



# **Explosion-proof Dome**

## **Quick Start Guide**

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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.

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

### Intended Use of the Dome

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

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

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

IP Degree: IP68 (1m, 1h)

Ex Standards:

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

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

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

### Special Conditions for Safe Use

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

### Explosion-proof Dome Nameplate

Explosion-proof Dome	
<b>Product Model:</b>	
<b>Protection Level: IP68(1m/1h)</b>	<b>Temperature: -40°C~ +60°C</b>
<b>Working Voltage: AC100-240V</b>	<b>Working Current: ≤1000mA</b>
<b>Product No.:</b>	<b>Date of Production:</b>
<b>SEV 21 ATEX 0514X</b>	<b>IECEX NEP 20.0029X</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> 
WARNING: DO NOT OPEN WHEN ENERGIZED POTENTIAL ELECTROSTATIC CHARGING HAZARD-SEE INSTRUCTIONS	
<b>Hangzhou Hikvision Digital Technology Co., Ltd.</b> <b>No.555 Qianmo Road, Binjiang District, Hangzhou, 310052, China</b>	

## Safety Instruction



### Warnings

#### Laws and Regulations

The device should be used in compliance with local laws, electrical safety regulations, and fire prevention regulations.

#### Electrical Safety

**CAUTION:** To reduce the risk of fire, replace only with the same type and rating of fuse. The equipment must be connected to an earthed mains socket-outlet.

**Grounding:** The both internal and external earthing shall be connected reliably.

A readily accessible disconnect device with the appropriate rating shall be incorporated external to the equipment.

An overcurrent protective device with the appropriate rating shall be incorporated external to the equipment not exceeding the specification of the building.

An all-pole mains switch shall be incorporated in the electrical installation of the building.

This equipment shall be installed incorporated with UPS to avoid the risk of restart.

#### Battery

This equipment is not suitable for use in locations where children are likely to be present.

**CAUTION:** Risk of explosion if the battery is replaced by an incorrect type.

Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).

L'utilisation ou le remplacement inadéquats de la pile peuvent entraîner un risque d'explosion. Remplacez-la par le même type ou l'équivalent du même type seulement.

Jetez les piles usagées conformément aux directives fournies par le fabricant de la pile.

Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.

Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.

Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.

Dispose of used batteries according to the instructions.

#### Installation

Never place the equipment in an unstable location. The equipment may fall, causing serious personal injury or death.



### Cautions

#### Electrical Safety

Ensure correct wiring of the terminals for connection to an AC mains supply.

The equipment has been designed, when required, modified for connection to an IT power distribution system.

### Fire Prevention

No naked flame sources, such as lighted candles, should be placed on the equipment. The serial port of the equipment is used for debugging only.

### Hot Surface



CAUTION: Hot parts! Burned fingers when handling the parts.

This sticker is to indicate that the marked item can be hot and should not be touched without taking care. Wait one-half hour after switching

off before handling parts.

The device with this sticker is intended for installation in a restricted access location. Access can only be gained by service persons or by users who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken.

### Installation

Install the equipment according to the instructions in this manual.

To prevent injury, this equipment must be securely attached to the wall in accordance with the installation instructions.

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

Make sure that the wall is strong enough to withstand at least 8 times the weight of the device and the mount.

Make sure that the power has been disconnected before you wire, install, or disassemble the device.

### Transportation

Keep the device in original or similar packaging while transporting it.

Do not drop the product or subject it to physical shock.

### Power Supply

The power source should meet limited power source or PS2 requirements according to IEC 60950-1 or IEC 62368-1 standard.

Refer to the device label for the standard power supply. Please make sure your power supply matches with your device.

Use a power adapter provided by qualified manufacturers. It is recommended to provide an independent power adapter for each device as adapter overload may cause over-heating or a fire hazard.

### System Security

Please understand that you have the responsibility to configure all the passwords and other security settings about the device, and keep your user name and password.

### Maintenance

If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.

A few device components (e.g., electrolytic capacitor) require regular replacement. The average lifespan varies, so periodic checking is recommended. Contact your dealer for details.

To ensure explosion-proof performance, do not damage explosion-proof surface.

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.

Ambient temperature: -40°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.

### **Cleaning**

Please use a soft and dry cloth to clean the inner and outer surfaces. Do not use alkaline detergents.

Keep the surface clean and prevent dust accumulation. DO NOT clean the surface by compressed air duster.

### **Using Environment**

When any laser equipment is in use, make sure that the device lens is not exposed to the laser beam, or it may burn out.

Do not aim the lens at the sun or any other bright light.

To avoid heat accumulation, good ventilation is required for a proper operating environment.

DO NOT expose the device to extremely hot (the operating temperature shall be -40°C to 60°C (-40°F to 140°F)), cold, dusty, corrosive, saline-alkali, or damp environments. For temperature and humidity requirements, see device specification.

DO NOT expose the device to high electromagnetic radiation.

To avoid fire danger caused by electrostatic charge, never touch or wipe the speed dome in explosive environment. Perform the wiping and replacing accessories only under non-explosive environment with the provided glove.

### **Emergency**

If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

### **Time Synchronization**

Set up device time manually for the first time access if the local time is not synchronized with that of the network. Visit the device via web browser/client software and go to time settings interface.

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# 1 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, and petrochemical industry.

## 1.1 Explanation of Model Naming

The product can be named by rules of Figure 1-1.

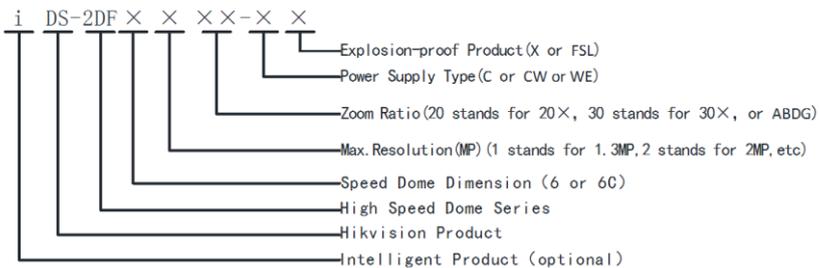


Figure 1-1 Product Naming Rule

## 1.2 Power Supply

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

## 1.3 Explosion-proof Parameters

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

## 1.4 Mechanical Specification

- Material: 304/316L Stainless Steel.
- Cable outlet: One G 3/4 explosion-proof cable outlet, inner hole diameter  $\Phi 15$ .

## 1.5 Working Environment

- Altitude (Above sea level): Within 2000 m.

- Humidity: Within 95%.
- Temperature: Refer to *Explosion-proof Dome Nameplate*.

**Note:**

To ensure safety of the users and explosion-proof performance of the speed dome, your installation environment must meet the installation requirements of the speed dome 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.

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 speed dome cannot be powered up, check the cable connection carefully.

## 2.2 Cable Description and Routing

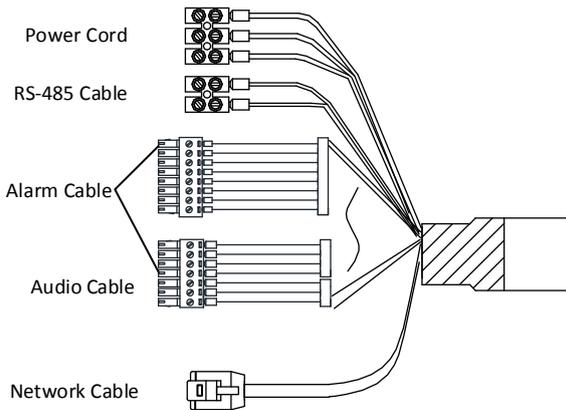


Figure 2-1 Cable Description

**Notes:**

- The cables vary depending on different speed dome 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.

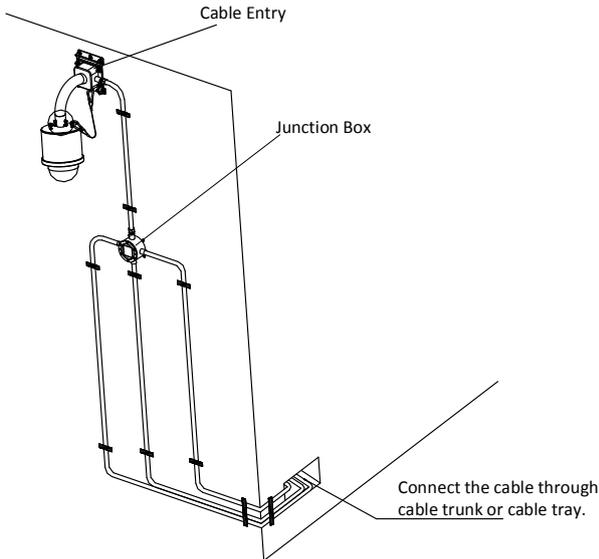


Figure 2-2 Cable Wiring Diagram

## 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 speed dome 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 speed dome is powered off.
- Do not disassemble the speed dome.

### 2.3.1 Disconnecting the Cables

After testing the speed dome, disconnect the cables as shown in Figure 2-3.

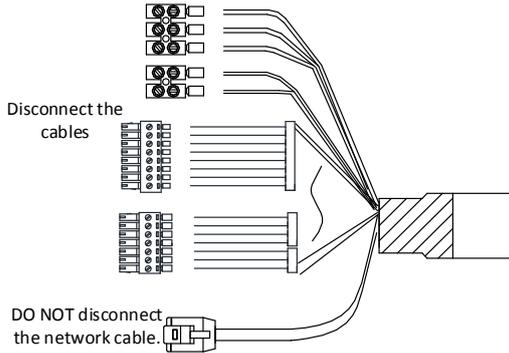


Figure 2-3 Disconnecting the cables

### 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 speed dome is power off before connecting the cables.

#### Steps:

1. Drill four screw holes for  $\phi 16$  expansion screws in the wall, and fix the installation plate onto the wall by inserting the four M12  $\times$  130 expansion screws

into the wall. Make sure that  mark is upward.

2. Insert the flag washer and the spring washer. Then tighten the four screws to secure the installation plate as shown in Figure 2-4.

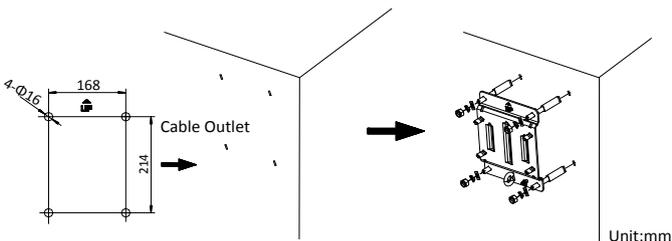


Figure 2-4 Install the Installation Plate

3. Route the cables into the bracket body. Insert three preassemble screws into the preassemble screw holes on the cable joint (do not tighten the preassemble screws) as shown in Figure 2-5.

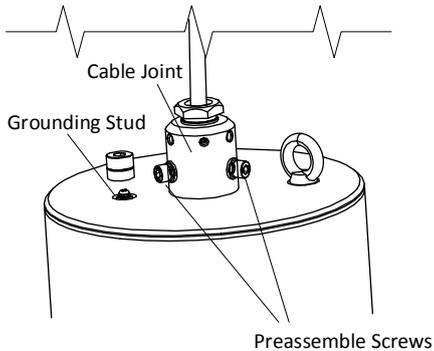


Figure 2-5 Insert the Screws

**Note:**

The grounding stud is used for grounding connection to avoid the accumulation of static electricity

4. Align the bracket with the cable joint and rotate the bracket clockwise until three preassemble screws on the cable joint hooks onto three slots on the bracket as shown in Figure 2-6.

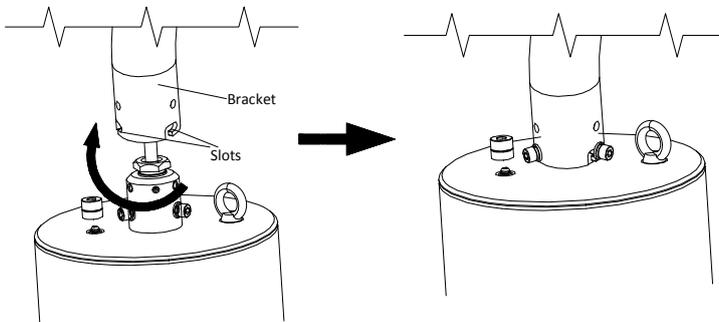


Figure 2-6 Rotate the Bracket

5. Screw three fixing screws into the fixing screws holes on the bracket. Then tighten three preassemble screws to secure the speed dome as shown in Figure 2-7.

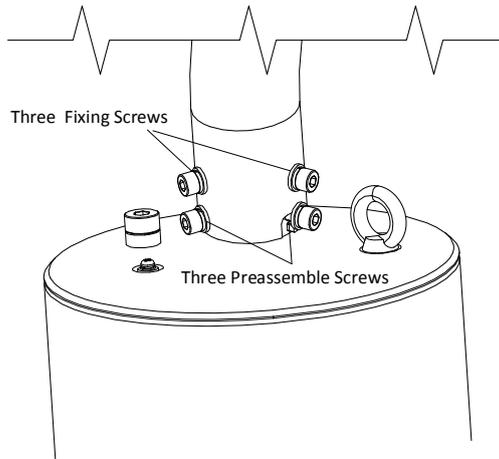


Figure 2-7 Secure the Speed Dome

6. Install the bracket to the installation plate.
  - a. Hang the safety rope to the speed dome and the hook on the bracket.
  - b. Route the cables of the speed dome through the bracket and connect the corresponding cables.
  - c. Hang the speed dome to the bracket by aligning the holes of bracket with the screws and move the speed dome downward to secure the speed dome as shown as Figure 2-8.

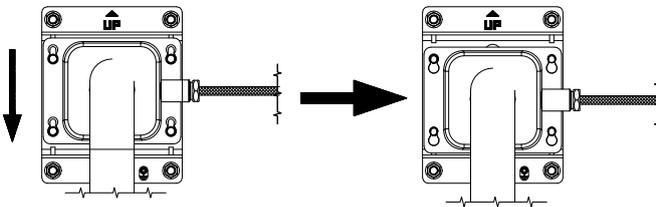


Figure 2-8 Install Bracket to Installation Plate

7. Secure the bracket by putting in the flat washer and the spring washer. Then tighten the gland nut.

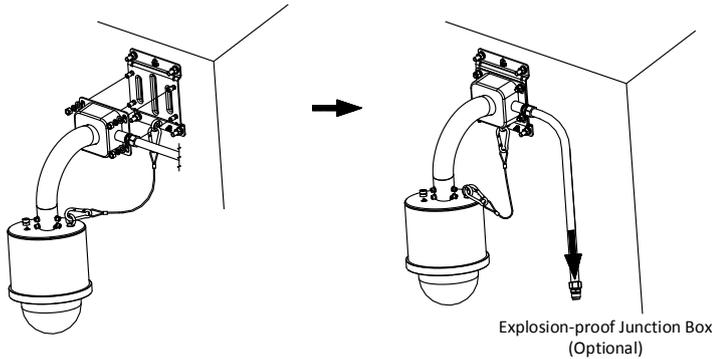


Figure 2-9 Secure the Bracket

- 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 speed dome is power off before connecting the cables.

**Steps:**

- Drill four screw holes for  $\phi 16$  expansion screws in the wall, and fix the installation plate onto the wall by inserting the four M12  $\times$  130 expansion screws



into the wall. Make sure that **UP** mark is at the cable outlet and is upward.

- Insert the flag washer and the spring washer. Then tighten the four screws to secure the installation plate as shown in Figure 2-10.

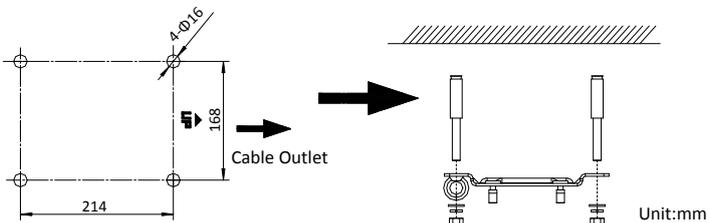


Figure 2-10 Install the Installation Plate

3. Route the cables into the bracket body. Insert three preassemble screws into the preassemble screw holes on the cable joint (do not tighten the preassemble screws) as shown in Figure 2-11.

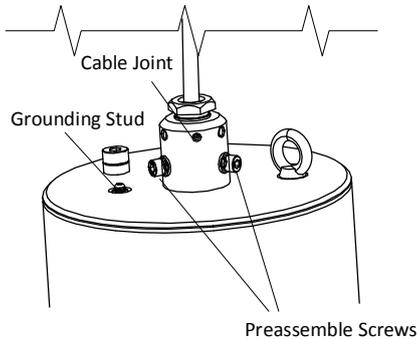


Figure 2-11 Insert the Screws

**Note:**

The grounding stud is used for grounding connection to avoid the accumulation of static electricity.

4. Align the bracket with the cable joint and rotate the bracket clockwise until three preassemble screws on the cable joint hooks onto three slots on the bracket as shown in Figure 2-12.

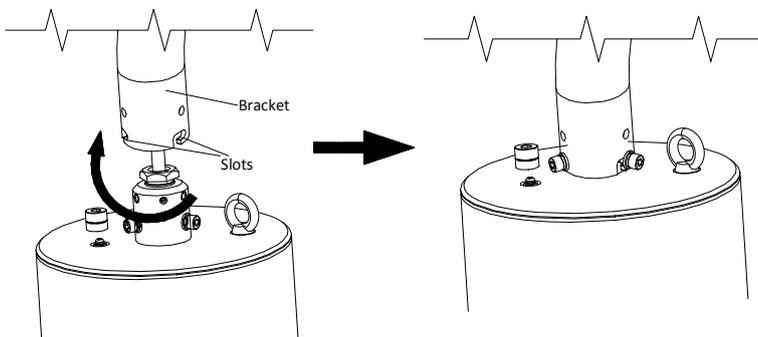


Figure 2-12 Rotate the Bracket

5. Screw three fixing screws into the fixing screws holes on the bracket. Then tighten three preassemble screws to secure the speed dome as shown in Figure 2-13.

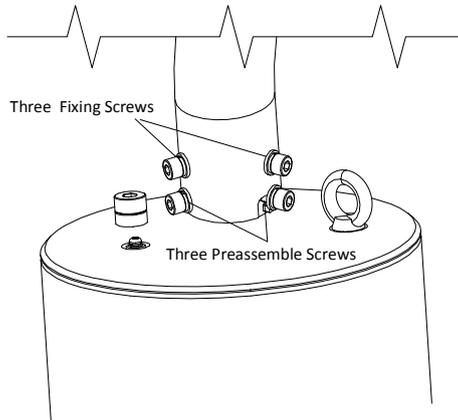


Figure 2-13 Secure the Speed Dome

6. Install the bracket to the installation plate.
  - a. Hang the safety rope to the speed dome and the hook on the bracket.
  - b. Route the cables of the speed dome through the bracket and connect the corresponding cables.
  - c. Hang the speed dome to the bracket by aligning the holes of bracket with the screws and move the speed dome following the direction in Figure 2-14 to secure the speed dome.

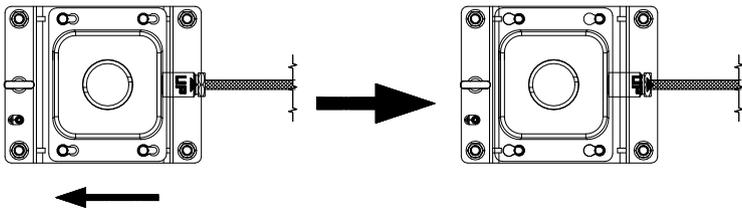


Figure 2-14 Install Bracket to Installation Plate

7. Secure the bracket by putting in the flat washer and the spring washer. Then tighten the gland nut.

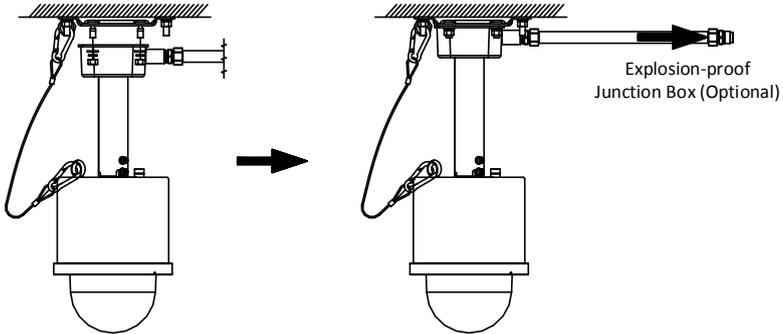


Figure 2-15 Secure the Bracket

8. 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 speed dome, you shall route the cable through the cable entry to protect the cables after speed dome installation.

#### **Steps:**

1. Loosen and take off the gland nut of the cable entry.
2. Seal the cable entry by routing the cables through the sealing ring, washer, and gland nut in order as shown in Figure 2-16.

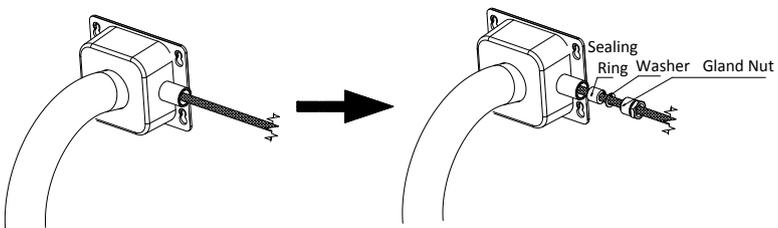


Figure 2-16 Seal the Cable Entry

3. Screw tight the gland nut to the base.

## 2.4 Protective Measures for Outdoor Installation

If the device is installed outdoors, necessary protective measures should be taken to ensure safety. Scan the following QR code to get protective measures for outdoor installation.



## 3 Activate and Access Network Camera

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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