Canon

Network Camera

VB-R13VE / VB-R12VE / VB-R11VE / VB-R10VE Installation Guide

Please be sure to read the "Safety Precautions" section for correct use. After reading this Installation Guide, keep it in a readily accessible location for future reference.

* Some cameras are not available in certain countries or regions.

Caution Request a professional installer for all installation work. Never try to install the camera yourself. Doing so may result in unforeseen accidents such as dropping the camera or electric shock.

Installation Guide (This document)

Setup CD-ROM

Dedicated wrench

Check Included Items

Warranty Card

Notice Power Interface Cable R13VE R11VE I/O Interface Cable (BK2-0035-000) R13VE R11VE Power Interface Cable (Waterproof) R12VE R10VE LAN Connector Set (Waterproof) R12VE R10VE

Symbols Indicating Camera Model

Camera specific functions will be listed using the symbols below.

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Accessories

The following accessories can be purchased separately as necessary. Some accessories are not available in certain countries or regions

Ceiling Mounting Kit CM10-VB Dedicated accessory for attaching the camera to the ceiling.

Wall Mounting kit WM10-VB

Dedicated accessory for attaching the camera to a wall surface.

1.5inch Pipe Adapter PA10-15-VB

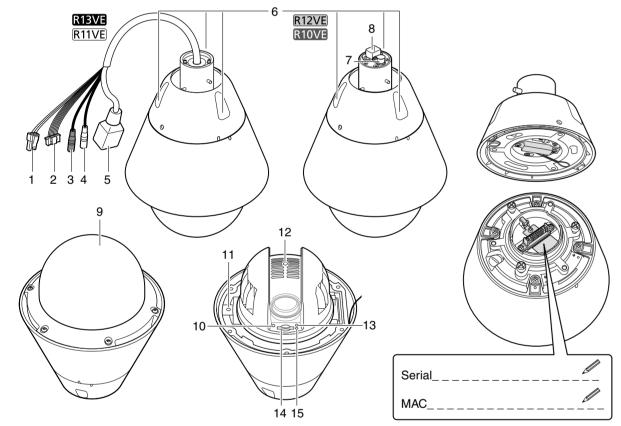
Dedicated accessory used to install the camera to the end of pipe that extends from high ceilings, such as in big-box

Dome Unit DU10-S-VB

Smoked dome cover. Canon AC Adapter PA-V18

Dedicated AC adapter for this camera.

Part Names

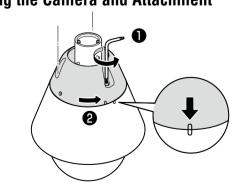


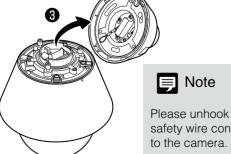
- 1. Power connection terminal R13VE R11VE / 2. External device I/O terminals R13VE R11VE /
- 3. Audio input terminal (Black) (common LINE IN and MIC IN) R13VE R11VE /
- 4. Audio output terminal (White) (LINE OUT) R13VE R11VE / 5. 100Base-TX LAN connector R13VE R11VE / 6. Attachment screws / 7. Power connection terminal R12VE R10VE / 8. LAN connector R12VE R10VE /
- 9. Dome case / 10. Reset switch / 11. Reboot switch / 12. Lens / 13. LED (Orange) / 14. Memory card slot /
- * On: when powered on, during reboot / Off: during normal use

Before Installing the Camera

Set the IP address and other network information on the camera using the "Camera Management Tool" on the Setup CD-ROM. For details on how to operate the "Camera Management Tool", please refer to the "Camera Management Tool User Manual".

Separating the Camera and Attachment



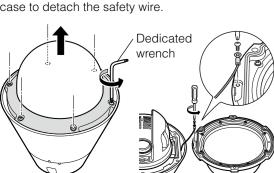




Removing and Attaching the Dome Case

Removing the Dome Case

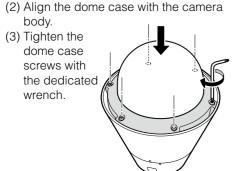
Loosen the screws holding the dome case in place with the dedicated wrench, and remove it. Loosen the screws on the dome case to detach the safety wire.



Attaching the Dome Case

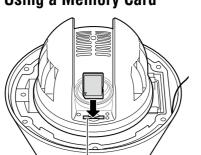
(1) Fix the screws in the dome case and attach the safety wire.

(3) Tighten the dome case screws with the dedicated wrench.



Using a Memory Card

Memory card slot



To remove the memory card, push it in all the way until the card slightly pops out and remove.

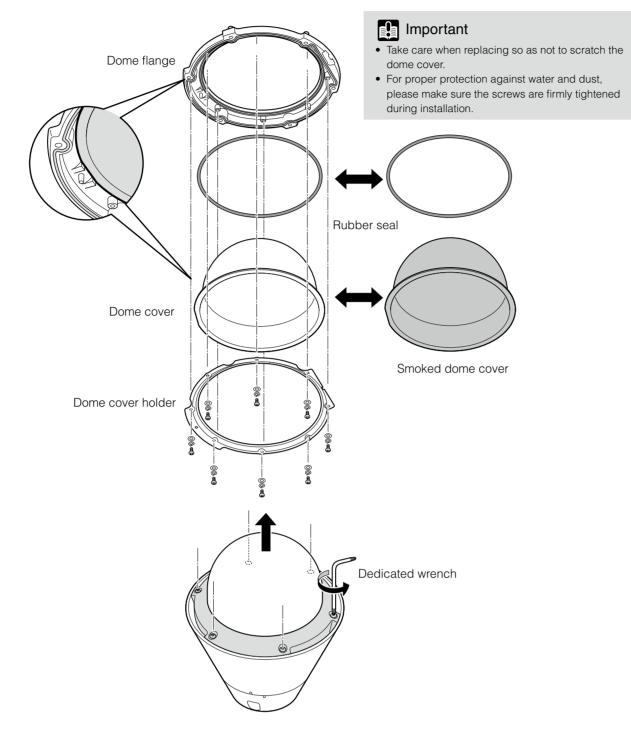
Remove the dome case and place the memory card in the memory card

Important

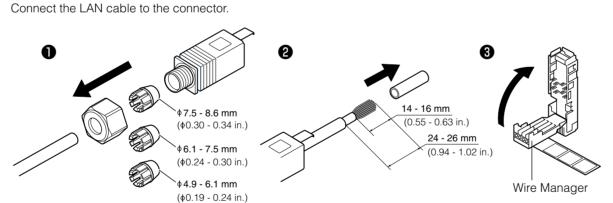
- Insert a memory card before installing the camera.
- When using a memory card with the camera for the first time, it is recommended to format the card after inserting it into the camera (please refer to the "Operation Guide").
- Always unmount the memory card before removing it (please refer to the "Operation Guide").

Using the Dome Unit (sold separately)

Remove the dome case from the camera, then remove the dome cover holder and dome flange, and replace with the smoked dome.



Connecting the LAN Connector Set (Waterproof) R12VE R10VE



 Align the wires with the terminal settings

according to the

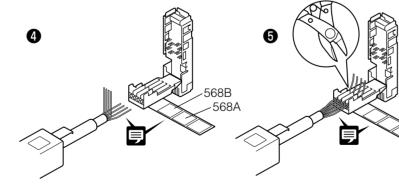
manager.

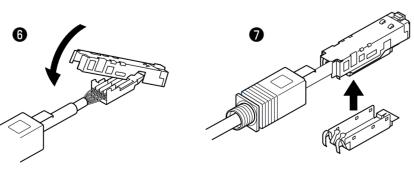
568B/568A color coded

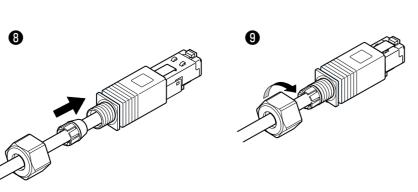
illustration, and insert them into the wire

 The LAN cable may not be able to be properly inserted or removed from the LAN connector, if the LAN Connector Set (Waterproof) is not used. The cable's water resistance will not be

maintained as well.





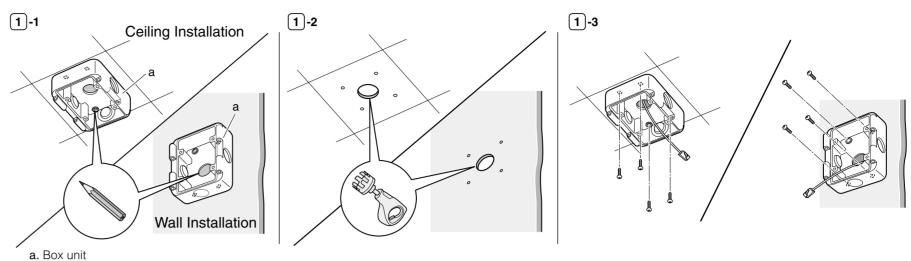


Installing the Camera

Attached to ceilings/Attached to walls

The camera is installed with the optional ceiling mounting kit (sold separately) or wall mounting kit (sold separately). If it is not possible to drill a hole in the ceiling or wall for wiring purposes, a composite pipe can be used instead.

Please refer to the installation guide included with the optional ceiling mounting kit and wall mounting kit for further details.



1-1

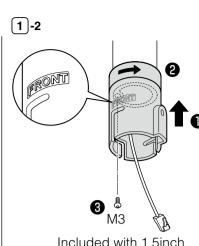
Pass necessary cables for connecting the camera through the pipe.

> 3.0 cm (1.2 in.)

Ceiling pendant mounting

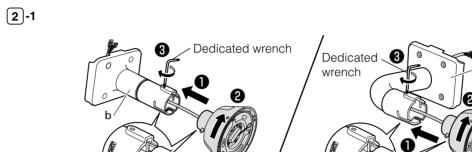
Mount using the 1.5inch Pipe Adapter (sold separately).

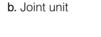
For details please refer to the Installation Guide included with the

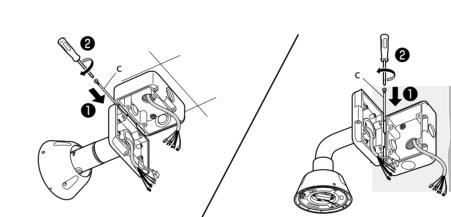




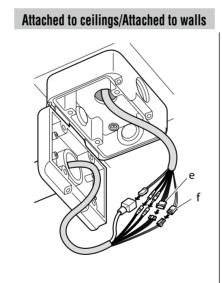
2 -2

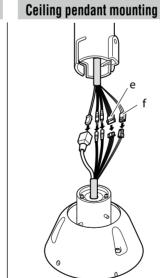


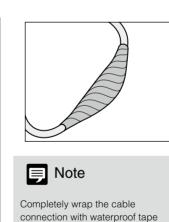




c. Shaft **2** -3







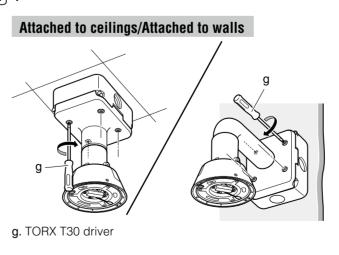
allow water to enter between the

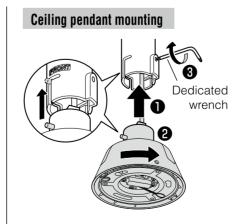
individual cables.

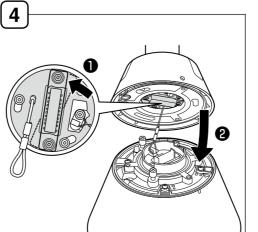


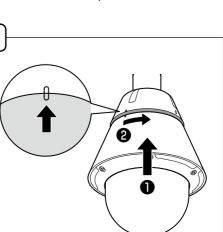
e. I/O interface cable f. Power interface cable

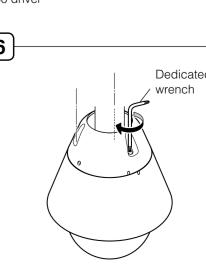
3

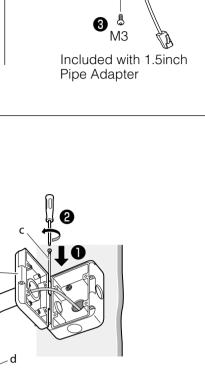












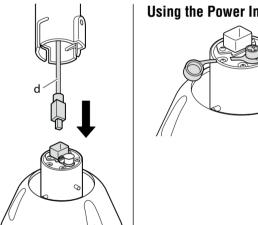
b. Joint unit c. Shaft d. LAN cable

R12VE R10VE

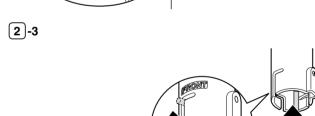
2 -1

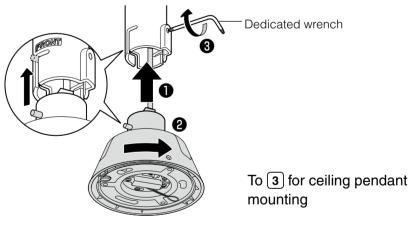
2 -2

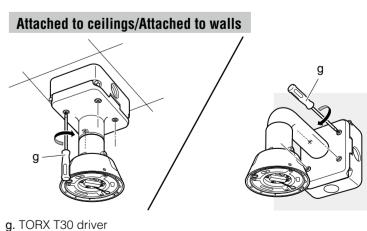


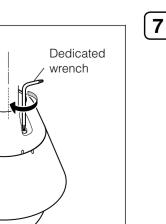


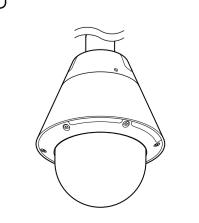
Cut off the cap if the power interface cable (Waterproof) is to be used. Keep the cut-off cap in a safe location. If the cap is not attached when the power interface cable (Waterproof) is not being used, it may result in the accumulation of water, which will damage the camera







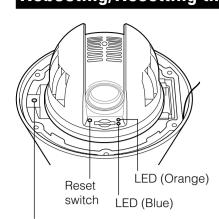




When the temperature within the camera is low (heater activated)

When the unit is powered by a 24 V AC/ PoE+ power source, the heater unit can be used. The heater unit's orange LED will turn on, when the unit has been activated due to the low temperature within the camera, and the transfer of video is also not possible. Once the temperature within the camera has reached the level where it can transfer the video once again, the orange LED will turn off.

ebooting/Resetting the Camera



Rebooting

To reboot the camera by turning its power off and on, remove the dome case and press the reboot switch.

■ Note

Rebooting can be done from the camera settings page as well (please refer to the "Operation Guide").

Resetting

To reset the camera to its factory default settings, press the reset switch and reboot switch while checking the LED (Blue) in the following order. 1) Hold the reset switch down, and press the reboot switch with a

- pointed object.
- 2) After holding down the reset switch for at least three seconds, release the reboot switch.
- 3) After the LED (Blue) starts to blink, release the reset switch. When the blinking has stopped, the unit has finished resetting.

Connecting the Camera

Power Connection

Reboot switch

Power can be supplied to the camera in the three ways described below. Please be sure to read the user manual for the dedicated power supply before use.



• Power supply should conform to all local codes.

• The power supply should also comply with IEC/UL60950-1 (SELV/LPS) standards.

■ PoE+/PoE (Power over Ethernet)

Power can be supplied to the camera by using a LAN cable connected to a PoE+/PoE HUB that conforms to the IEEE802.3at Type 2 (PoE+)/Type 1 (PoE) standard.

Important

• Check with your dealer for more information about PoE+/PoE HUB and Midspan technology.

Midspan (a LAN cable power supply device) is a device that, like a PoE+/PoE HUB, supplies power to the camera via a LAN cable

• Some PoE+/PoE HUBs allow the limitation of currents for each port, but applying limits may interfere with performance. If using this type of PoE+/PoE HUB, do not limit the operating current.

• Some PoE+/PoE HUBs have limits for the total current consumption for the ports which can interfere with performance when multiple ports are in use. For more information, check the instruction guide for your PoE+/PoE HUB.

• When the camera is connected to both a PoE+/PoE HUB and an external power supply (12 V DC or 24 V AC), power will

be supplied in the following order of precedence. External power supply (24 V AC) > PoE+/PoE HUB > External power supply (12 V DC)

However, when connecting power from both, certain combinations could cause problems such as unstable network connections. If a problem arises, either set the PoE+/PoE HUB power supply to "disabled" or use the optional AC adapter as the external power supply.

■ External Power Supply

12 V DC or 24 V AC input can be used. Use the included interface cable to connect to the camera power connection terminal.



1: BROWN Power 24 V AC / 12 V DC non-polar 2: BLUE Power 24 V AC / 12 V DC non-polar 3: GREEN FG (frame ground)

12 V DC can be connected in a non-polar configuration.

Important

• The power supply should be within the following voltage range.

• 24 V AC: Voltage fluctuation within ±10% of 24 V AC (50 Hz or 60 Hz ±0.5 Hz or less)

Current supply capacity of at least 2.0 A per camera

12 V DC: Voltage fluctuation within ±10% of 12 V DC

Current supply capacity of at least 1.5 A per camera • When using a 12 V DC battery power supply, be sure to connect resistors of at least 0.5 – 1.0 Ω/20 W in series to the

• For an external power supply, use a double-insulated device.

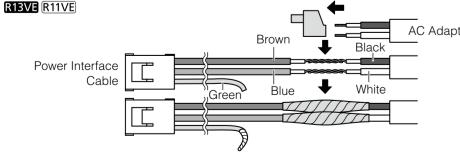
Recommended Power Cables [Reference]						
Cable (AWG)		24	22	20	18	16
12 V DC maximum cable length	m	4	6	10	17	26
	(ft.)	(13.1)	(19.7)	(32.8)	(55.8)	(85.3)
24 V AC maximum cable length	m	6	10	15	24	39
	(ft.)	(19.7)	(32.8)	(49.2)	(78.7)	(128.0)

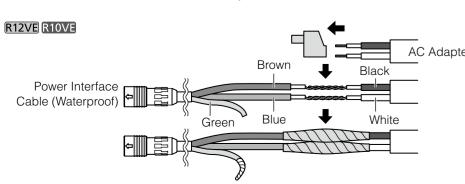
Use UL cable (UL-1015 or equivalent) for 12 V DC or 24 V AC wiring.

AC Adapter

Please use the dedicated AC adapter (sold separately)

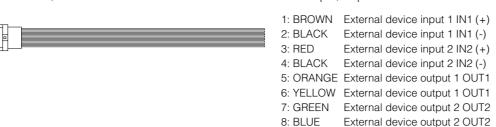
Remove the power connector attached to the AC adapter, then connect the power interface cable from the power connector included in the package, as shown in the following diagram. Wrap the cable connection with waterproof





External Device I/O Terminals RIBVE R11VE

External device I/O terminals consist of two input and output systems each. Viewer can be used to check external device input status and control output to an external device (Please refer to the "Operation Guide"). Use the included I/O interface cable to connect to external device input/output terminals.



■ External Device Input Terminals (IN1, IN2)

External device input terminals consist of two sets (IN1, IN2) of two terminals, with the negative terminals connected to the camera interior GND. Connecting cables to the positive and negative terminals and opening or closing the circuit notifies the Viewer.

Important

• When connecting sensors and switches, connect terminals that are electrically isolated from the respective power and

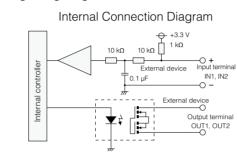
■ External Device Output Terminals (OUT1, OUT2)

External device output terminals consist of two sets (OUT1, OUT2) of two terminals. The sets have no polarity. Controls from the Viewer can be used to open and close the circuit between the terminals. Using optical couplers, the output terminals are isolated from the camera's internal circuit.

The load connected to the output terminals should be within the following rating range.

Rating between output terminals: Maximum voltage 50 V DC

Continuous load current at or below 100 mA On resistance: Max. 30 \Omega



Audio Input/Output Terminals R13VE R11VE

Each audio input/output terminal has one input system and one output system. Connecting the camera to an audio input/output device such as a microphone or a speaker with an amplifier allows you to send/receive audio through the Viewer.

Use the \$3.5 mm (\$0.14 in.) monaural mini-jack connector to connect an audio input/output device.

■ Audio Input Terminal Common LINE IN/MIC IN (monaural input)

Although the camera only has a single audio input system, it supports two types of microphone input: LINE IN and MIC IN. Before using the audio input, please confirm the [Audio Input] on the Setting Page (please refer to the "Operation Guide"). LINE IN is selected by default.

Input terminal: \$43.5 mm (\$\phi 0.14 in.) mini jack (monaural) Dynamic MIC IN

Input impedance: 1.5 k Ω ±5%

* Supported microphones: Output impedance: 400 – 600 Ω Condenser MIC IN

Input impedance (microphone bias resistance): 2.2 kΩ ±5%

Microphone power supply: plug-in power (voltage: 2.3 V) * Supported microphones: Condenser microphones with plug-in power support

LINE IN

Input level: Max. 1 Vp-p

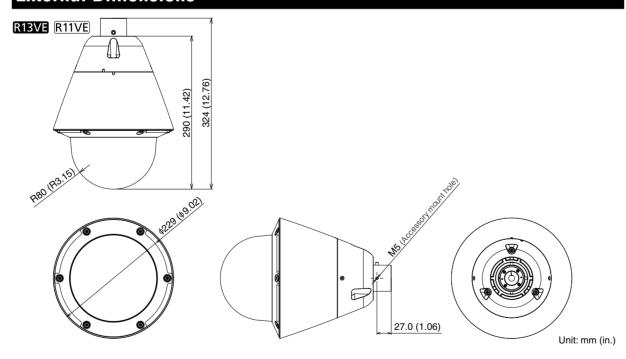
* Please use a microphone with an amplifier. ■ Audio Output Terminal LINE OUT (monaural output)

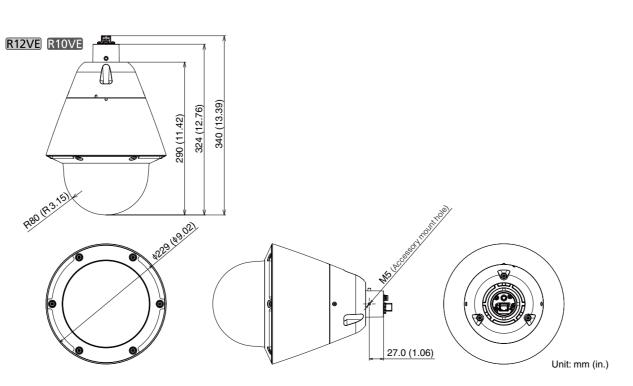
Connect the camera to a speaker with an amplifier. Audio can be sent to the speaker from Viewer.

Output terminal: \$3.5 mm (\$0.14 in.) mini jack (monaural)

Output level: Max. 1 Vp-p * Use a speaker with an amplifier.

External Dimensions





Specifications

Please refer to the installation procedures or the Appendix – Specifications for specifications not listed below.

Camera

Viewing Angle

Lens

30x optical zoom (20x digital zoom) lens with auto focus

R13VE R12VE For 16:9 aspect ratios Horizontal: 62.6° (W) - 2.2° (T)

Vertical: 36.9° (W) - 1.3° (T) For 4:3 aspect ratios Horizontal: 48.5° (W) - 1.7° (T) Vertical: 36.9° (W) - 1.3° (T)

For 16:9 aspect ratios Horizontal: 58.4° (W) – 2.1° (T) Vertical: 34.1° (W) - 1.2° (T)

R11VE R10VE

For 4:3 aspect ratios Horizontal: 58.4° (W) – 2.1° (T)

Vertical: 45.0° (W) - 1.6° (T) Min. Subject Illumination R13VE R12VE

Day Mode (color) 0.05 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE)

Night Mode (monochrome) 0.002 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE)

When using the Dome Unit (Smoked) (sold separately) Day Mode (color):

0.1 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) Night Mode (monochrome

0.004 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) R11VE R10VE

0.03 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) Night Mode (monochrome 0.002 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE)

When using the Dome Unit (Smoked) (sold separately)

0.06 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE)

0.004 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) 360° continuous panning 180° (ceiling-mounted position: 0° – 180°)

When the horizontal direction of the camera is 0°. - When the tilt angle is between angles below, the dome cover can cause a line to appear in the video, as well as a decline in the video quality.

0° - 12° (168° - 180°) (W) 0° – 5° (175° – 180°) (T)

Interface

Pan Angle Range

LAN x 1 (RJ45, 100Base-TX (auto/full-duplex/half-duplex)) Network Terminal Audio Input Terminal R13VE R11VE \$\phi_3.5 \text{ mm (\$\phi_0.14 in.) mini-jack connector (monaural)} (Common for LINE IN & MIC IN) LINE IN (connect to an amplifier microphone) or

MIC IN (connect to a microphone w/o amplifier) Switch LINE IN/MIC IN in the Setting Page Audio Output Terminal R13VE R11VE \$\phi_3.5 \text{ mm (\$\phi_0.14 in.) mini-jack connector (monaural)} LINE OUT (connect to an amplifier speaker) (LINE OUT)

External Device I/O Terminal R13VE R11VE Input x 2, Output x 2

SD Memory Card, SDHC Memory Card, SDXC Memory Card Compatible. * To insure reliability in the recording speed, it is recommended to use CLASS 10 rated products. Even when using CLASS 10 products, reliability cannot be guaranteed during heavy access loads (e.g., when recording

and deleting data at the same time).

Others

Memory Card*

Operating Environment Temperature

(Includes LAN Connector Set Operating Temperature Range (including direct sun exposure): AC: $-50^{\circ}\text{C} - +55^{\circ}\text{C} (-58^{\circ}\text{F} - +131^{\circ}\text{F})$

PoE+: -35°C - +55°C (-31°F - +131°F) DC, PoE: -10°C - +55°C (+14°F - +131°F)

Start-up Temperature Range (including direct sun exposure): AC, PoE+: -30°C - +55°C (-22°F - +131°F)

DC. PoE: -10°C - +55°C (+14°F - +131°F)

Humidity: 5% – 85% (without condensation) Storage Environment Temperature: -30°C - +60°C (-22°F - +140°F)

Humidity: 5% – 90% (without condensation)

Ceiling mount/Surface mount Canon will not guarantee proper operation if the cameras are installed on surfaces where the angle is more than

±5° from horizontal, because this will put a heavy load onto sliding mechanical parts and may affect durability. PoE: PoE power supply via LAN connector (IEEE802.3at Type1/Type2 compliant) AC Adapter: PA-V18 (100 - 240 V AC) (sold separately)

External power source: 24 V AC/12 V DC

Power Consumption R13VE R12VE

PoE+: Max. approx. 22.4 W * PoE: Max. approx. 11.3 W *

AC Adapter PA-V18: Max. approx. 13.8 W (100 V AC) Max. approx. 13.8 W (240 V AC) DC: Max. approx. 12.3 W

AC: Max. approx. 34.8 W

R11VE R10VE PoE+: Max. approx. 20.8 W *

PoE: Max. approx. 10.1 W *2

AC Adapter PA-V18: Max. approx. 12.7 W (100 V AC) Max. approx. 12.8 W (240 V AC)

DC: Max. approx. 11.0 W AC: Max. approx. 33.2 W *1 Class 4 power sourcing equipment (requests 30.0 W)

*2 Class 0 power sourcing equipment (requests 15.4 W)

R13VE R11VE Approx. 3530 g (7.79 lb.) **R12VE R10VE** Approx. 3420 g (7.54 lb.)

Impact Resistance IK10 (20J) Dust-resistant/ Waterproof Specification IP66 rated

Symbols Indicating Safety Precautions

This Installation Guide uses the following symbols to indicate important information the user should know in order to use the product safely. Explanations are provided for each symbol so that users will understand the level of

importance for each. Be sure to observe these items. Failure to follow the instructions accompanied by this symbol may result in death or **⚠** Caution

Failure to follow the instructions accompanied by this symbol may result in injury. Failure to follow the instructions accompanied by this symbol may result in property

|Safety Precautions

Installation Precautions

Caution

Warning

Do not install in the following places:

• Places in strong direct sunlight, near heat-generating objects, or locations subject to high

Places near fire sources or flammable solvents (alcohol, thinner, fuel, etc.)

 Places subject to oily smoke or steam Confined or enclosed places

R13VE R11VE Insulate the ends of cables you are not using. Failure to insulate will cause fire or electric shock.

Failure to do so may result in fire or electric shock.

Notes on Power Supply

- R13VE R11VE Only use the dedicated AC adapter (sold separately) for AC power.
- Do not set any heavy objects on the power cable (or the LAN cable for a PoE+/PoE power supply). • Do not pull, forcibly bend, scratch, or modify the power cable (or the LAN cable for a PoE+/PoE power
- Do not cover or wrap the AC adapter (sold separately) with cloth or blankets.

For installation or inspection of this camera, consult the dealer where you purchased the product. This installation should be made by a qualified service person and should conform to all local codes.

- When installing, make sure the surface is capable of withstanding the total weight of the camera and accessories, and sufficiently reinforce if necessary.
- Be sure to use installation screws designed for the type of ceiling the camera is to be installed. • Periodically check the parts and screws for rust and loosening, in order to prevent injuries and
- equipment damage due to falling items.
- Do not install where snow can accumulate directly on the camera.
- Be sure to attach the safety wire when installing the camera.
- Failure to do so may result in the camera falling or other accidents.
- Do not touch the edges of metal parts with bare hands.

Failure to do so may result in injuries.

- Do not install on an unstable surface.

subject to significant vibration.

- To maximize shock resistant specifications, do not install on insufficiently strong surfaces or surfaces
- After turning off the power, do not turn the power on again for at least five seconds.
- If there is condensation, please wait to power on, until the condensation dissipates.
- Take care not to damage wiring or piping.
- Failure to do so may result in damage to peripheral items.

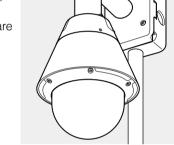
Important

lightning strikes. Please refer to our website for details.

Precautions for Installing the Camera Outdoor

waterproof/ dustproof capabilities. • R13VE R11VE Waterproof the cable connections and the ends of cables you are

• R12VE R10VE Please be sure to use the included LAN Connector Set • If wiring by connecting the camera to the composite pipe, bridge the gap



Precautions for Use

• If you discover defective conditions such as smoke, strange sounds, heat or strange odors,

- If thunder starts, stop installation or inspection etc. and do not touch the camera or continue
- connecting the cable.
- Do not damage the connecting cable. • Do not insert foreign objects such as water or metal into the camera.
- Do not use flammable sprays near the camera.

• Do not use flammable solvents such as alcohol, paint thinner or benzine when cleaning the camera.

Failure to do so may result in fire or electric shock.

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legislation implementing those Directives.

Only for European Union and EEA (Norway, Iceland and Liechtenstein) These symbols indicate that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU), the Battery Directive (2006/66/EC) and/or national



If a chemical symbol is printed beneath the symbol shown above, in accordance with the Battery Directive, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Battery Directive.

have a possible impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about the recycling of this product, please contact your local city office, waste authority,

approved scheme or your household waste disposal service or visit www.canon-europe.com/weee, or www.

electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could

This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and

CANON INC. 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo 146-8501, Japan

CANON EUROPA N.V.

canon-europe.com/battery.

Bovenkerkerweg 59, 1185 XB Amstelveen, The Netherlands

Failure to do so may result in fire or electric shock.

⚠ Caution

• Do not install in unstable places, places subject to significant vibration or impact, or places subject to salt damage or corrosive gas.

- Do not install in places subject to strong winds.
- Be careful not to get your fingers caught when installing.

Caution

- Do not turn the camera rotator by hand.
- Take measures to remove static electricity before performing any procedures.
- Please waterproof and dust-proof camera as necessary, when installing outdoors. Failure to do so may result in malfunctions.
- We recommend the installation of a lightning arrester (a surge protection device) as a measure against failures caused by
- When installing the camera outdoors, observe the following precautions to retain
- not using, including their connectors.
- using the conduit box (sold separately). When connecting the conduit box and the pipe, apply silicon sealant to seal it tightly after attaching the pipe to prevent water getting in as necessary.
- / Warning
- immediately stop using the camera and contact your nearest dealer. Fire or electric shock may result from continued use of the product.
- Do not disassemble or modify the camera.

• Do not leave LAN cables, external power supply, or the power connector for the AC adapter (sold separately) connected when the camera is not in use for long periods.