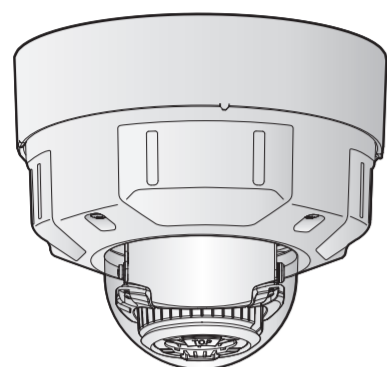


## Installation Guide

Included Installation Instructions

### Network Camera

Model No. **WV-S2531LTN / WV-S2531LN**  
**WV-S2511LN**



WV-S2531LN



- Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.
- For information about the basic description of this product, refer to the Important Information on the provided CD-ROM. For information about how to perform the settings and how to operate the camera, refer to the Operating Instructions on the provided CD-ROM.
- The model number is abbreviated in some descriptions in this manual.

#### For U.S. and Canada:

i-PRO Americas Inc.  
https://www.i-pro.com/

#### For Europe and other countries:

i-PRO Co., Ltd. Fukuoka, Japan  
https://www.i-pro.com/

i-PRO EMEA B.V. UK Branch  
1010 Cambourne Business Park,  
Cambridgeshire CB23 6DP

Authorised Representative in EU:  
i-PRO EMEA B.V.  
Laarderhoogtweg 25, 1101 EB  
Amsterdam, Netherlands



## Important safety instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 6) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 7) Only use attachments/accessories specified by the manufacturer.
- 8) Use only with the 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.
- 9) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 10) 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.



## Troubleshooting

Before requesting service, refer to the Important Information (included in the CD-ROM) and "Troubleshooting" in the Operating Instructions (included in the CD-ROM) and confirm the trouble.

## Open Source Software

- This product contains open source software licensed under GPL (GNU General Public License), LGPL (GNU Lesser General Public License), etc.
- Customers can duplicate, distribute and modify the source code of the software under license of GPL and/or LGPL.
- Refer to the "readme.txt" file on the provided CD-ROM for further information about open source software licenses and the source code.
- Please note that we shall not respond to any inquiries regarding the contents of the source code.

#### WARNING:

- To prevent injury, this apparatus must be securely attached to the wall/ceiling in accordance with the installation instructions.
- All work related to the installation of this product should be made by qualified service personnel or system installers.
- The installation shall be carried out in accordance with all applicable installation rules.
- The connections should comply with local electrical code.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunlight, fire or the like.

#### CAUTION:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- The network camera is only intended for a connection to an ethernet or PoE network without routing to the outside plant.

For Canada  
CAN ICES-3(A)/NMB-3(A)

: Direct current symbol

The model number and serial number of this product may be found on the surface of the unit. You should note the model number and serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. \_\_\_\_\_  
Serial No. \_\_\_\_\_

For U.S.A.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### Disposal of Old Equipment and Batteries Only for European Union and countries with recycling systems



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation. By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment. For more information about collection and recycling, please contact your local municipality. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



**Note for the battery symbol (bottom symbol)**  
This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

## About notations

The following notations are used when describing the functions limited for specified models. The functions without the notations are supported by all models.

- S2531L** :The functions with this notation are available when using the model WV-S2531LTN / WV-S2531LN.
- S2511L** :The functions with this notation are available when using the model WV-S2511LN.

## About the user manuals

Product documentation is composed of the following documents.

- **Installation Guide (this document):** Explains installation, mounting, cable connections, and adjusting the field of view. This manual uses the WV-S2511LN as an example in the explanations.
- **Important Information (included in the CD-ROM):** Provides basic information about the product.
- **Operating Instructions (included in the CD-ROM):** Explains how to perform the settings and how to operate this camera.

Adobe® Reader® is required to read these operating instructions on the provided CD-ROM. When the Adobe Reader is not installed on the PC, download the latest Adobe Reader from the Adobe web site and install it. The external appearance and other parts shown in this manual may differ from the actual product within the scope that will not interfere with normal use due to improvement of the product.

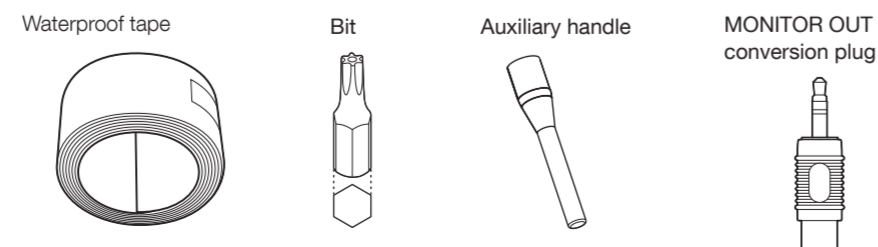
## Standard accessories

Installation Guide (this document) .....1 set CD-ROM\*1 ..... 1 pc.  
IMPORTANT SAFETY INSTRUCTIONS ..... 1 pc. Code label\*2 ..... 1 pc.

- \*1 The CD-ROM contains the operating instructions and different kinds of tool software programs.
- \*2 This label may be required for network management. Use caution not to lose this label.

The following parts are used during installation procedures.

Base bracket ..... 1 pc. RJ45 waterproof connector cover ..... 1 pc.  
Attachment plate ..... 1 pc. RJ45 waterproof connector cap ..... 1 pc.  
Fixing screws for attachment plate (M4 x 8 mm {5/16 inches}) ..... 5 pcs. Bit (Hex wrench, screw size 6.35 mm {1/4 inches} T20) ..... 1 pc.  
(of them, 1 for spare) 2P power cable ..... 1 pc.  
Template A (for the attachment plate) ..... 1 sheet 4P alarm cable ..... 1 pc.  
Template B (for the base bracket) ..... 1 sheet MONITOR OUT conversion plug ..... 1 pc.  
Waterproof tape ..... 1 pc. Auxiliary handle **S2511L** ..... 1 pc.



## Preparations

Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.

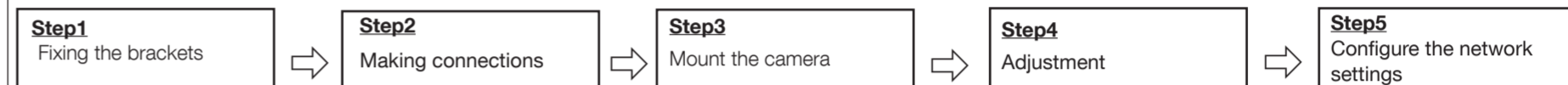
#### IMPORTANT:

- Procure 4 screws (M4) to secure the attachment plate (accessory) to a ceiling or a wall.
- The minimum required pull-out capacity of a single screw or anchor bolt is 196 N {44 lbf} or more when mounting with the installation method **[Type 1]** , **[Type 2]** , or **[Type 3]** described in the right table.
- Select screws according to the material of the location that the camera will be mounted to. In this case, wood screws and nails should not be used.
- If the mounting location such as plaster board is too weak to support the total weight, the area shall be sufficiently reinforced.
- This product can only be installed indoors when WV-Q105A or WV-Q169A is used to install it on the ceiling.

Installation method	Description of installation method
Mount the camera on the two-gang junction box using the attachment plate (accessory).	<b>[Type 1]</b>
Directly mount the camera onto the ceiling or wall using the attachment plate (when wiring can be installed in the ceiling or wall).	<b>[Type 2]</b>
Mount the camera onto the ceiling or wall using the base bracket (accessory) (when conduits are used for wiring, or when there is no space available for wiring in the ceiling or the wall). <sup>*1</sup>	<b>[Type 3]</b>
Mount the camera using WV-Q105A (Ceiling mount bracket), WV-Q169A (Ceiling mount bracket), WV-Q121B (Ceiling mount bracket), WV-Q122A (Wall mount bracket), or WV-Q124 (Mount bracket) .	Refer to each instruction guide of the bracket.

## Installation

The installation tasks are explained using 5 steps.



Remove the camera using the reverse order of the installation procedures.

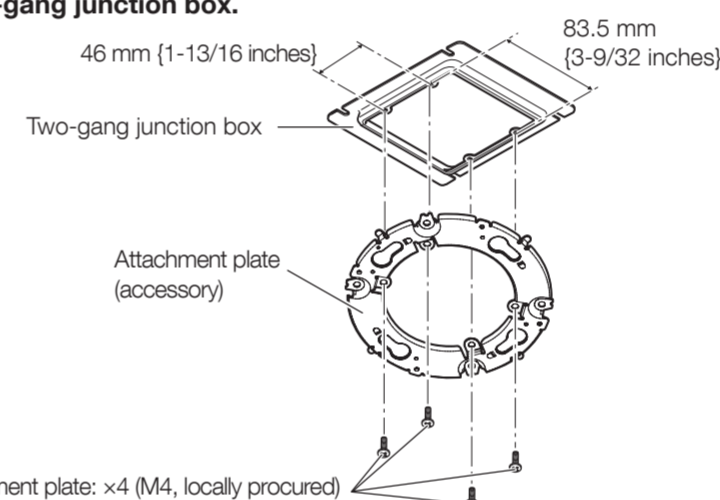
### Step 1 Fixing the brackets \*There are 3 methods to install the camera to a ceiling or wall.

#### [Common]

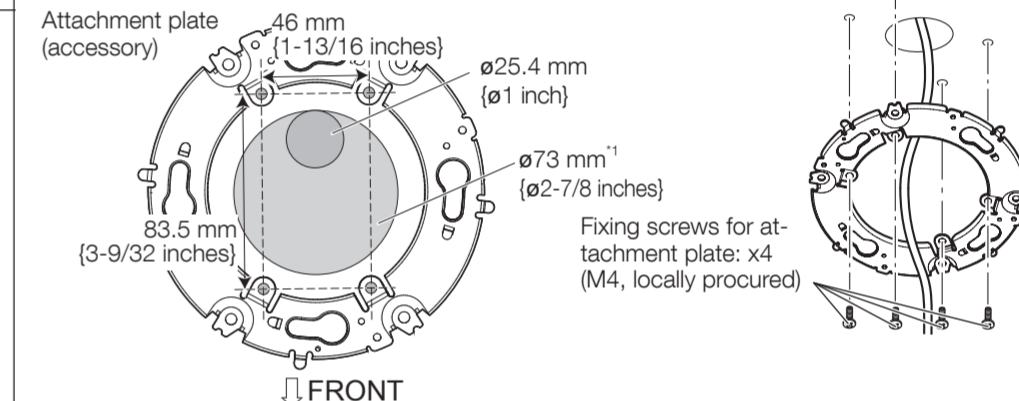
##### Note:

- Attach the attachment plate (accessory) so that the marking (PGYE1054) faces toward the ceiling or wall to be installed.

#### [Type 1] Using a two-gang junction box.



**[Type 2] Directly mount the camera to the ceiling or wall using the attachment plate.** Align the **FRONT** direction of the template A (accessory) with the desired direction, and drill through a 25.4 mm {1 inch} diameter hole to attach the attachment plate. Then, the direction of the marker "FRONT" on the camera (see the figure in [4] of "Step 3 Mount the camera") should face the desired direction of the camera.

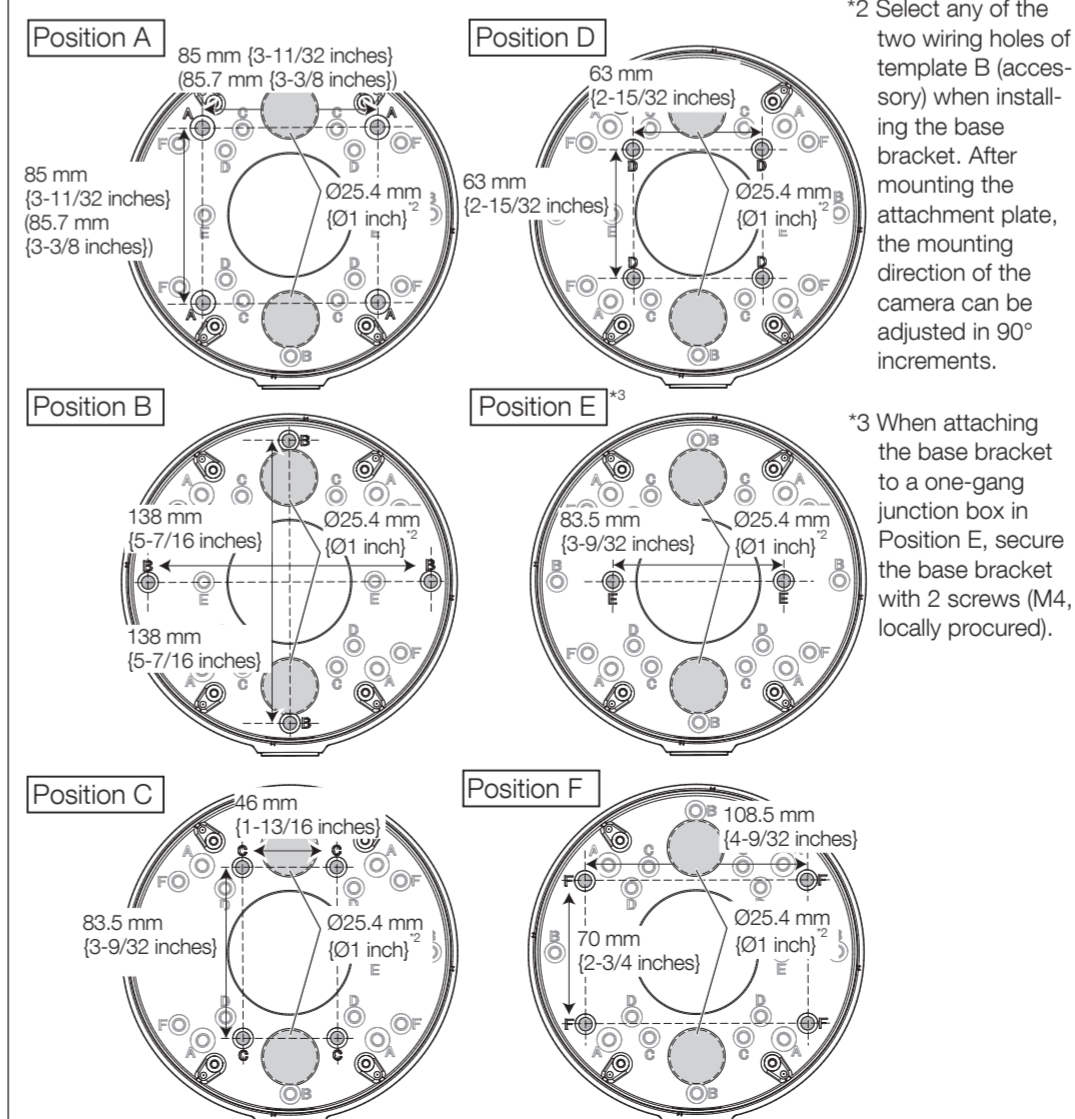


\*1 If the mounting direction of the camera is not determined yet or if you want to change the direction of the camera after it has been installed. If you want to be able to change the direction of the camera, drill through a 73 mm {2-7/8 inches} diameter hole in the center. By doing so you can adjust the mounting direction of the camera in 90° increments.

#### [Type 3] Mount the camera to a ceiling or a wall using base bracket (accessory).

##### ① Using the template B (accessory), make screw holes for fixing the base bracket and wiring holes.

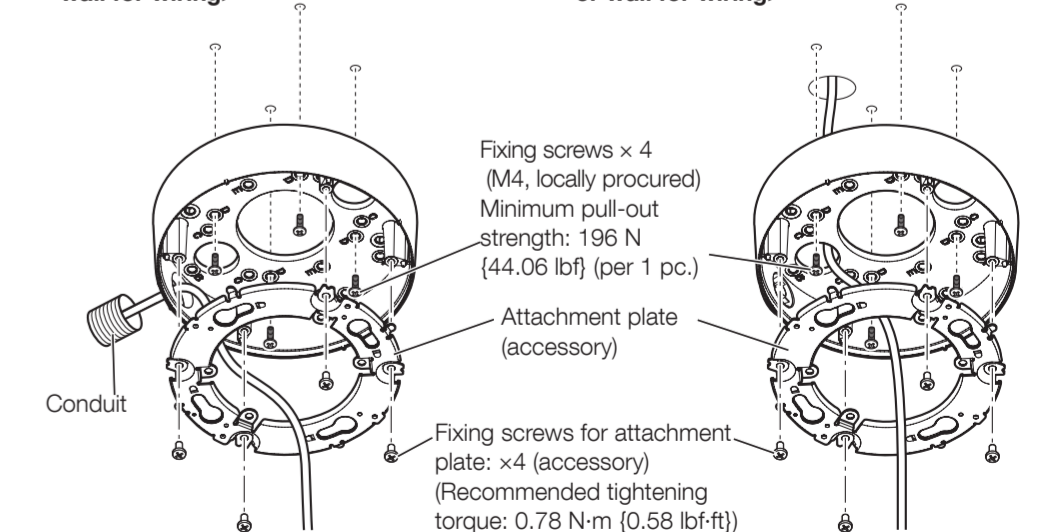
The base bracket can be fixed in any of the following 6 screwing positions according to ceiling and wall conditions. Match the hole used when installing the camera to any of positions A to F.



##### ② When using the conduit on the ceiling or wall for wiring, remove the cap for the female thread for the conduit by using a hexagon wrench (ISO 2936, width across flats S=5 mm {3/16 inches}).

The female thread for conduit is compliant with ANSI NPSM (parallel pipe threads) 3/4 or ISO 228-1 (parallel pipe threads) G3/4. Cap for the female thread for the conduit

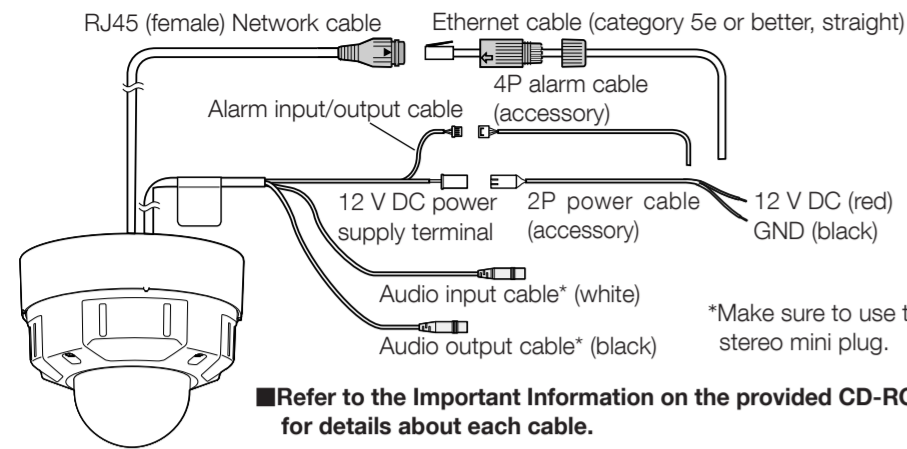
##### ③ Mount the attachment plate and the base bracket. <When using the conduit on the ceiling or wall for wiring>



#### IMPORTANT:

- If open wiring is conducted, be sure to use conduits and run the cables inside the tubes to protect the cables from direct sunlight.
- Installation work shall be such that there is no exposure to water into the architecture through the conduits having been joined..

## Step 2 Making connections



Refer to the Important Information on the provided CD-ROM for details about each cable.

### IMPORTANT:

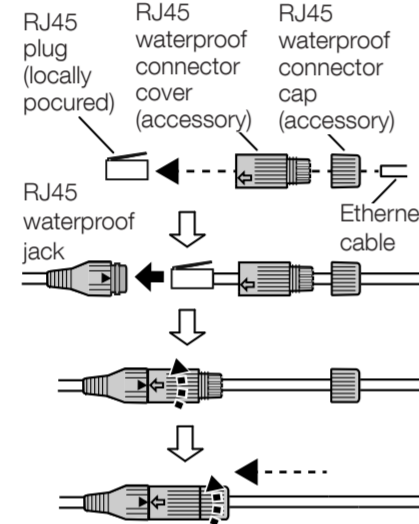
- Turn off each system's power supply (PoE hub or device to supply power to the camera) before making a connection.
- The 12 V DC power supply shall be insulated from the commercial AC power.

- [1] Connect an Ethernet cable (category 5e or better, straight) to RJ45 (female) network cable. \* The maximum cable length is 100 m [328 feet].

### IMPORTANT:

- If the procedure for the RJ45 waterproof connector (accessory) part is not correctly followed, the waterproofing may be compromised. Do not install the camera where the RJ45 waterproof connector is exposed to constant rain or moisture.
- The external dimensions of the Ethernet cable are from  $\phi 5$  mm [ $\phi 3/16$  inches] to  $\phi 6.5$  mm [ $\phi 1/4$  inches].

- ① First pass the Ethernet cable through the RJ45 waterproof connector cap (accessory) and then through the RJ45 waterproof connector cover (accessory). Next, use a specialized tool (locally procured) to crimp the RJ45 plug (locally procured) to the end of the Ethernet cable.
- Take care not to remove the rubber parts from inside the RJ45 waterproof connector cover.
- ② Insert the RJ45 plug into the RJ45 waterproof jack connected to the camera.
- ③ Connect the RJ45 waterproof connector cover to the RJ45 waterproof jack and then rotate the RJ45 waterproof connector cover until the "←" marks align.
- ④ Connect the RJ45 waterproof connector cap to the RJ45 waterproof connector cover until there is no gap between it and the RJ45 waterproof connector cover.



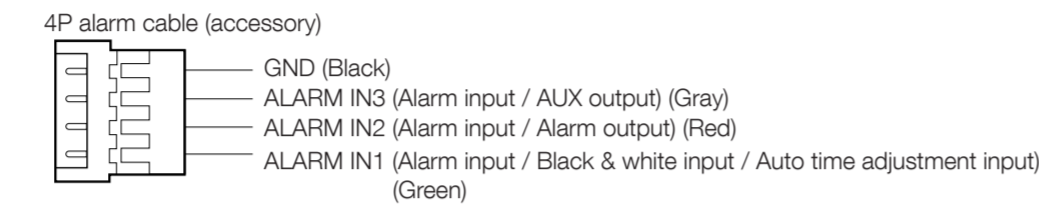
- [2] When connecting an AC adaptor or an external power supply, use the 2P power cable (accessory) to connect it to the camera.

### Caution:

- A READILY ACCESSIBLE DISCONNECT DEVICE SHALL BE INCORPORATED TO THE EQUIPMENT POWERED BY 12 V DC POWER SUPPLY.
- ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY (UL 1310/CSA 223) or LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1).

Connect the output cable of the AC adaptor to the 2P power cable (accessory). (Red: 12 V DC side, Black: GND side)

- [3] If needed, connect the 4P alarm cable (accessory).



### Note:

- The default of EXT I/O terminals is "Off". Refer to the Operating Instructions on the provided CD-ROM for further information about the EXT I/O terminal settings.

- [4] If needed, connect a microphone or the line out of an external device to the audio input cable.

- [5] If needed, connect a powered speaker to the audio output cable.

### Note:

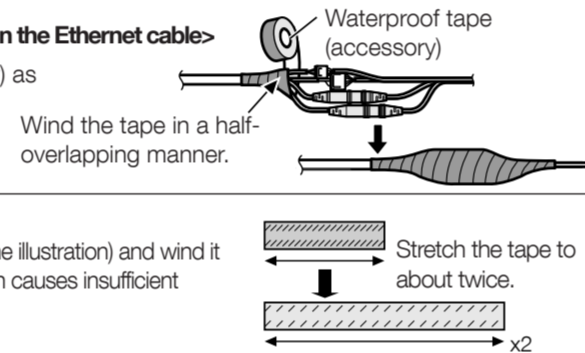
- The audio output can be switched to the monitor output. Refer to the "Operating Instructions" on the provided CD-ROM for descriptions of how to switch the output.

- [6] Adequate waterproof treatment is required for the cables when installing the camera with cables exposed.

The camera body is waterproof, but the cable ends, inside the base bracket (accessory) are not waterproof. Apply waterproof treatment on the connecting part as shown below.

### <Waterproof treatment for other cables than the Ethernet cable>

Apply some waterproof tape (accessory) as shown in the right.



### IMPORTANT:

- Stretch the tape by approx. twice (see the illustration) and wind it around the cable. Insufficient tape stretch causes insufficient waterproofing.

## Step 4 Adjustment

- [1] Turn on power for the camera and then remove the protection film from the camera lens.

- [2] Loosen the pan table fixing screw. Adjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring.

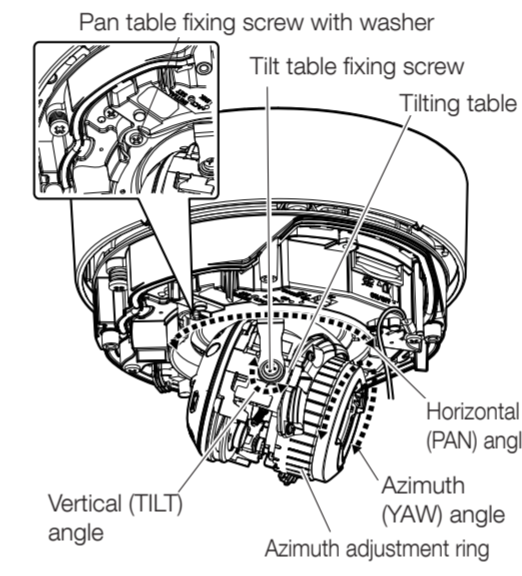
Horizontal (PAN) angle:  $\pm 180^\circ$   
Vertical (TILT) angle:  $+85^\circ - -30^\circ$   
Azimuth (YAW) angle:  $\pm 100^\circ$

### Note:

- When mounting the camera on a ceiling, adjust the tilt angle so that the TOP mark above the lens always comes to the top side.
- When mounting the camera on a wall, rotate the pan table by  $180^\circ$  to the left and rotate the tilt table till the TOP mark above the lens always comes to the top side.

- [3] Tighten the cross-head side of tilt table fixing screw (on one side) and the pan table fixing screw, and fix the camera.

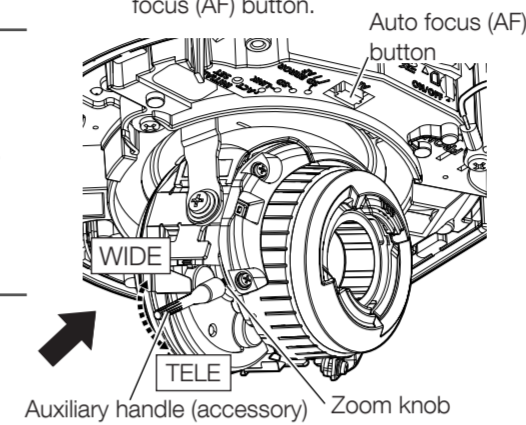
(Recommended tightening torque: 0.59 N-m [0.44 lbf-ft])



### S2511L

- [4] Adjust the zoom and focus.

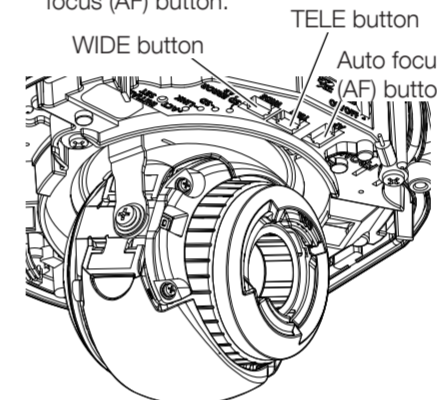
- ① Loosen the zoom knob equipped with auxiliary handle (accessory) by rotating the knob to the left, and move it between TELE and WIDE to obtain the appropriate angle of view. Then, lock the zoom knob by rotating it back to the right.
- ② Adjust the focus by pressing the auto focus (AF) button.



### S2531L

- [4] Adjust the zoom and focus.

- ① adjust the viewing angle by pressing the WIDE or TELE buttons.
- ② Adjust the focus by pressing the auto focus (AF) button.

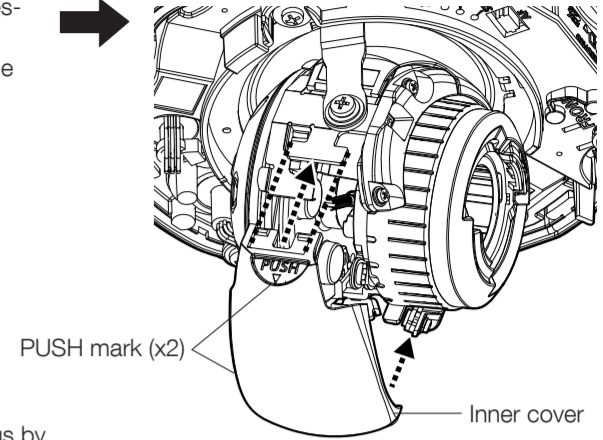


### S2511L

- ③ Adjust the screen size and focus by repeating steps ① and ②. Readjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring if necessary. After the adjustment, remove the auxiliary handle (accessory).

### S2511L

- [5] Press the PUSH mark on both sides of the inner cover, and install the inner cover to the place where it was removed.



### S2531L

- ③ Adjust the screen size and focus by repeating steps ① and ②. Readjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring if necessary.

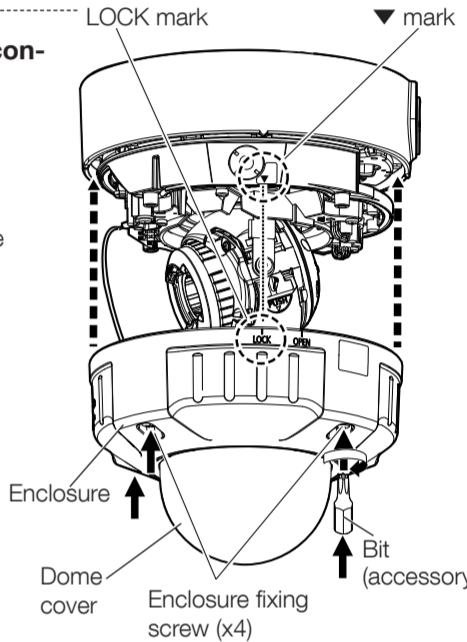
- [6] Disconnect the MONITOR OUT conversion plug (accessory). Attach the enclosure and secure it by tightening the enclosure fixing screws.

Align the LOCK mark on the enclosure with the ▼ mark on the camera. Then mount the enclosure directly to the camera. (Recommended tightening torque: 0.78 N-m [0.58 lbf-ft])

### IMPORTANT:

- Check that the water-proof rubber installed in the slot around the camera does not slide out of the slot, and then mount the enclosure.

- [7] After complete installation, remove the protection film from the dome cover.



## Step 3 Mount the camera

- [1] Align the OPEN mark of the enclosure side panel with the protruding part of base bracket, insert 2 attachment mounting screws into the attachment plate, and rotate the camera approximately  $15^\circ$ . The LOCK mark is moved to the protruding part of base bracket and the camera is temporarily secured. (When directly attaching the attachment plate to a ceiling or wall, align the OPEN mark to the tab position of the attachment plate.)

### IMPORTANT:

- For installations on the wall, to prevent water from accumulating on the surface of the dehumidifying device, install the camera so that the dehumidifying device does not face up. If water accumulates on the surface of the dehumidifying device, it cannot function properly.

- [2] Loosen 4 enclosure fixing screws using the bit (accessory), and remove the enclosure from the camera.

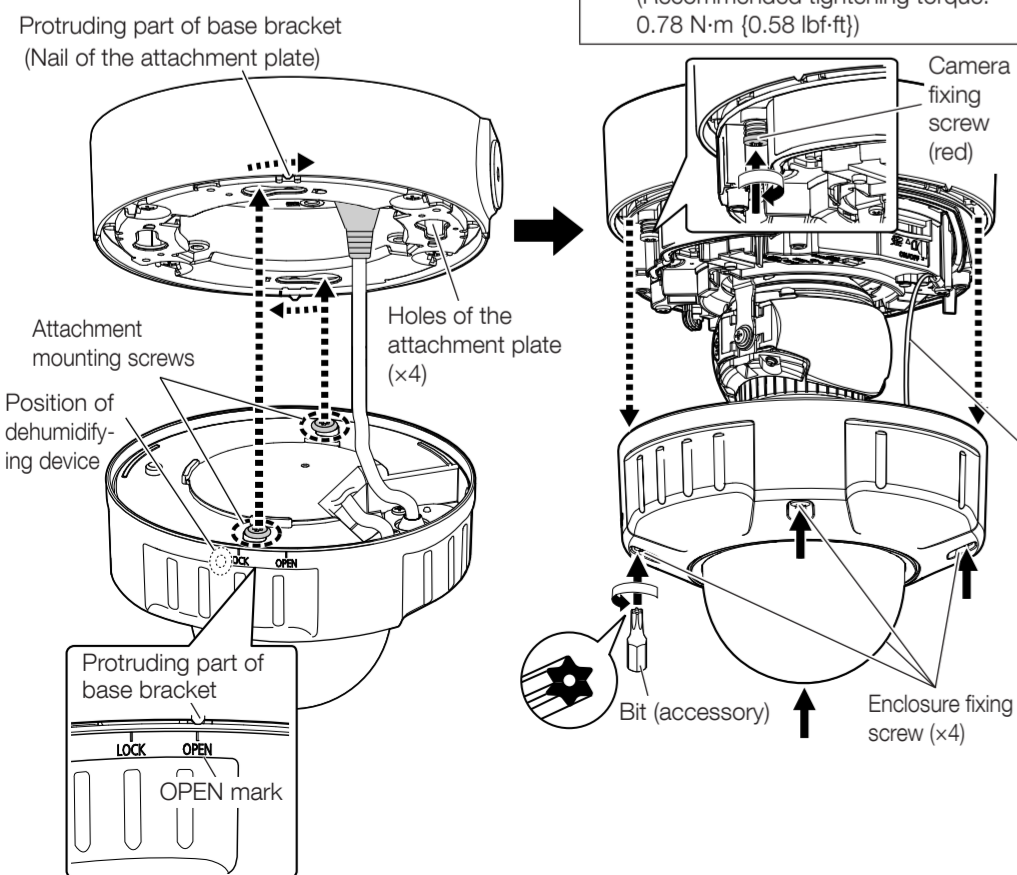
**IMPORTANT:**

- Enclosure is fixed to the camera body by the installed auxiliary wire, so please do not remove it.

- [3] Secure the camera by tightening the camera fixing screws (red).

**IMPORTANT:**

- Be sure to tighten the camera fixing screw. Failure to observe this may cause camera trouble due to camera falling. (Recommended tightening torque: 0.78 N-m [0.58 lbf-ft])



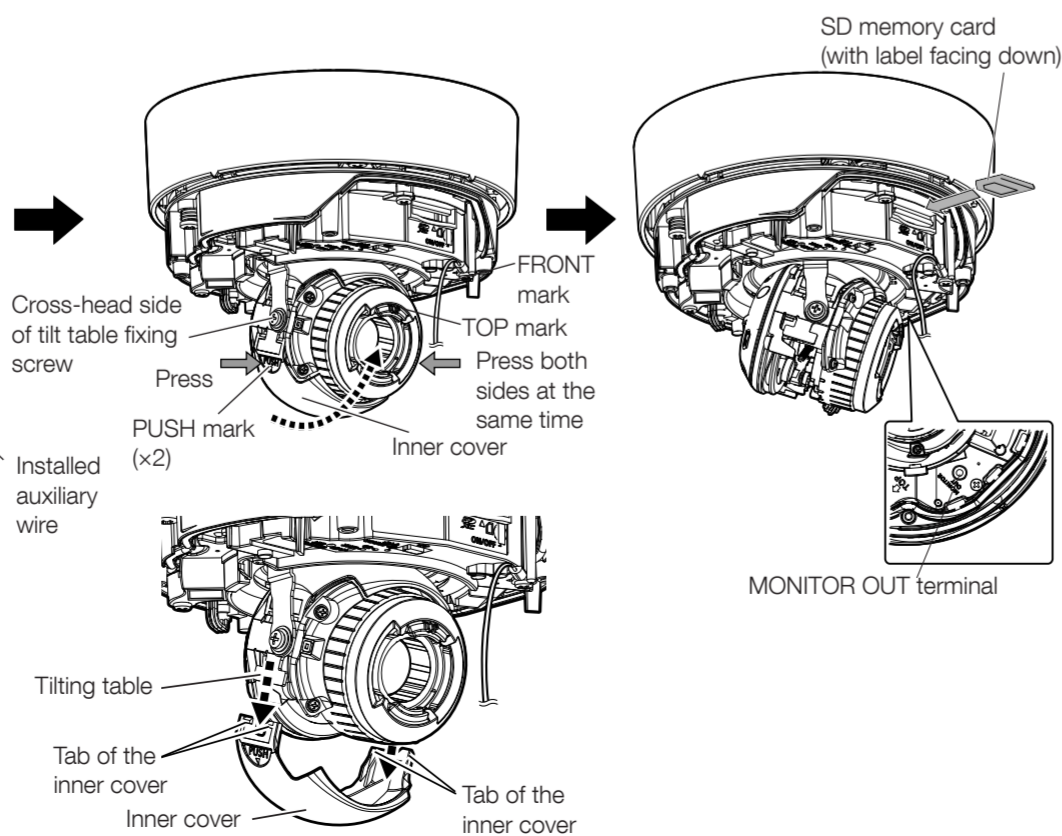
- [4] Loosen the cross-head side of tilt table fixing screw (on one side), and incline the tilt table while keeping the TOP mark on the camera lens head facing the front (i.e. the direction of FRONT mark on the camera).

### S2511L

- [5] Unhook each piece of four nails provided at both sides of the inner cover from the tilting table by pressing surroundings of the PUSH mark of the cover, and remove the inner cover.

### Note:

- When using WV-S2531LTN / WV-S2531LN, do not remove the inner cover.



## Step 5 Configure the network settings

Download and start [IP Setting Software] <Control No.: C0123> or [i-PRO Configuration Tool (ICT)] <Control No.: C0133> on our technical information support site ([https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information)), and connect to the network.