# SONY.

SNC-HM662

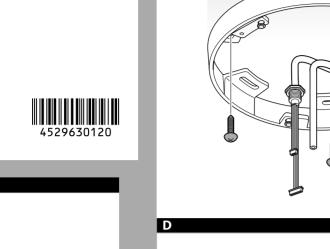
IPELA

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4-529-630-12(1)

# Network Camera

Installation Manual Before operating the unit, please read this manual thoroughly and retain it for future reference.



1

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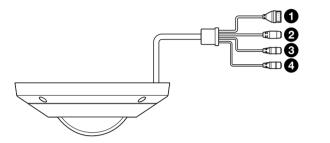
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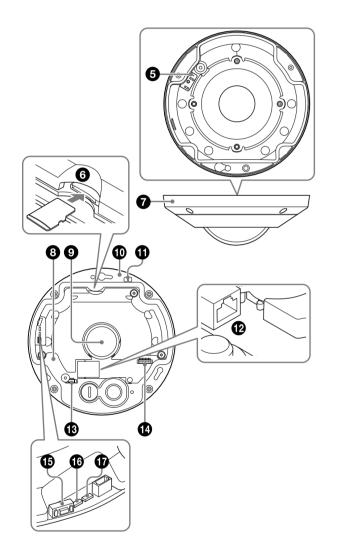
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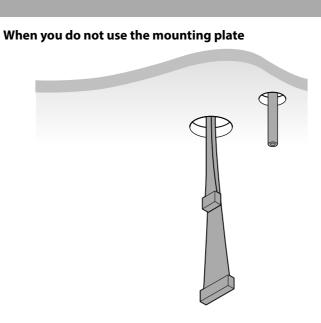
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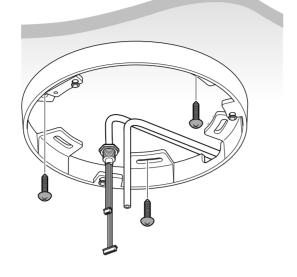
Note

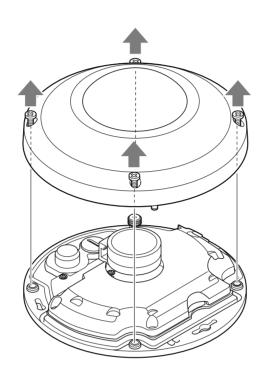


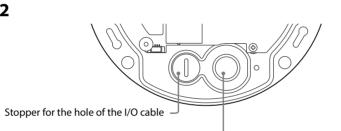




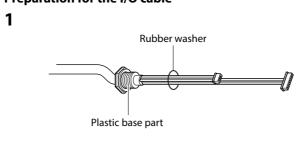
### When you use the mounting plate



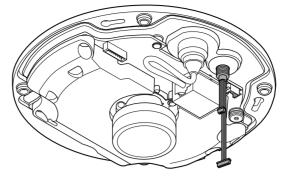


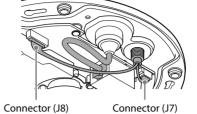


#### Preparation for the I/O cable



2, 3





Connector (J7)

#### **About the Manuals**

#### Installation Manual (this document)

This Installation Manual describes the names and functions of parts and controls of the Network Camera, gives connection examples and explains how to set up the camera. Be sure to read the Installation Manual before operating.

#### SNC easy IP setup Guide (stored in the CD-ROM) User's Guide/Application Guide (Web)

The User's Guide describes how to set up the camera and how to control the camera via a Web browser.

After installing and connecting the camera correctly, operate referring to the User's Guide.

#### Using the software

The supplied CD-ROM includes the setup program for assigning an IP address. The information for how to set up an IP address is also included in the disc in PDF format. User's Guide and Application Guide can be downloaded from the disc, or the

following URL:

### http://www.sony.net/ipela/snc

#### Using the CD-ROM manual

The manual can be read on a computer with Adobe Reader installed. You can download Adobe Reader free from the Adobe website.

1 Open the index.html file in the CD-ROM. 2 Select and click on the manual that you want to read.

#### Note

If you have lost or damaged the CD-ROM, you can purchase a new one from your Sony dealer or Sony service counter.

Adobe and Acrobat Reader are trademarks of Adobe Systems Incorporated in the United States and/or other countries.

### Assigning the IP address

Assign the IP address using the setup program in the supplied CD-ROM. For details on how to set up the IP address, see SNC easy IP Setup Guide.

### **Location and Function of Part**

#### B Reset switch

When you press and release the reset switch, the camera restarts. When you press and hold the reset switch, the camera is reset to the factory default settings.

#### POWER indicator

When the power is supplied to the camera, this indicator lights up.

### NETWORK indicator

The indicator lights up or flashes when the camera is connected to the network. The indicator is off when the camera is not connected to the network.

#### Installation

#### WARNING

- If you attach the camera in the height such as the wall or the ceiling, etc., entrust the installation to an experienced contractor or installer.
- If you install the camera on the ceiling, ensure that the ceiling is strong enough to withstand the weight of the camera plus the mounting plate and then install the camera securely. If the ceiling is not strong enough, the camera
- may fall and cause serious injury. • If you install the camera in a high place or ceiling, attach the optional rope to prevent the camera from falling.
- If you attach the camera to the ceiling, check periodically, at least once a year, to ensure that the connection has not loosened. If conditions warrant, make this periodic check more frequently.

#### Deciding the Installation Location of the Camera

#### When you do not use the mounting plate

(When connecting cables from the bottom of the camera) After deciding the direction in which the camera will shoot, make a hole (ø 14 mm (9/16 inches)) for the network cable and a hole (ø 20 mm (13/16 inches)) for the I/O cable using the supplied Alignment sticker for the camera base, thread the network cable and I/O cable, then decide the hole positions (three) for attaching the camera base.

#### When you use the mounting plate

(When connecting cables from the side of the camera) After deciding the direction in which the camera will shoot, decide the hole positions (three) for attaching the mounting plate using the supplied Alignment sticker for the mounting plate. Then thread the network cable and I/O cable through the side of the mounting plate, and secure the mounting plate on the ceiling/wall with three screws. Refer to "Mounting screws" for the screws to be used.

#### Mounting screws

The required mounting screws differ depending on the installation location and its material. (Mounting screws are not supplied.)

Steel wall or ceiling: Use M3 bolts and nuts. (Hexagon head bolt should not be used.)

Wooden wall or ceiling: Use M3 tapping screws. The panel thickness must be 15 mm (5/8 inch) or more.

Concrete wall: Use anchors, bolts and plugs suitable for concrete walls. (Head shape of M3 bolt: Pan head screw or hexagon head bolt should not be used.) Junction box: Use screws to match the holes on the junction box. (Head shape of screw: ø 7 mm (9/32 inch) Height 3 mm (1/8 inch) or less. (When you do not use the mounting plate))

#### WARNING

The required mounting screws differ depending on the installation location and its material. If you do not secure the camera with the appropriate mounting screws, the camera may fall off.

#### Preparation for the Network Cable and I/O Cable D

#### Prepare the cables as required for your usage.

- 1 Remove the dome case from the camera base by loosening the four screws with the supplied screwdriver.
- 2 Remove the rubber stopper for the hole of the network cable. Remove the stopper for the hole of the I/O cable by using a flat tip screwdriver.

#### Preparation for the network cable

• Size of the network cable (unit: mm)

Recommended cable diameter: 24 AWG (0.51 mm (1/32 inches))

### Note

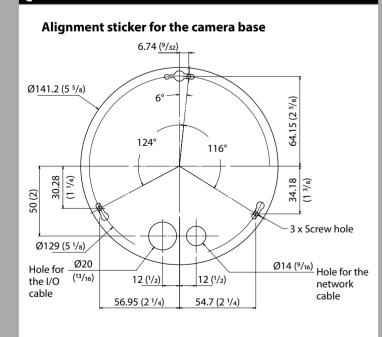
Use the cable of 5 mm to 8 mm ( $^{7}/_{32}$  inches to  $^{11}/_{32}$  inches) diameter for the network cable. If you use another thickness of cable, waterproof performance may be impaired.

#### Assembly procedure

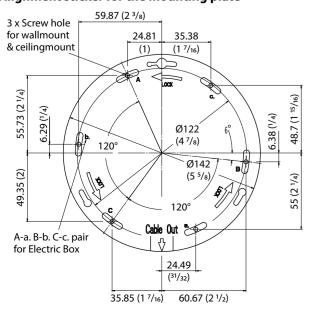
- 1 Make a hole through the rubber seal plug, then thread the network cable.
- 2 Peel a part of the sheath of the network cable.
- **3** Attach the connector to the network cable. Note



Α



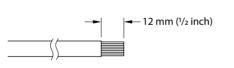




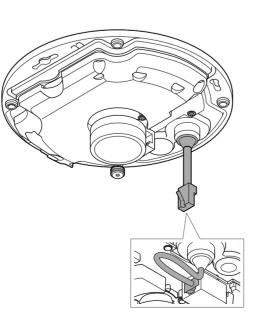
Rubber stopper for the hole of the network cable

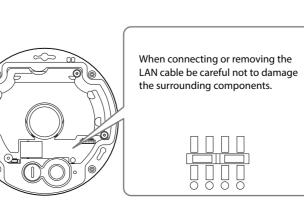
#### Preparation for the network cable











## Side

Cables are not connected when the unit comes from the factory. 1/O connectors

## Equipped to a sensor input and alarm output.

Each connector is adapted to the following signal. + 3V3: For maintenance use only.

DO: Alarm output DI: Sensor input GND: Ground

For details on each function and required settings, see the User's Guide. For the wiring, see "Connecting the I/O connectors."

Power input (Black) Connect to a 12 V DC power supply system.

#### Caution

To connect a 12 V DC power supply system, use the following DC plug. DC plug: PL03B: Straight, center positive, outer diameter 5.5 mm, inner diameter 2.1 mm

### 3, 4 I/O (input/output) cable

Audio Used for the line output connector (green) and the microphone input connector (pink).

 Microphone input connector (minijack, monaural) Connect a commercially available microphone.

**4** Line output connector (minijack, monaural) Connect a commercially available speaker system with a built-in amplifier.

### Caution

Take care not to trap the cables between the camera and the ceiling or the wall. If the cable is trapped, it may cause a fire or electric shock due to breaking.

### Inside



В

#### **5** Built-in microphone contact Align to the spring contact when attaching the dome case.

microSD card slot

This slot is used for optional microSD memory cards. Image data in the camera can be recorded to a memory card by inserting it into the slot When inserting, point the contact area at the camera base side, and be sure to insert it completely. This unit is only compatible with microSD and microSDHC memory cards.

### Note

For inquiries regarding verified microSD memory cards, contact your authorized Sony dealer.

#### Dome case

Spring contact

Align to the built-in microphone contact when attaching the dome case. Dens
 Lens

### Camera base

Strap hole

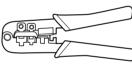
#### LAN network port (RJ45)

Connect a network cable (UTP, category 5) to this port to communicate with a network or PoE\* system. For details on connection, see the Instruction Manual of the power supply equipment. (\*PoE stands for Power over Ethernet. It is pursuant to IEEE802.3af.)

Connector (J7)

Connect the I/O cable

Connector (J8) Connect the I/O cable For attaching the connector to the network cable, you need a crimper (RJ45).



4 Thread the cable through the bottom of the camera base, connect the network cable to the LAN port (RJ45), then attach the rubber seal plug to the camera base for waterproofing.



When connecting or removing the LAN cable be careful not to damage the surrounding components.

#### Preparation for the I/O cable

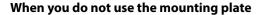
- 1 Attach the supplied rubber washer to the I/O cable.
- 2 Thread the I/O cable through the bottom of the camera base, then secure the plastic base part.

**3** Connect the I/O cable to the connector (J8) and connector (J7).

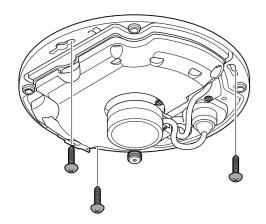
### Notes

• Secure with 0.5 N-m. • Do not pull on any cables forcefully, as a connection may become loose.

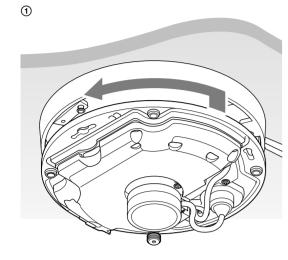
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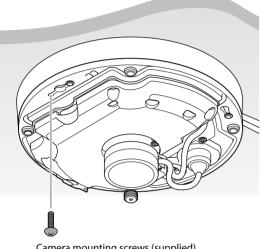


1



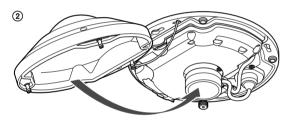
#### When you use the mounting plate





Camera mounting screws (supplied)

2



#### **Installing the Camera**

### 1 Attach the camera base.

When you do not use the mounting plate (When connecting cables from the bottom of the camera) Secure the camera base on the ceiling/wall with the three screws. Refer to "Mounting screws" for screws to be used.

#### When you use the mounting plate (When connecting cables from the side of the camera)

1 Attach the camera base to the mounting plate, then turn the camera base counterclockwise.

(2) Tighten the camera mounting screws (supplied) with the supplied screwdriver to secure the camera base to the mounting plate.

#### Note

Do not use other than the supplied screws. Otherwise, the camera unit may not be secure and could fall.

#### **2** Attach the dome case.

① Replace the desiccant that is attached to the inside of the dome case, with the supplied desiccant, using the supplied double-sided tape.

#### Note

When removing the desiccant from the Mylar sheet which is inside of the dome cover, be careful not to deform the Mylar sheet.

- ② Attach the dome case while the spring contact is aligned to the built-in microphone contact.
- 3 Secure the dome case and camera base by tightening the four screws with the supplied screwdriver.

#### Note

Be sure that all the screws are tightened correctly. Otherwise, waterproof performance may be impaired.

④ Remove the protecting film from the dome cover.

### Note

Do not install the camera to the place where the power cable, connecting cables, or connectors are submerged. It may cause water to seep inside the camera, or failure.

### Attaching the fall prevention rope

If you install the camera in a high place or ceiling, attach the optional fall prevention rope to prevent the camera from falling.

Thread the rope through the strap hole of the camera as illustrated, then fix the rope to the junction box, etc., on the ceiling/wall with a screw (not supplied). For details of the fall prevention rope, contact your Sony dealer or sales agent.

### Note

When attaching the rope, be sure not to short out the metal parts.

#### Connection

#### Connecting to the Network

Connect the LAN connector of the camera to a PoE\* supported device (such as a hub) using the network cable (straight, not supplied).

The electrical power is supplied through the network cable. For details, refer to the instruction manuals of the PoE supported devices.

(\* PoE: The acronym for Power over Ethernet. IEEE802.3af standard compliant devices.)

It is also possible to connect the LAN port of the camera to a router or hub in the network using a network cable (not supplied).

#### **Connecting the Power Source**

- The camera can be powered in either of the following ways.
- 12 V DC
- Power supply equipment pursuant to IEEE802.3af (PoE\* system) \* PoE means Power over Ethernet.

#### Notes

- Do not turn off the camera immediately after turning it on. Wait for at least five minutes before turning off the camera.
- Do not input 12 V DC power if power is supplied by a PoE system.

### Connecting to the power supply equipment pursuant to IEEE802.3af The power supply equipment pursuant to IEEE802.3af supplies the power

through the network cable. For details, refer to the Instruction Manual of the equipment.

#### Connecting to 12 V DC source

- Connect the power input terminal of the I/O cable (black) to a 12 V DC source. • Use a 12 V DC source isolated from 100 to 240 V AC. Usable voltage range is as
- follows. 12 V DC: 10.8 V to 13.2 V
- In the USA, the product shall be powered by a UL Listed Class 2 Power Supply Only.
- In Canada, the product shall be powered by a CSA certified Class 2 Power Supply Only.

### Specifications

#### Compression

Ε

Video compression format	JPEG/H.264
Audio compression format	G.711/AAC
Maximum frame rate	1080p mode
	30 fps
	Fisheye mode (H.264)
	10 fps
	Fisheye mode (JPEG)
	13 fps

#### Camera

Image device	1/2.5 type CMOS
5	Effective picture elements: Approx. 4,910,000
Minimum illumination	F2.0/Auto gain control maximum rate MAX/50
	IRE (IP)/10 fps (fisheye mode)
	Color: 0.7 lx
	Black & White: 0.3 lx

#### Lens Focal ler .+h

Focal length	0.98 mm to 1.12 mm
Maximum relative aperture	F2.0
View angle	Vertical: 182°
	Horizontal: 182°
Minimum object distance	500 mm

#### Interfa

Interface	
LAN port (PoE)	10BASE-T/100BASE-TX, auto negotiation (RJ45)
I/O port	Sensor input: $\times$ 1, make contact, break contact Alarm output: $\times$ 1 (24 V DC, 0.5 A)
microSD memory card slot	
Microphone input	Minijack (monaural)
	Plug-in-power supported (rated voltage: 2.5 V DC) Recommended load impedance: 2.2 k $\Omega$
Line output	Minijack (monaural), Maximum output level: 1 Vrms

#### Others

F

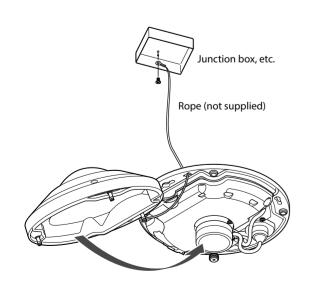
others	
Power supply	IEEE802.3af compliant (PoE system) 12 V DC ±10%
Power consumption	6.0 W max.
Operating temperature	Start temperature: -20 °C to +50 °C (-4 °F to +122 °F)
	Working temperature: $-30 \degree$ C to $+50 \degree$ C ( $-22 \degree$ F to $+122 \degree$ F)
Storage temperature	−25 °C to +60 °C (−13 °F to +140 °F)
Operating humidity	20% to 90%
Storage humidity	20% to 95%
Dimensions (diameter/height)	G
. <b>3</b> .	145.0 mm $\times$ 54.0 mm (5 <sup>3</sup> / <sub>4</sub> inches $\times$ 2 <sup>1</sup> / <sub>4</sub> inches),
	not including the mounting plate
Mass	Approx. 640 g (1 lb 6.6 oz), not including the
	cables and mounting plate
Supplied accessories	CD-ROM (supplied programs) (1)
	I/O cable (1)
	Mounting plate (1)
	Alignment sticker for the mounting plate (1)
	Alignment sticker for the camera base (1)
	Camera mounting screws (1)
	Double-sided tape (1)
	Rubber seal plug (1)
	Rubber washer (1)
	Safety Regulations, Installation Manual (1 set)
	Screwdriver (1)
	Desiccant (1)

Design and specifications are subject to change without notice.

#### **Recommendation of Periodic Inspections**

In case using this device over an extended period of time, please have it inspected periodically for safe use. It may appear flawless, but the components may have deteriorated over time, which may cause a malfunction or accident. For details, please consult the store of purchase or an authorized Sony dealer.

3 凹



When you use the mounting When you do not use the mounting plate plate Ø145.0 (5 <sup>3</sup>/<sub>4</sub>) Ø147.0 (5 7/8) /8) 2 70.0 (2 Unit: mm (inches)

G

• Use UL cable (VW-1 style 10368) for 12 V DC connection.

#### Decommonded newsraphie

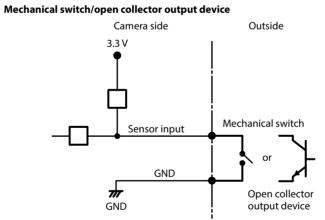
Recommended power cable				
CABLE (AWG)	#24	#22	#20	
Max. length (m)	9	15	23	
Max. length (III)	2	15	25	

### Note

Use the power supply equipment with surge protector.

#### **Connecting the I/O Connectors**

### Wiring diagram for sensor input



#### Wiring diagram for alarm output

