

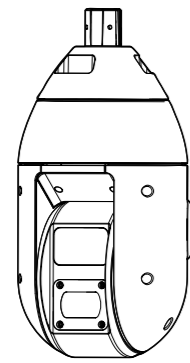
# Panasonic®

## Installation Guide

Included Installation Instructions

### Network Camera

Model No. WV-X6533LN, WV-S6532LN



WV-X6533LN



- 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 following Panasonic support website. <https://security.panasonic.com/download/>
- Before reading this manual, be sure to read the Important Information.

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

Panasonic Corporation of North America  
Two Riverfront Plaza, Newark, NJ 07102-5490  
<http://business.panasonic.com/>

#### Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada  
1-877-495-0580  
<https://www.panasonic.com/ca/>

#### For Europe and other countries:

Panasonic Corporation  
<http://www.panasonic.com>

Panasonic Corporation  
Osaka, Japan

Authorised Representative in EU:

Panasonic Testing Centre  
Panasonic Marketing Europe GmbH  
Winsbergring 15, 22525 Hamburg, Germany



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#### 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 authority. 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.

### Important safety instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 6) Only use attachments/accessories specified by the manufacturer.
- 7) 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.



- 8) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 9) 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 "Troubleshooting" of Important Information in the CD-ROM and Operating Instructions on the Panasonic support website. Then, confirm the trouble.

#### 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.
- This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.
- Operation of this equipment in a residential environment could cause radio interference.

#### CAUTION:

- The network camera is only intended for a connection to an ethernet or PoE+ network without routing to the outside plant.
- RISK GROUP 2 IR emitted from this product. Avoid eye exposure. Use appropriate shielding or eye protection.

For Canada

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

For U.S.A.

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. \_\_\_\_\_



: Caution, infrared radiation



: Direct current symbol



: Alternating current symbol

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: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Supplier's Declaration of conformity  
Trade name : Panasonic  
Model No. : WV-X6533LN, WV-S6532LN  
Responsible Party :  
Panasonic Corporation of North America  
Two Riverfront Plaza, Newark, New Jersey  
07102-5490  
Support Contact : 1-800-528-6747



For U.S.A. and Canada

This device complies with part 15 of FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### 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 Panasonic shall not respond to any inquiries regarding the contents of the source code.

### About the user manuals

Product documentation is composed of the following documents.

- **Installation Guide (this document):** Explains installation, mounting, cable connections, and network connections. This manual uses the WV-X6533LN as an example in the explanations.
- **Important Information (included in the CD-ROM):** Provides basic information about the product such as Precautions for installation, Parts and functions, etc..
- **Operating Instructions (on the Panasonic support website):** Explains how to perform the settings and how to operate this camera.

"<Control No.: C\*\*\*\*>" used in this document should be used to search for information on the Panasonic support website and will guide you to the right information.

#### Note:

- 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.
- SDXC/SDHC/SD memory card is described as SD memory card.

### Standard accessories

Installation Guide ..... 1 pc.  
(this document and additional leaflet) ..... 1 pc.  
IMPORTANT SAFETY INSTRUCTIONS ..... 1 pc.  
Warranty card ..... 1 pc.  
CD-ROM\*1 ..... 1 pc.  
Code label\*2 ..... 1 pc.

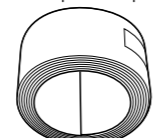
\*1 The CD-ROM contains the several kind of operating instructions and different kinds of tool software programs.  
\*2 This label may be required for network management. Use caution not to lose this label.

The following parts are used during installation procedures.

Cable cover ..... 1 pc.	8P alarm cable ..... 1 set
Attachment pipe ..... 1 pc.	24 V AC power supply connector kit ..... 1 set
Waterproof tape ..... 1 pc.	(Power supply connector housing: 1 pc., Contact: 3 pcs.)
RJ45 waterproof connector cover ..... 1 pc.	Special hexagon screw *3 ..... 5 pcs.
RJ45 waterproof connector cap ..... 1 pc.	(of them, 1 for spare)
Rain wash coating label ..... 1 pc.	Locking washers ..... 5 pcs.
	(of them, 1 for spare)

\*3 The screws are necessary when installing the camera on a separately sold mount bracket.

Waterproof tape



## Preparations

### Other items that are needed (not included)

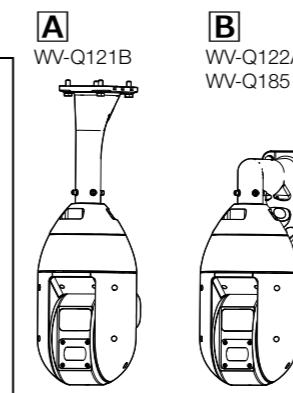
Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.

Installation method	Mounting screw	Minimum pull-out strength/ 1pcs.
<b>A) When hanging the camera from ceiling</b> Use the ceiling mount bracket (WV-Q121B*1).	M10 screws/ 4pcs.	1411 N {317 lbf}
<b>B) When installing the camera on a wall</b> Use the wall mount bracket (WV-Q122A*1, WV-Q185*1).	M10 screws/ 4pcs.	823 N {185 lbf}

\*1 For details on procedure for attaching mount bracket and camera, read the operating instructions of each mount bracket.

#### IMPORTANT:

- Refer to our website (<https://security.panasonic.com/support/info/> <Control No.: C0120>) for information on the minimum pull-out strength.
- Prepare four mounting screws (M10) to be mounted on ceiling or wall separately.
- 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.

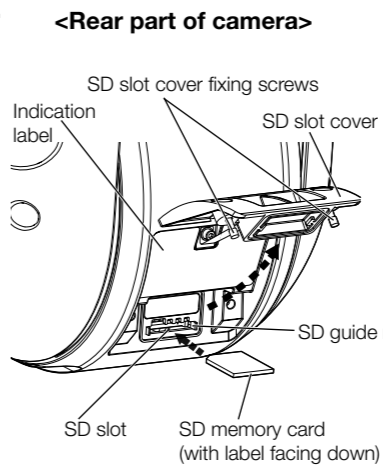


### Preparations before installation

#### [1] Insert an SD memory card as occasion demands.

For the detailed procedures of inserting and removing an SD memory card, refer to Important Information on the provided CD-ROM.

- ① Loosen 2 SD slot cover fixing screws (M4) using a Phillips screwdriver, and open the SD slot cover.
- ② Insert an SD memory card in the SD slot. Push in straight until the end and confirm that a clicking sound is heard. Take your fingers off the SD memory card and check that its back end does not protrude over the SD guide rib.
- ③ Attach the SD slot cover again.  
Recommended tightening torque of the SD slot cover fixing screws: 1.38 N·m {1.02 lbf·ft}

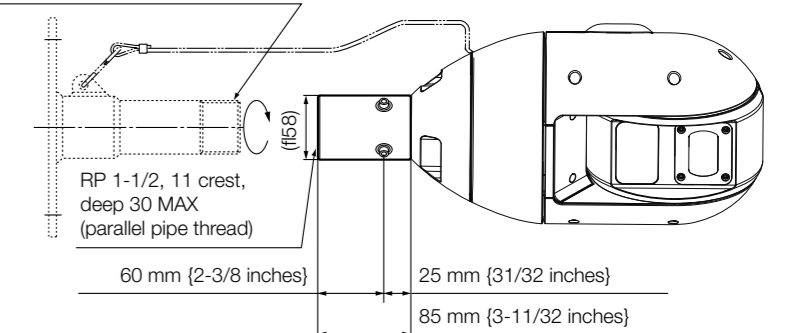


#### IMPORTANT:

- The mount bracket (locally procured) should have the configuration that enables fixation of safety wire from camera.

⇒Go to Step 1 [1].

R 1-1/2, 11 crest, deep 30 MAX  
(taper pipe thread)



## Installation

The installation tasks are explained using 4 steps.

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

**Step1**  
Fix the mount bracket and hang the camera



**Step2**  
Making connections



**Step3**  
Fixing the camera



**Step4**  
Configure the network settings

\* For step 4, refer to other leaflet

### Step1 Fix the mount bracket and hang the camera

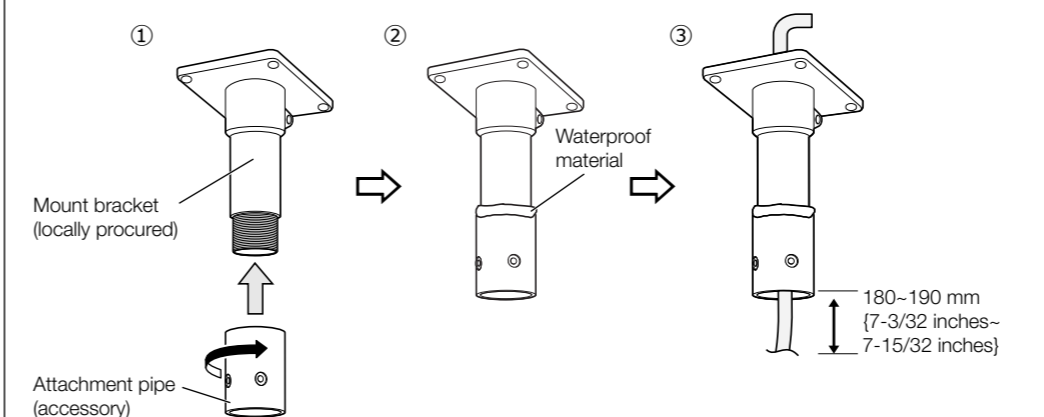
The following explains an example of installation using mount bracket (locally procured).

The right figure shows an example of the camera mounted on a ceiling with a mount bracket (locally procured).

When waterproofing, use waterproof material to fill in gaps and holes between the attachment pipe and the mount bracket.

#### [1] Fix the attachment pipe (accessory) to the mount bracket (locally procured).

- ① Fix the attachment pipe to the mount bracket.
- ② Fill the gap between the mount bracket and attachment pipe with waterproof material (locally procured) such as silicon clay.
- ③ Pass the cables from the ceiling through the mount bracket.



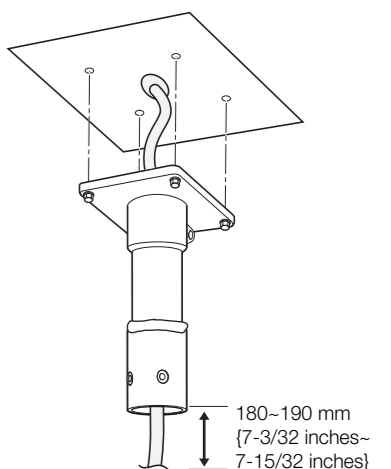
#### [2] Fix the mount bracket (locally procured) on the installation surface.

Fix a mount bracket to the installation surface on the ceiling by using appropriate bolts, nuts or the like (locally procured).

#### IMPORTANT:

- After waterproofing the hole for fixing mount bracket and the port for pulling out the cable on the installation surface, fix the mount bracket on the installation surface.
- Adjust the length of cable from camera attachment port of attachment pipe to cable end to 180-190 mm (7-3/32 inches~7-15/32 inches). (If the cable that is pulled out is too long, storage after wiring becomes difficult. Adjust the cable length carefully.)
- For the number of fixing screws and the minimum pull-out strength (per 1 pc.), refer to the operating instructions of mount bracket (locally procured).
- Ensure the minimum pull-out strength (per 1 pc.) that has sufficient allowance for total mass of mount bracket (locally procured), attachment pipe, and camera etc.

⇒Go to Step 1 [5].



## Step1 Fix the mount bracket and hang the camera (continued)

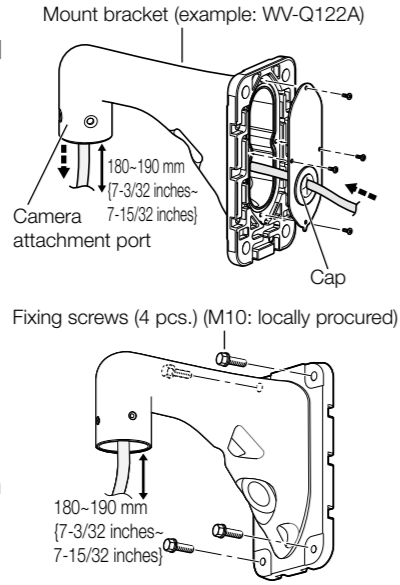
Here explains an example of installation on a wall using wall mount bracket (WV-Q122A). For detailed installation information and procedure, refer to operating instructions of each mount bracket.

### [3] Process the installation surface.

Decide the attachment position and bore holes for screws or anchors on the wall and a hole for wiring as occasion demands.

### [4] Pass a cable into mount bracket and fix it on the installation surface.

- Insert the cables coming from installation surface from rear surface of mount bracket to internal and pull them out from camera attachment port (cable cover attachment side). When passing the cables into mount bracket, take care not to apply unreasonable force to the cables.
- Apply waterproof treatment to the drilled installation surface and the cap of the mount bracket back-side.
- Attach the mount bracket to wall surface using fixing screws (4 pcs.) (M10: locally procured).



### IMPORTANT:

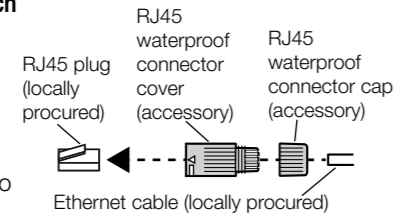
- After waterproofing the hole for fixing mount bracket, the port for pulling out the cable on installation surface, and the cap part on rear surface of mount bracket, fix the mount bracket on the installation surface.
- Fixing screw: Minimum pull-out strength (per 1 pc.)  
WV-Q121B 1411 N {317 lbf}  
WV-Q122A 823 N {185 lbf}
- Adjust the length of cable from camera attachment port of mount bracket to cable end to 180-190 mm {7-3/32 inches-7-15/32 inches}. (If the cable that is pulled out is too long, storage after wiring becomes difficult. On the contrary, if it is too short, the cable cannot reach to the camera when installing the camera. Adjust the cable length carefully.)

The following works are common to WV-Q121B / WV-Q122A (option) and mount bracket (locally procured).

### [5] Process the Ethernet cable (locally procured) and attach the waterproof connector cover and cap (accessory).

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 (accessory).



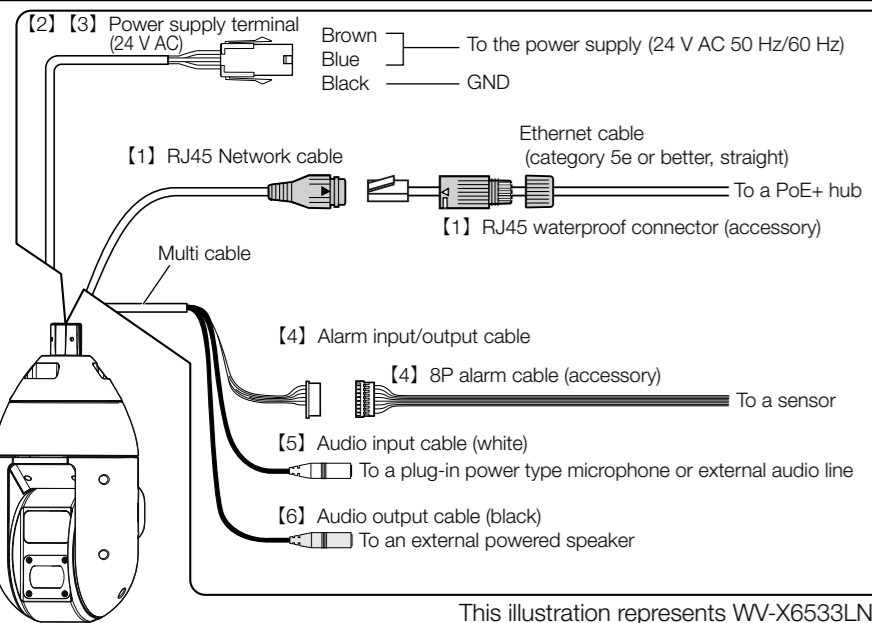
### IMPORTANT:

- The maximum length of the Ethernet cable (locally procured) is 100 m [Approx. 328 ft], and the external dimensions of it are from ø5 mm {ø3/16 inches} to ø6.5 mm {ø1/4 inches}.

## Step2 Making connections

### IMPORTANT:

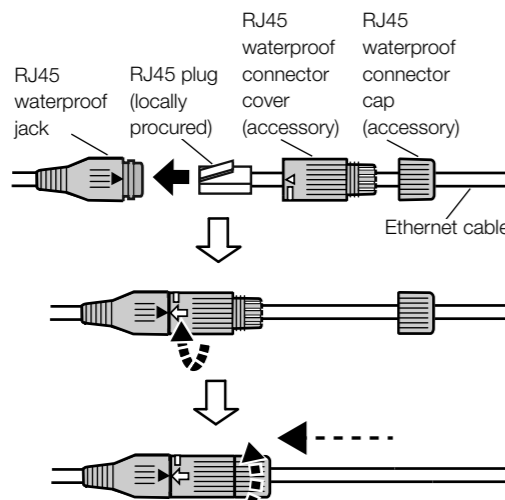
- Before connecting the cables to the camera, be sure to turn off the power supply of the system, and confirm that no power is being supplied to the camera.
- If the power supply is turned on while the movable parts of the camera are fixed by tape, the operations of trying to perform panning, tilting, and stopping are repeated. Turn off the power supply to the camera and continue the connecting work. In addition, it will not operate panning and tilting when the camera is in the horizontally laid state during prior preparations, etc.



This illustration represents WV-X6533LN.

### [1] Connect an Ethernet cable (category 5e or better, straight) to RJ45 network cable.

- Insert the RJ45 plug (locally procured) into the RJ45 waterproof jack from the camera.
- Insert the RJ45 waterproof connector cover so that the "◀: OPEN" mark aligns with the "▶" mark of the RJ45 waterproof jack, and rotate in the direction of the arrow in the illustration at right until matching with the "◀: LOCK" mark.
- Connect the RJ45 waterproof connector cap (accessory) to the RJ45 waterproof connector cover and rotate the RJ45 waterproof connector cap until there is no gap between it and the RJ45 waterproof connector cover.



### [6] Attach the cable cover (accessory) to the mount bracket.

- Fix the cable cover to the mounting bracket using special hexagonal screws and locking washers by tightening the screws using a hexagonal wrench for M5 screw (locally procured). Adjust the direction of the cable cover so that the "REAR" mark of the cable cover points towards the mount bracket. Recommended tightening torque: 9.8 N·m {7.23 lbf·ft}

### IMPORTANT:

- Camera mounting screw (hexagon screw (M6)) included with WV-Q121B / WV-Q122A / WV-Q185 cannot be used. Use the special hexagon screw that has a large washer included with the camera.

- Remove the tape as the installed auxiliary wire is temporarily fixed to the inside of the cable cover with tape.

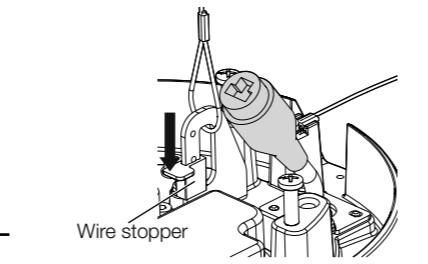
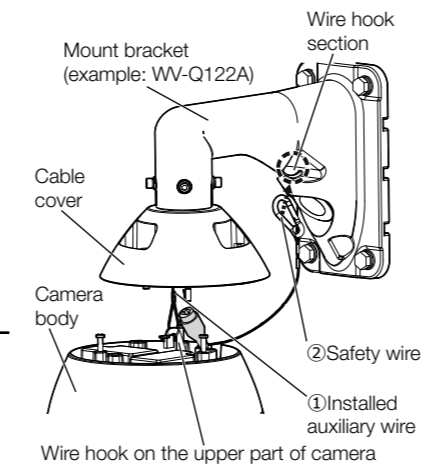
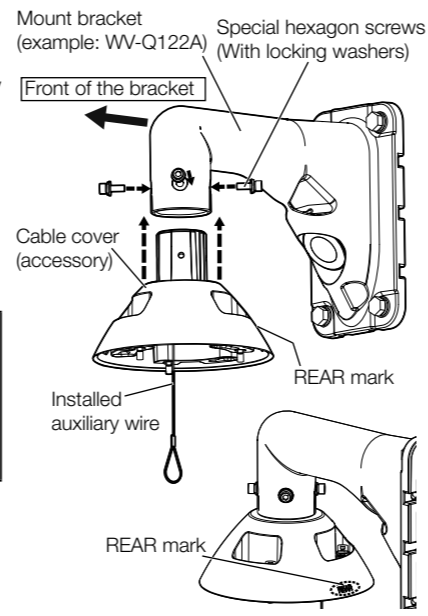
### [7] Hang the camera from the installed auxiliary wire of the cable cover, and attach the safety wire to the mounting bracket.

- Move the camera to the installation location and hitch the installed auxiliary wire of the cable cover to the wire hook on the upper part of camera. Next, lower the wire stopper to prevent the installed auxiliary wire from coming off.
- Attach the safety wire of the camera to the wire hook section of mount bracket.

For the safety wire attachment position, refer to operating instructions of each mount bracket.

### Note:

- The horizontal and vertical rotating parts of the camera are fixed by tape. Do not remove the tape until fixing of the camera is completed.
- The camera is not fixed. Take care not to hit the camera against periphery.
- Retain a work space of 800 mm {31-1/2 inches} or more from the cable cover to the ground surface when you hang the camera from it.
- The installed auxiliary wire and the safety wire are designed assuming the only camera is suspended. Do not hang any object other than the camera.



## Step2 Making connections (continued)

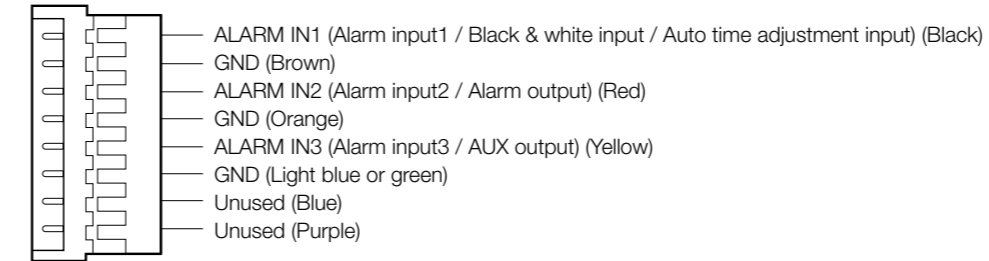
### Caution:

- A READILY ACCESSIBLE DISCONNECT DEVICE SHALL BE INCORPORATED TO THE EQUIPMENT POWERED BY 24 V AC POWER SUPPLY.
- ONLY CONNECT 24 V AC CLASS 2 POWER SUPPLY (UL 1310/CSA 223) or LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1).
- ONLY CONNECT POWER OVER ETHERNET 54 V DC or PoE+ 54 V DC LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1).

### [3] Recommended wire rod and wire length

AWG size (stranded wire)	#24 (0.22 mm <sup>2</sup> )	#22 (0.33 mm <sup>2</sup> )	#20 (0.52 mm <sup>2</sup> )	#18 (0.83 mm <sup>2</sup> )
Wire length	5 m {16.4 ft}	5 m {16.4 ft}	15 m {49.2 ft}	20 m {65.6 ft}

### [4] Connect 8P alarm cable (accessory) as occasion demands.



### Note:

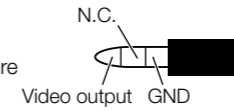
- The default of EXT I/O terminals is "Off". Refer to the Operating Instructions on the Panasonic support website for further information about the EXT I/O terminal settings.

### [5] Connect a microphone or external audio line to the audio input cable as occasion demands.

### [6] Connect a powered speaker to the audio output cable as occasion demands.

### Note:

- The audio output can be switched to monitor output. The default is "Audio". Refer to the Operating Instructions on the Panasonic support website for descriptions of how to switch the output.
- If the audio output is used for the monitor output, connect a ø3.5 mm stereo mini plug (locally procured) to the wire as shown in the right figure and use it.



### [7] If you use a cable other than Ethernet cable, waterproof it.

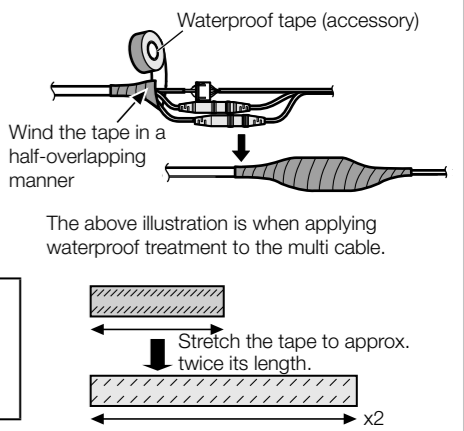
The camera body is waterproof, but the cable ends are not waterproof. Waterproof the connection part of each cable.

### <Waterproof treatment>

Waterproof by using the waterproof tape (accessory) as shown in the right-hand figure.

### IMPORTANT:

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



The above illustration is when applying waterproof treatment to the multi cable.

## Step3 Fixing the camera

### 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.
- When removing the RJ45 waterproof connector, be sure to loosen the RJ45 waterproof connector cap first, rotate the RJ45 waterproof connector cover in the direction opposite to the attaching direction, and remove it. (If the RJ45 waterproof connector cover is removed when the "◀: LOCK" mark of the RJ45 waterproof connector cover is aligned with the "▶" mark of the RJ45 waterproof jack, the RJ45 waterproof jack may be damaged).

### 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.
- When removing the RJ45 waterproof connector, be sure to loosen the RJ45 waterproof connector cap first, rotate the RJ45 waterproof connector cover in the direction opposite to the attaching direction, and remove it. (If the RJ45 waterproof connector cover is removed when the "◀: LOCK" mark of the RJ45 waterproof connector cover is aligned with the "▶" mark of the RJ45 waterproof jack, the RJ45 waterproof jack may be damaged).

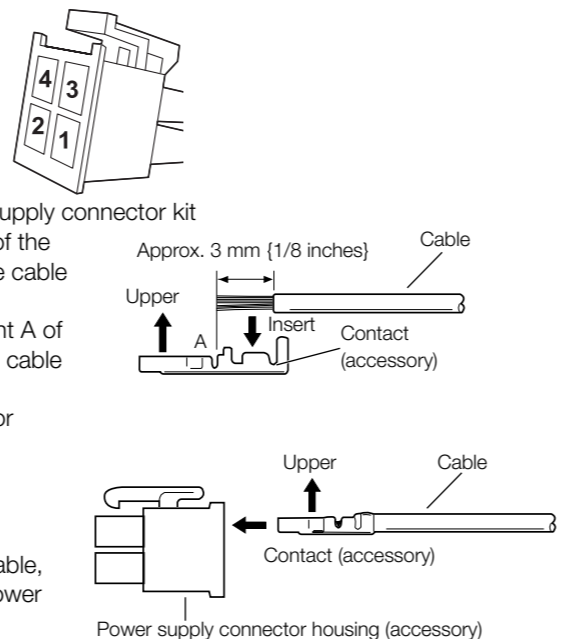
### [2] Assemble 24 V AC connector kit (accessory) and connect it to the power supply terminal (24 V AC) of camera body as occasion demands.

#### ① Array of pins of connector housing (accessory)

Pin No.	Signal
1	24 V AC LIVE (Brown)
2	24 V AC NEUTRAL (Blue)
3	Ground (Black)
4	Not use

#### ② How to assemble the 24 V AC power supply connector kit

- Remove approx. 3 mm {1/8 inches} of the outer jacket of the cable and twist the cable core to prevent the short circuit first.
- Insert the tip of the cable into the point A of the contact (accessory), and hold the cable using the cable clamp.
- Procure either of the following tools for clamping.  
Molex manual clamp tool:  
57027-5000 (For UL1015),  
57026-5000 (For UL1007)
- After clamping the contact and the cable, insert the contact properly into the power supply connector housing.



### IMPORTANT:

- The 24 V AC power supply shall be insulated from the commercial AC power.
- Be sure to use the 24 V AC power supply connector kit (accessory) provided with this product.
- After processing 24 V AC connector, actually connect it to the camera and ensure it operates normally before using it.
- Be sure to fully insert the 24 V AC power supply connector into the power supply terminal (24 V AC). Otherwise, it may damage the camera or cause malfunction.
- When installing the camera, make sure that excessive force is not applied to the power cable.

## Step3 Fixing the camera

### [1] Attach the camera to the cable cover (accessory).

- Make the Panasonic logo mark on the camera body face the front side, and adjust so that the right end of the drain port at the rear part of the camera is aligned with the right edge of the leading letter R of the "REAR" mark on the cable cover rear part. (See the top illustration at right.)
- Insert the positioning pins (3 pcs.) on the upper part of camera into the cable cover attachment hole.
- Rotate the camera part in a clockwise direction when looking from the bottom and confirm that the right end of the drain port at the rear part of the camera comes up to and is provisionally fixed at the right end of the last letter R of the "REAR" mark on the rear part of the cable cover. (See the middle illustration at right.)
- Remove the buffer material attached to the three special hexagonal screws (fixing screws) of the cable cover, and securely tighten the screws. (See the bottom illustration at right.) Recommended tightening torque: 2.45 N·m {1.81 lbf·ft}

### Note:

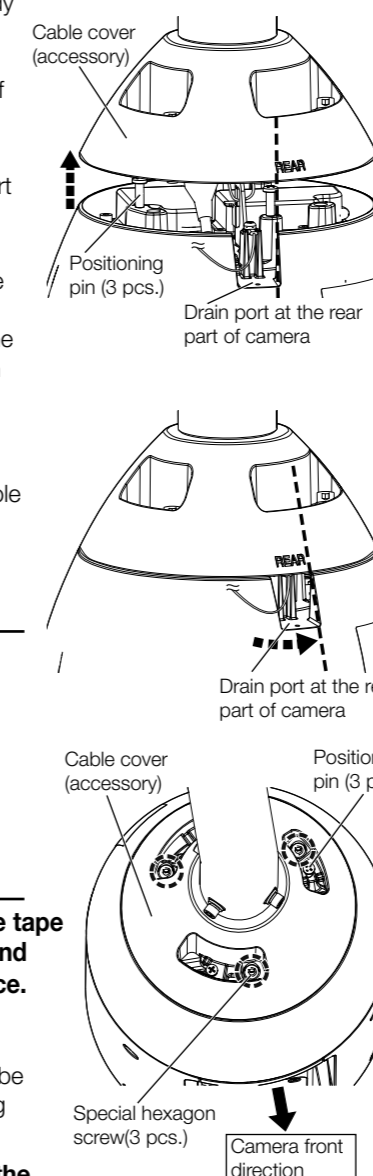
- Since the fixing screw is a special hexagon screw, use a hexagon wrench for M5 (locally procured).
- Bend it to the inside of the cable cover to prevent the installed auxiliary wire and the wiring section from being caught in the periphery of the cable cover.

### [2] When the camera has been installed, remove the tape fixing the horizontal and vertical rotation parts and the protection sheet of the front panel top surface.

- After removal, be sure not to touch the clear part of the front panel.
- Before turning on the power supply of the camera, be sure to detach the tape fixing the panning and tilting parts.

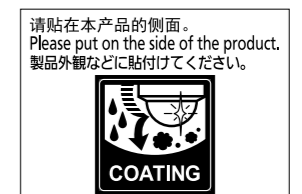
### [3] Turn on the power supply of camera and check the network of camera following Step 4 "Configure the network settings" and adjust the angular field of view.

For details on adjustment of angular field of view of camera, refer to Operating Instructions on the Panasonic support website.

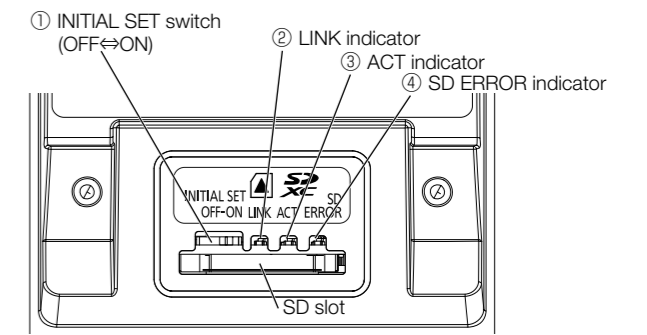


### Note:

- Attach the "Rain wash coating label" carried by the camera to the surface of the camera (Refer to the illustration below).



## Indicators and switch



### ① INITIAL SET switch (OFF→ON)

(OFF→ON)

### ② LINK indicator

- When the camera is able to communicate with the connected device

Lights orange

### ③ ACT indicator

- When data is being sent via the camera

Blinks green (accessing)

### ④ SD ERROR indicator

- When the camera is being started
- When an SD memory card is recognized normally
- When the SD slot is not used or an abnormality is detected in the SD memory card after the camera has started

Lights red  
Lights red → Lights off  
Lights red → Stays red