter system settings interface for time settings.
- DO NOT drop the device or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid installation on vibrations surface or places subject to shock (ignorance can cause device damage).

- To ensure explosion-proof performance, do not damage explosion-proof surface.
- DO NOT place the device in extremely hot (refer to the specification of the device for the detailed operating temperature), cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- The dome cover for indoor use shall be kept from rain and moisture.
- Exposing the device to direct sun light, low ventilation or heat source such as heater or radiator is forbidden (ignorance can cause fire danger).
- DO NOT aim the device at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.
- Use the provided glove when open up the dome cover, and avoid direct contact with the dome cover, because the acidic sweat of the fingers may erode the surface coating of the dome cover.
- To prevent accumulation of electrostatic charge, use a soft and damp cloth when clean inside and outside surfaces of the bubble. DO NOT use alkaline detergents.
- Keep all wrappers after unpack them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and lead to additional costs.
- This equipment is not suitable for use in locations where children are likely to be present.
- Keep the surface clean and prevent dust accumulation. DO NOT clean the surface by compressed air duster.
- Never attempt to change the component by yourself. Contact the manufacture to help solve the problem in running in order to avoid damage.
- Ambient temperature: -30°C - +60°C
- DO NOT open when an explosive atmosphere is present potential electrostatic charging hazard-see instructions.
- When assembly and operation, the operator must follow the requirements of the IEC 60079-14: latest version Explosive atmospheres- Part 14: Electrical installations design, selection and erection, beside of the manufacturer's operating instructions or its National equivalent.
- Maintenance shall comply with IEC 60079-17.
- Repair and overhaul shall comply with IEC 60079-19: latest version or its National equivalent.

## Table of Contents

<b>1 Overview</b> .....	<b>1</b>
1.1 Explosion-proof Dome Overview .....	1
1.2 Explanation of model naming.....	1
1.3 Power Supply .....	2
1.4 Explosion-proof Parameters .....	2
1.5 Mechanical Specification .....	2
1.6 Working Environment .....	2
<b>2 Installation</b> .....	<b>2</b>
2.1 Preparation .....	2
2.1.1 Basic Requirement.....	2
2.1.2 Checking Installing Environment .....	2
2.1.3 Preparing Cables .....	3
2.1.4 Preparing Tools.....	3
2.1.5 Original Packaging .....	3
2.1.6 Run the Device in Safe Area .....	3
2.2 Cable Description and Routing .....	4
2.3 Installing the Explosion-proof Dome.....	5
2.3.1 Disconnecting the Cables.....	6
2.3.2 Wall Mounting .....	6
2.3.3 Pendant Mounting .....	8
2.3.4 Cable Entry Installation.....	10
<b>3 Activate and Access Network Camera</b> .....	<b>11</b>



# 1 Overview

## 1.1 Explosion-proof Dome Overview

The explosion-proof dome captures high quality colored images in dim light environment with its low illumination and offers more details over expansive areas. It is equipped with explosion-proof enclosure made of stainless steel. It can be widely used in places such as: port, wharf, petrochemical industry, military industry. Refer to Figure 1-1 for explosion-proof dome overview.



Figure 1-1 Explosion-proof Dome Overview

## 1.2 Explanation of model naming

The product can be named by rule of Figure 1-2.

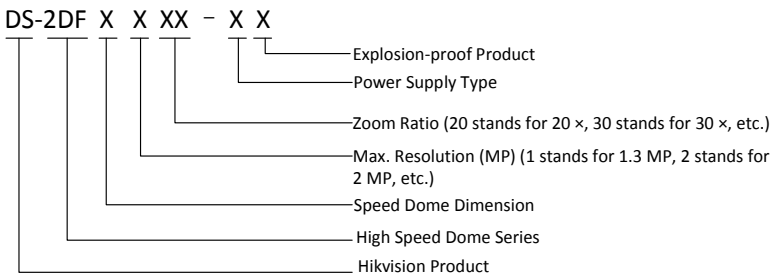


Figure 1-2 Product Naming Rule

## 1.3 Power Supply

For detailed information about the power supply, refer to *Explosion-proof Dome Nameplate*.

## 1.4 Explosion-proof Parameters

For detailed information about explosion-proof parameters, refer to *Explosion-proof Dome Nameplate*.

## 1.5 Mechanical Specification

- Material: 304/316L Stainless Steel.
- Cable Entry of Bracket: One G  $\frac{3}{4}$  explosion-proof cable entry, inner hole diameter  $\Phi 15$ .

## 1.6 Working Environment

- Altitude (Above sea level): Within 2000m.
- Humidity: Within 95%.
- Temperature: Refer to *Explosion-proof Dome Nameplate*.

### **Note:**

To ensure safety of the users and explosion-proof performance of the device, your installation environment must meet the installation requirements of the device you purchased.

# 2 Installation

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## 2.1 Preparation

### 2.1.1 Basic Requirement

- All the electronic operation should be in strictly compliance with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.
- Make sure the device in the package is in good condition and all the assembly parts are included.

### 2.1.2 Checking Installing Environment

- Make sure that there is enough space to install the device and accessories.

- Make sure that the wall is strong enough to withstand at least eight times the weight of the device and accessories.

### 2.1.3 Preparing Cables

You should prepare proper cables according to the actual network bandwidth, transmission distance and installation environment:

- Network Cable
- Power Cord

### 2.1.4 Preparing Tools

Before installation, prepare the tools, such as the expansion screws, electric hammer, electric drill, wrench, screwdriver, electroprobe, and network cable.

### 2.1.5 Original Packaging

When you unpack the device, keep the original package properly, in case of returning or repairing the camera, you can pack the device with the package.

**Note:**

The user should be responsible for any damage caused due to transporting in unoriginal package.

### 2.1.6 Run the Device in Safe Area

It is recommended to trial run the device in the safe area before installation.

**Steps:**

1. Make sure the power cable and network cable are connected properly. Then power on the device to trial run the device.

**Note:**

If there is no network in the safe area, connect CVBS cable to a monitor via auxiliary video cable to test if the device displays image normally.

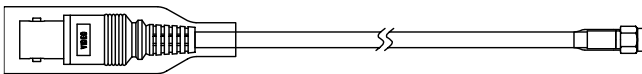


Figure 2-1 Auxiliary Video Cable Connection

2. Check if the device performs power-up action. If not, contact the technical support. Normally, the power-up action should include the device movement of automatically panning and tilting.
3. Check if the image can be displayed normally. If not, contact the technical support.
4. Start the installation after making sure the device works properly.

**Note:**

If the device cannot be powered up, check the cable connection carefully.

## 2.2 Cable Description and Routing

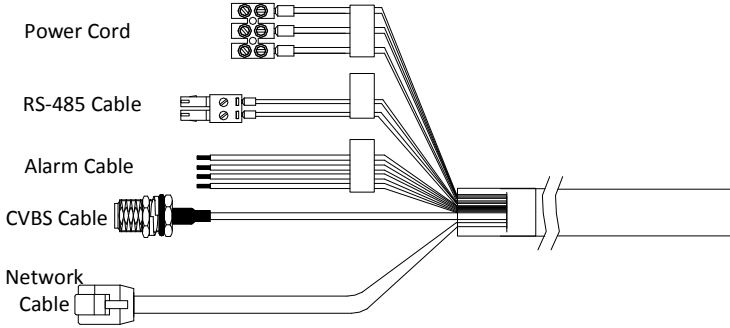


Figure 2-2 Cable Description

### **Notes:**

- The cables vary depending on different device models.
- The three cables of the power cord should be connected to corresponding wires. The red cable should be connected to live wire. The black cable should be connected to neutral wire. The yellow/green cable must be connected to the ground.
- To avoid transmitting interference, route power cables separately.

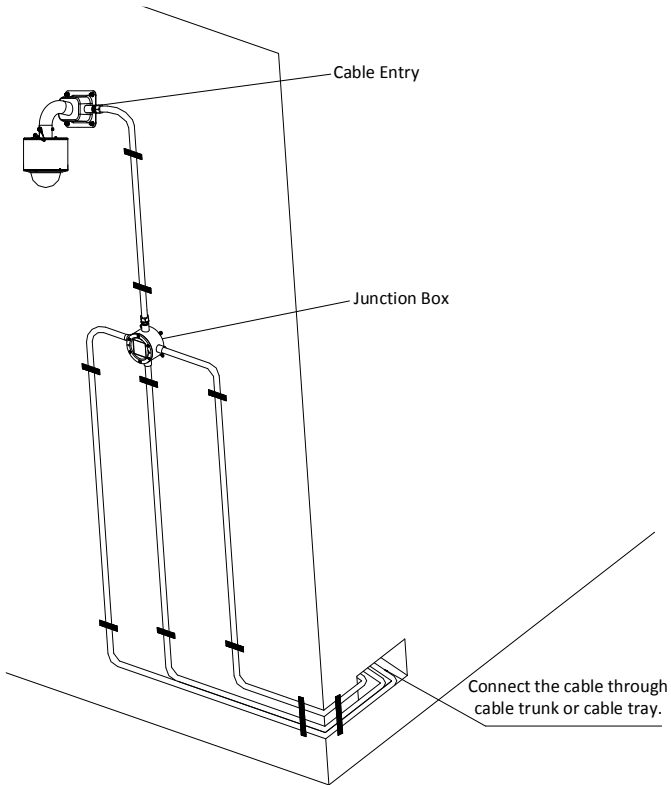


Figure 2-3 Cable Wiring Diagram

## 2.3 Installing the Explosion-proof Dome

### *Before you start:*

Make sure the device in the package is in good condition and all the assembly parts are included.

### *Notes:*

- Do not drag the device with its waterproof cables. The waterproof performance is affected otherwise.
- Do not touch the bubble directly by hand. The image blurs otherwise.
- All installation operations shall be performed when the device is powered off.
- Do not disassemble the device.

### 2.3.1 Disconnecting the Cables

After testing the device, disconnect the cables as shown in Figure 2-2.

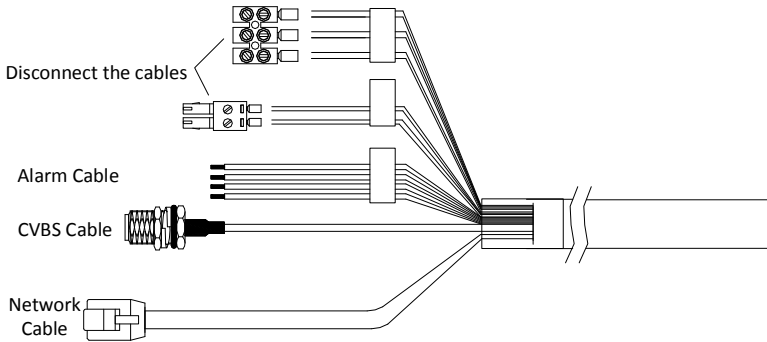


Figure 2-4 Disconnect the cables

### 2.3.2 Wall Mounting

#### **Before you start:**

- Make sure that the wall is thick enough to withstand the expansion screws.
- Make sure that the wall is strong enough to withstand more than eight times the weight of the dome and the accessories.
- There must be enough space for installing the explosion-proof dome and its accessories.
- Make sure the device is power off before connecting the cables.

#### **Steps:**

1. Fix the explosion-proof dome to the bracket.
  - a. Route the cables through the bracket. Align the limit screw on the bracket to the notch on the device, and rotate clockwise until firmly fixed.

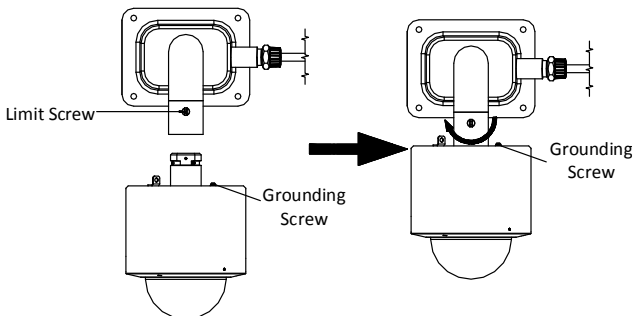


Figure 2-5 Fix the Device to the Bracket

- b. Tighten the two fixing screws on the bracket by hex wrench to secure the explosion-proof dome, and lock the safety rope to the bracket.

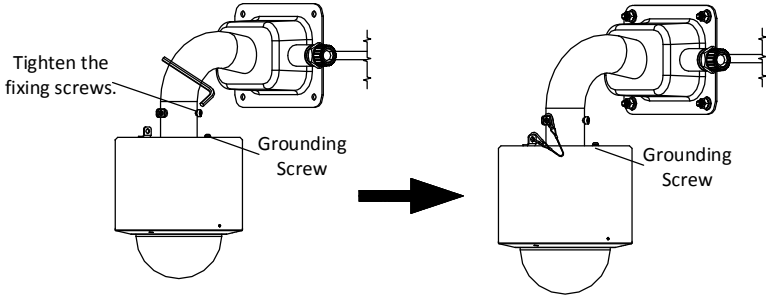


Figure 2-6 Secure the Device

2. Drill four screw holes for  $\phi 12.5$  expansion screws in the wall.

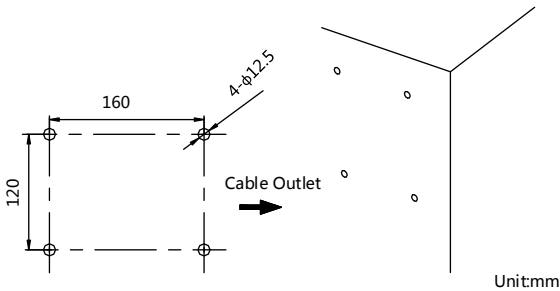


Figure 2-7 Drill Screw Holes

3. Fix the mounting bracket onto the wall by inserting the four expansion screws. Insert the flat washer and the spring washer. Then tighten the four screws to secure the installation plate as shown in Figure 2-8.

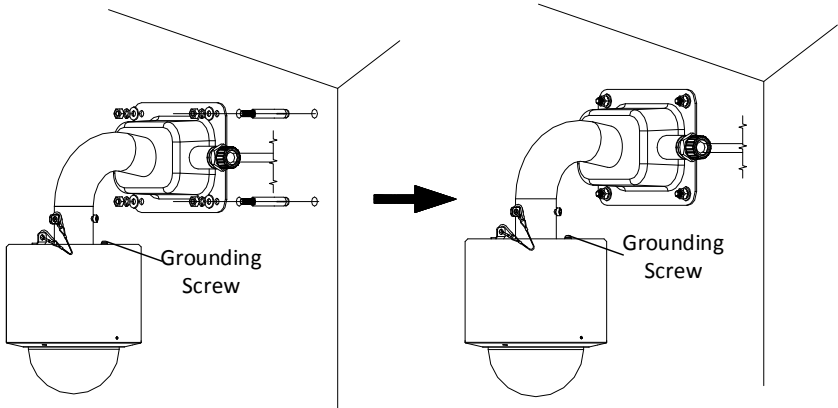


Figure 2-8 Mount the Bracket and Device

4. Remove the protective film on the bubble after the installation is finished.

### 2.3.3 Pendant Mounting

#### ***Before you start:***

- Make sure the ceiling is thick enough to withstand the expansion screws.
- Make sure the ceiling must be strong enough to withstand more than eight times the weight of the dome and its accessories.
- There must be enough space for installing the explosion-proof dome and its accessories.
- Make sure the device is power off before connecting the cables.

#### ***Steps:***

1. Fix the explosion-proof dome to the bracket.
  - a. Route the cables through the bracket. Align the limit screw on the bracket to the notch on the device, and rotate clockwise until firmly fixed.



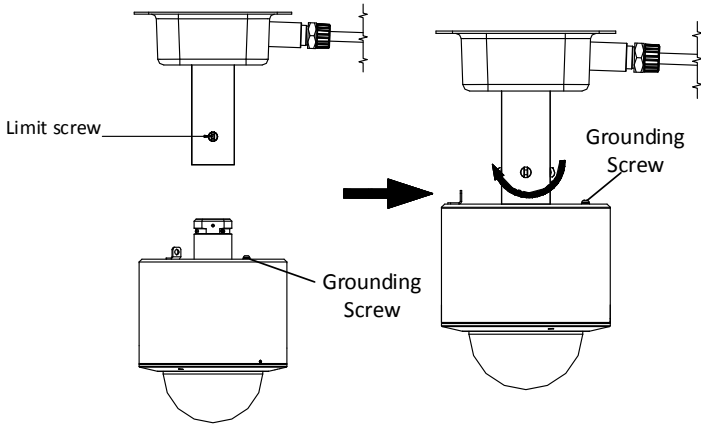


Figure 2-9 Fix the Device to the Bracket

- b. Tighten the two fixing screws on the bracket by hex wrench to secure the device, and lock the safety rope to the bracket.

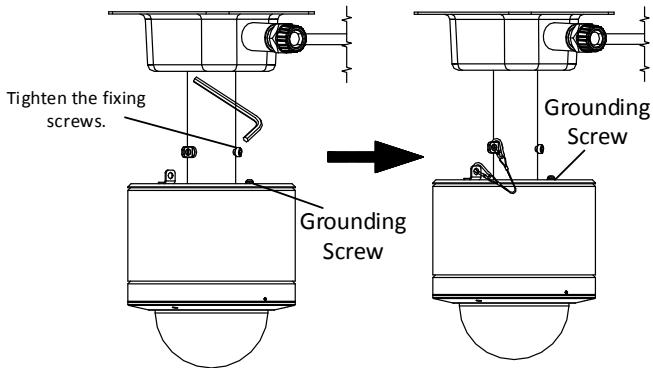


Figure 2-10 Secure the Device

2. Drill four screw holes for  $\phi 12.5$  expansion screws in the wall.

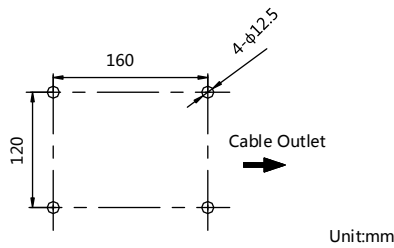


Figure 2-11 Drill Screw Holes

- Fix the mounting bracket onto the wall by inserting the four expansion screws. Insert the flat washer and the spring washer. Then tighten the four screws to secure the installation plate as shown in Figure 2-12.

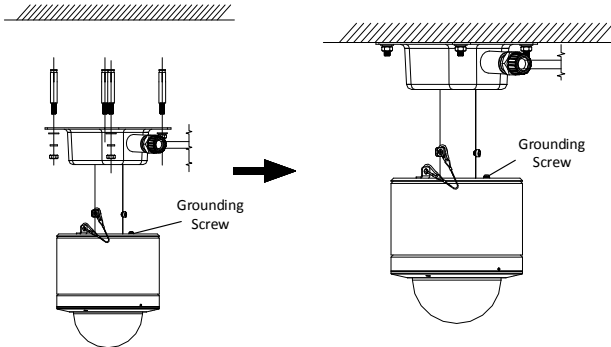


Figure 2-12 Mount the Bracket and Explosion-proof Dome

- Remove the protective film on the bubble after the installation is finished.

### 2.3.4 Cable Entry Installation

#### **Purpose:**

To ensure the explosion-proof performance of the device, you shall route the cable through the cable entry to protect the cables after device installation.

#### **Steps:**

- Loosen and remove the thread protector on the adapter.
- Seal the cable entry by installing the protective steel tube on the adapter as shown in Figure 2-13.

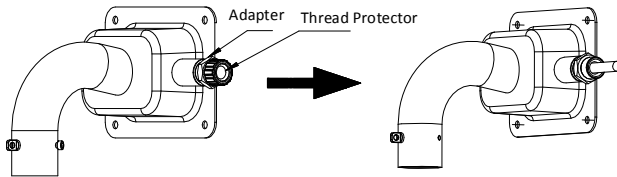


Figure 2-13 Seal the Cable Entry

3. Screw tight the gland nut to the base.

## 3 Activate and Access Network Camera

Scan the QR code to get *Activate and Visit Network Camera*. Note that mobile data charges may apply if Wi-Fi is unavailable.





See Far, Go Further