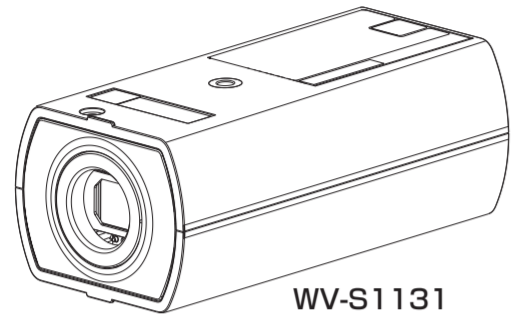


Installation Guide

Included Installation Instructions

Network Camera

Model No. **WV-S1132 / WV-S1132RF**
WV-S1132EG / WV-S1131
WV-S1112 / WV-S1111



WV-S1131

(Please purchase the recommended lens separately.)



- 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 information about this product, refer to the installation instructions 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.
- WV-S1132RF and WV-S1132EG are the same model as the Network Camera WV-S1132.

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.
 Laarderhoogweg 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 use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Only use attachments/accessories specified by the manufacturer.
- 10) 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.



- 11) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 12) 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.
- To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- The apparatus should not be exposed to dripping or splashing.
- 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

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.

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. _____

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.

Preparations

Other items that are needed (not included)

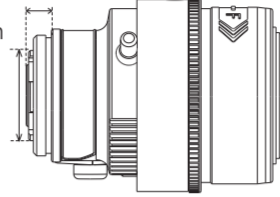
Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.

Note:

- The lens section is not included with the camera. Refer to our website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) for further information about the compatible lens.
- * When using a lens made by other companies, use a lens that has a protruded portion from the mount face of ø20 mm {25/32 inches} or less and a protruded portion from the flange face of 4.5 mm {5/32 inches} or less. Lenses without a focus adjustment mechanism and zoom lenses cannot be used.

Protruded portion from flange face:
4.5 mm {5/32 inches} or less

Protruded portion from mount face:
ø20 mm {25/32 inches} or less



Installation method	Recommended screw	Minimum pull-out strength (per 1 pc.)
For mounting on ceiling Mount bracket: approx. 260 g {0.57 lbs} camera: 350 g {0.77 lbs}	M6 or M8 screws × 4"	562 N {126 lbf}²
	M4 × 1 (for the safety wire)	24.5 N {5.5 lbf}
For mounting on wall Mount bracket: approx. 420 g {0.93 lbs} camera: 350 g {0.77 lbs}	M6 or M8 screws × 4"	724 N {163 lbf}²
	M4 × 1 (for the safety wire)	24.5 N {5.5 lbf}

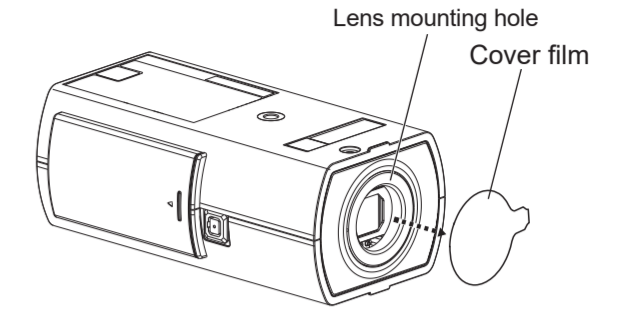
- *1 The number of required screws or anchor bolts varies depending on the specifications of the mount bracket (locally procured). Refer to the operating instructions of the mount bracket (locally procured) for information about how to mount the mount bracket.
- *2 Make sure that the screws or anchor bolts separately procured when locally procuring a mount bracket for the ceiling or wall are capable of supporting the total weight (including the moment force when mounting to a wall).

IMPORTANT:

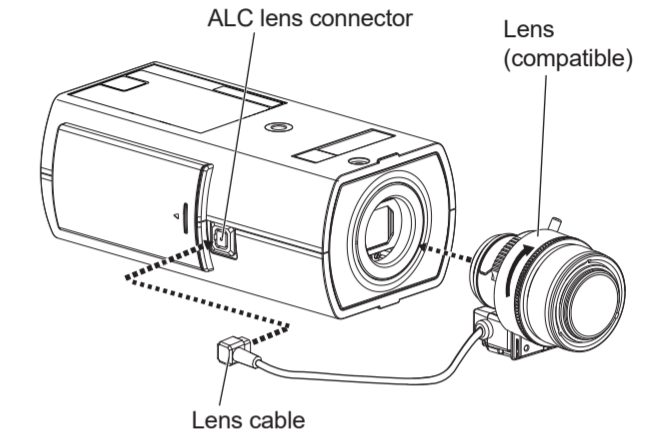
- The installation area shall be strong enough to hold the camera and camera mount bracket.
- The camera mount bracket (locally procured) shall be mounted on the foundation part of the construction or a part with adequate strength.
- Select screws according to the material of the location that the camera 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.

Mount the lens to the camera

[1] Remove the cover film attached to the lens mounting hole of the camera.



[2] Slowly rotate the lens clockwise to mount the lens and connect the lens cable to the ALC lens connector of the camera.



Important safety instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Only use attachments/accessories specified by the manufacturer.
- 10) 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.



- 11) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 12) 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.

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-S1131 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.

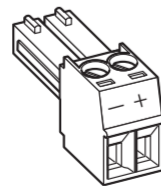
*1 The CD-ROM contains the operating instructions and different kinds of tool software programs.
 *2 This label may be required for network management. Use caution not to lose this label.

The following parts are used during installation procedures.

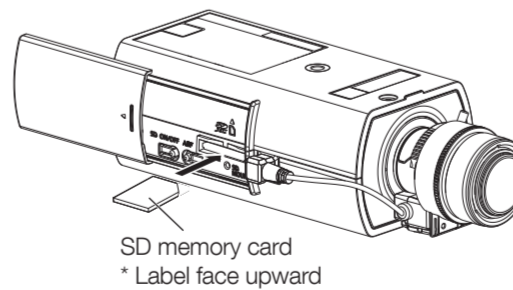
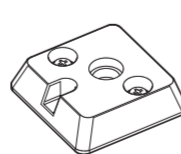
Tripod mount base*3 1 pc. Safety wire 1 pc.
 Power cable plug 1 pc. Washer 1 pc.
 Safety wire lug 1 pc. Spring washer 1 pc.
 Wire lug fixing screws (M2.5 × 8 mm {5/16 inches}) 2 pcs. (of them, 1 for spare)

*3 For further information about Tripod mount base, refer to the Important Information on the provided CD-ROM.

Power cable plug



Tripod mount base



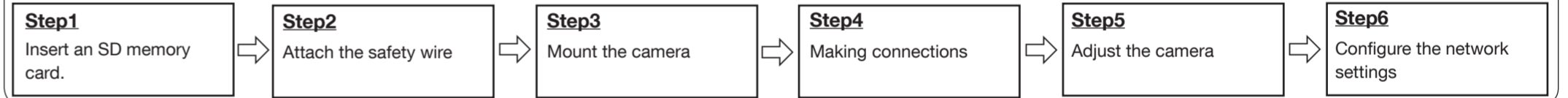
SD memory card
 * Label face upward

[2] Close the slide cover on the side of the camera.

Installation

The installation tasks are explained using 6 steps.

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



Step1 Insert an SD memory card

When using an SD memory card, go through the following procedure before installing the camera.

When removing an SD memory card, reverse the procedure. Refer to the Operating Instructions on the provided CD-ROM for further information about the SD memory card settings.

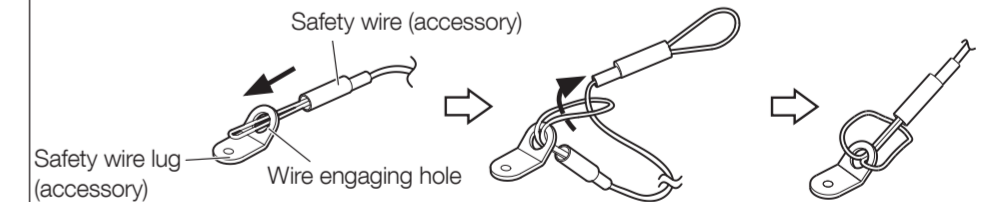
- [1] Open the slide cover on the side of the camera, insert an SD memory card fully into the SD memory card slot until a click is heard.**
 - Insert the SD memory card with its label facing up.

Step2 Attach the safety wire (accessory)

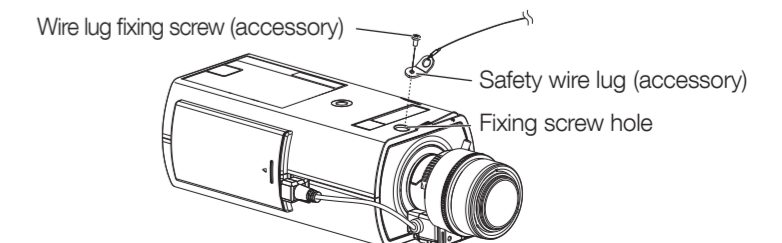
IMPORTANT:

- When securing the camera using a separately procured bracket, use the fixing screw (M4, locally procured), and the safety wire, washer, and spring washer (accessories).

[1] Engage the safety wire (accessory) with the wire engaging hole.



[2] Secure the safety wire lug (accessory) to the camera mount screw hole with the wire lug fixing screw (accessory).
 (Recommended tightening torque: 0.39 N·m {0.29 lbf·ft})



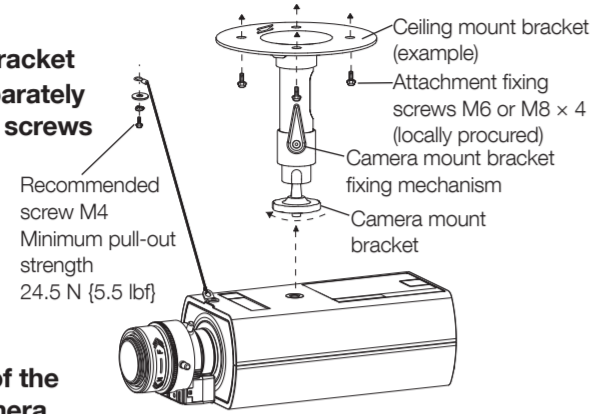
Step3 Mount the camera

■ For mounting on ceiling

- [1] **Mark the position of holes to be made for the ceiling mount bracket (locally procured) on the attachment position of the ceiling, and make those holes for attachment.**

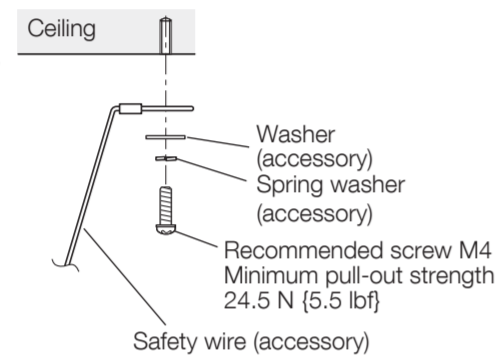
Determine the hole diameter and hole depth according to the specifications of the screws or anchor bolts to be used.

- [2] **Secure the ceiling mount bracket (locally procured) using separately procured attachment fixing screws or anchors.**



- [3] **Loosen the camera mount bracket fixing mechanism to freely move the camera mount bracket. Align the screw thread with the fixing screw hole of the camera, and rotate the camera mount bracket to secure the camera. Tighten the camera mount bracket fixing mechanism and secure the camera mount bracket.**

- [4] **Attach the safety wire (accessory) to the foundation area of the architecture or where sufficient strength is assured. Prepare the fixing screw according to the material of the area where the safety wire (accessory) is to be installed.**



IMPORTANT:

- Be sure to rotate and secure the camera mount bracket. Rotating the camera places a large burden on the camera mount bracket, and may cause damage.
- The safety wire (accessory) shall be adjusted to remove slack.
- The distance from the camera to the ceiling changes depending on the tilt angle of the camera. Attach the safety wire (accessory) in a position according to the tilt angle of the camera.

■ For mounting on wall

- [1] **Mark the position of holes to be made for the wall mount bracket (locally procured) on the attachment position of the wall, and make those holes for attachment.**

Determine the hole diameter and hole depth according to the specifications of the screws or anchor bolts to be used.

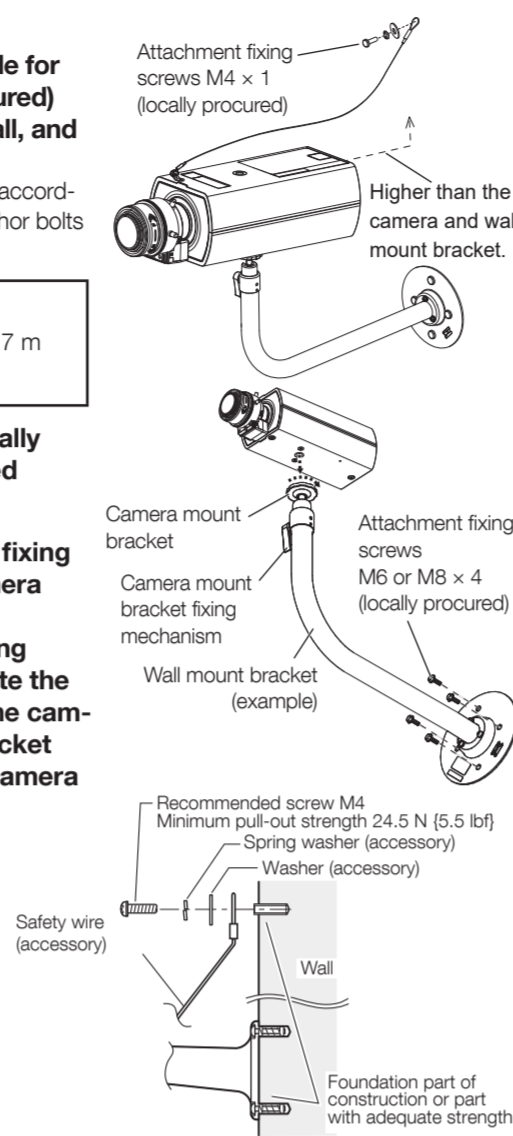
IMPORTANT:

- Mount the bracket in a position higher than 2.7 m (8.86 feet) from the floor.

- [2] **Secure the wall mount bracket (locally procured) using separately procured screws or anchors.**

- [3] **Loosen the camera mount bracket fixing mechanism to freely move the camera mount bracket. Align the screw thread with the fixing screw hole of the camera, and rotate the camera mount bracket to secure the camera. Tighten the camera mount bracket fixing mechanism and secure the camera mount bracket.**

- [4] **Attach the safety wire (accessory) to the foundation area of the architecture or where sufficient strength is assured. Prepare the fixing screws according to the material of the area where the safety wire (accessory) is to be installed.**



IMPORTANT:

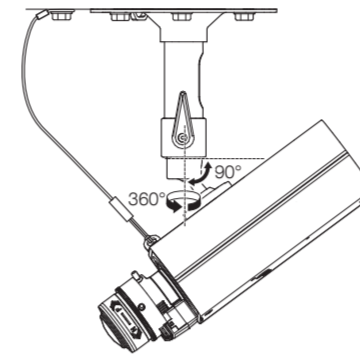
- Be sure to rotate and secure the camera mount bracket. Rotating the camera places a large burden on the camera mount bracket, and may cause damage.
- Attach the safety wire (accessory) in a position higher than the camera and the mount bracket.
- Attach the safety wire (accessory) so that if the camera were to become detached, it would not fall on nearby people.

Step5 Adjust the camera

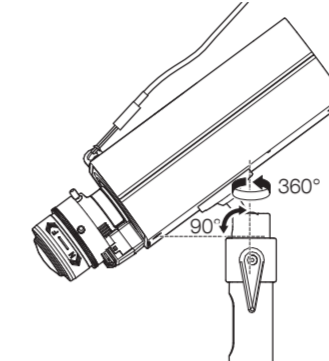
[1] Adjusting the camera angle

Loosen the camera mount bracket fixing mechanism on the camera mount bracket, and then check the adjustment monitor to adjust the camera angle. When adjusting the camera angle, make sure to loosen the camera mount bracket fixing mechanism on the camera mount bracket before making adjustments. If the camera angle is changed when the camera mount bracket fixing mechanism is tightened, excessive force is applied to the camera mount bracket and camera, which may damage them. After adjusting the camera angle, make sure to tighten the camera mount bracket fixing mechanism securely again.

For mounting on ceiling

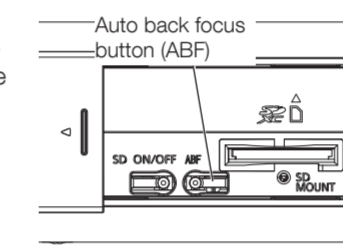


For mounting on wall

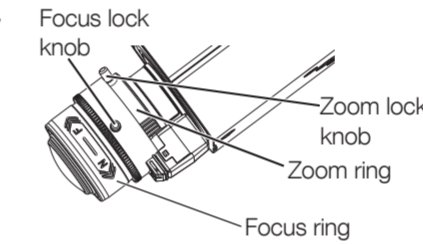


[2] Adjusting the focus

① First, reset the back focus position by holding down the auto back focus button for 5 seconds or more when the power is on.



② Manually adjust the angle of view and focus coarsely by adjusting the zoom and focus of the lens to center a subject in the screen, and then press the auto back focus button on the side of the camera.

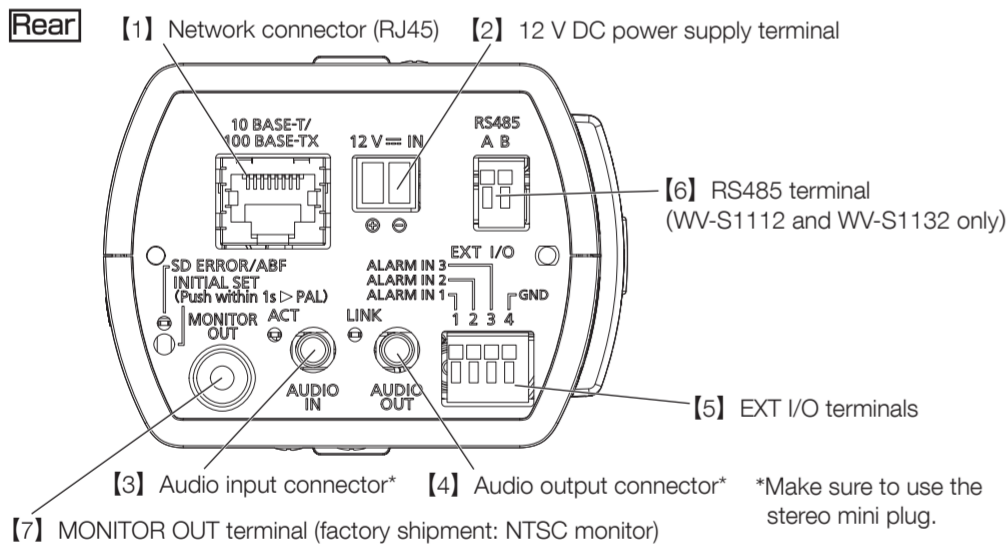


Note:

- How to take a wide depth of field: When focus is desired on entire near or distant subjects, select indoor scene mode, or adjust the focus to the midrange position using manual focus adjustment.
- The most common use of a varifocal lens and a zoom lens: Note that the adjustment method is different depending on the type. For further information, refer to the operating instructions for the lens to be used.
- Depending on the lens to be used, if the zoom ring is fully rotated in the "W" direction, the periphery may become dark. In such a case, rotate the zoom ring in the "T" direction for readjustment.
- When shooting the following subjects, it may have difficulty adjusting the back focus position automatically. In this case, adjust the back focus position manually from the setup menu. Refer to the Operating Instructions (included in the CD-ROM) for how to perform the auto back focus function from the setup menu.
 - Subj. moves frequently
 - Subj. with large illuminance change
 - Subj. with low illuminance
 - Subj. through a window
 - Subj. with less contrast such as white wall
 - Subj. with heavy flicker

Step4 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 the network connector.**

- [2] **When connecting an AC adaptor or an external power supply, use the power cable plug (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).

- Loosen the screw of the power cable plug (accessory), strip 3 mm to 7 mm (1/8 inches to 9/32 inches) from the end of the wire, twist the stripped part of the wire sufficiently to avoid short circuit, and then connect the output cable to the power cable plug (accessory). When connecting an external power supply to the camera, use the 16 AWG to 24 AWG single-wired or stranded wired cables.
- Tighten the screw of the power cable plug (accessory). (Recommended tightening torque: 0.34 N·m (0.25 lbf·ft))
- Connect the power cable plug to the camera.

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

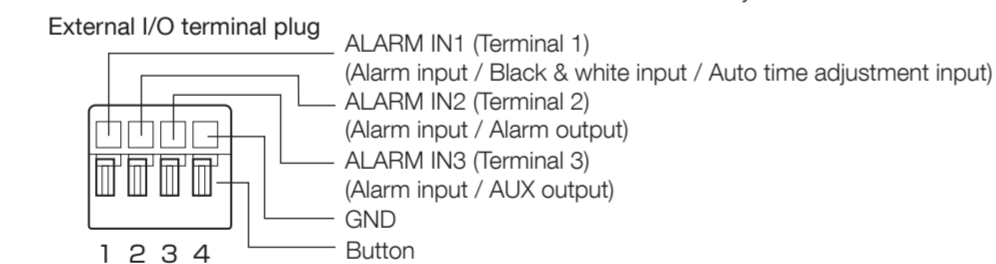
- [4] **If needed, connect a powered speaker to the audio output connector.**

- [5] **If needed, connect the alarm input/output cables to the EXT I/O terminals.**

Connect the cables of external devices to the EXT I/O terminal plug.

① When connecting an external device, remove 8 mm - 9 mm (5/16 inches - 11/32 inches) of the outer jacket of the cable and twist the cable core to prevent the short circuit first. Specification of cable (wire): 20 AWG - 26 AWG, Single core, twisted

② Push down the button of the desired terminal on the external I/O terminal plug with a ballpoint pen, and release the button when the cable of the external device is fully inserted into the terminal hole.



Note:

- Do not connect 2 wires or more directly to a terminal. When it is necessary to connect 2 or more wires, use a splitter.
- Check whether the stripped part of the wire is not exposed and is securely connected.
- 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.

- [6] **If needed, connect an RS485 communication cable.(WV-S1112 and WV-S1132 only)**

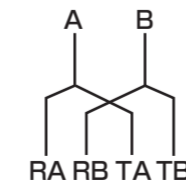
Connect a twisted-pair cable (locally procured) to the RS485 terminal.

① When connecting an external device, remove 9 mm - 10 mm (11/32 inches - 13/32 inches) of the outer jacket of the cable and twist the cable core to prevent the short circuit first. Specification of cable (wire): 22 AWG - 28 AWG, Single core, twisted

② Push down the button of the desired terminal on the RS485 terminal plug with a ballpoint pen, and release the button when the cable of the external device is fully inserted into the terminal hole.

Note:

- There is a correlation between communication speed and transmission distance. Confirm usage conditions. (Ex. 1200 m {3937 feet} when 90 kbps or lower)
- When using twisted-pair cable over long distances, use thicker cable (22 AWG to 24 AWG).
- This product does not contain a termination resistor. If needed, use an external termination resistor.
- The RS485 port of this unit is intended for use with 2-line communications. When connecting 4-line communication devices, make connections as shown in the right illustration.



- [7] **Connect the adjustment monitor to the MONITOR OUT terminal using a pin-plug cable.**

- [8] **Turn on the camera.**

Step6 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), and connect to the network.