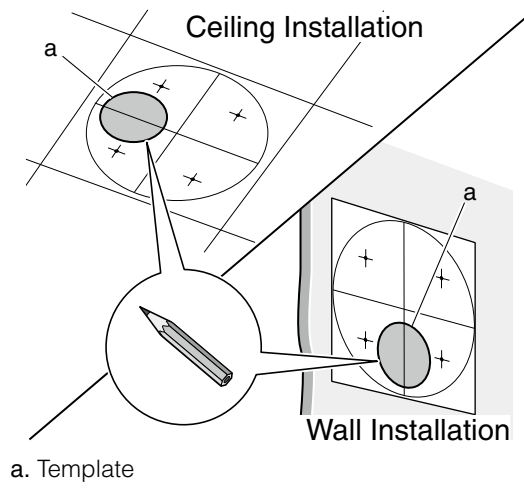


Installing the Camera

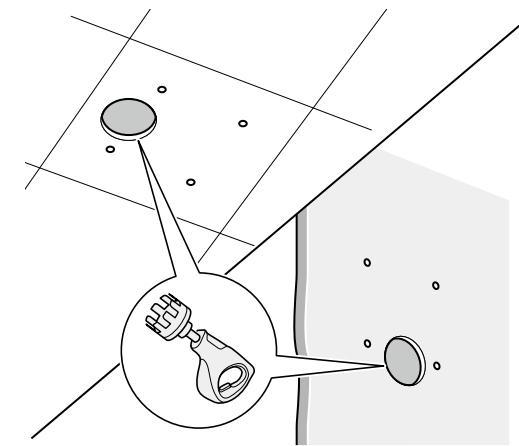
1

Directly attached to ceilings/Directly attached to walls

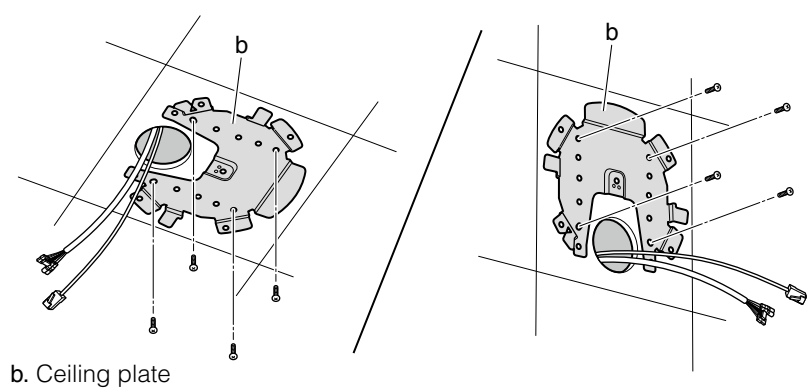
1-1



1-2

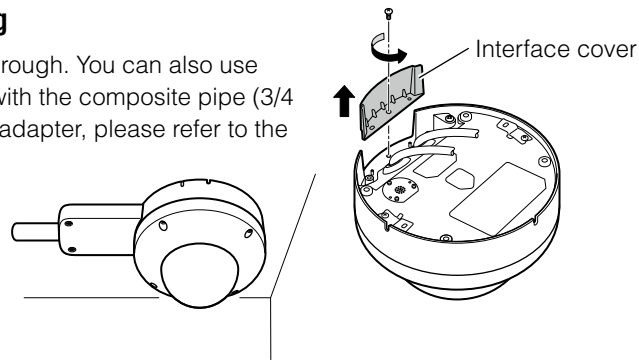


1-3



If the cables cannot be stored above a ceiling

Remove the interface cover and pass the cable through. You can also use the conduit adapter (sold separately) to connect with the composite pipe (3/4 inch NPSM threaded hole). If you use the conduit adapter, please refer to the Installation Guide included with the adapter.



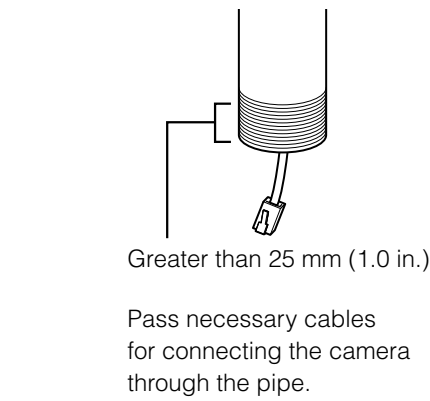
Attaching to a junction box

Attach the ceiling plate to the junction box after confirming the fixing holes locations with the external dimensions diagram.

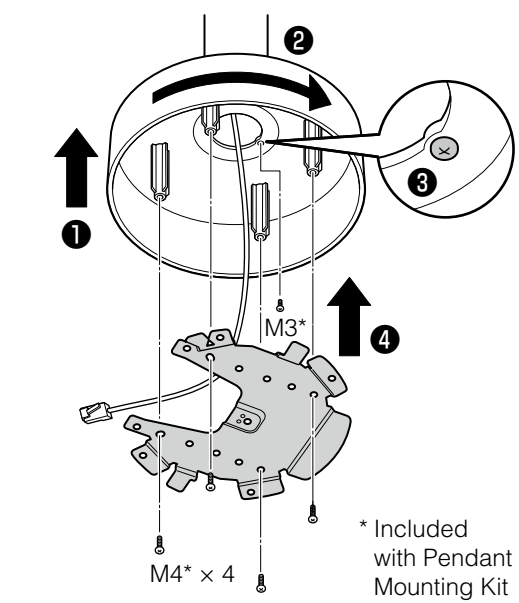
Ceiling pendant mounting

Mount using the Pendant Mounting Kit (sold separately). For details please refer to the Installation Guide included with the kit.

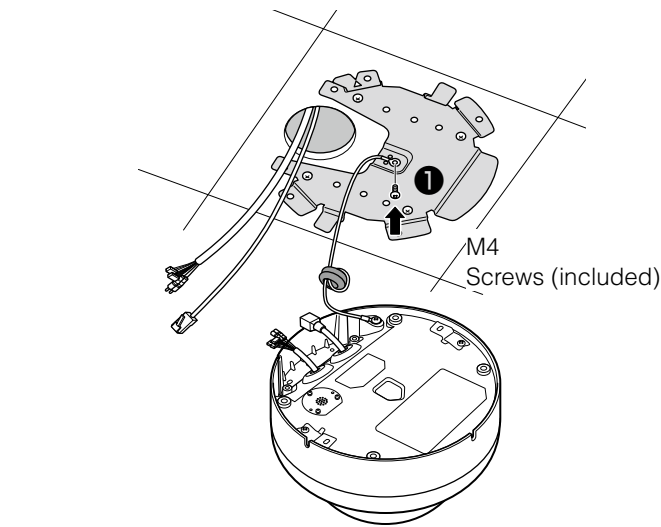
1-1



1-2

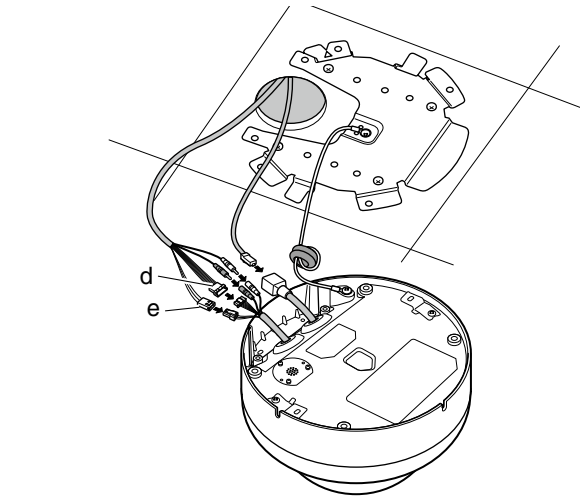


2

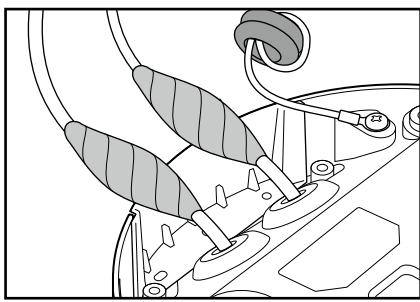


c. Safety wire

3



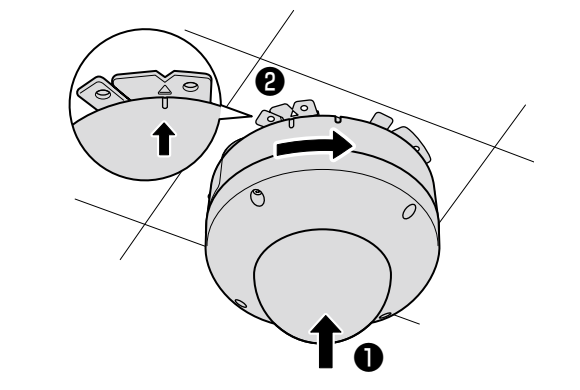
d. I/O interface cable
e. Power interface cable



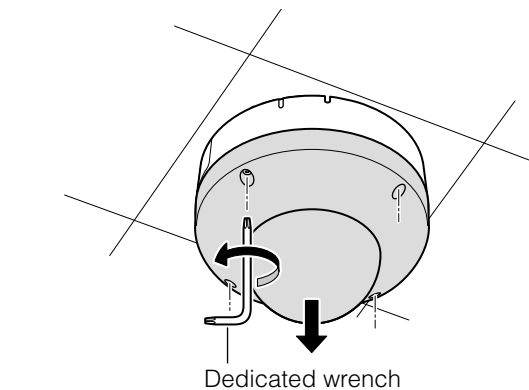
Note

Wrap the cable connection with waterproof tape.

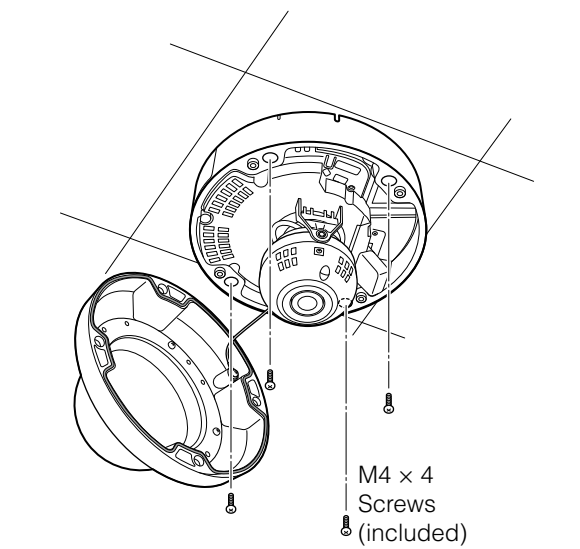
4



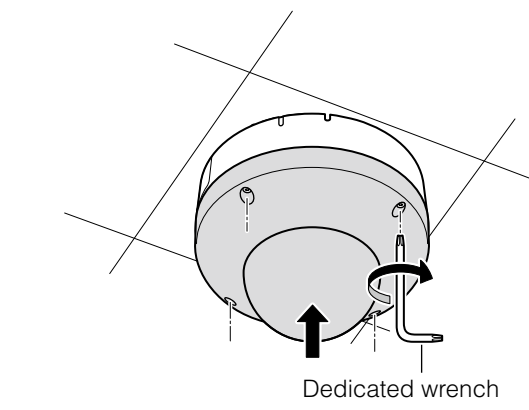
5



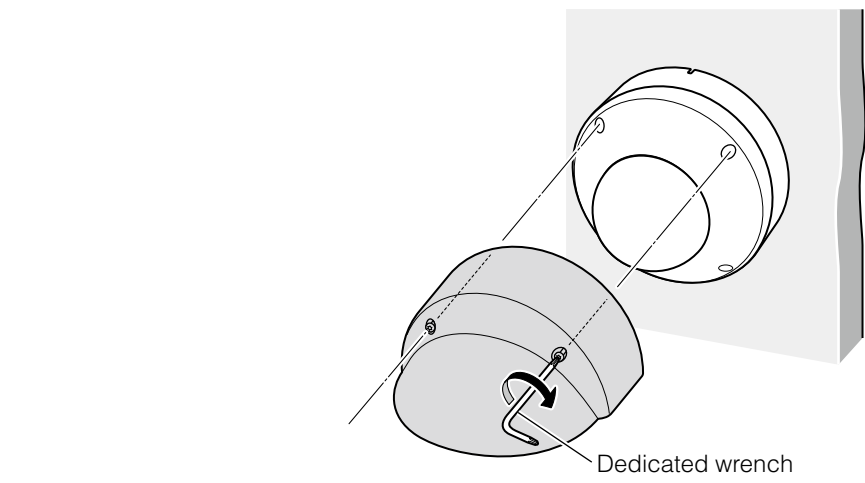
6



7



Attaching the sunshade cover (sold separately)



8

When the installation has finished, please adjust the angle. For more information, please refer to the "Operation Guide".

Rebooting/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 display 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 starts to blink, release the reset switch. When the blinking has stopped, the unit has finished resetting.

Connecting the Camera

To prevent cable connections from shorting out, wrap each individual connection with insulating tape, and then wrap all of the cables with waterproofing tape.

Power Connection

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.

Note

- Power supply should conform to all local codes.
- The power supply should also comply with IEC/UL60950-1 (SELV/LPS) standards.
- M641VB** Please only use 24 V AC as a power source when using the Heater Unit HU641-VB (sold separately). PoE, 12 V DC and AC Adapters cannot be used.

PoE (Power over Ethernet)

The camera supports PoE functions. Power can be supplied to the camera by using a LAN cable connected to a PoE HUB that conforms to the IEEE802.3at Type1 standard.

Important

- Check with your dealer for more information about PoE HUB and Midspan technology. Midspan (a LAN cable power supply device) is a device that, like a PoE HUB, supplies power to the camera via a LAN cable.
- Some PoE HUBs allow the limitation of power for each port, but applying limits may interfere with performance. If using this type of PoE HUB, do not limit the operating power.
- Some PoE HUBs have limits for the total power 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 HUB.
- M641VB** When the camera is connected to both a PoE HUB and an external power supply (12 V DC or 24 V AC), power from the power supply first connected is given priority. But when both power supplies are connected, according to the combination, problems such as failure of the network connection may occur. If a problem arises, disable one of the power supplies.

External Power Supply **M641VB**

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 $\pm 10\%$ of 24 V AC (50 Hz or 60 Hz ± 0.5 Hz or less) Current supply capacity of at least 1.0 A per camera
- 12 V DC: Voltage fluctuation within $\pm 10\%$ 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 $0.5 - 1.0 \Omega/20$ W in series to the power line.
- For an external power supply, use a double-insulated device.

Recommended Power Cables [Reference]

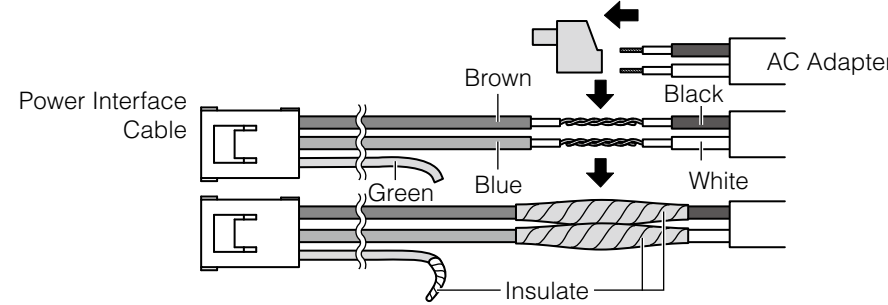
Cable (AWG)	24	22	20	18	16
12 V DC maximum cable length	5 m (16.4 ft.)	9 m (29.5 ft.)	14 m (45.9 ft.)	23 m (75.5 ft.)	32 m (105.0 ft.)
24 V AC maximum cable length	11 m (36.1 ft.)	18 m (59.1 ft.)	29 m (95.1 ft.)	46 m (150.9 ft.)	64 m (210.0 ft.)

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

AC Adapter **M641VB**

Please use the dedicated AC adapter (sold separately).

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



External Device I/O Terminals **M641VB**

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.

1. BROWN	External device input 1 IN1 (+)
2. BLACK	External device input 1 IN1 (-)
3. RED	External device input 2 IN2 (+)
4. BLACK	External device input 2 IN2 (-)
5. ORANGE	External device output 1 OUT1
6. YELLOW	External device output 1 OUT1
7. GREEN	External device output 2 OUT2
8. BLUE	External device output 2 OUT2

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 GND.

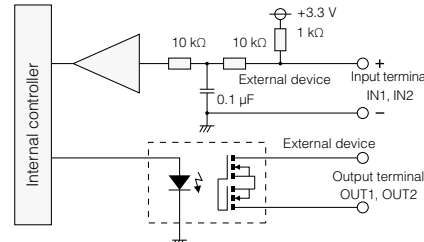
External Device Output Terminals (OUT1, OUT2)

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 Ω

Internal Connection Diagram



Audio Input/Output Terminals **M641VB**

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

- Dynamic MIC IN
Input impedance: 1.5 k Ω $\pm 5\%$
* Supported microphones: Output impedance: 400 – 600 Ω
- Condenser MIC IN
Input impedance (microphone bias resistance): 2.2 k Ω $\pm 5\%$
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

* 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: $\Phi 3.5$ mm ($\Phi 0.14$ in.) mini jack (monaural)

Output level: Max. 1 Vp-p

* Use a speaker with an amplifier.

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 legislation implementing those Directives.

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.

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 electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could 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.canon-europe.com/battery.