

# **x10 HD-SDI PTZ In/Outdoor Camera**

*User's Manual*

# Safety Information



## CAUTION

RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.



## CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



### Warning

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



### Precaution

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## WARNING

To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

## WARNING

2. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
3. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
4. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
5. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.
6. When installing the camera, fasten it securely and firmly. A falling camera may cause personal injury.
7. Do not place conductive objects (e.g. screw drivers, coins, metal things, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.
8. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
9. If any unusual smell or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
10. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way.
11. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

## Precautions

### Operating

- Before using, make sure power supply and others are properly connected.
- While operating, if any abnormal condition or malfunction is observed, stop using the camera immediately and then contact your Special dealer.

### Handling

- Do not disassemble or tamper with parts inside the camera.
- Do not drop or subject the camera to shock and vibration as this can damage camera.
- Care must be taken when you clean the clear dome cover. Especially, scratch and dust will ruin your quality of camera.

### Installation and Storage

- Do not install the camera in areas of extreme temperature, which exceed the allowable range.
- Avoid installing in humid or dusty places.
- Avoid installing in places where radiation is present.
- Avoid installing in places where there are strong magnetic fields and electric signals.
- Avoid installing in places where the camera would be subject to strong vibrations.
- Never expose the camera to rain and water.

# Important Safety Instructions

1. **Read these instructions.** - All these safety and operating instructions should be read before the product is operated.
2. **Keep these instructions.** - The safety, operating and use instructions should be retained for future reference.
3. **Heed all warnings.** - All warnings on the product and in the operating instructions should be adhered to.
4. **Follow all instructions.** - All operating and use instructions should be followed.
5. **Do not use this apparatus near water.** - For example: near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement; near a swimming pool; etc.
6. **Clean only with dry cloth.** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners.
7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** - Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product, and to protect it from over-heating. The openings should never be blocked by placing the product on bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's unstructions have been adhere to.
8. **Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.**
9. **Do not defeat the safety purpose of the polarized or grounding-type plug.** A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. **Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**
11. **Only use attachments/accessories specified by the manufacturer.**
12. **Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.**
13. **Unplug this apparatus during lightning storms or when unused for long periods of time.**
14. **Refer all servicing to qualified service personnel.** Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.





#### Disposal of Your Old Appliance

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1. When this crossed-out wheel bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.



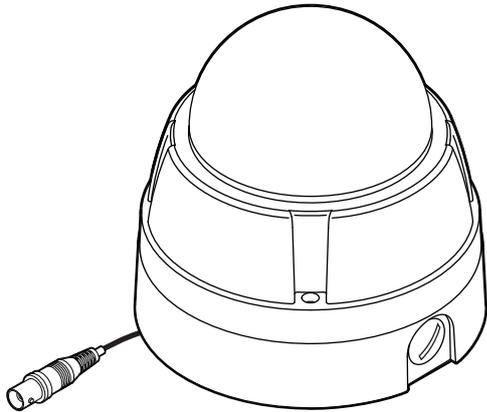
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, 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.

# Contents

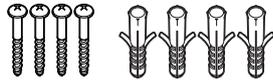
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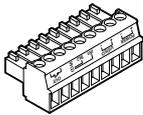
# 1 Introduction - Product & Accessories



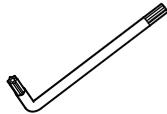
1 Main Body + 2 Surface Mount Bracket



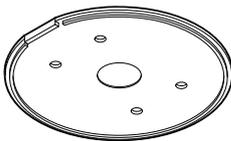
3 Screw & Plastic Anchor-4pcs



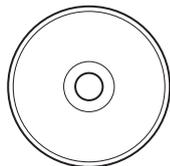
4 9P Terminal Block



5 Torx Wrench



6 Rubber Gasket



7 Manual CD



8 Quick Manual

✳ Please check if all the camera and accessories are included in the package.

**1 Main Body**

Camera module, screws, terminal block slot and DIP switches are included.

**2 Surface Mount Bracket**

- It is used when installing the camera right on to the ceiling.

- To install the camera with the surface mount bracket, the bracket needs to be separated from the main body, then needs to be re-assembled the bracket and the main body according to the order.

**3 Screw & Plastic Anchor**

- Screws are used to fix the surface mount bracket to the ceiling.

- Plastic anchors are used to tighten the screws to the hole by inserting them into the holes in advance.

**4 Terminal Block**

Power, video, communication and alarm input cables are connected through the terminal blocks.

**5 Torx Wrench**

It is used to screw/unscrew the fixed screws on the main body.

**6 Rubber Gasket**

It is installed between the surface mount bracket and wall/wall mount bracket to prevent the water leakage.

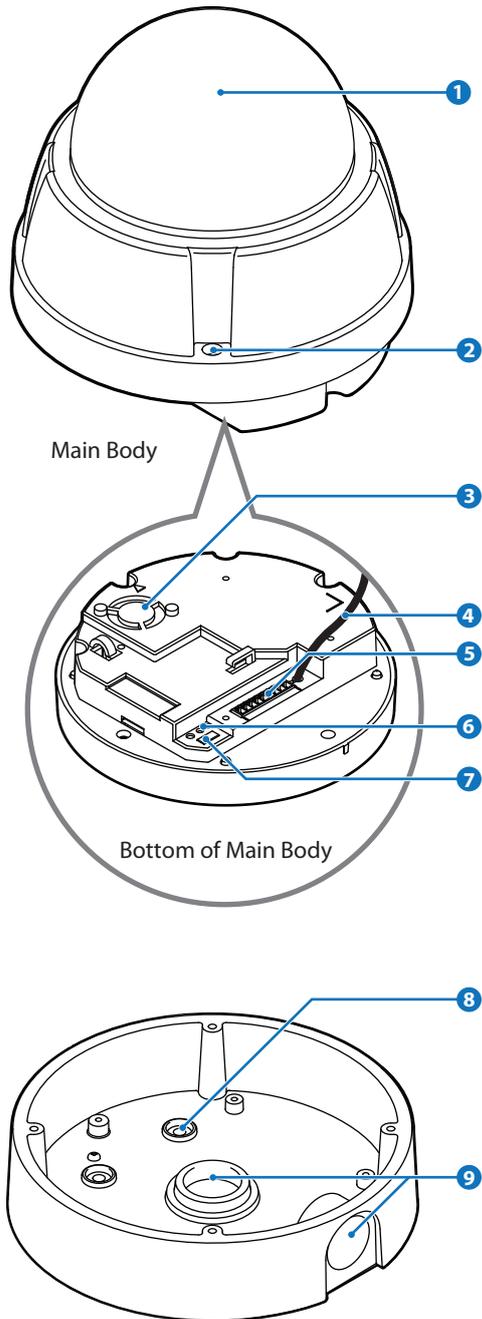
**7 Manual CD**

It is included Manual and 'IP Search' program.

**8 Quick Manual**

It gives a concise explanation of the installation of Camera.

# 1 Introduction - Part Name & Functions



- 1 Dome Cover**
  - Protects the camera module from outside environment.
  - Do not detach protection film from the dome cover before finishing all installation processes to protect dome cover from scratches or dust.
- 2 Lockup Screw**

Fixes main body to the surface mount bracket.
- 3 Fan**

Fan for temperature control.
- 4 HD-SDI Cable**

Main video output cable.
- 5 9P Terminal Block Slot**

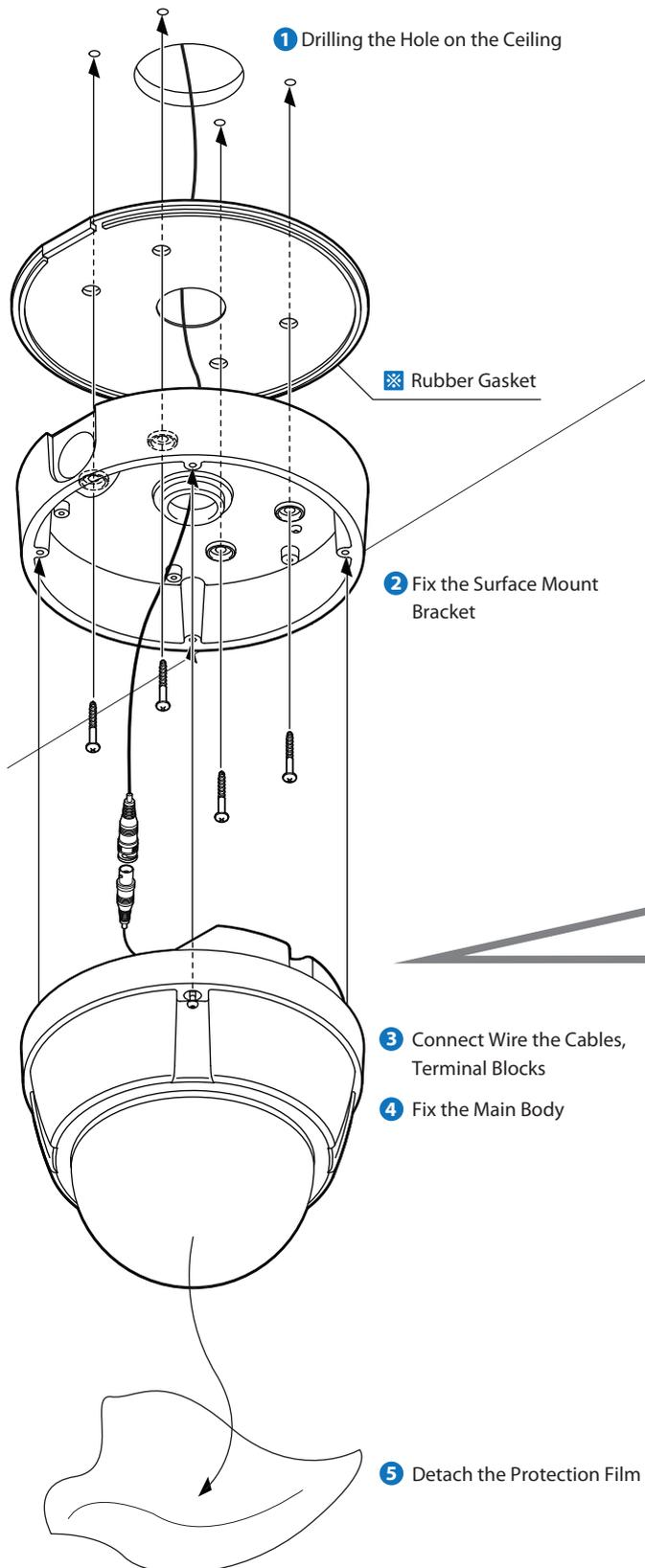
Power, keyboard controller, Alarm input and relay out cables are connected to this terminal block.
- 6 LED & Reset Button**

LED for active(yellow light), power(red light) status and Reset button for reset camera.
- 7 ID Setup Switch**

Specify the camera ID.
- 8 Mounting Hole**

This is used to attach the surface mount bracket to the ceiling.
- 9 3/4" Pipe Mounting Hole**
  - This is used to pass the cables to the cameras.
  - When water protection is needed, connect the 3/4" pipe through this hole, then pass the cables through the pipe.

# 2 Installation - Installation Using Surface Mount Bracket



## 1 Drilling the Hole on the Ceiling

To pass cables through the ceiling, drill a hole (30mm diameter) on the ceiling panel.

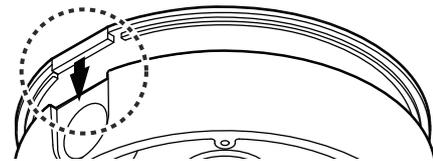
## 2 Fix the Surface Mount Bracket

Pass the cables to the  $\frac{3}{4}$ " pipe hole, and screw the surface mount bracket to the ceiling.

### ※ Rubber Gasket

- Before installing the gasket, the hole in the center is to be cut by knife when only necessary.

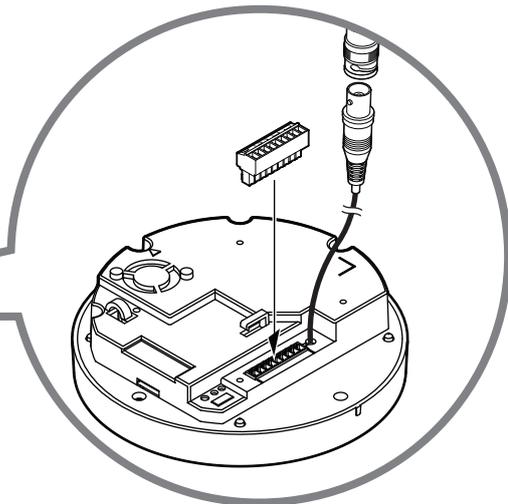
- When installing gasket, the protrusion of the gasket should be matched with the groove joint of the bottom of the surface mount bracket.



## 3 Connect Wire the Cables, Terminal Blocks

Connect the terminal blocks to the main body.

See the section 2 'Installation-Terminer Block' for detail.



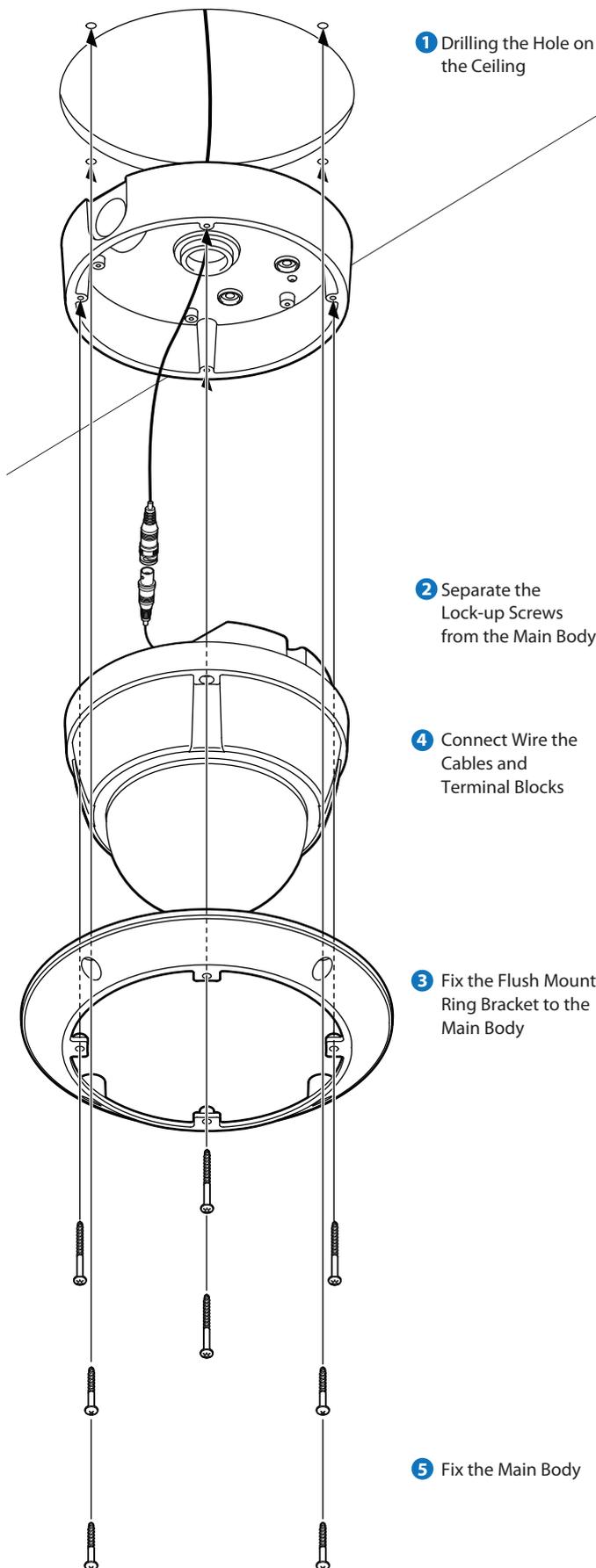
## 4 Fix the Main Body

Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

## 5 Detach the Protection Film

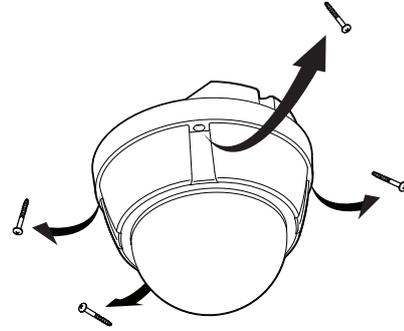
Detach the protection film from the dome cover.

# 2 Installation - Installation Using Flush Mount Ring Bracket (Option)



**1 Drilling the Hole on the Ceiling**  
To pass cables through the ceiling, drill a hole(70mm diameter) on the ceiling.

**2 Separate the Lock-up Screws from the Main Body**  
Separate the 4 lock-up screws from the main body in advance.



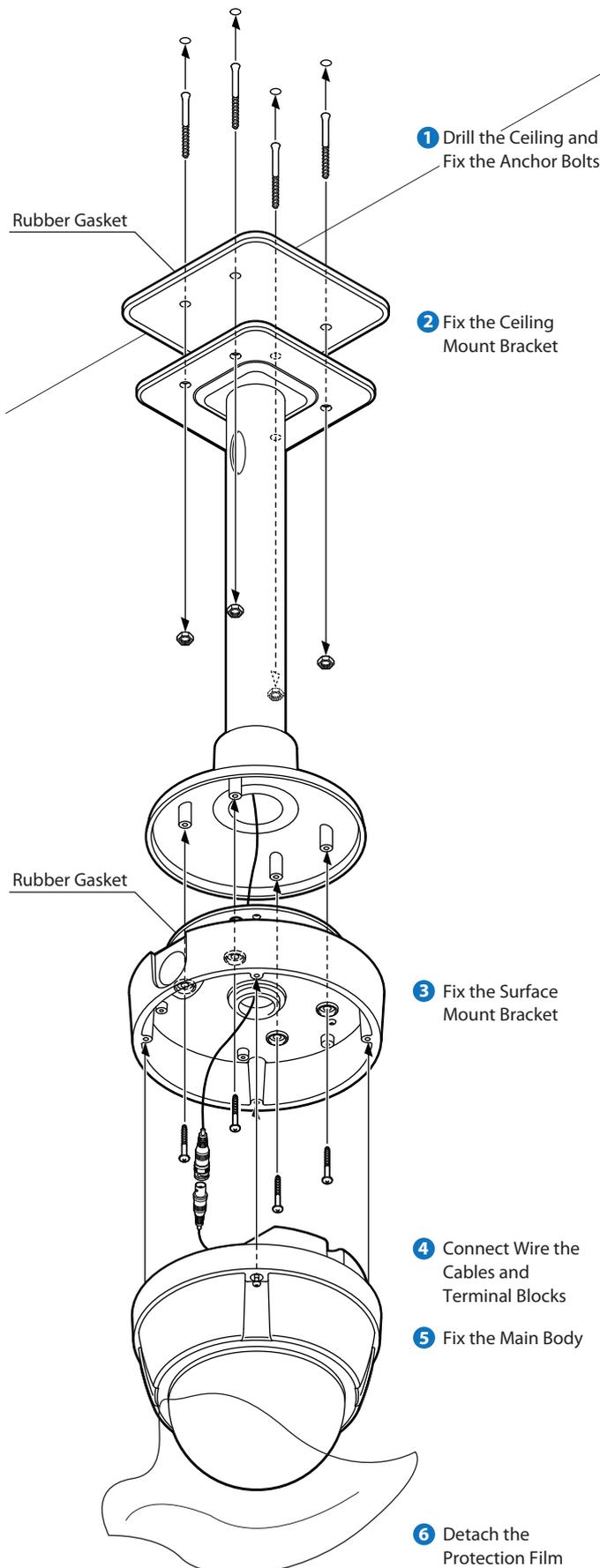
**3 Fix the Flush Mount Ring Bracket to the Main Body**  
Fix the flush mount ring bracket to the main body using torx screws.

**4 Connect Wire the Cables, Terminal Blocks**  
- Connect the terminal blocks to the main body.  
- Refer the previous page for detailed information.

**5 Fix the Main Body**  
Screw the main body with the surface mount bracket to the ceiling using the screws on the surface mount bracket.

**6 Detach the Protection Film**  
Detach the protection film from the dome cover.

# 2 Installation - Installation Using Ceiling Mount Bracket (Option)



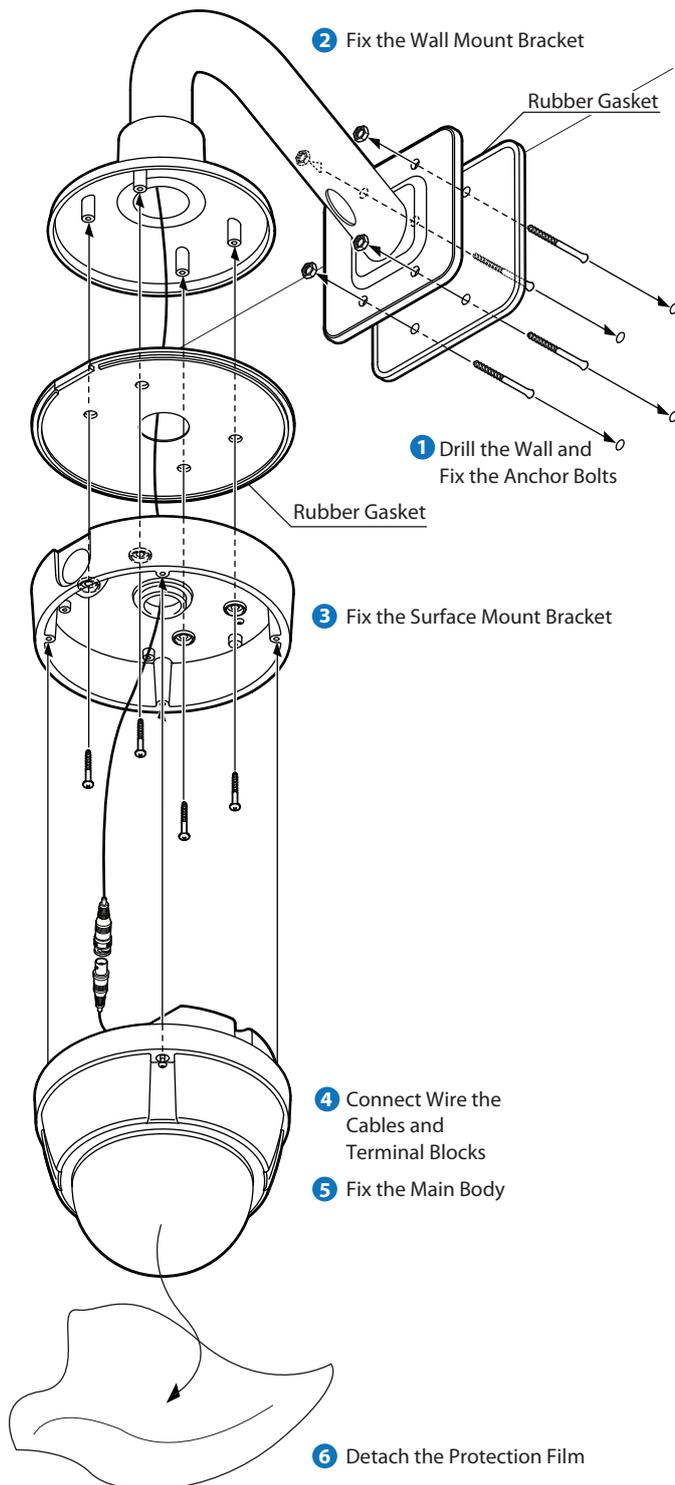
## 1. Installing on the Concrete Ceiling

- 1 **Drill the Ceiling and Fix the Anchor Bolts**  
On the ceiling, drill a hole (6mm diameter/ 50mm depth), and fix the anchor bolts.
- 2 **Fix the Ceiling Mount Bracket**
  1. Drill a hole (20mm diameter) on the pipe of the bracket to pass the cables.
  2. On the fixed anchor bolts, attach the rubber gasket and screw the ceiling mount bracket.

## 2. Installing on the Wooden Ceiling

- 1 **Drill the Ceiling**  
To pass cables to upside of ceiling, drill a hole (30mm diameter) on the ceiling.
- 2 **Fix the Ceiling Mount Bracket**  
Pass the cables into the ceiling mount bracket, and screw the ceiling mount bracket to the ceiling.
- 3 **Fix the Surface Mount Bracket**  
Pass the cables through the hole of the surface mount bracket, screw the surface mount bracket to the ceiling mount bracket.
- 4 **Connect Wire the Cables, Terminal Blocks**  
- Connect the terminal blocks to the main body.  
- Refer the 8 page for detailed information.
- 5 **Fix the Main Body**  
Screw the main body to the surface mount bracket. (Screws are included in the main body.)
- 6 **Detach the Protection Film**  
Detach the protection film from the dome cover.

# 2 Installation - Installation Using Wall Mount Bracket (Option)



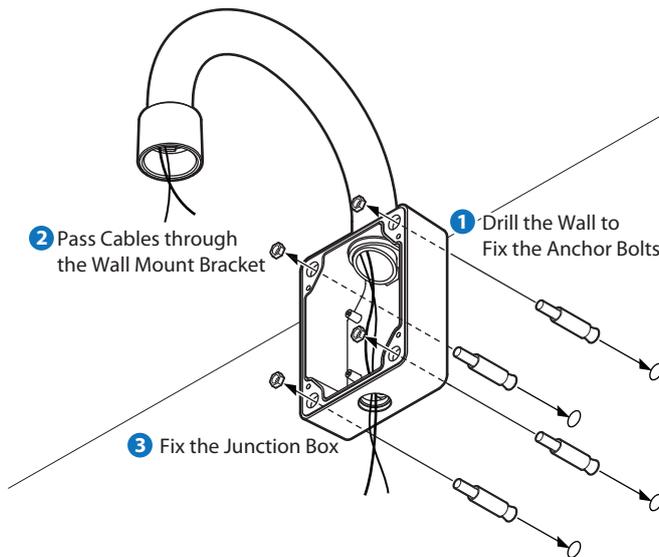
## 1. Installing on the Concrete Wall

- 1 Drill the Wall and Fix the Anchor Bolts**  
On the wall, drill a hole (6mm diameter/ 50mm depth), and fix the anchor bolts.
- 2 Fix the Wall Mount Bracket**
  1. Drill a hole (20mm diameter) on the pipe of the bracket to pass the cables.
  2. On the fixed anchor bolts, attach the rubber gasket and fix the wall mount bracket with nuts and screws.

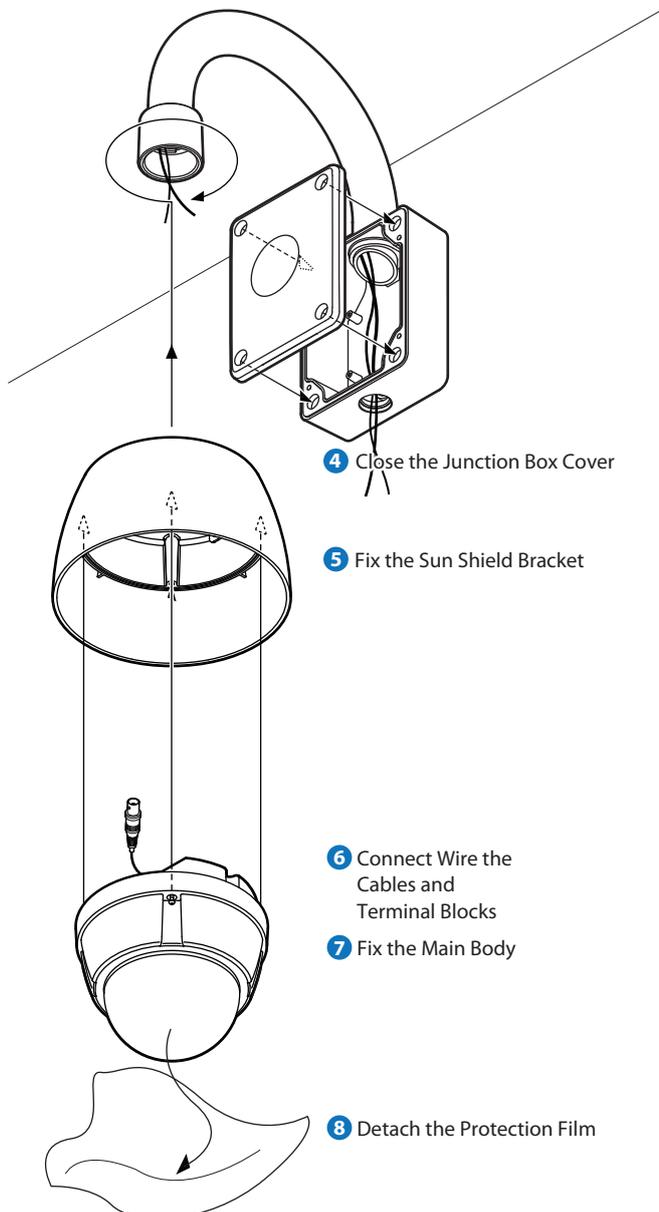
## 2. Installing on the Wooden Wall

- 1 Drill the Wall**  
To pass cables to the wall, make a hole about 30 mm on the wall.
- 2 Fix the Wall Mount Bracket**  
Pass the cables into the wall mount bracket, and screw the wall mount bracket to the wall.
- 3 Fix the Surface Mount Bracket**  
Pass the cables through the hole of the surface mount bracket, screw the surface mount bracket to the wall mount bracket.
- 4 Connect Wire the Cables, Terminal Blocks**  
- Connect the terminal blocks to the main body.  
- Refer the 8 page for detailed information.
- 5 Fix the Main Body**  
Screw the main body to the surface mount bracket. (Screws are included in the main body.)
- 6 Detach the Protection Film**  
Detach the protection film from the dome cover.

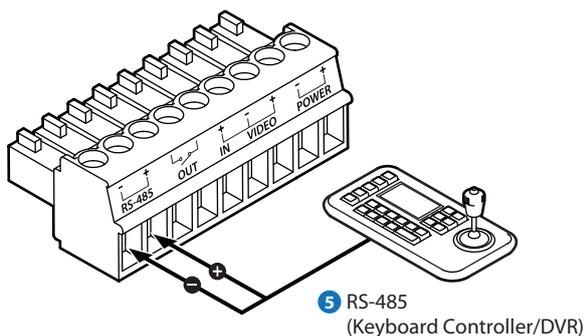
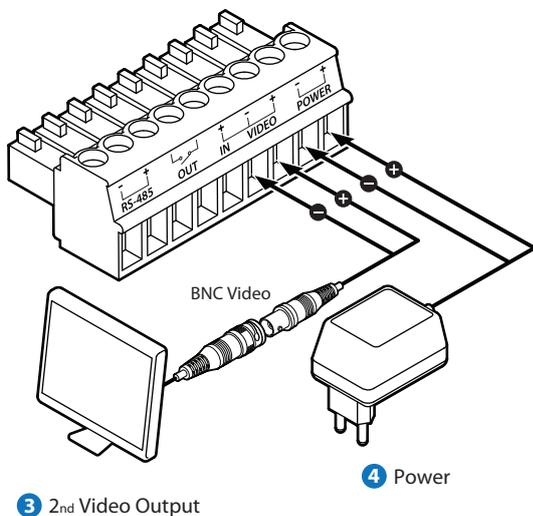
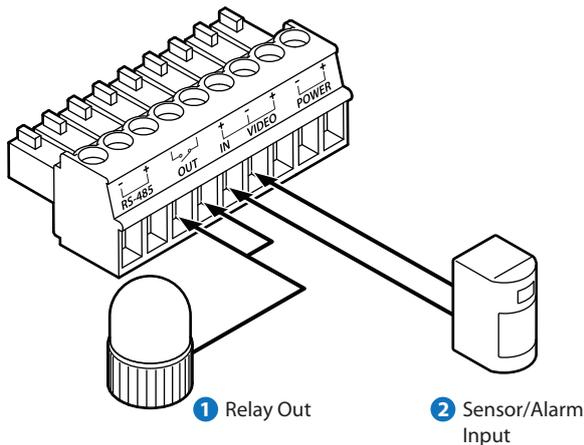
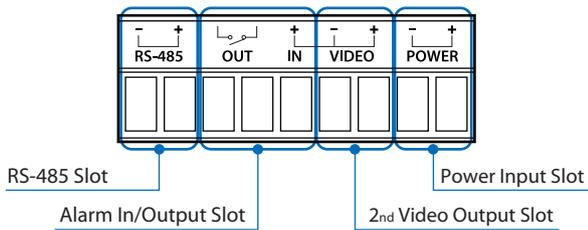
# 2 Installation - Installation Using Wall Mount Bracket with Junction Box (Option)



- 1 Drill the Wall to Fix the Anchor Bolts**  
On the wall, drill a hole (6mm diameter/50mm depth) for fix the anchor bolts.
- 2 Pass Cables through the Wall Mount Bracket**  
Pass cables before fixing the wall mount bracket.
- 3 Fix the Junction Box**  
Fix the junction box to anchor bolts on the wall.
- 4 Close Junction Box Cover**  
Close cover to the junction box using the torx driver.
- 5 Fix the Sun Shield Bracket**  
Fix the sun shield bracket to the wall mount bracket.
- 6 Connect Wire the Cables, Terminal Blocks**  
- Connect the terminal blocks to the main body.  
- Refer the 8 page for detailed information.
- 7 Fix the Main Body**  
Screw the main body to the surface mount bracket.  
(Screws are included in the main body.)
- 8 Detach the Protection Film**  
Detach the protection film from the dome cover.



# 2 Installation - Terminal Block



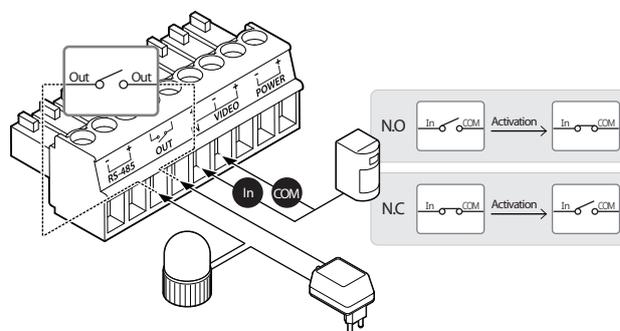
## 1 Relay Out

- It connects to the alarm lights, siren or lamps.
- The sensor types are normal open and normal close.

## 2 Sensor/Alarm Input

- It connects to IR sensor, IrDA sensor or door switch. If the sensor is activated, it can activate to move camera to the specific angle and to connect the alarm device.
- A cable of the sensor should connect to input 1 or 2, and the other should be connected to 'COM' slot.
- The sensor types are normal open and normal close.

Normal Open (N.O)	Output voltage is high state when sensor is activated.
Normal Close (N.C)	Output voltage is high state when sensor is not activated.



<Inside of terminal block: Activation type of alarm in/out N.O. / N.C.>

## 3 2nd Video Output

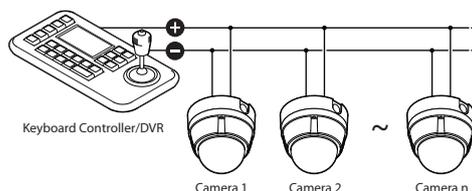
Video out check the screen during installation.

## 4 Power

- Please check the correct rated power.
- The rated power is marked on the bottom of the camera.

## 5 RS-485 Communication (DVR/Keyboard)

For PTZ control, connect this line to keyboard and DVR. To control multiple cameras at the same time, RS-485 communication lines of them are connected in parallel as shown below.



# 3 OSD - Check Points before Operation

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## Check Points before Operation

1. Before power is applied, please check the cables carefully.
2. The camera ID of the controller must be identical to that of the camera to be controlled. The camera ID can be check in the system information of OSD menu.
3. If your controller supports multi-protocols, the protocol must be changed to match to that of the camera.
4. If you changed camera protocol by changing DIP switch, the change will be effective after you reboot the camera.
5. Since the operation method can be different for each controller available, refer to the manual for your controller if camera cannot be controlled properly.

### 1 Preset and Pattern Function Pre-check

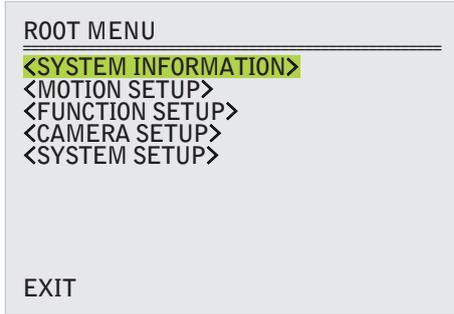
- Check how to operate preset, pattern, scan and group function with keyboard controller/DVR in advance to operate camera function using them.  
(Refer to your system keyboard manual)

### 2 Start OSD Menu

- Using the OSD menu, preset, pattern, scan, group and alarm input function can be configured for each application.  
Enter 'Preset key + 95'.

# 3 OSD - ROOT MENU & SYSTEM INFORMATION

1



1 ROOT MENU

---

#### <SYSTEM INFORMATION>

Shows information and current configuration.

---

#### <MOTION SETUP>

Setup for motion related settings.

---

#### <FUNCTION SETUP>

Setup for various functions such as preset, scan, pattern, group and schedule.

---

#### <CAMERA SETUP>

Configure camera related functions and data.

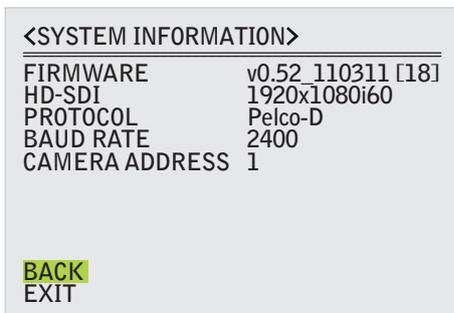
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#### <SYSTEM SETUP>

Configure for basic system setup.

---

1



1 SYSTEM INFORMATION

---

#### FIRMWARE VER

Shows the current firmware version.

---

#### HD-SDI

Shows the current resolution of HD-SDI.

---

#### PROTOCOL

Shows the current PTZ control protocol.

---

#### BAUD RATE

Shows the current baud rate of the PTZ control.

---

#### CAMERA ADDRESS

Shows the current camera ID of the PTZ control.

---

# 3 OSD - MOTION SETUP

1

<MOTION SETUP>		
POWER UP ACTION	ON	
JOG MAX SPEED	100/SEC	
JOG DIRECTION	NORMAL	
<ALARM INPUT SETUP>		
BACK EXIT		

↓  
'<ALARM INPUT SETUP>' select  
and press the 'NEAR' Key

2

<ALARM INPUT SETUP>		
ALARM 1	N.O	NOT USED
BACK EXIT		

↓  
Select 'Alarm Number'  
by move joystick up/down.  
And press the 'NEAR' key

3

<ALARM INPUT SETUP>		
ALARM 1	N.O	NOT USED
BACK EXIT		

↓  
Select 'Alarm Type'  
by move joystick up/down.  
And move joystick right.

4

<ALARM INPUT SETUP>		
ALARM 1	N.C	NOT USED
BACK EXIT		

Select 'Alarm Action'  
by move joystick up/down.  
And press the 'NEAR' key to save.

## 1 MOTION SETUP

Setup the general functions of pan/tilt motions.

<b>PWR UP ACTION</b>	ON / OFF
----------------------	----------

This function enables to resume the last action executed before power down. Most of actions such as preset, pattern, scan and group are available for this function but jog actions are not available to resume.

<b>JOG MAX SPEED</b>	30/SEC ~ 150/SEC
----------------------	------------------

Sets maximum jog speed. Jog speed is inversely proportional to zoom magnification. As zoom magnification goes up, pan/tilt speed goes down.

<b>JOG DIRECTION</b>	NORMAL / INVERSE
----------------------	------------------

If you set this to 'NORMAL', the view in the screen is moving same direction with jog tilting. If 'INVERSE' is selected, the view in the screen is moving reversely.

<ALARM INPUT SETUP>  
Moves to 'ALARM INPUT ACTION' screen.

## 2 ALARM INPUT SETUP

If an external sensor is activated, camera will move to corresponding action.

<b>Alarm Number</b>	1
---------------------	---

<b>Alarm Type</b>	N.O(Normal Open) / N.C(Normal Close)
-------------------	--------------------------------------

- Sets sensor input type.  
- Refer page 14 for more detailed information.

<b>Alarm Action</b>	NOT USED / HOME / PRESET 1~255 / SCAN 1~8 / PATTERN 1~4 / GROUP 1~8
---------------------	---

Assign counter-action to each alarm input. Among 149 actions, choose the action as explained below.

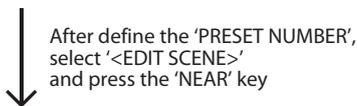
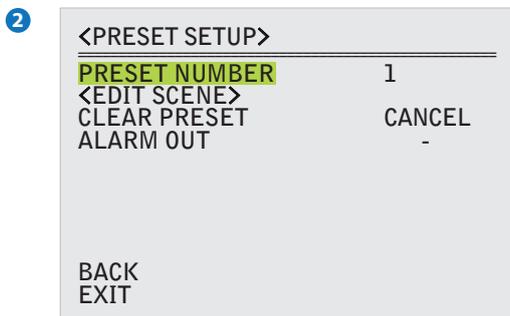
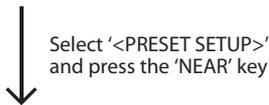
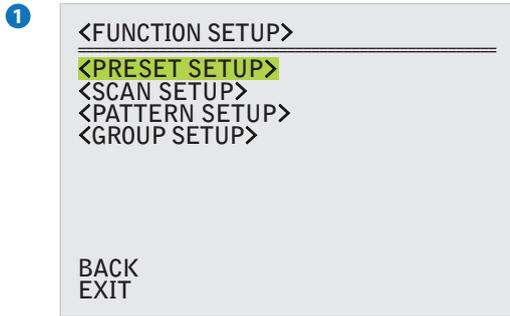
## 3 ALARM INPUT SETUP - Type Setup

- 1) Move joystick up/down to set alarm type.
- 2) Move joystick right to set alarm action.

## 4 ALARM INPUT SETUP - Alarm Action Setup

- 1) Move joystick up/down to set the action(HOME, PRESET, SCAN, PATTERN, GROUP) and number.
- 2) Move joystick left/right to move the focus to set alarm type, function name and function number.
- 3) By pressing near key, save the current setting.

# 3 OSD - FUNCTION SETUP > PRESET SETUP



1 **FUNCTION SETUP**  
Configure 4 special functions with this menu.

2 **PRESET SETUP**  
255 presets from the number 1 to 255 can be assigned excluding preset 95, 131~134, 141~148, 151~158 reserved for menu.

**PRESET NUMBER** 1 ~ 255  
Selects the preset number to edit.

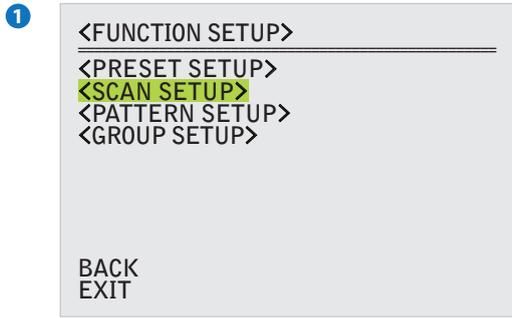
**<EDIT SCENE>**  
Define the current preset scene position(i.e. PTZ).

**CLEAR PRESET** CANCEL / OK  
Deletes current preset data.

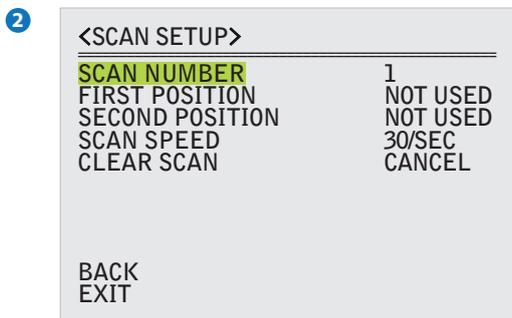
**ALARM OUT** - / 1  
Relay output can be linked with preset run. ' - ' means off, '1' means on.

3 **EDIT SCENE**  
1) By PTZ controlling, move camera to desired position.  
2) By pressing the 'NEAR' key, the save current PTZ data.  
3) If you want cancel the editing, press the 'FAR' key.

# 3 OSD - FUNCTION SETUP > SCAN SETUP



↓ Select '<SCAN SETUP>' and press the 'NEAR' key



## 2 SCAN SETUP

Up to 8 scans are available, which makes the camera to move slowly between two preset positions.

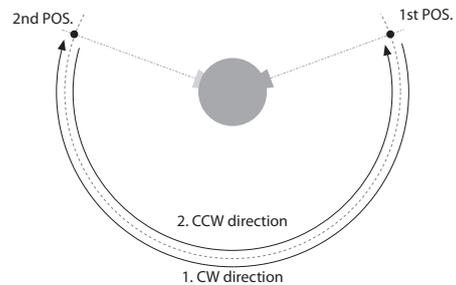
When scan function runs, the camera moves from the preset assigned as the 1st pos. to the preset assigned as the 2nd pos. in CW(Clockwise) direction. Then camera moves from the preset assigned as the 2nd pos. to the preset assigned as the 1st pos. in CCW(Counterclockwise) direction. Then, it continues to move from the 1st pos. to the 2nd pos. back and forth.

### If the 1st POS. = the 2nd POS.

In case that the preset assigned as the 1st pos. is same as the preset assigned as the 2nd pos., camera turns on its axis by 360° in CW direction and then it turns on its axis by 360° in CCW direction.

### If one preset is not defined between the 1st POS. and the 2nd POS.

If case that a position assigned is 'NOT USED', camera turns on its axis by 360° in CW direction from the preset which is 'NOT USED' and then it turns on its axis by 360° in CCW direction.



**SCAN NUMBER** 1 ~ 8  
Selects the scan number to edit.

**FIRST POSITION** PRESET 1 ~ 255 / NOT USED  
Set up the 1st position for scan function.

⊠ Undefined preset cannot be assigned as position. If you press 'NEAR' key when the selected undefined preset, the preset will returned to previous position(Available preset or 'NOT USED').

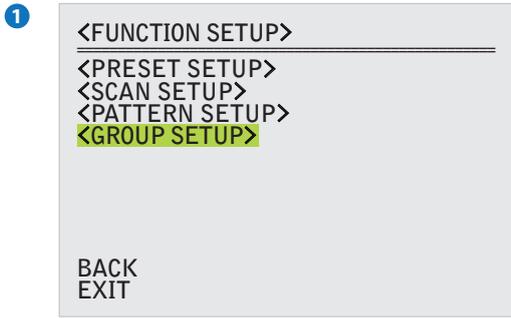
**SECOND POSITION** PRESET 1 ~ 255 / NOT USED  
Same as the 1st position setup.

**SCAN SPEED** 1/SEC ~ 180/SEC  
Sets the scan speed.

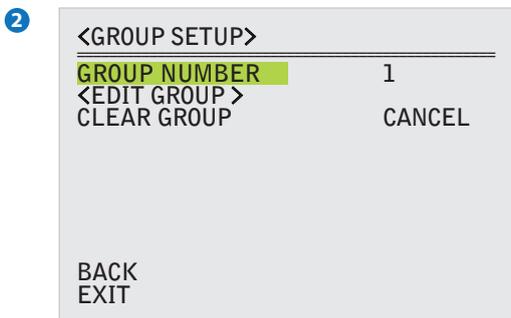
**CLEAR SCAN** CANCEL / OK  
Deletes the current scan data.



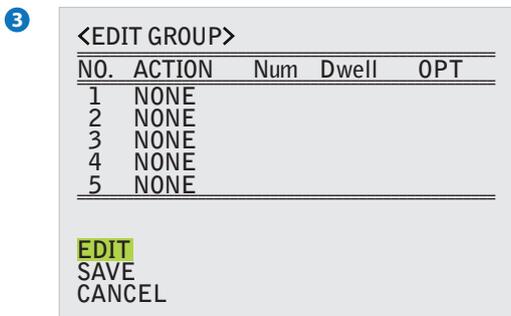
# 3 OSD - FUNCTION SETUP > GROUP SETUP



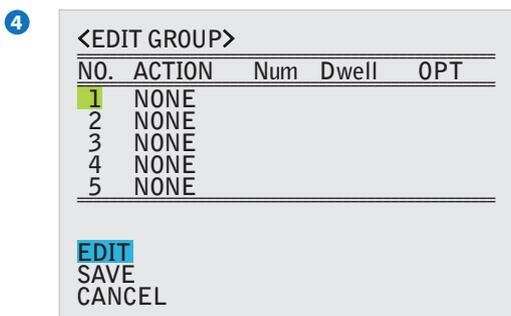
↓ Select '<GROUP SETUP>' and press the 'NEAR' key



↓ After define the 'GROUP NUMBER', select '<EDIT GROUP>' and press the 'NEAR' key



↓ Press the 'NEAR' key to start editing

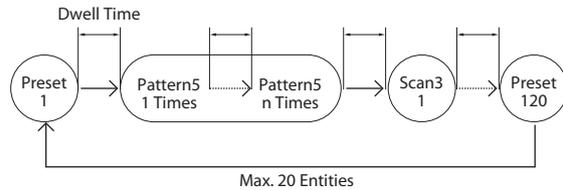


↓ Select function sequence number by move joystick up/down. And press the 'NEAR' key.

## 2 GROUP SETUP SCREEN

The group function allows running sequence of presets, pattern and/or scans. Max. 8 group can be stored. Each group can have max. 20 action entities which can be preset, pattern or scan.

Preset speed can be set up and the repeat number of pattern & scan can be set up in group setup. Dwell time between actions can be set up also.



**GROUP NUMBER** 1 ~ 8  
Selects group number to edit.

**<EDIT GROUP>**  
Starts editing group.

**CLEAR GROUP** CANCEL / OK  
Deletes data in the current group.

## 3 EDIT GROUP - Initial Screen

Press the 'NEAR' key to start group setup.

**NO.** 1 ~ 20  
Means the sequence of the function in a group. The functions will be run from lower no. to higher no. by sequence.

**ACTION NUM** NONE / PRESET 1~255 / PATTERN 1~4 / SCAN 1~8  
Select the function.

**DWELL** 00:03 ~ 04:00 (min:sec)  
Sets dwell time between function by moving joystick up/down. If the 'OPT' of pattern/group is set to repeat more than twice, it means the repeat interval.

**OPT** PRESET: 1~360 / PATTERN & SCAN: 1~255  
It represents preset speed (1~360) when preset is selected. It should be the number of repetition (1~255) when pattern or scan is selected for 'ACTION'.

## 4 EDIT GROUP - Select Function Sequence

Note that max. 20 functions are allowed in a group. Move cursor up/down and press the 'NEAR' key to set up.

## 5 EDIT GROUP - Assign Function

Move cursor to the 'NO.' to assign the function, click the enter button to set up. Select the function by clicking up/down button.

# 3 OSD - FUNCTION SETUP > GROUP SETUP

5

<EDIT GROUP>				
NO.	ACTION	Num	Dwell	OPT
1	NONE			
2	NONE			
3	NONE			
4	NONE			
5	NONE			

EDIT  
SAVE  
CANCEL

↓ Move joystick up/down to select action, and move joystick right.

6

<EDIT GROUP>				
NO.	ACTION	Num	Dwell	OPT
1	PRESET	1	00:02	1
2	NONE			
3	NONE			
4	NONE			
5	NONE			

EDIT  
SAVE  
CANCEL

↓ After define items, press the 'NEAR' key

7

<EDIT GROUP>				
NO.	ACTION	Num	Dwell	OPT
1	PRESET	1	00:02	1
2	NONE			
3	NONE			
4	NONE			
5	NONE			

EDIT  
SAVE  
CANCEL

↓ Press the 'FAR' key, and move joystick down to select 'SAVE'

8

<EDIT GROUP>				
NO.	ACTION	Num	Dwell	OPT
1	PRESET	1	00:02	1
2	NONE			
3	NONE			
4	NONE			
5	NONE			

EDIT  
SAVE  
CANCEL

Press the 'NEAR' key to save current data.

5 **EDIT GROUP - Assign Function**  
Move cursor to the 'NO.' to assign the function, press the 'NEAR' key to set up. Select the function by moving joystick up/down.

6 **EDIT GROUP - Assign Function**  
Move cursor left/right to select items and move cursor up/down to change each value.

7 **EDIT GROUP - Select Function Sequence**  
e.g.) If 'PRESET 1' is not defined at 'ROOT MENU>FUNCTION SETUP>PRESET SETUP', then the 'ACTION' will be automatically changed to 'NONE'.

<EDIT GROUP>				
NO.	ACTION	Num	Dwell	OPT
1	PRESET	1	00:02	1
2	NONE			
3	NONE			

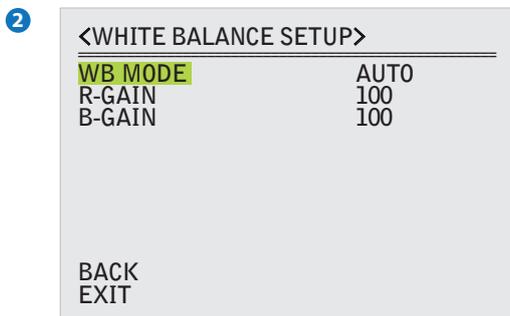
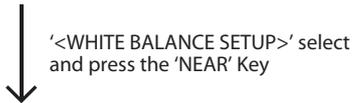
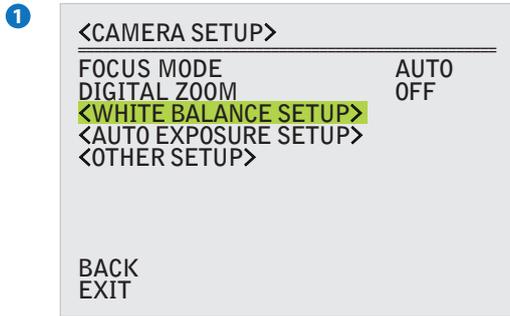
↓ Press the 'NEAR' key

<EDIT GROUP>				
NO.	ACTION	Num	Dwell	OPT
1	NONE			
2	NONE			
3	NONE			

⊗ The function undefined cannot be set as action.

8 **EDIT GROUP - Saves the Setting**  
After finishing setting up all actions, place cursor on 'SAVE'. Then, press the 'NEAR' key to save current data.

# 3 OSD - CAMERA SETUP



## 1 CAMERA SETUP

Setup the general functions of zoom camera module.

**FOCUS MODE** AUTO / MANUAL

Sets the camera focus mode.

- **AUTO:** This mode exchanges the focus mode automatically between manual focus mode and auto focus mode. Manual focus mode activates in preset operation and auto focus mode activates when jog operation starts.

- **MANUAL:** With manual mode at presets, focus data is memorized in each preset in advance and camera calls focus data in correspondence with presets as soon as camera arrives at a preset.

**DIGITAL ZOOM** ON / OFF

Sets digital zoom function to 'ON' or 'OFF'. If this is set to 'OFF', optical zoom function runs but zoom function stops at the end of optical zoom magnification.

<WHITE BALANCE SETUP>

Starts 'WHITE BALANCE SETUP' setup screen.

<AUTO EXPOSURE SETUP>

Starts 'AUTO EXPOSURE SETUP' setup screen.

<OTHER SETUP>

Starts 'OTHER SETUP' setup screen.

## 2 WHITE BALANCE SETUP

**WB MODE** AUTO / MANUAL / ONE PUSH> / OUTDOOR / INDOOR

- **AUTO:** Camera perform white balance automatically.

- **Manual:** 'R/B-Gain' level can be set up manually.

- **ONE PUSH:** WB is executed once on the scene you designated.

- **INDOOR:** WB will be done under assumption of Indoor illumination.

- **OUTDOOR:** WB will be done under assumption of Sun light.

**RED ADJUST** 0 ~ 255

**BLUE ADJUST** 0 ~ 255

# 3 OSD - CAMERA SETUP > AUTO EXPOSURE SETUP

1

<CAMERA SETUP>	
FOCUS MODE	AUTO
DIGITAL ZOOM	OFF
<WHITE BALANCE SETUP>	
<AUTO EXPOSURE SETUP>	
<OTHER SETUP>	
BACK	
EXIT	



'<AUTO EXPOSURE SETUP>' select and press the 'NEAR' Key

2

<AUTO EXPOSURE SETUP>	
BACK LIGHT	OFF
DAY/NIGHT	AUTO
AE MODE	AUTO
* SHUTTER	1/60
* IRIS	F2.0
* GAIN	4dB
* BRIGHT	20
SLOW SHUTTER	ON
BACK	
EXIT	

2 AE SETUP

**BACK LIGHT** ON / OFF  
Sets the backlight compensation.

**DAY/NIGHT** AUTO / DAY / NIGHT  
'AUTO' exchanges day/night.

**AE MODE** AUTO / MANUAL / IRIS / SHUTTER / BRIGHT

- **AUTO**: Full auto mode for AE function

- **MANUAL**: In manual mode. 'IRIS', 'GAIN', 'SHUTTER SPEED' can be changed in this mode.

- **IRIS**: Iris priority mode. You can change iris while others are adjusted automatically.

- **SHUTTER**: Shutter priority mode. Shutter speed can be changed while while others are adjusted automatically.

- **BRIGHT**: In this mode, you can assign AE value in terms of brightness.

**IRIS LEVEL** CLOSE / F1.8 / F2.0 / F2.4 / F2.8 / F3.4 / F4.0 / F4.8 / F5.6 / F6.8 / F8.0 / F9.6 / F11 / F14 / F16 / F19 / F22 / F26 (18 steps)

Works when 'AE MODE' is 'MANUAL' or 'IRIS' mode.

**GAIN LEVEL** -3 / 0 / 3 / 6 / 9 / 12 / 15

Works when 'AE MODE' is 'MANUAL'.

Enhances image brightness automatically in case that luminance level of image signal is too low.

**SHUTTER SPD** 1/2 ~ 1/10000 (21 steps)

Works when 'AE MODE' is 'MANUAL' or 'SHUTTER' mode.

**BRIGHTNESS** 0~23 (24 steps)

Works when 'AE MODE' is 'BRIGHT'.

Adjusts brightness of images. Iris, shutter speed and gain are adjusted automatically in correspondence with this value.

**SLOW SHUTTER** ON / OFF

Turn On/Off slow shutter function. If you turn this on, the shutter speed is slowed down to intensify image by accumulating small light in the extremely dark environment. This function is effective only in Full Auto AE mode.

# 3 OSD - CAMERA SETUP > OTHER SETUP

1

<b>&lt;CAMERA SETUP&gt;</b>	
FOCUS MODE	AUTO
DIGITAL ZOOM	OFF
<WHITE BALANCE SETUP>	
<AUTO EXPOSURE SETUP>	
<b>&lt;OTHER SETUP&gt;</b>	
BACK	
EXIT	



'<OTHER SETUP>' select  
and press the 'NEAR' Key

2 OTHER SETUP

EXP COMPENSATION	7 (GAIN:-10.5dB)
	~ +7 (GAIN:+10.5dB) (15 Steps)

Default is '0/0dB'.

APERTURE	0 ~ 15
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GAMMA	NORMAL / TYPE1 / TYPE2
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PICTURE EFFECT	OFF / Negative / B&W
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2

<b>&lt;OTHER SETUP&gt;</b>	
<b>EXP COMPENSATION</b>	0
APERTURE	6
GAMMA	NORMAL
PICTURE EFFECT	OFF
BACK	
EXIT	

# 3 OSD - SYSTEM SETUP

1

<SYSTEM SETUP>	
HD-SDI	1920x1080i60
CLEAR ALL DATA	CANCEL
BAUD RATE	2400
BACK	
EXIT	

2 SYSTEM SETUP

HD-SDI	1280x720p50 / 1280x720p60 / 1920x1080i50, / 1920x1080i60
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Select the resolution of HD-SDI.

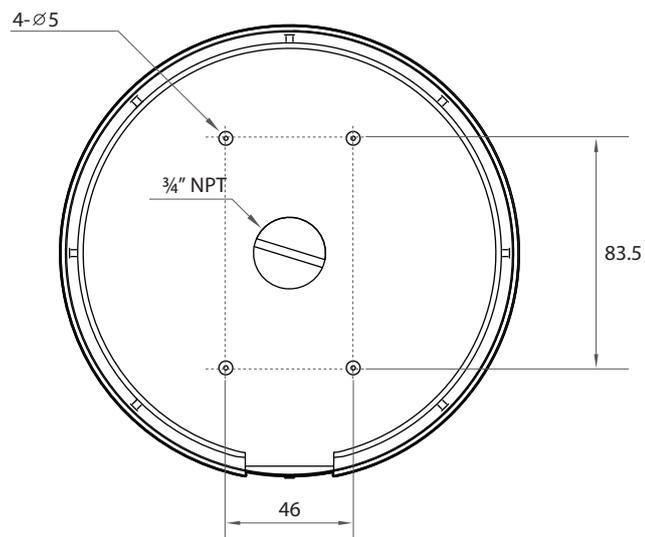
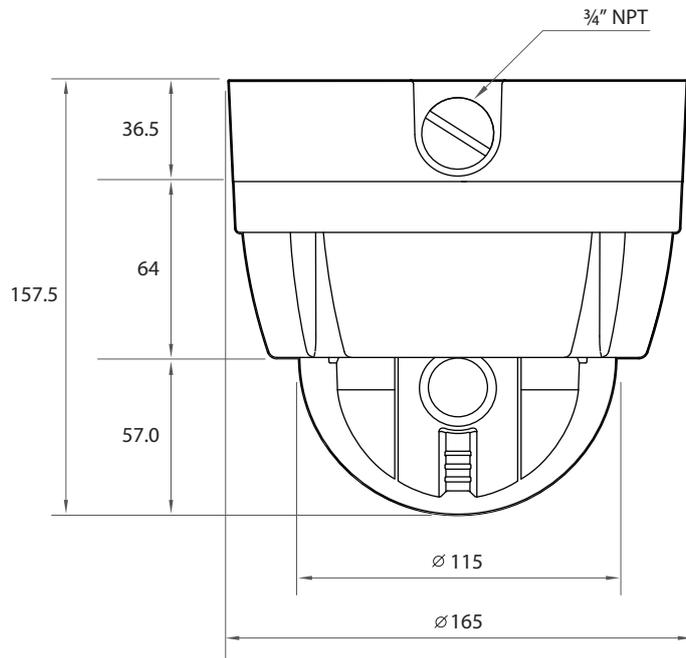
CLEAR ALL DATA	CANCEL / OK
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Deletes all configuration data such as display, camera, motion setup and so on.

BAUD RATE	2400 / 4800 / 9600 / 19200 / 38400
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# 4 Specifications - Dimension

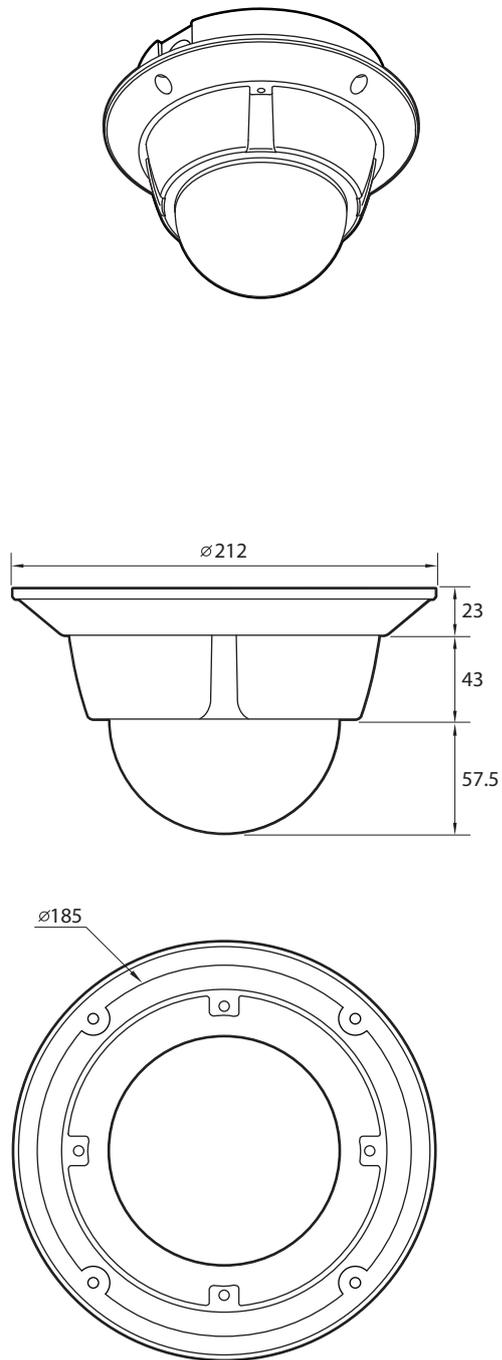
Unit: mm



# 4 Specifications - Dimension of Option Brackets

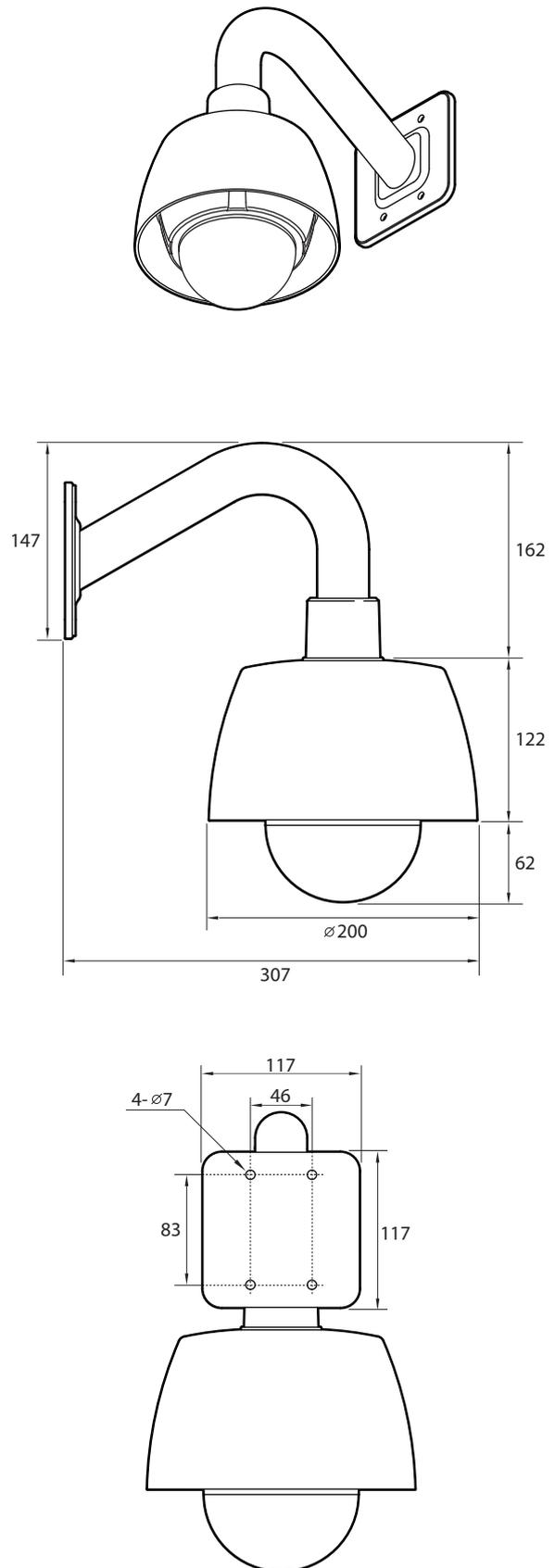
1. Flush Mount Ring Bracket

Unit: mm



2. Sun Shield Mount Bracket

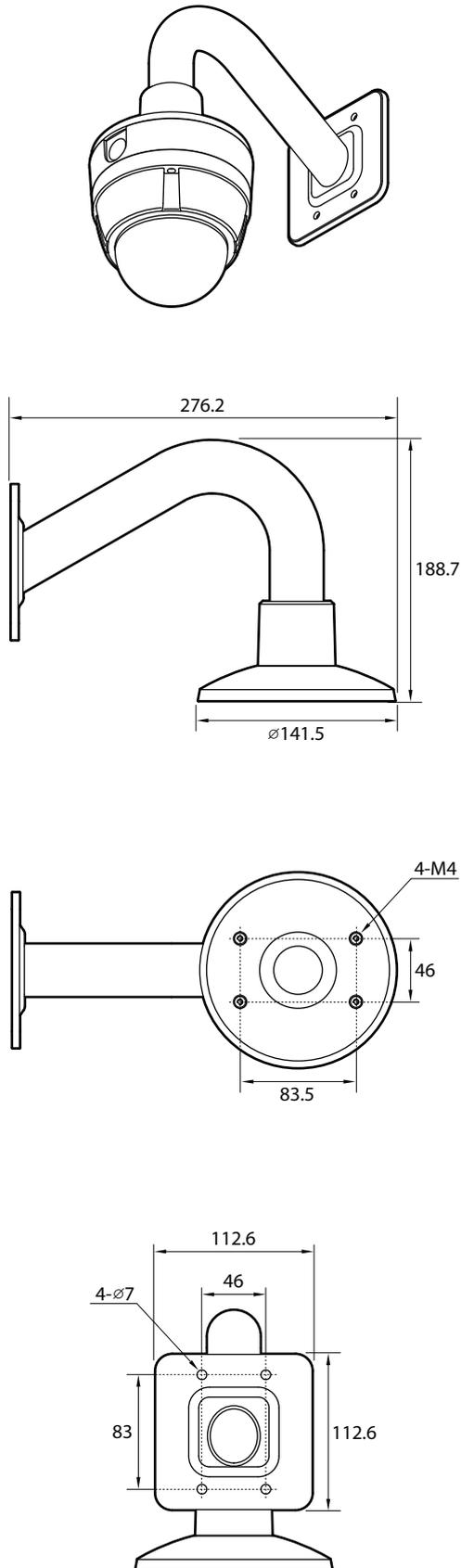
Unit: mm



# 4 Specifications - Dimension of Option Brackets

3. Wall Mount Bracket

Unit: mm



4. Ceiling Mount Bracket

Unit: mm

