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**3-inch 2 Megapixel  
Intelligent Network Speed Dome Installation Manual**

**Version 1.0.0**

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## Welcome

Thank you for purchasing our speed dome!

**Please read the following safeguards and warnings carefully before you install or use the product!**

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# Important Safeguards and Warnings

## Safety Measures

### 1. Qualified Engineer Needed

- The installation engineer or maintenance engineer shall have corresponding CCTV system installation certificate or maintenance qualification certificate.
- The installation engineer or maintenance engineer shall have qualification certificate for work at height.
- The installation engineer or maintenance engineer shall have the basic knowledge and operation technique for low-voltage cable layout and low-voltage electronic cable connection.
- Please read the installation manual carefully and keep it well for future reference,
- We are not liable for any problems caused by unauthorized modifications or attempted repair.

### 2. Lifting Appliance Requirement

- Please select the proper speed dome installation mode and use the lifting appliances at the safety environment.
- The lifting appliances shall have the enough capacity to reach the installation height.
- The lifting appliances shall have safe performance.

**The precaution measures include two types: Warning and Note.**

- **Warning:** It is to alert you there is an optional risk of death or series injury!
- **Note:** It is to alert you there is an optional risk of damage or property loss!

## Warning

1. All installation and operation here should conform to your local electrical safety codes. We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.
2. Be sure to use all the accessories (such as power adapter) recommended by manufacturer.
3. Do not connect several speed domes to one power adapter. It may result in overheat or fire if it exceeds the rated load.
4. Before you connect the cable, install or uninstall, or begin the daily maintenance work, please turn off the power and unplug the power cable.
5. Please make sure the produce is secure firmly on the wall or the ceiling.
6. Please turn off the power and unplug the power cable, If there is any smoke, disgusting smell, or noise. Please contact your local retailer or customer service centre for help.

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7. All the examination and repair work should be done by the qualified service engineers. We are not liable for any problems caused by unauthorized modifications or attempted repair.

## Note

### 1. Safety Transportation

- Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.
- This series product must use split type package during the transportation.
- We are not liable for any damage or problem resulting from the integrated package during the transportation.

### 2. When device is malfunction

Shut down the device and disconnect the power cable immediately if there is smoke, abnormal smell or abnormal function. Please contact your local retailer ASAP.

### 3. Do not try to dismantle or modify the device

- There is risk of personal injury or device damage resulting from opening the shell.
- Please contact your local retailer if there is internal setup or maintenance requirement.
- We are not liable for any problems caused by unauthorized modifications or attempted repair.

### 4. Do not allow other object falling into the device

- Please make sure there is no metal or inflammable, explosive substance in the speed dome.
- The above mentioned objects in the device may result in fire, short-circuit or damage.
- Please shut down the device and disconnect the power cable if there is water or liquid falling into the camera. Please contact your local retailer ASAP.
- Please pay attention to the camera. Avoid the sea water or rain to erode the camera.

### 5. Handle carefully

Do not allow this series product fall down to the ground.  
Avoid heavy vibration.

### 6. Installation Environment Requirement

- This series speed dome should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.
- This series product shall be away from the strong electromagnetism radiant, please keep it away from wireless power, TV transmitter, transformer and etc.

### 7. Daily Maintenance

- Please use the soft cloth to clean dust on the shell, or you can use soft cloth with cleaning liquid to clean the shell and then use soft cloth to make it dry.

- 
- Do not use gasoline, dope thinner or other chemical material to clean the shell. It may result in shell transfiguration or paint flake.
  - Do not allow the plastic or rubber material to touch the shell for a long time. It may result in paint flake.

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# 1 INTELLIGENT SPEED DOME INSTALLATION

## PREPARATION

### 1.1 Basic Requirement

- All installation and operation here should conform to your local electrical safety codes.
- Before installation, please open the package and check all the components are included. Please make sure the speed dome installation environment and installation mode can meet your requirement. If there is special requirement, please contact your local retailer for more information.
- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

### 1.2 Check installation space and installation location intension

Please make sure the installation environment has enough space to install the speed dome and its corresponding bracket.

Please make sure the ceiling, wall and the bracket can support the speed dome and its corresponding installation component. It shall sustain the 8X weight of the speed dome.

### 1.3 Please keep all package material well for future use

Please keep speed dome package material well in case you need to send it back to your local retailer or manufacturer for maintenance work.

Non-original package material may result in device damage during the transportation.



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## 2 SETUP BEFORE INSTALLATION

### 2.1 Check Accessories

Before the installation, please check the accessories one by one according to the packing list. Please make sure all the components listed are included.

### 2.2 Open Device

Remove the package and then take out the device. Open the transparent cover and take out the packing material EPE around the speed dome driver. Please remove the dustproof paster from the pedestal. See Figure 2-1.

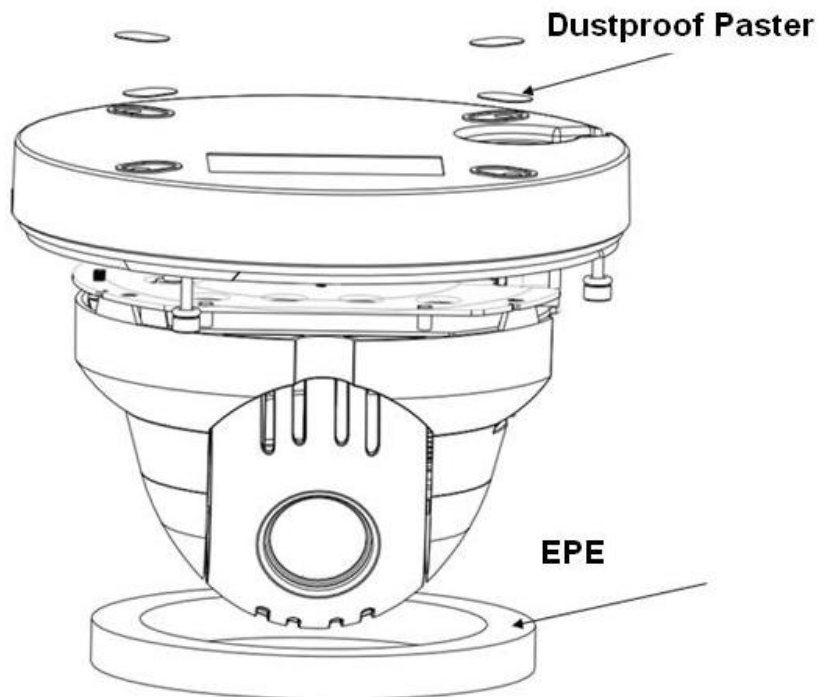


Figure 2-1

### 2.3 About Ceiling Installation Position Map

The ceiling installation position map is to define hard ceiling holes position and cable exit position. The shadow part is the mechanical blind spot. Please paste it according to your actual requirement to avoid mechanical blind spot. See Figure 2-2.

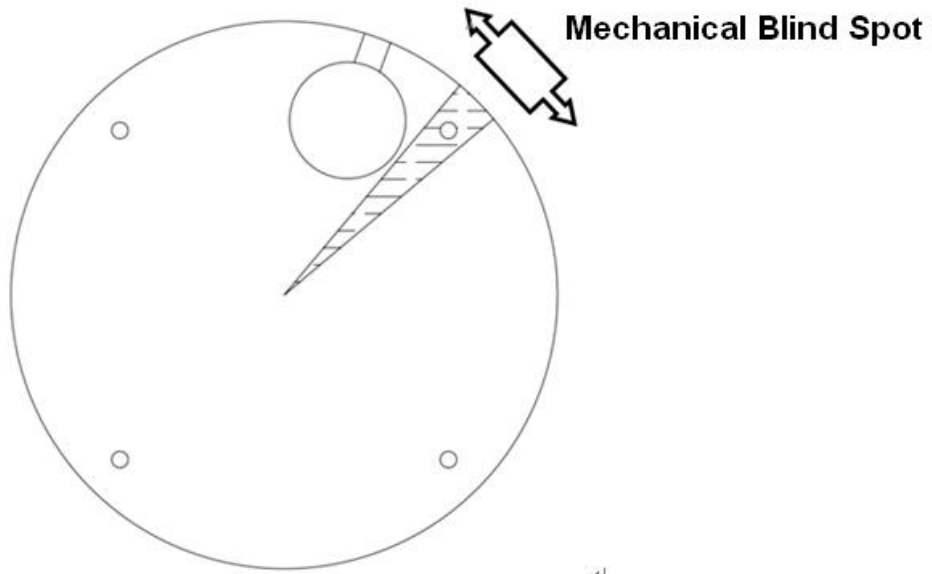


Figure 2-2

## 2.4 TF Card Slot and Reset Button

TF card slot and RESET button is shown as in Figure 2-3.

Press the RESET button for at least five seconds; you can restore factory default setup.

**Before you remove the SD card, please make sure it is not in read/write status; otherwise you may lose data or result in SD card damage.**

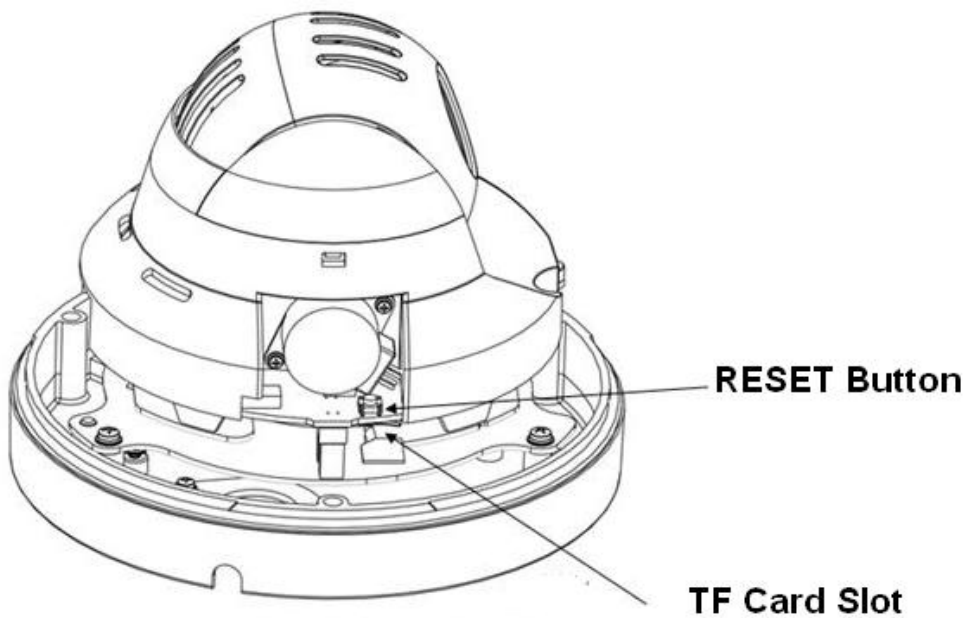


Figure 2-3

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## 3 CEILING INSTALLATION

### 3.1 Installation Components

The ceiling installation dome body is shown as in Figure 3-1.

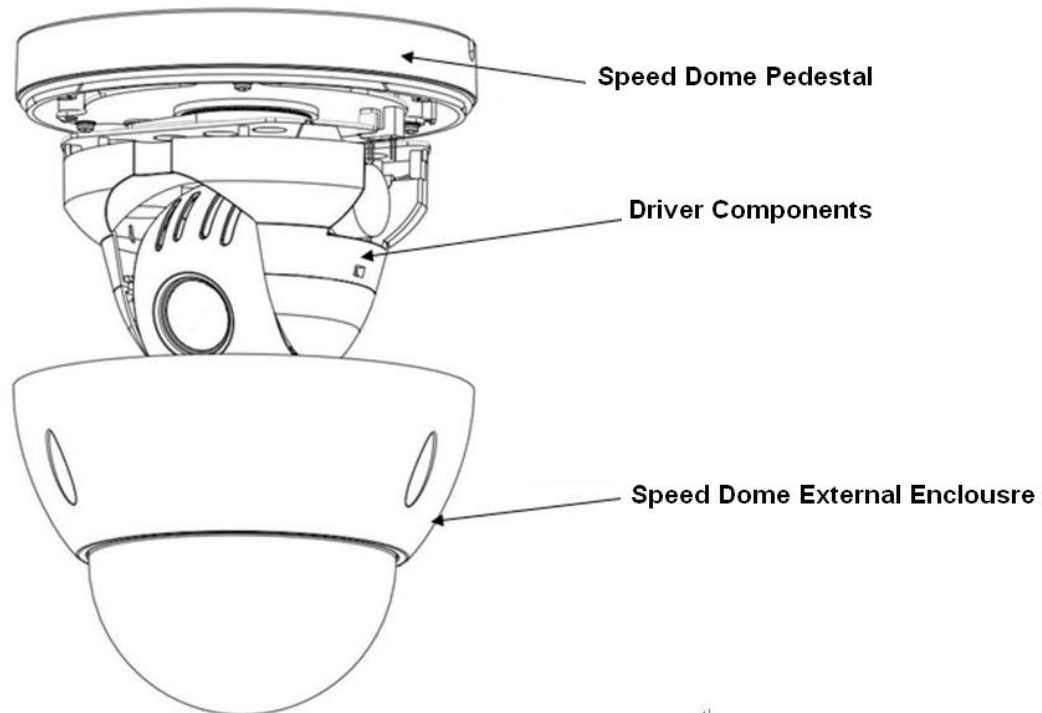


Figure 3-1

### 3.2 Ceiling Installation Steps

#### 3.2.1 Installation Requirements

The ceiling mount speed dome can be installed in the hard construction wall in the indoor environments. Before the installation, please make sure:

- The wall is thick enough to install the expansion bolt.
- The wall can at least sustain the 8x weight of the speed dome.

#### 3.2.2 Installation Steps

- 1) The ceiling installation has two cable exit modes: One is to pull the cable through the side cable exit of the speed dome without dig holes on the ceiling. The other is to dig holes on the ceiling and pull the cable through the ceiling.
- 2) Confirm installation position and cable exit mode. Use the ceiling installation position map to dig holes on the ceiling and then put the four plastic expansion bolts firmly.
- 3) In Figure 3-2, pull the cable according to your cable exit mode. And then use four screws to secure the pedestal and driver of the ceiling speed dome on the ceiling. Turn the screws to the plastic expansion bolts.
- 4) In Figure 3-3, use three screws (provided) to secure the external enclosure on the pedestal and fix firmly,

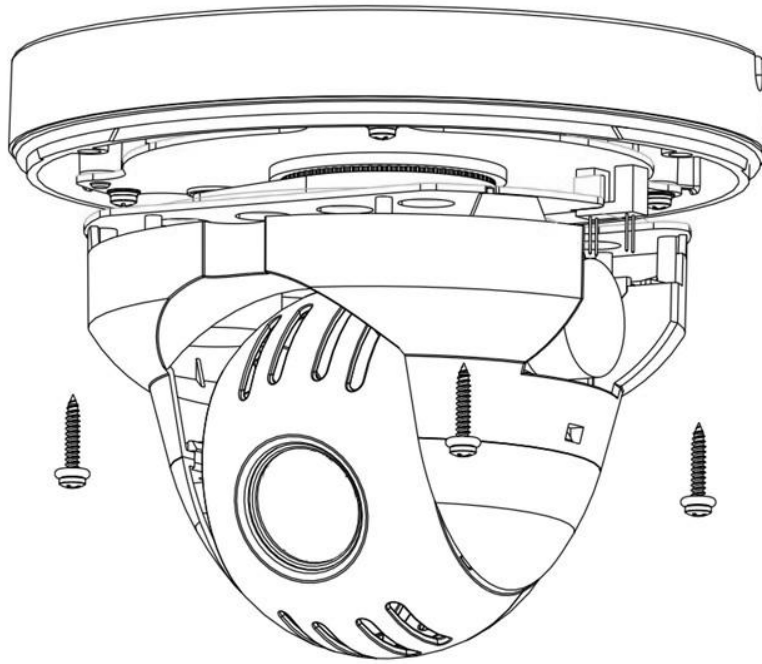


Figure 3-2

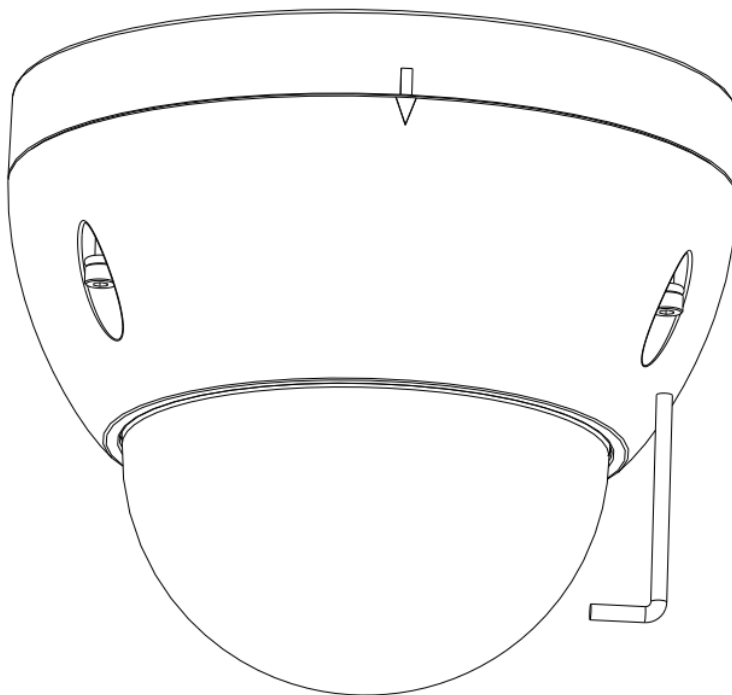


Figure 3-3

### 3.2.3 Cable Connection

The step listed below is for ceiling or wall mount series product.

Please refer to Figure 3-4 to connect the power cable, network cable, audio cable, alarm input/output pin of the intelligent speed dome composite cable according to your actual requirements. Please use insulation tape to seal the cable connection ports to do proper waterproof work.

The audio input and output port are standard RCA port and power port is standard DC5.5\*2.1F port.

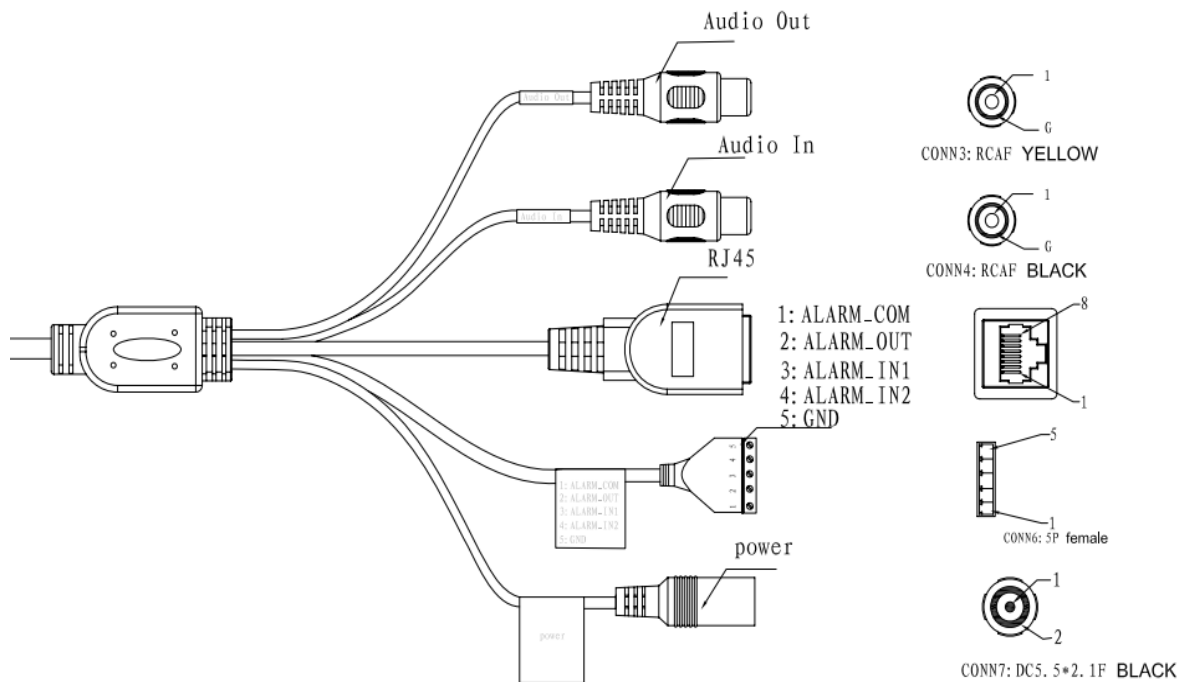


Figure 3-4

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## 4 WALL MOUNT BRACKET INSTALLATION

### 4.1 Component Installation

Wall mount bracket is shown as below. See Figure 4-1.

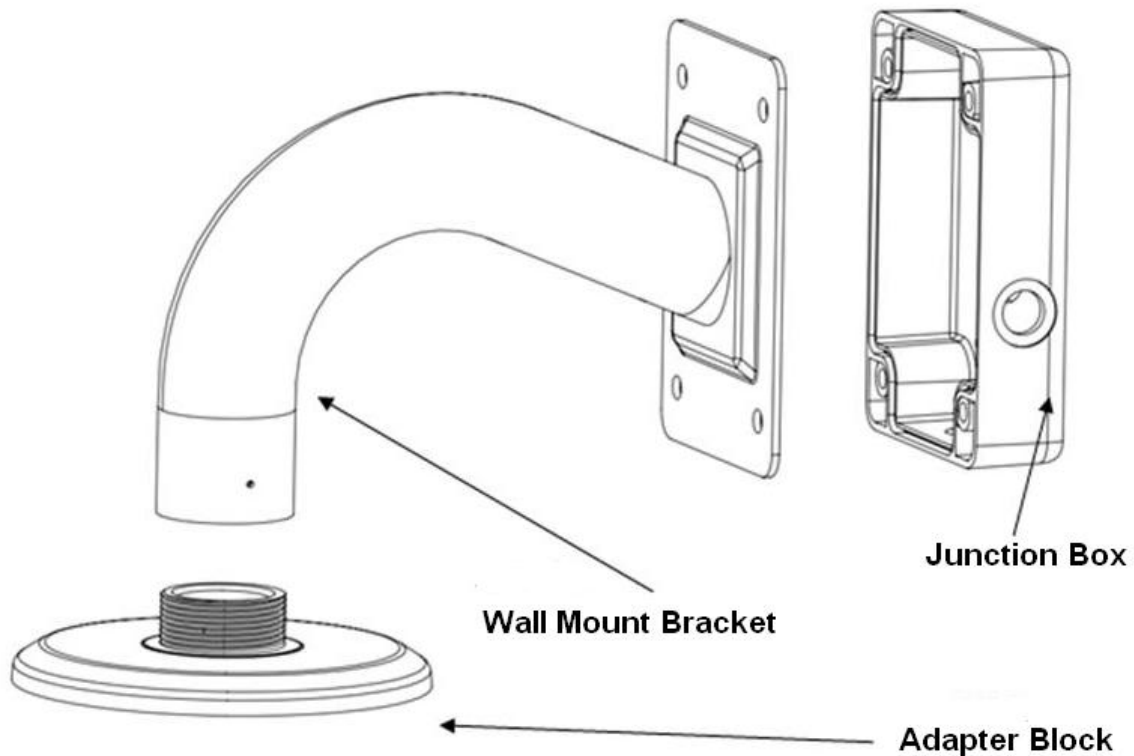


Figure 4-1

### 4.2 Installation

#### 4.2.1 Installation Requirements

The wall mount speed dome can be installed in the hard construction wall in the indoor environments. Before the installation, please make sure:

- The wall is thick enough to install the expansion bolt.
- The wall can at least sustain the 8x weight of the speed dome.

#### 4.2.2 Installation Steps

1). Please draw four holes position in the wall according to the holes of the bottom of junction box. Then you can dig four holes and insert the expansion bolts (not provided). Use four hex bolts and flat washer to fix the box in the expansion bolts. See Figure 4-2.

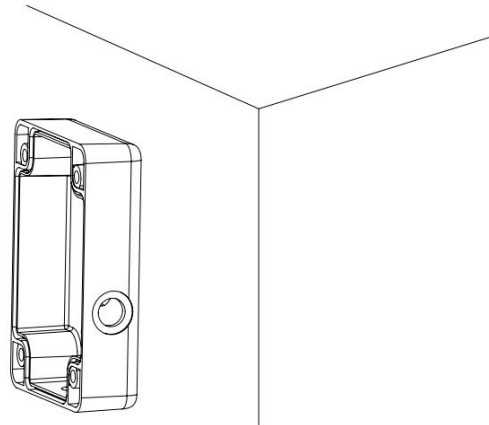


Figure 4-2

2). Connect the adapter block to the internal thread of the wall mount bracket. Pull the intelligent speed dome composite cable through the adapter block and end of the column of the wall-mount bracket and pull it out of the other end of the wall mount bracket. Line up the pedestal to the internal hole of the adapter block. Insert four screws and rubber washer. See Figure 4-3. Please make sure the cable exit is at the rear end of the wall mount bracket (or the arrow is at the front of the bracket). **Please note this step is very important. Please make sure the screws are firm, otherwise, it may result in falling risk of the intelligent speed dome.**

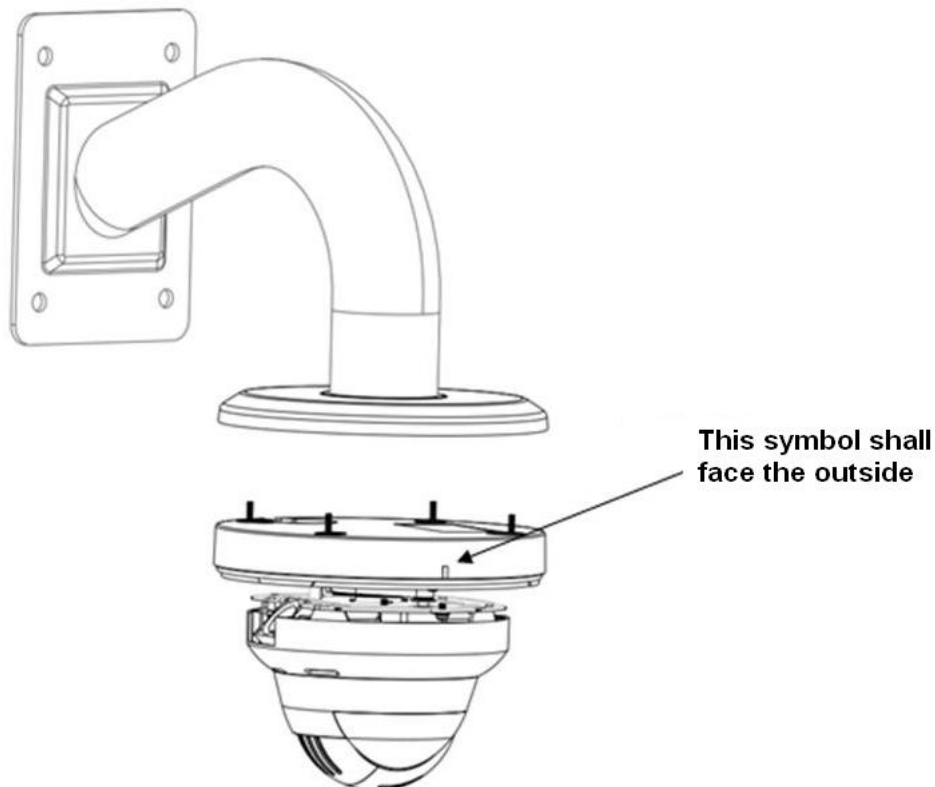


Figure 4-3

3) Complete the cable connection of the junction box and use 4 M8 screws to secure the wall mount bracket in the box. Now the installation is complete. See Figure 4-4.

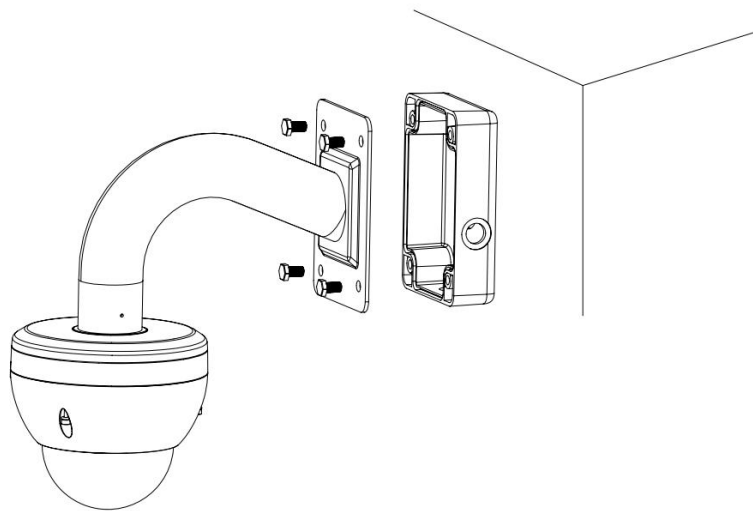


Figure 4-4



## 5 APPENDIX I 24V AC WIRE GAUGE AND TRANSMISSION DISTANCE RELATIONSHIP SHEET

The recommended max transmission distance is under the following environments: The wire diameter is fixed and the DC 24V power voltage loss rate is below 10%. For the device of DC power supplying, the max allowed voltage loss rate is 10%.

Please refer to the bold line (The second line) in the following sheet for 24V AC wire gauge and transmission distance relationship.

Feet(m) mm W	0.8000	1.000	1.250	2.000
10	243 (74)	381 (116)	597 (181)	1529 (465)
<b>12</b>	<b>204 (62)</b>	<b>316 (96)</b>	<b>495 (150)</b>	<b>1277 (387)</b>
20	121 (37)	190 (58)	297 (90)	765 (232)
30	79 (24)	125 (38)	198 (60)	511 (155)
40	56 (18)	90 (29)	143 (45)	362 (110)
50	47 (14)	75 (22)	119 (36)	301 (91)
60	40 (12)	64 (19)	102 (31)	258 (78)
70	35 (10)	56 (17)	89 (27)	226 (68)
80	31 (9)	50 (15)	79 (24)	201 (61)
90	28 (8)	45 (13)	71 (21)	181 (55)
100	25 (7)	41 (12)	65 (19)	164 (49)

## 6 APPENDIX II 12V AC WIRE GAUGE AND TRANSMISSION DISTANCE RELATIONSHIP SHEET

The recommended max transmission distance is under the following environments: The wire diameter is fixed and the DC 12V power voltage loss rate is below 10%. For the device of DC power supplying, the max allowed voltage loss rate is 10%.

Please refer to the bold line (The first line) in the following sheet for 12V AC wire gauge and transmission distance relationship.

Feet(m) mm W	0.8000	1.000	1.250	2.000
	<b>10</b>	<b>62 (18)</b>	<b>96 (29)</b>	<b>151(45)</b>
12	51 (15)	80 (24)	126 (37)	323 (96)
15	41 (12)	64(19)	100 (30)	258 (77)
20	31 (9)	48 (14)	75 (22)	193 (58)
30	20 (6)	32 (9)	50 (15)	129 (38)
40	15 (4)	24 (7)	37 (11)	96 (29)
50	12 (3)	19 (5)	30 (9)	77 (23)

## 7 APPENDIX III WIRE GAUGE REFERENCE SHEET

Metric bare wire diameter (mm)	AWG	SWG	Bare wire cross section (mm <sup>2</sup> )
0.050	43	47	0.00196
0.060	42	46	0.00283
0.070	41	45	0.00385
0.080	40	44	0.00503
0.090	39	43	0.00636
0.100	38	42	0.00785
0.110	37	41	0.00950
0.130	36	39	0.01327
0.140	35		0.01539
0.160	34	37	0.02011
0.180	33		0.02545
0.200	32	35	0.03142
0.230	31		0.04115
0.250	30	33	0.04909
0.290	29	31	0.06605
0.330	28	30	0.08553
0.350	27	29	0.09621
0.400	26	28	0.1257
0.450	25		0.1602
0.560	24	24	0.2463
0.600	23	23	0.2827
0.710	22	22	0.3958
0.750	21		0.4417
0.800	20	21	0.5027
0.900	19	20	0.6362
1.000	18	19	0.7854
1.250	16	18	1.2266
1.500	15		1.7663
2.000	12	14	3.1420
2.500			4.9080
3.000			7.0683

### Note

- This manual is for reference only. Slight difference may be found in the user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective

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**owners.**

- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local service engineer for more information.**