

## Installation Manual

### Indoor / Outdoor Speed Dome Camera



Note: Please read the following before installation

## Safety precautions

1. Select a proper location and use safe hoist for installing speed dome cameras.
2. Confirm that the hoist is capable of lifting to the installation position.
3. Proper protective measures must be provided in the hoist, for protecting engineering staffs.
4. Confirm that power supply is 110V/220V. Ensure safety precautions for preventing electric shock.

## Warning indications for use

1. When using this product, please follow the local electrical appliance regulations for safety concern.
2. This product is using AC24V power input, for safety of use, do not use any power supply other than that specified.
3. For the safety of the engineering staffs, apply power only upon completion of installation.

## Requirements for Operation environment

1. Environmental requirements for indoor type speed dome cameras:
  - Environment temperature:  $-10^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
  - Environment humidity:  $<90\%$
  - Power supply: AC24V, 2.0A, 50/60Hz
2. Environmental requirements for outdoor type speed dome cameras:
  - Environment temperature:  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
  - Environment humidity:  $<90\%$
  - Power supply: AC24V, 2.0A, 50/60Hz

## Precautions on installation

1. Basic requirements for installation
  - a. Follow local regulations about installation safety request.
  - b. Check out if accessories are complete. Optional accessories are required for different installation sites. Please contact your local distributors for proper installation accessories, so that the camera could be installed safely without causing danger.
2. Check if the installation location is of sufficient height.

3. Check if the installation location is strong enough for supporting cameras. Make sure installation spots (ceiling or wall) is of sufficient strength to support the camera and bracket without immediate danger of falling.

#### 4. Cable standards

Coaxial cable for image signal:

Select proper cable length for your installation distance. Recommended spec. is as follows:

RG59/U:	300ft (100 meters)
RG6/U:	700ft (210 meters)
RG11/U:	1200ft (360 meters)

RS485 cable:

Please comply with RS485 wiring standards and select proper RS485 cable. Improper cable may result in RS485 communication transmission error, which may cause speed dome cameras to react incorrectly. Please pay much attention to this prior to installation.

When thinner or lower anti-interference RS485 cable is used for connecting the camera, the maximum transmission distance may be shortened and vice versa. Standard rule for RS485 transmission distance:

When using 18AWG(Belden 8760) Shielded Twisted Pair Cable, different control Baud Rate will have different transmission distance performance, the ideal is as below table:

Baud rate	Max. Transmission Distance
2400	1200 meters
4800	1000 meters
9600	800 meters

More details will be given in the follow-up sections.

#### 5. Setting of Camera Position Code

Prior to installation, setup ID address and communication protocol of your camera firstly, then you can install it. While when re-setting of ID or protocol is necessary after installation, please avoid such resetting when power of camera is "ON" and please POWER-OFF firstly the camera before resetting, then this new resetting will become valid.

#### 6. Self Test of Camera

Before installing this camera, please execute camera self-testing as following:

when powering on the camera, it will automatically execute tilt up/down scanning, then pan horizontal scanning for around 20~30 seconds, then camera will stop at the Preset Point 1. Upon completion of these, the speed dome camera is in normal condition.

7. Please keep the original packaging

After unpacking the camera, take good care of the original packaging. In case any problem occurred, it can be used to re-pack cameras for returning to the local distributor or manufacturer for repair.

8. Remove protection materials before supplying power to the camera, so as to prevent it from faulty operation or causing mechanical errors.

## Accessories and Installation

### 1. Precautions

This product is normally installed in an elevated position. Installation work should comply with local safe regulations.

Proper safety precautions and protective measures shall be taken for installing the camera.

For the personnel safety sake, carry out electrification and product test only after completion of installation work.

#### Safety Pin

After done setting the ID Address for the speed dome, please remove the Safety Pin (see below picture) before turning on the power. Failure to do so will result damaging the speed dome and causing unnecessary malfunction.



### Electrification test

Before connecting the power, make a final check to confirm correct wiring.

When powering on the camera, it will automatically execute self testing by doing firstly Tilt up/down scanning, then pan horizontal scanning, then camera will stop at the Preset Point 1. Upon completion of these, the self testing is well done.

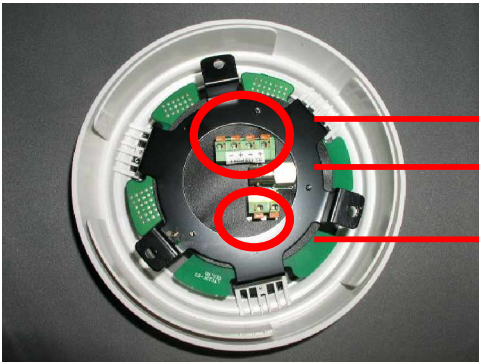
### 2. For Indoor Speed Dome

#### Surface type

Firstly please take out the chassis of Indoor camera kit, then fix it in the location which you desire to install, and following the wiring diagram for AC24V, RS485 and video signal cable of indoor basement as below. Please make sure this basement is well installed and avoid any danger of falling-down concern.



### Wiring diagram for Indoor speed dome



A  
B  
C

- A: RS485 INPUT
- B: Video Output
- C: AC24 INPUT

### Installation Procedures for Indoor Surface type Speed Dome:

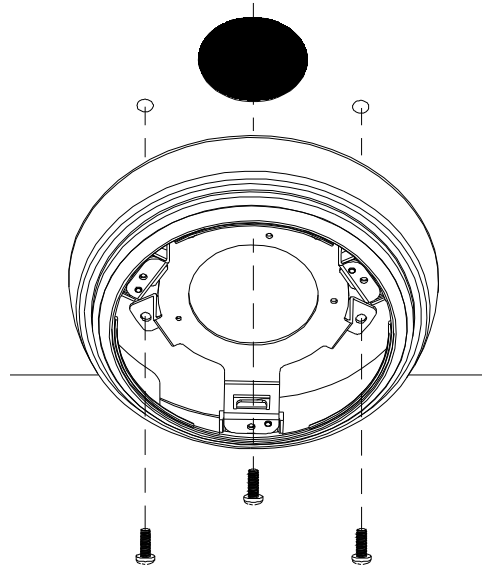
Firstly install the basement of indoor speed dome to the desired location as below, and double check whether it's well fixed:



Then follow the below of Photo A to plug the pins into the socket by correct direction; if the direction is correct but can't plug in, then please check local distributor for trouble-shooting support, please don't plug in by any improper force which may cause the damage of the camera itself.



(Photo A)



Against clockwise direction to loosen the camera from Chassis

By clockwise direction to tighten the camera into Chassis

### In-ceiling type

This type of installation is to install the indoor type camera into the ceiling hole; only the dome cover will appear out of the ceiling.

The ceiling must be capable of sustaining weight 4 times or above of that of the camera, so that the camera will not fall and cause injury to any person.

#### Installation Procedures for Indoor In-ceiling type Speed Dome:

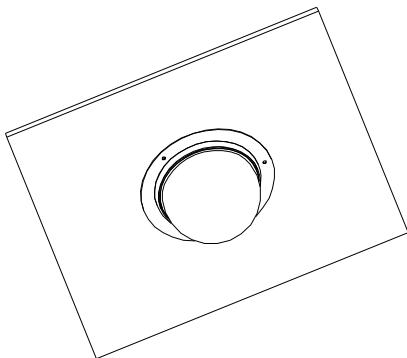
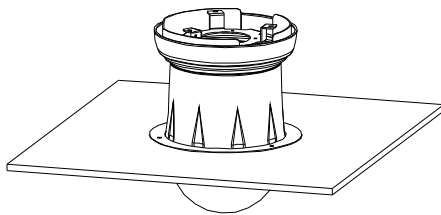
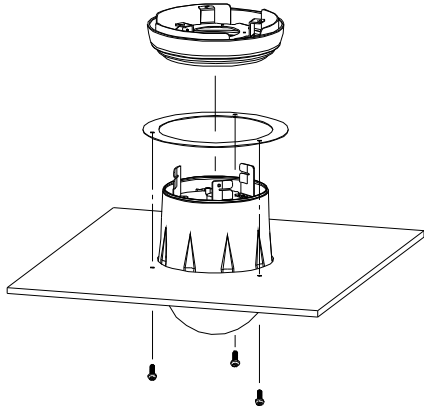
##### Punching holes in the ceiling:

Remove the target ceiling first, inside the packing carton, you will find the 1:1 indication sticker of punching hole location. Attach this sticker to the ceiling where you want to install the camera, and make the desired holes accordingly with a proper tool.

Take out the dome cover of camera, then put on the metal ring and fix this dome cover on it as below :



then install the upper body of indoor camera into ceiling as below:

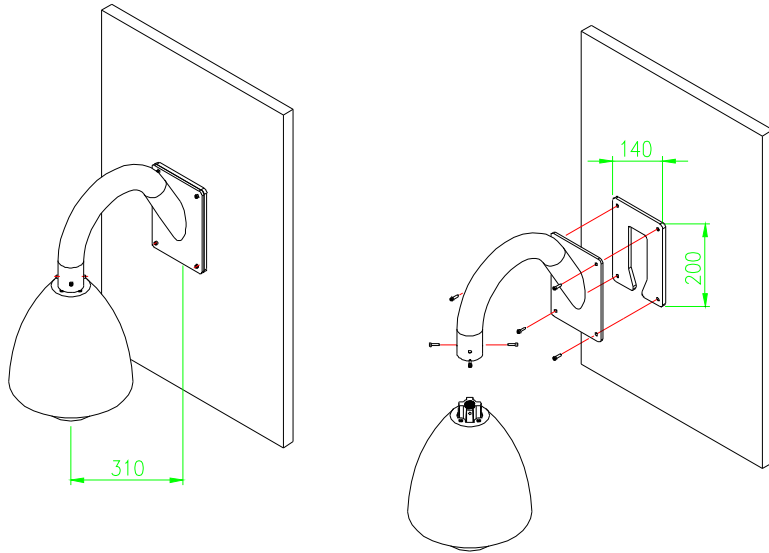


### 3. Outdoor mount installation

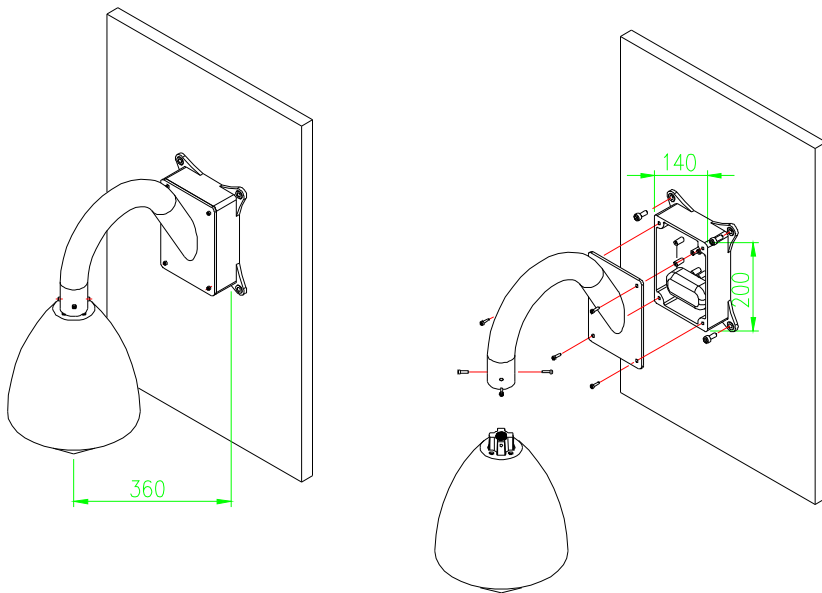
The mounting wall must be strong enough for holding the camera. Minimum loading capacity should be at least 35 kg or above, for prevention of fall and personal injury. As below:

For Wall mount bracket only:

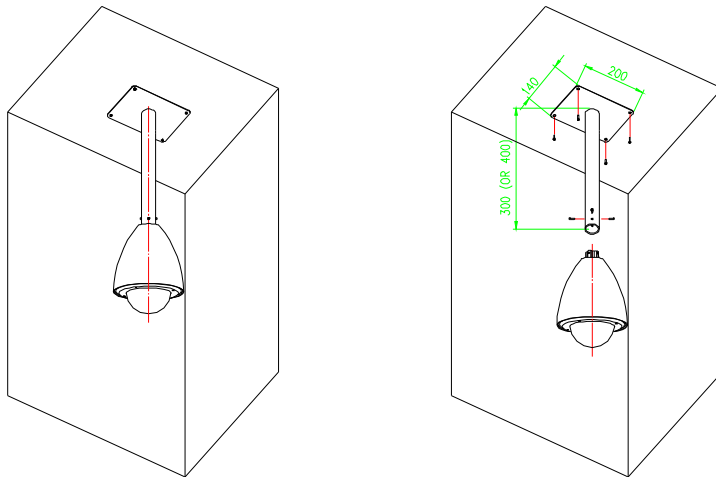




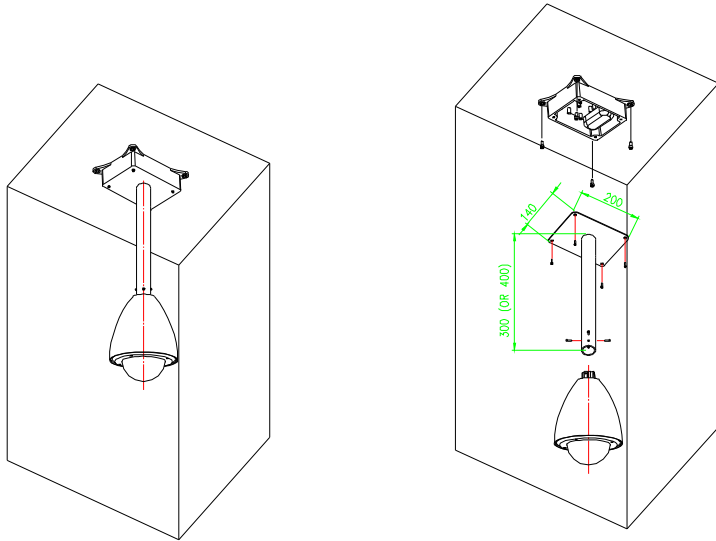
For Wall mount bracket with waterproof box:



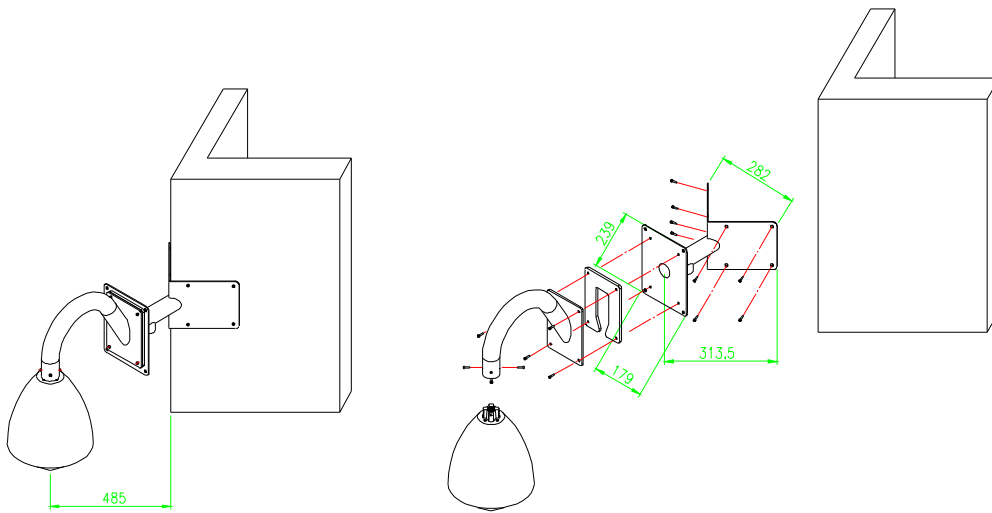
For pendant mount bracket only:



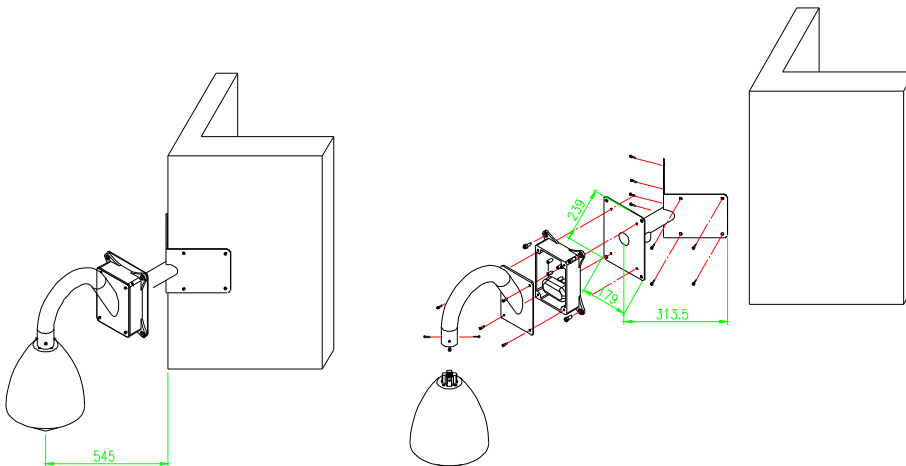
For pendant mount bracket with waterproof box:



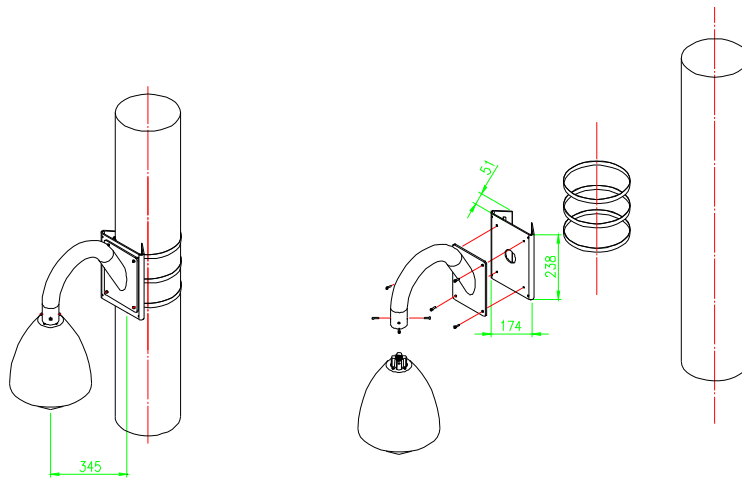
For Corner wall mount bracket :



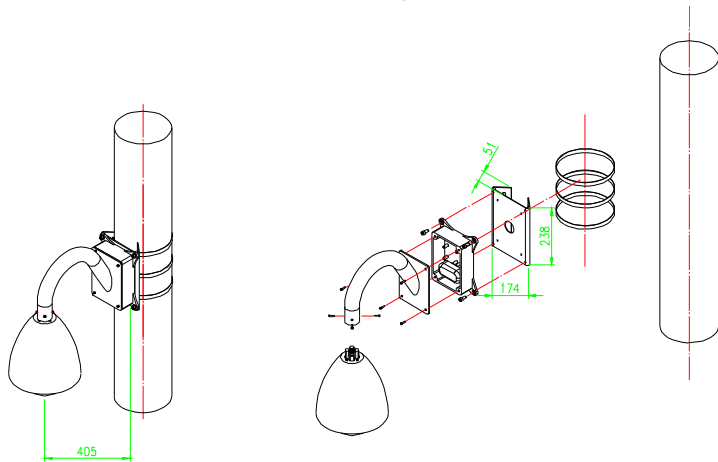
For Corner wall mount bracket with waterproof box:



For Pole mount bracket:

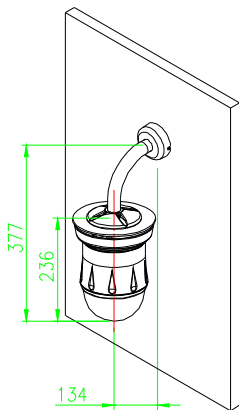


For Pole mount bracket with waterproof box:

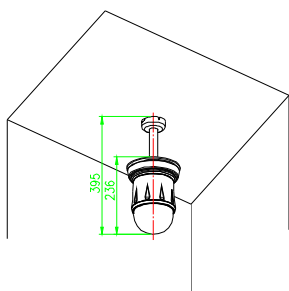


#### 4. Indoor Speed Dome Bracket

For Wall mount bracket only:



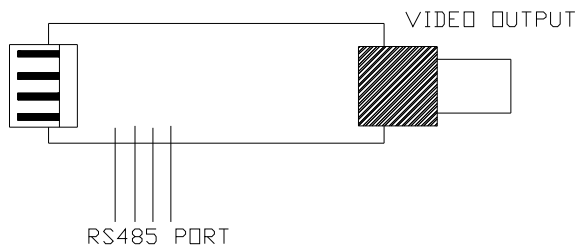
For pendant mount bracket only:



## 5. Two-connection methods can be used for the outdoor type

### Non-waterproof box

There is a connecting board attached to the packing. The external cables for control circuit/ power supply/ video signal can be connected to this connecting board. Afterwards, connect the control cable and AC24V from the speed dome camera to the connecting board and complete the wiring. Then the bracket is ready to be installed to the wall. The connecting board is as per the following diagram:



RS485 connector is comprised of 4 pins, they are assigned as follows:

Black: RS485 ( )

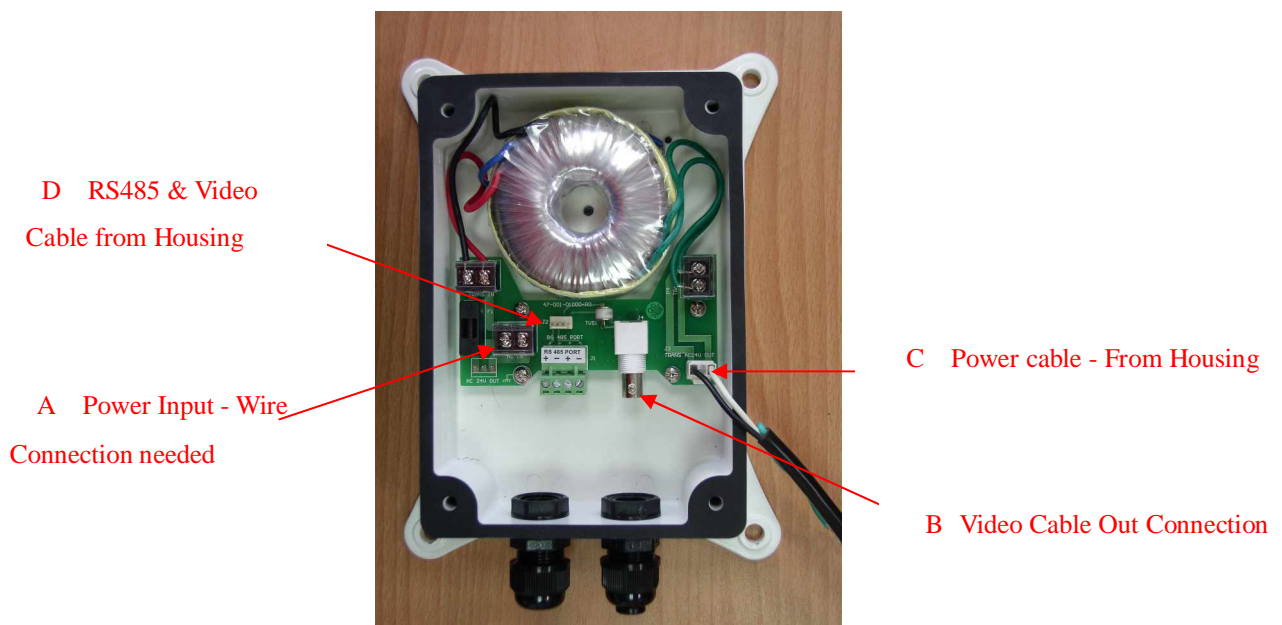
Brown: RS485 ( )

Red: RS485 ( )

Orange: RS485 ( )

### Waterproof box wiring

Firstly fix the box to the wall and connect Power supply, Video signal and RS485 to the box. Then connect the 4-pin cable and AC 24V power supply cable to the connecting board. Use the 4 screws to fix the waterproof box to the bracket. This completes installation of the waterproof box. The waterproof box is as per following drawing.



### **A Power input**

Connect this jack to the power supply of 110VAC or 230VAC according to the product you bought.

### **B Video-Out Cable Connection**

Connect the Video-Out cable from housing to another BNC cable for video image inside the power box.

### **C Housing Power Cable Connection**

Connect the power cable from housing to the board inside of the power box.

## 6. Alarm Interface Info (OPTIONAL PRODUCT)

Outdoor Speed dome is able to add alarm input, which will activate the camera automatically to preset points corresponding to the alarm received. Such interfaces is built-in with 4 N.O. Contact Alarm Input and 1 N.O output (the tolerance of voltage for N.O is DC30V, 1A) , which can correspond to PRESET 1 to PRESET 4, as below table

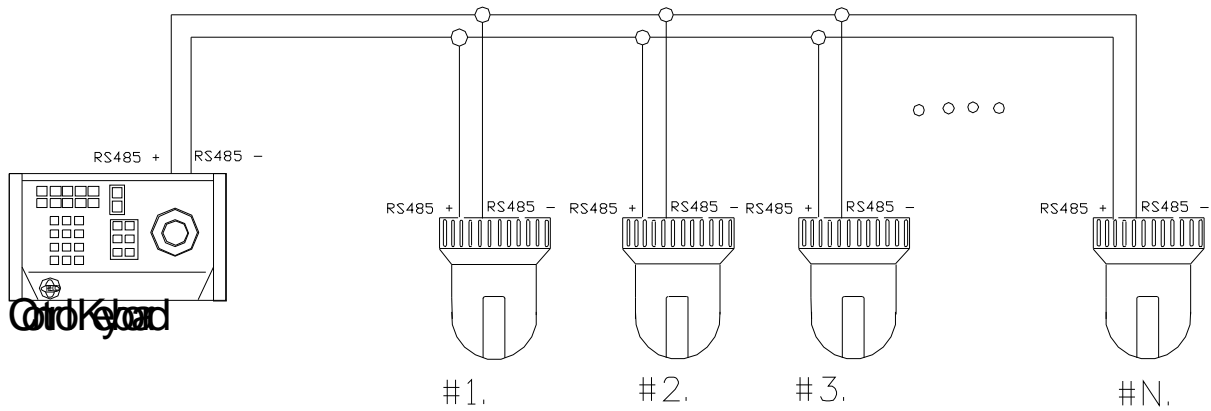
ALARM INPUT		
ALARM 1.	PRESET 1.	RED line
ALARM 2.	PRESET 2.	GREEN line
ALARM 3.	PRESET 3.	YELLOW line
ALARM 4.	PRESET 4.	PURPLE line
COM		BLACK line
ALARM OUTPUT, DC30V, 1A		
ALARM OUTPUT	BLUE line WHITE line	

## 7. RS485 Wiring Method

Two RS485 wiring methods can be used according to actual needs. We recommend the following wiring methods for avoiding mal function of RS485 control.

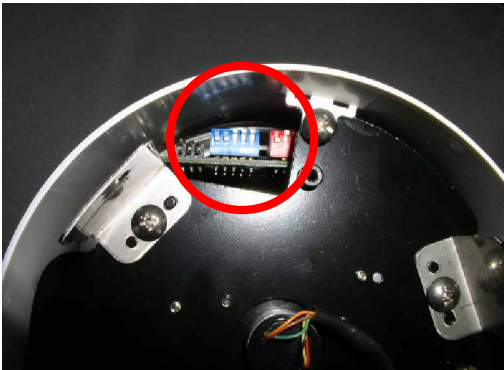
### RS485 serial connection

This method connects speed dome cameras in sequential manner where the first camera connects to the second and then the second to the third, and so on until the last one. A terminal resistance is connected to the last camera to form a closed loop, see the following illustration:



When connecting the entire system, set terminal resistance to the last camera for ensuring normal control.

As how to set this terminal resistance, there is one control board of dip switches as below:



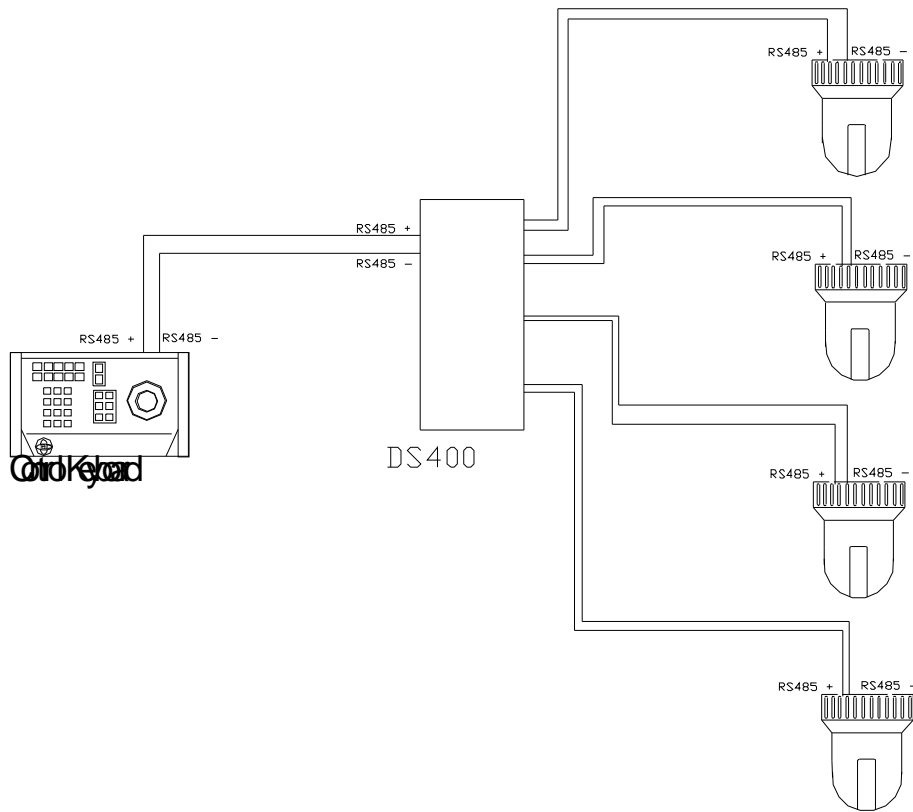
Set the blue-color DIP S/W # 5 as "ON", then this will activate RS485 terminal resistance, in contract as "OFF", it's to disable such terminal resistance.

When using RS485 serial connection, the max. in one serial connection is to connect up to 32 pieces of speed dome, if over 32 pieces of speed dome, then please use "RS485 Aster Connection" method together with our DS810 (8 port RS485 distributor) to diversify the number of speed dome in one single serial connection, in order to make sure the stability of the complete control system.

### RS485 aster Connection

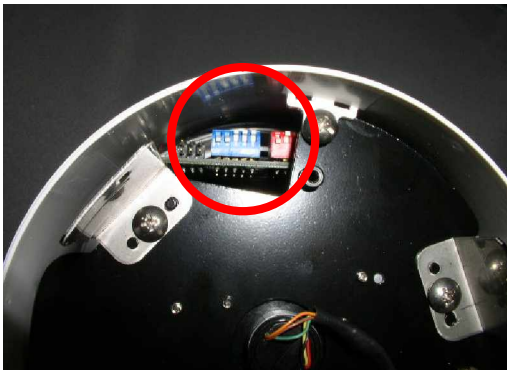
This is the most common method in practical installation work. In the aster connection, if a RS485 distributor is not utilized, it is likely to have reflected signal and to lower the ability of resisting interference. This may cause mal functioning of the control signal that results in faulty control of the camera or unstopping operation when the control signal is stopped.

In such cases, we recommend to use our DS810 RS485 Distributor. This product can effectively convert the aster connection into the correct connection method that meets RS485 requirements to acquire optimal communication reliability. See the following diagram for reference.



### 8. Speed Dome Camera Communication Protocol and ID Address Setting

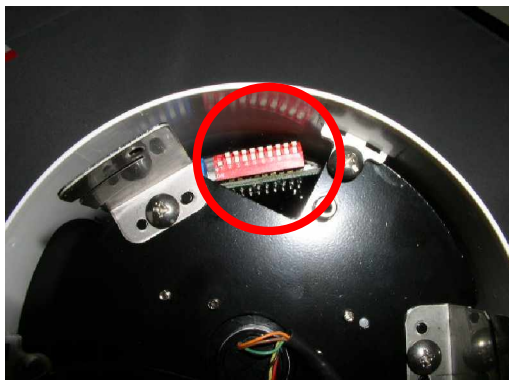
On the bottom of speed dome, there is one 5-PIN DIP SWITCH, SW1~4 is for setting speed dome protocols as below procedures:



#### Setting for Communication Protocol

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
EYEVIEW	ON	ON	OFF	OFF	X
PELCO P-9600	OFF	ON	OFF	OFF	X
PELCO P-4800	ON	OFF	OFF	OFF	X
PELCO D-2400	OFF	OFF	OFF	OFF	X

B. Setting ID address of speed dome as below:



Please change Red-Color DIP SWITCH SW1 ~8 as below:

Symbol "O" in the following tables denote setting "ON "



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	1	2	3	4	5	6	7	8
201	○			○			○	○
202		○		○			○	○
203	○	○		○			○	○
204			○	○			○	○
205	○		○	○			○	○
206		○	○	○			○	○
207	○	○	○	○			○	○
208					○		○	○
209	○				○		○	○
210		○			○		○	○
211	○	○			○		○	○
212			○		○		○	○
213	○		○		○		○	○
214		○	○		○		○	○
215	○	○	○		○		○	○
216				○	○		○	○
217	○			○	○		○	○
218		○		○	○		○	○
219	○	○		○	○		○	○
220			○	○	○		○	○
221	○		○	○	○		○	○
222		○	○	○	○		○	○
223	○	○	○	○	○		○	○
224						○	○	○
225	○					○	○	○

	1	2	3	4	5	6	7	8
226		○				○	○	○
227	○	○				○	○	○
228			○			○	○	○
229	○		○			○	○	○
230		○	○			○	○	○
231	○	○	○			○	○	○
232				○		○	○	○
233	○			○		○	○	○
234		○		○		○	○	○
235	○	○		○		○	○	○
236			○	○		○	○	○
237	○		○	○		○	○	○
238		○	○	○		○	○	○
239	○	○	○	○		○	○	○
240					○	○	○	○
241	○				○	○	○	○
242		○			○	○	○	○
243	○	○			○	○	○	○
244			○		○	○	○	○
245	○		○		○	○	○	○
246		○	○		○	○	○	○
247	○	○	○		○	○	○	○
248				○	○	○	○	○
249	○			○	○	○	○	○
250		○		○	○	○	○	○

	1	2	3	4	5	6	7	8
251	○	○		⊗	○	○	⊗	⊗
252			○	⊗	○	○	⊗	⊗
253	○		○	⊗	○	○	⊗	⊗
254		○	⊗	⊗	○	○	⊗	⊗
255	⊗	○	⊗	⊗	○	○	⊗	⊗

## 9. RS485 Common Troubleshooting

Error	Possible Causes	Solutions
Able to do self-test on initial electrification, but is unable to be controlled	1. Keyboard's (or DVR's) communication protocol is not consistent with camera's	Alter protocols for consistency
	A. Keyboard's (or DVR's) baud rate is not consistent with camera's	Alter baud rates for consistency
	B. RS485 polarity error	Switch polarity of RS485 pins
Control of camera is working, but not smoothly	C. RS485 bad wire connection	Re-check RS485 wiring
	1. Mainframe is too far from cameras	Check wires for error. Or set terminal resistance at the last camera.
	2. RS485 has a disconnected wire	Replace RS485 cable
Power-on but no video output	3. Too many cameras are paralleled	Install an RS485 distributor
	1. Contact of AC24V power is not good.	1. Check the connection of AC24V whether as normal
	2. the Voltage of AC24V adapter is too low.	2. Check whether the voltage of power input to speed dome is AC24V, if not, please use the adapter which is more than AC24V voltage (but no more than AC28V, otherwise it will burn the camera)

## 10. OPERATION SETUP INFO FOR KB3000 IN EYEVIEW PROTOCOAL SPEED DOME

1. Select to Control the Speed Dome Camera:

Enter:  +  +

Display:

NNN: Users may enter one number from Number 0 ~255 as the number of the speed dome cameras. The speed dome camera you select to control appears on the LCD screen after one number is entered.

2. Set up the Speed Dome Preset Points:

A. Enter:  +  +

B. Display:

C. NNN: Users may enter one number from Number 1 ~ 64 as preset points number.

D. Operation: Move the speed dome to the location you want to set up and set the preset point based on the method used for Point A. The operation method applies to other preset points setting.

Call the Speed Dome Preset Points:

Enter:  +  +

Display:

NN: Preset points, No. 1~64

3. Delete the Speed Dome Preset Points:

Description: This function is designed to clear the preset points by following the operation procedure:

Enter:  +  +

Display:

NN: Preset points to be deleted, No. 1~64

4. Set up Preset Point Group: (Do not apply to PELCO Protocol)

Description: This function is designed to scan the preset points in order. Each group is allowed to set up 16 preset points for the moving speed and retention time.

Enter: [ SHOT ] + [ N ] + [ ON ]

If you choose EYEVIEW Protocol for one of our speed dome cameras, you may set up 4 preset point groups by following the operation procedure:

A. Press [ SHOT ] :

LCD displays: [ Input TourNo: 000 ]

Enter the preset point groups, No. 1-4, and press the [ ON ] key.

LCD displays: [ Track: 01 Sum: 001 ]

B. Press [ TELE ] :

LCD displays: [ No:001 Point:001 ]

Enter one of the preset points of the group ranging from No. 1-64.

C. Press [ TELE ] : Set up the moving speed

LCD displays: [ No:001 Speed:001 ]

The speed represents the moving speed between two preset points and is divided into 1-8 phase. (1: fastest speed; 8: slowest speed)

D. Press [ TELE ] : Set up the retention time

LCD displays: [ No:001 Time:001 ]

The displayed time is the retention time of each preset point and can be set from 1 to 99 seconds.

E. Press the [ TELE ] key to go back to step B to set up next point. Press [ OFF ] to end and save your setting.

5. Start Preset Point Group Scanning (Do not apply to PELCO Protocol)

Enter: [ SHOT ] N [ ENTER ]

LCD displays: [ Input Tour No : XXX ]

XXX: No. 1~4 preset points group scanning. Complete the preset point setup described in Step 4. before starting preset point group scanning.



## 6. Activate Pan Scanning:

Description: While this function is activated, the speed dome makes a 360° horizontal rotation.

Activate Pan Scanning:  +

Press [AUTO].

LCD displays:

Press the [ON] key to activate Pan scanning.

## 7. Deactivate Pan Scanning:

Description: Stop the speed dome rotating at 360 degrees horizontally.

+

Press [AUTO]

LCD displays:

Press the [OFF] key or control the joystick directly to stop Pan scanning.

## 8. Horizontal Revolution of 2 Preset Points (Do not apply to PELCO Protocol)

Description: This function is designed to set the speed dome at horizontal revolution in a small zone.

Enter: Press [AUTO].

LCD displays:

Enter a start point for Auto Pan scanning. The start point should be one of the preset points. Complete preset point setting first by following Step 2.

Press the [ON] key to complete the start point setting.

LCD displays:

Enter a stop point for Auto Pan scanning. The stop point should be one of the preset points. Complete preset point setting first by following Step 2.

Press the [OFF] key to complete the stop point setting. The speed dome will begin to move at horizontal revolution immediately.

## 11. OPERATION SETUP INFO

This speed dome camera offer OSD function. You could set up different setting base on site environment. By doing so, speed dome camera will have better image quality. Please refer to following operation mode.

OSD function ACTIVATE

[PRESET] + [95] + [ENTER]

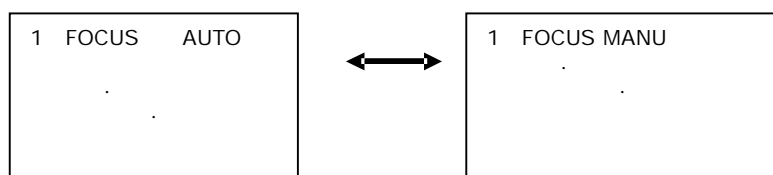
You could set up different setting through keyboard or DVR.

To select each item, [TELE] / [WIDE] button is used for UP and DOWN.

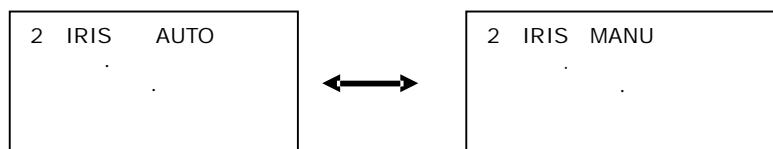
To change the data item or return back to previous menu at "Return" line, [NEAR] / [FAR] button is used for change data or confirmation for return.

## V2-SB18 / SA26 / SB36 Camera Manual setting

### FOCUS SET



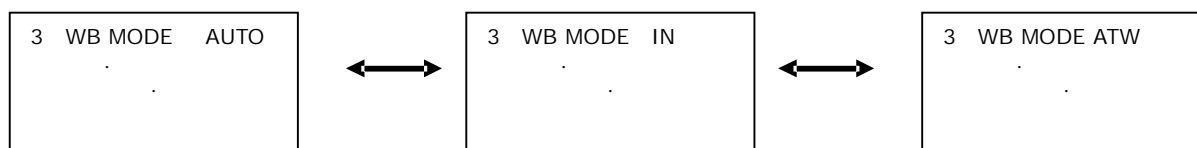
### IRIS SET



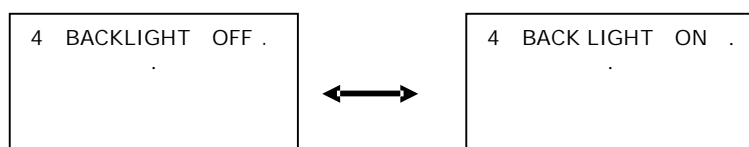
### WB SET

This function is for changing the WB (White Balance) mode.

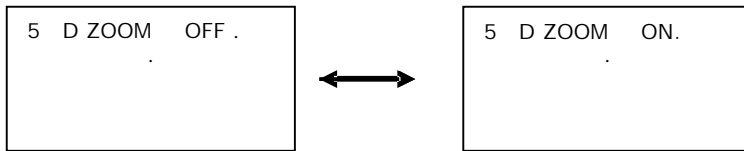
Set the mode to Auto, In (for indoor application) , ATW.



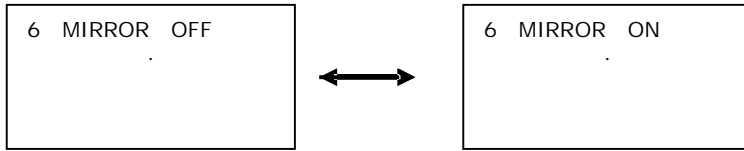
### BACKLIGHT SET:



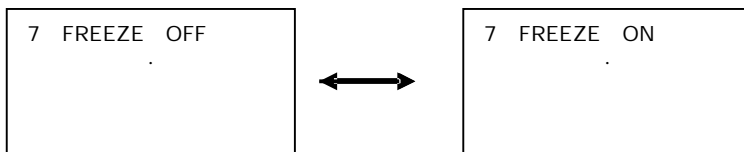
## DIGITAL ZOOM SET



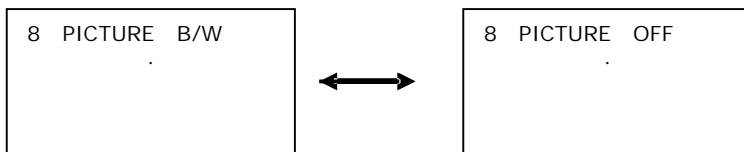
## MIRROR SET



## FREEZE SET

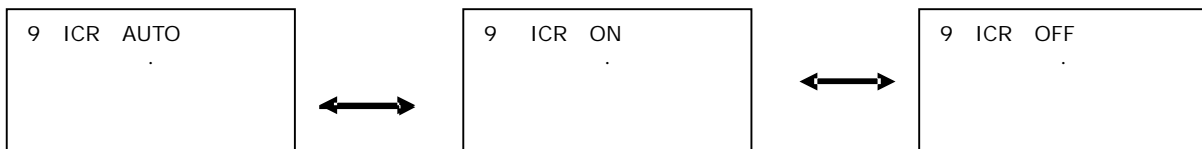


## PICTURE SET

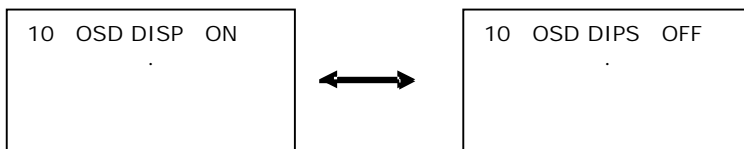


## ICR SET

This function is available for ICR AUTO/ON/OFF mode.

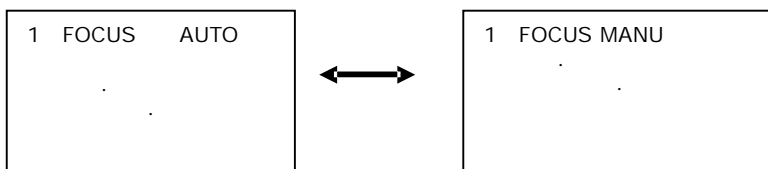


## OSD DISP SET

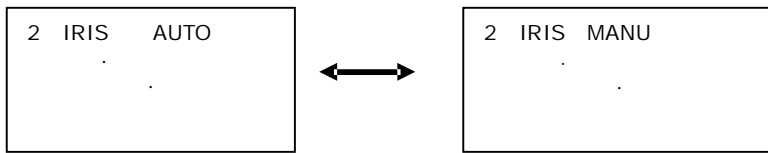


## V2-M7 Camera Manual Setting

## FOCUS SET



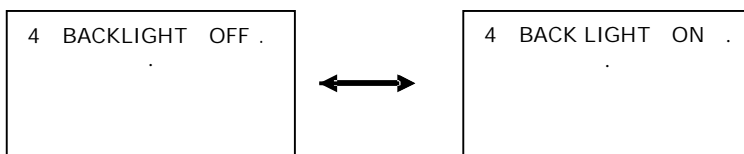
### IRIS SET



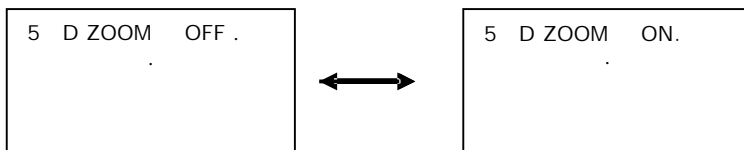
### WB SET

This function is for changing the WB mode. This mode for V2-M7 will be only in Auto mode

### BACKLIGHT SET:

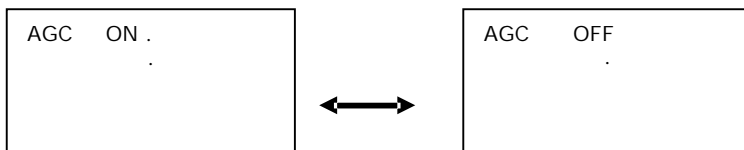


### DIGITAL ZOOM SET



### AGC SET

This AGC function is to increase the function of signal quality of camera, the initial setting is "ON".



PS: When the ICR mode is set to AUTO, the "AGC OFF" cannot be set.

N Value No.	Control Object	Keyboard Operation Definition	
		[SET]+N+[ENTER]	[PRESET]+N+[ENTER]
85	Home Position Auto Returning	OFF	ON
86	Auto slow shutter	OFF	ON

87	IR Filter AUTO for		ON
88	IR Filter IN (color mode)		ON
89	IR Filter OUT (black-white mode)		ON
90	Back light	OFF	ON
91	Digit ZOOM	OFF	ON
92	PAN SCAN SETTING		START point
93			STOP point
94	Zoom/Pan speed limit	OFF	ON
95	Camera Manual setting	OFF	ON
97	Preset Tour(preset 1~16 point)	OFF	ON
99	Auto PAN Scan	OFF	ON
100	SPEED DOME DEFAULT		ON

## V2-SA27 Camera Manual setting

### MAIN MENU

MENU CAM ID FOCUS SET AWB SET AE SET BACKLIGHT SPECIAL SET MOTION DET F OSD DISP EXIT
--

### Set Up the Menu

- 1.) To select each item of OSD Menu , pls use "*TELE*" and "*WIDE*" button for the menu of UP and DOWN .
- 2.) To change the setting, use "*FAR*" and "*NEAR*" button .

## 12. Extended Command

N Value No.	Control Object	Keyboard Operation Definition	
		[SET]+ N+[ENT ER]	[PRESET]+N+[ENTE R]
85	Home Position Auto Returning	OFF	ON
86	Auto slow shutter	OFF	ON

87	IR Filter AUTO for		ON
88	IR Filter IN (color mode)		ON
89	IR Filter OUT (black-white mode)		ON
90	Back light	OFF	ON
91	Digit ZOOM	OFF	ON
92	PAN SCAN SETTING		START point
93			STOP point
94	Zoom/Pan speed limit	OFF	ON
95	Camera Manual setting	OFF	ON
97	Preset Tour(preset 1~16 point)	OFF	ON
98	OSD Display	OFF	ON
99	Auto PAN Scan	OFF	ON
100	SPEED DOME DEFAULT		ON

110V/220V

AC24V,

; -10 to +50  
: <90%  
: AC24V, 2000mA, 50/60Hz

; -30 to +50  
: <90%  
: AC24V, 2.0A, 50/60Hz

RG59/U: 300ft (100 meters)  
RG6/U: 700ft (210 meters)  
RG11/U: 1200ft (360 meters)

RS485

RS485 RS485  
RS485  
RS485

RS485

22AWG(Belden 8760)

Baud rate

Baud rate	
2400	1200 meters
4800	1000 meters
9600	800 meters

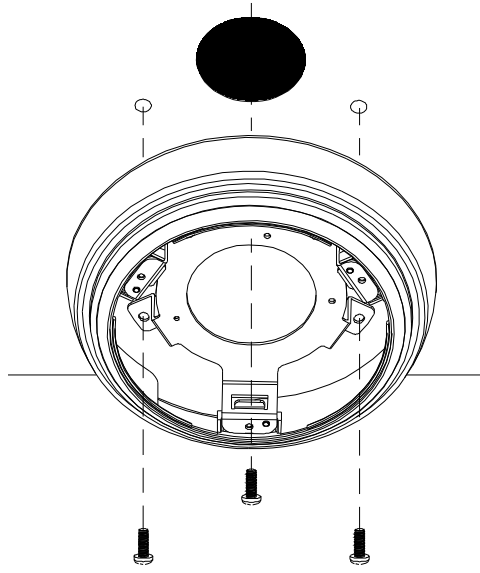
ID

20~30

AC24V, RS485







4

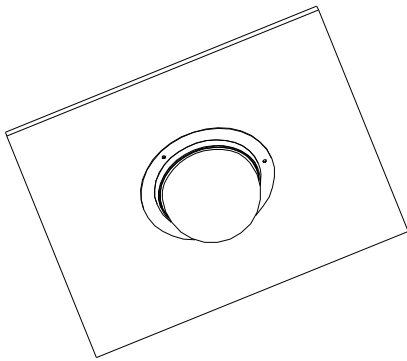
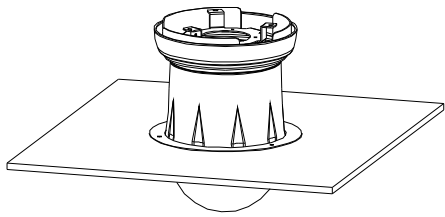
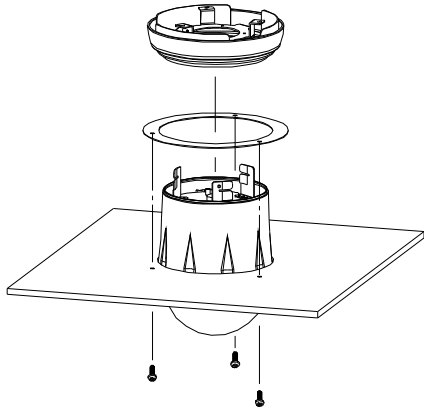
1. :

1 1

2. 1



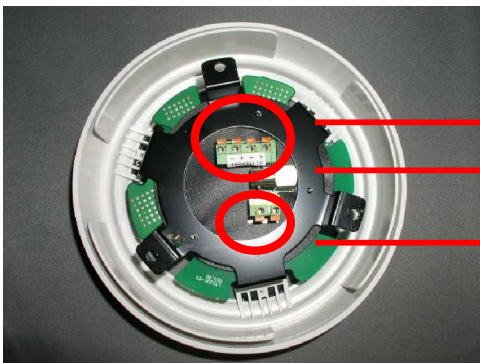
:



3.

Video Output/AC24V Power Input/RS485

Input



A

B

C

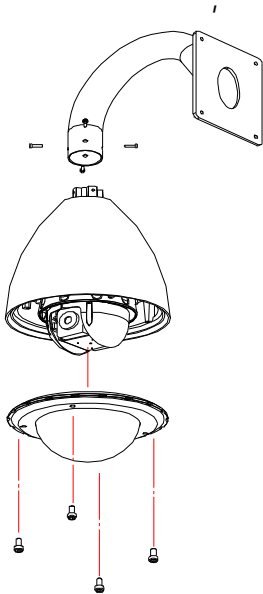
A: RS485 INPUT

B: Video Output

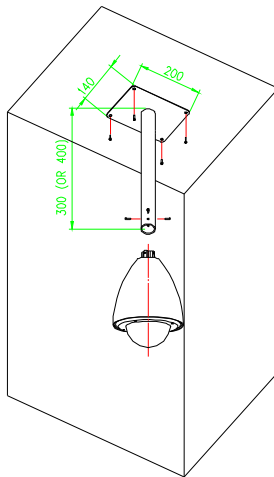
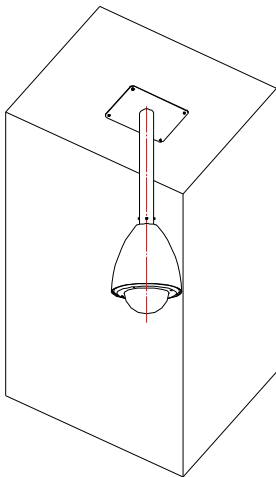
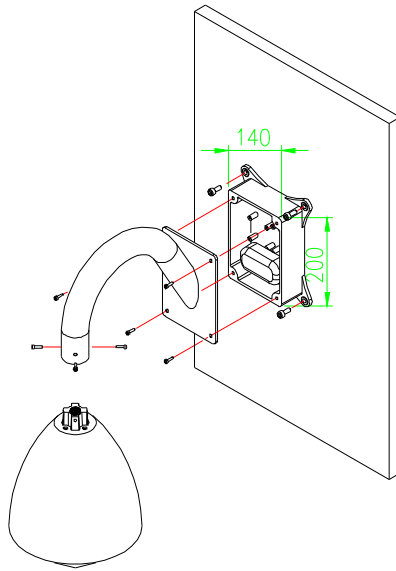
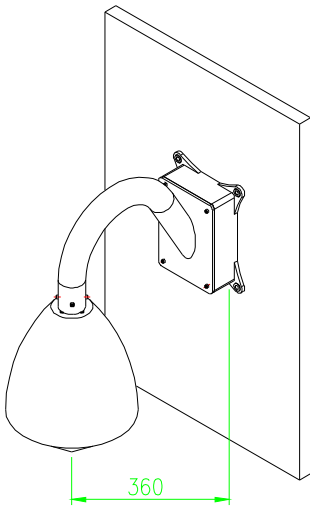
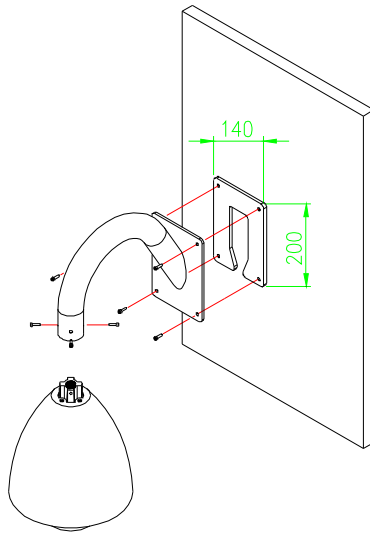
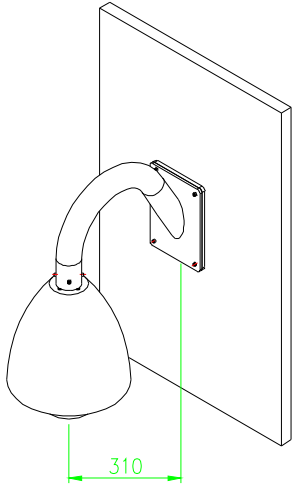
C: AC24 INPUT

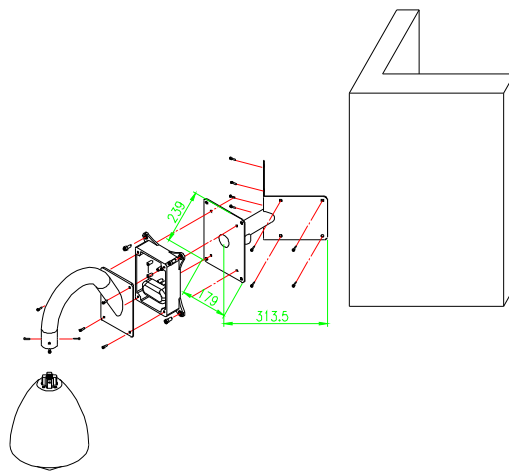
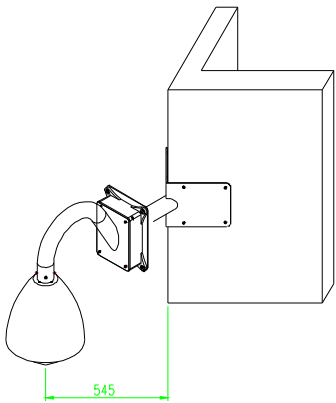
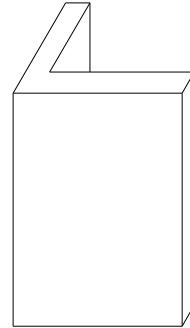
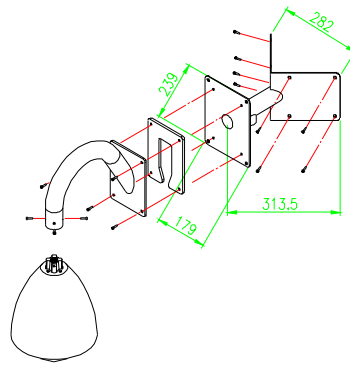
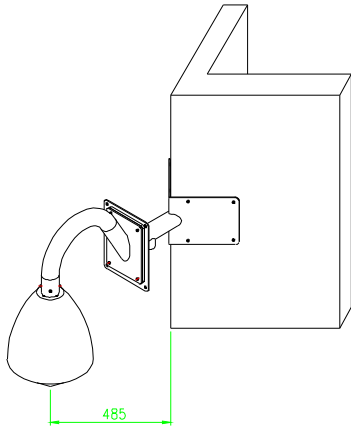
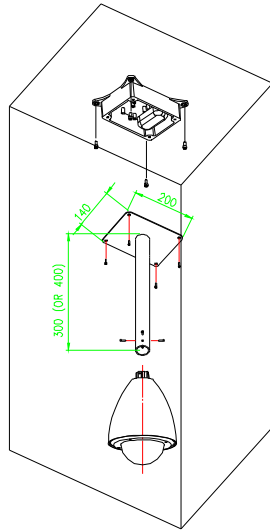
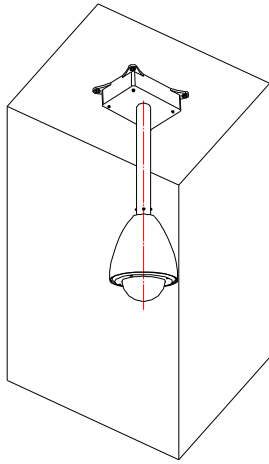
1.

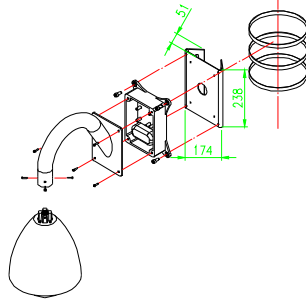
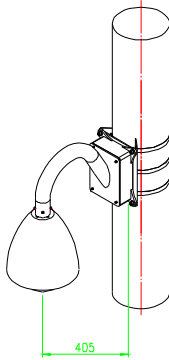
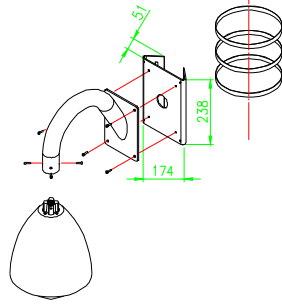
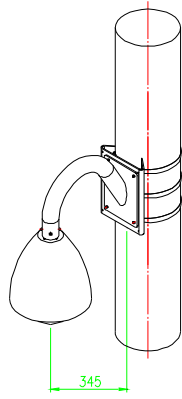
2.



35kg



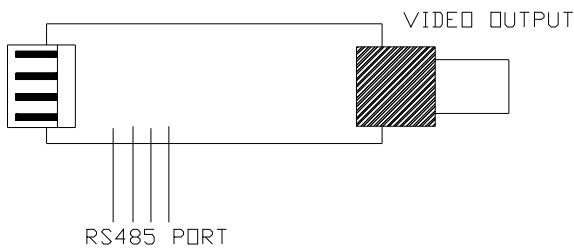




3.

2

AC24V

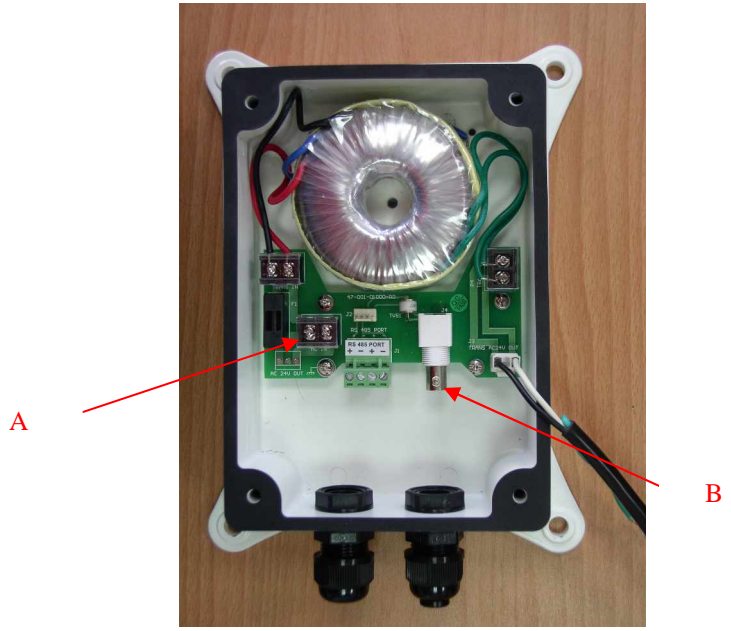


RS485

4

- : RS485 ( )
- : RS485 ( )
- : RS485 ( )
- : RS485 ( )

RS485

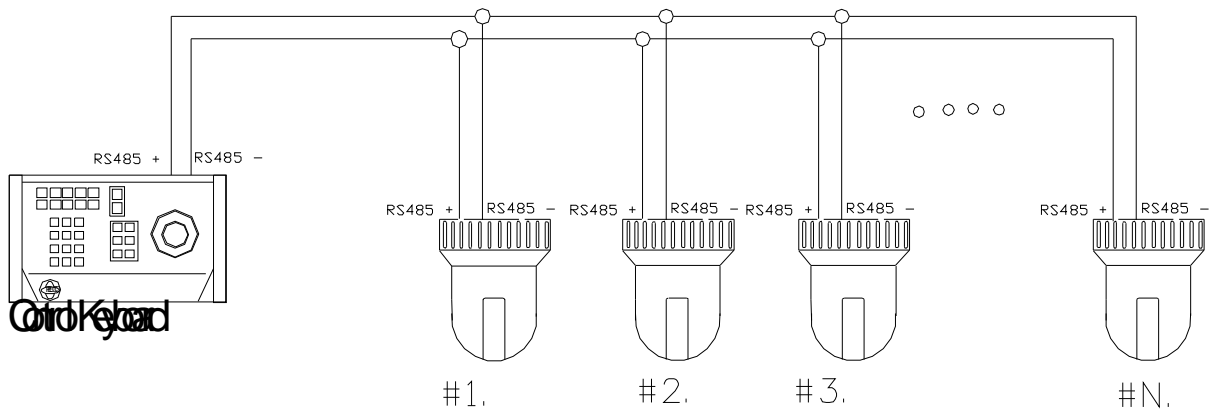


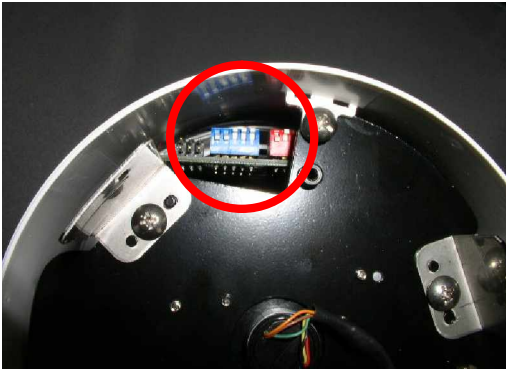
**A: AC110V**  
AC110V

**B:**

**RS485**

2 RS485  
RS485  
RS485  
2  
2





DIP S/W 5 ON, RS485

RS485 , OFF,

RS485 ,  
32 ,

RS485

DS810 ,

32 ,

RS485

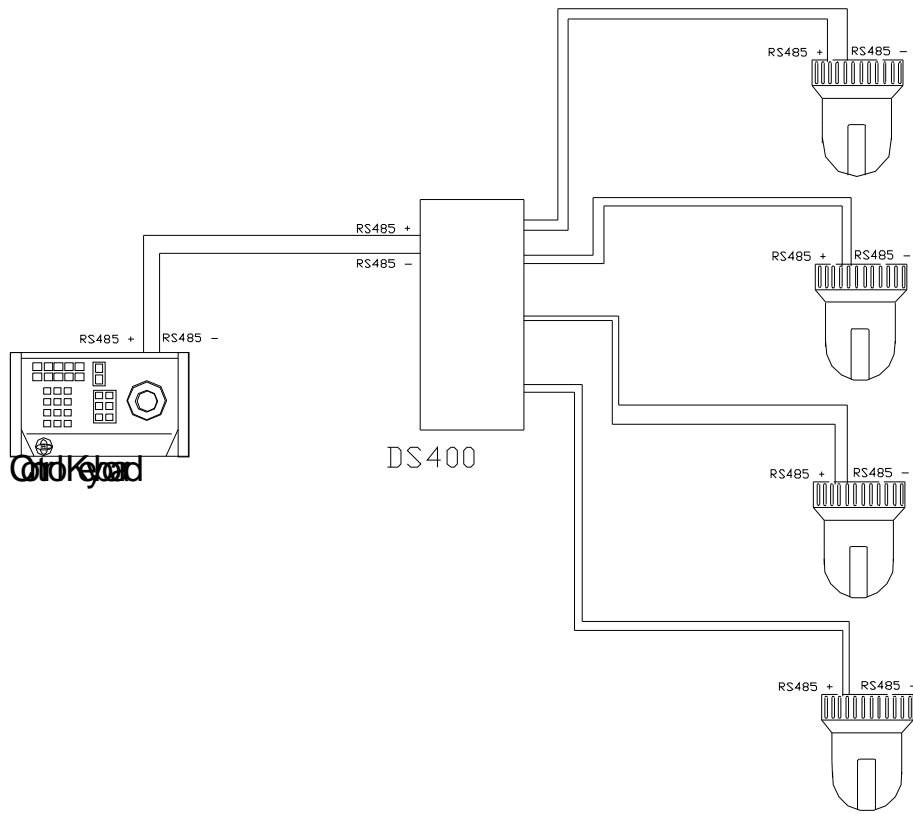
RS485

RS485

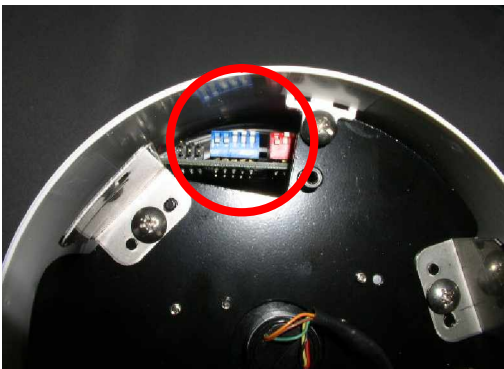
DS810 RS485 ,

:





5PIN DIP SWITCH, SW1 ~ SW4

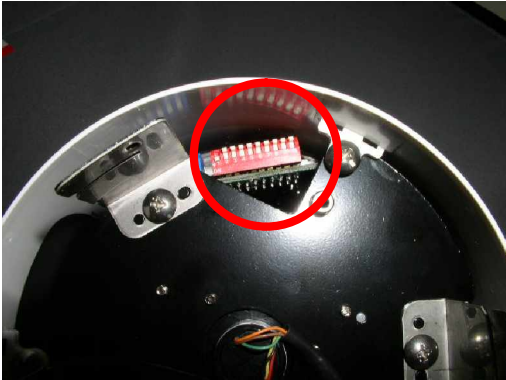


	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
EYEVIEW	ON	ON	OFF	OFF	X
PELCO P-9600	OFF	ON	OFF	OFF	X
PELCO P-4800	ON	OFF	OFF	OFF	X

PELCO D-2400	OFF	OFF	OFF	OFF	X
--------------	-----	-----	-----	-----	---

1 8

" ON "



	1	2	3	4	5	6	7	8
1	○							
2		○						
3	○	○						
4			○					
5	○		○					
6		○	○					
7	○	○	○					
8				○				
9	○			○				
10		○		○				
11	○	○		○				
12			○	○				
13	○		○	○				
14		○	○	○				
15	○	○	○	○				
16					○			
17	○				○			
18		○			○			
19	○	○			○			
20			○		○			
21	○		○		○			
22		○	○		○			
23	○	○	○		○			
24				○	○			
25	○			○	○			

	1	2	3	4	5	6	7	8
26		○		○	○			
27	○	○		○	○			
28			○	○	○			
29	○		○	○	○			
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N Value No.	Control Object	Keyboard Operation Definition	
		[SET] +N+[E NTER]	[PRESET]+N+[EN TER]
86	Auto slow shutter	OFF	ON
87	IR Filter AUTO		ON
88	IR Filter IN (color mode)		ON
89	IR Filter OUT (black-white mode)		ON
90	Back light	OFF	ON/AUTO



91	Digit ZOOM	OFF	ON
92	PAN SCAN SETTING		START point
93			STOP point
94	Zoom/Pan speed limit	OFF	ON
95	Camera Manual setting	OFF	ON
97	Preset Tour(preset 1~16 point)	OFF	ON
98	OSD Display	OFF	ON
99	Auto PAN Scan	OFF	ON