SONY

4-696-252-**11**(1)

Network Camera

Installation Manual

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

SNC-VB640/EB640

About the Manuals

Safety Regulations (included)

The Safety Regulations describes notes for the secure usage of camera. Be sure to read it.

Installation Manual (this document)

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.
The illustration of SNC-VB640 is used for example purpose.

Electronic Instruction Manual (Web)

- How to control the camera via a web browser
- How to setup the camera

Operate the camera referring to the guide above after having installed and connected the camera properly based on the Installation Manual.

Assigning the IP address

1 **Download the installer for "SNC toolbox" to a folder from the download site.**

2 **Install the SNC toolbox.**

Unzip the ZIP file of the downloaded installer.

Double-click "SncToolbox_Setup.exe." For details on installing and use refer to the Application Guide.

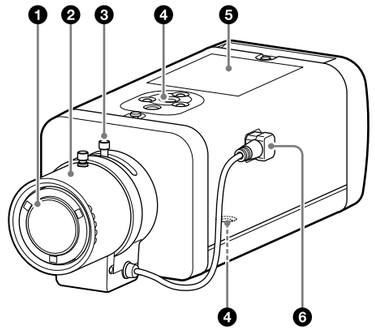
3 **Assign an IP address.**

Assign an IP address using the installed SNC toolbox. For details, see "Using SNC toolbox" – "Assign an IP address" in the Application Guide.

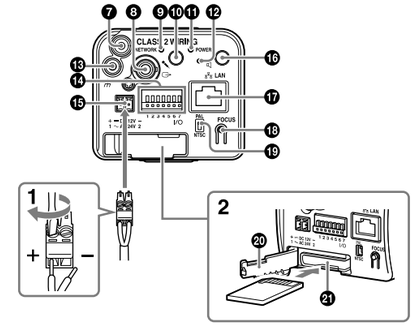
Tip

SNC toolbox stands for Sony Network Camera toolbox.

A



B



Location and Function of Part

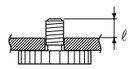
Front A

1 Lens
A vari-focal lens is mounted as standard equipment.

2 Focus ring
Turn this ring toward N (near) to focus on a closer object. Turn it toward ∞ (infinite) to focus on a farther object.

3 Zoom ring
Turn this ring toward T for telephoto, or toward W for wide-angle.

4 Tripod screw hole
Use this screw hole when attaching the camera to a tripod (screw: 1/4", 20 UNC). You can attach a tripod to either the top or bottom of the camera.



U1/4", 20 UNC
ℓ = 4.5 mm - 7 mm (ISO standard) (with the screws fastened)

Caution

Use the mounting screw whose length is 4.5 mm – 7 mm only. Use of other screws may cause improper mounting and damage parts inside the camera.

5 Rating Label
This label shows the name of device and its electric rating.

6 Lens connector (4-pin socket)
Supplies power and control signals to an auto-iris lens.

Rear B

7 Fall-prevention wire rope mounting screw hole
When installing the camera to the ceiling or the wall, secure the supplied wire rope to this hole using the supplied screw.

8 VIDEO OUT (video output) connector
Connect the commercially-available BNC cable.

9 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.

10 (microphone input) jack (minijack, monaural)
Connect a commercially available microphone.
This jack supports plug-in-power microphones (rated voltage: 2.5 V DC).

11 POWER indicator (Green)
When the power is supplied to the camera, the camera starts checking the system. If the system is normal, this indicator lights up.

12 Reset switch
To reset the camera to the factory default settings, turn on the power to the camera while holding down this switch with a pointed object.

13 (ground) terminal
This is the ground terminal for the chassis. Be sure to connect to the ground terminal.

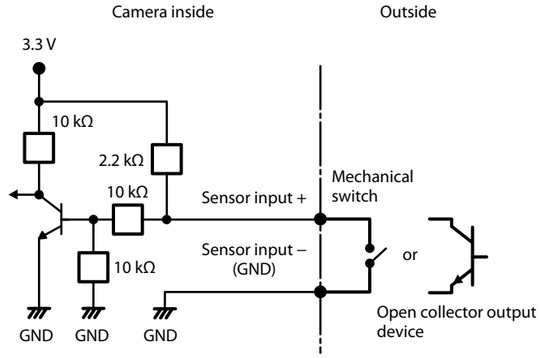
14 I/O (Input/Output) port (SNC-VB640 only)
This port provides two sensor inputs and two alarm outputs.
The signal pin assignment is as follows.

PinNo.	Signal
1	Sensor input 1+
2	Sensor input 2+
3	Sensor input– (GND)
4	Alarm output 1+
5	Alarm output 1–
6	Alarm output 2+
7	Alarm output 2–

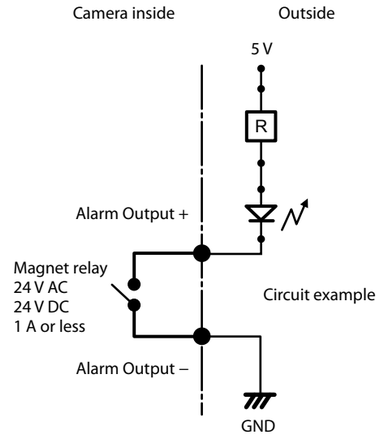
For details on each function and required settings, see the User's Guide.
Connect the wires of the I/O cable as follows:

Wiring diagram for sensor input

Mechanical switch/open collector output device



Wiring diagram for alarm output



15 DC 12 V/AC 24 V (power input) terminal (SNC-VB640 only)
Connect to a 12 V DC or 24 V AC power supply system. (B-1)

16 (line output) jack (minijack, monaural)
Connect a commercially available speaker system with a built-in amplifier.

17 LAN network port (RJ-45)
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.)

18 Easy Focus button
Adjust the focus approximately by the focus ring, then press this button to automatically adjust the focus.
To load the default setting, press and hold this button for more than 4 seconds.

19 NTSC/PAL switch
Switching the video output.
After setting the switch, reboot the camera unit.

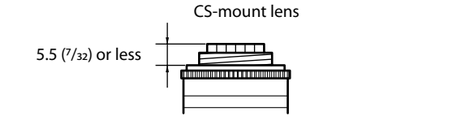
20 SD card slot cover
To remove the SD card slot cover, pull the cover forward, and insert the memory card.
When closing the cover, be sure to close it completely by pushing on the hook on the end until it locks in place.

21 SD card slot
This slot is used for optional SD 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 rating label side (referring to the illustration), and be sure to insert it completely. (B-2)
This unit is only compatible with SD and SDHC memory cards.

Note

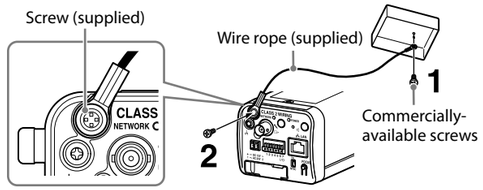
For inquiries regarding verified SD memory cards, contact your authorized Sony dealer.

C

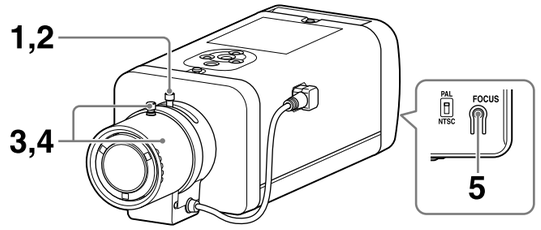


Unit: mm (inch)

D



E



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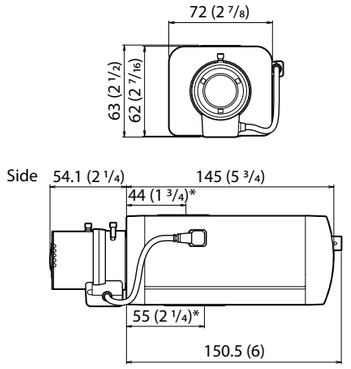

* Tripod screw hole position

Unit: mm (inches)

Installation

Caution

To prevent the camera from falling, make sure to attach the supplied wire rope.

Suitable lens **C**

The lens must be a CS-mount type and the protrusion behind the mounting surface must be 5.5 mm (7/32 inch) or less.

Caution

- When you install it into a wall or a ceiling, check that the wall or the ceiling is strong enough to hold the weight of the camera including the mounting bracket, and install it without fail. If not, the camera falls down and causes a serious injury.
  Also, check if the mounting is not loosened at least once a year. Make the checking interval short according to use condition.
- Performance will depend on the installation environment and the lens itself. For details, contact your authorized Sony dealer.

Attaching the wire rope **D**

When you install the camera on a ceiling or a high position, be sure to attach the supplied wire rope to prevent the camera from falling.
Attach the wire rope to the screw hole on the rear of the camera, as in the illustration.

Note

Take care not to short-circuit the power terminal or the cable with the wire rope when you attach it.

1. **Secure the wire rope to the junction box on the ceiling.**
   Use a commercially-available screw to match the screw hole of your junction box.
2. **Secure the wire rope to the wire rope mounting screw hole on the rear of the camera using the supplied screw.**

Caution

Use the supplied screws for installation. If not, the wire rope may not function properly.

Adjusting the Camera Coverage and Focus **E**

1. **Loosen the zoom ring locking screw to adjust the camera shooting coverage.**
2. **Tighten the locking screw to fix the zoom.**
3. **Loosen the focus ring locking screw to adjust the focus.**
4. **Tighten the locking screw to fix the focus ring.**
5. **Press the Easy Focus button on the rear to automatically adjust the focus.**

Note

You may not achieve satisfactory focus with the Easy Focus button due to the shooting environment.
In this case, press and hold the Easy Focus button for more than 4 seconds to return to the default position. Then, adjust the focus following step 3 and 4.

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 cable).
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.)
For SNC-VB640, it is possible to connect the LAN port of the camera to a router or hub in the network using a commercially-available network cable.

Connecting the Power Source

The camera can be powered in the following ways.

- 12 V DC or 24 V AC (Either voltage supported by SNC-VB640 only.)
- Power supply equipment pursuant to IEEE802.3af (PoE* system)

* PoE stands for 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 connect the power input cable 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 or 24 V AC source

Connect the power input cable of the camera to a 12 V DC or 24 V AC source.

- Use a 12 V DC or 24 V AC source isolated from 100 to 240 V AC. The acceptable voltage ranges for each are as follows.
  12 V DC: 10.8 V to 13.2 V
  24 V AC: 19.2 V to 28.8 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.
- Use UL cable (VW-1 style 10368) for these connections.

Recommended cable

12 V DC:

CABLE (AWG)	#24	#22	#20
Max. length (m (feet))	8 (26.2)	14 (45.9)	20 (65.5)

24 V AC:

CABLE (AWG)	#24	#22	#20
Max. length (m (feet))	11 (36.1)	19 (62.3)	28 (91.9)

Specifications

Compression

Video compression format	JPEG/H.264
Audio compression format	G.711/G.726/AAC
Maximum frame rate	60 fps

Camera

Signal system	NTSC color system/PAL color system (switchable)
Image device	1/2.8type CMOS (Exmor R) Effective number of pixels: approx. 2,130,000
Synchronization	Internal synchronization
Horizontal resolution	700 TV lines (monitor display ratio 4:3)
Video S/N	More than 50 dB (Auto gain control maximum rate 0 dB)
Minimum illumination	View-DR Off/VE* Off/Auto gain control maximum rate MAX/30 IRE (IP)/30 fps F1.2/Color: 0.006 lx, Black & White: 0.005 lx

* VE stands for Visibility Enhancer.

Lens

Focal length	2.8 mm to 8 mm
Maximum relative aperture	F1.2 to F1.95
View angle*	1920 × 1080 (aspect ratio 16:9) Vertical: 60.6° to 22.5°, Horizontal: 114.2° to 40.0°

* The view angle will change, depending on the setting of the aspect ratio resolution.

Minimum object distance	300 mm

Interface

LAN (PoE)	10BASE-T/100BASE-TX, auto negotiation (RJ-45)
I/O port (SNC-VB640 only)	Sensor input: × 2, make contact, break contact Alarm output: × 2, 24 V AC/DC, 1 A max. (mechanical relay outputs electrically isolated from the camera)
SD memory card slot	
Video output	VIDEO OUT: BNC, 1.0 Vp-p, 75 ohms, unbalanced, sync negative
Microphone input*	Minijack (monaural) Plug-in-power supported (rated voltage: 2.5 V DC) Recommended load impedance: 2.2 kΩ
Line input*	Minijack (monaural)

* The microphone input and the line input are switchable with operating menu.

Line output	Minijack (monaural), Maximum output level: 1 Vrms

Others

Power supply	SNC-VB640: 12 V DC ± 10% 24 V AC ± 20%, 50 Hz/60 Hz IEEE802.3af compliant (PoE system) SNC-EB640: IEEE802.3af compliant (PoE system)
Power consumption	6.0 W max.
Operating temperature	Start temperature: 0°C to 50°C (32°F to 122°F) Working temperature: –10°C to +50°C (14°F to 122°F)
Storage temperature	–20°C to +60°C (–4°F to +140°F)
Operating humidity	20% to 80% (no condensation)
Storage humidity	20% to 80% (no condensation)
Dimensions (w/h/d) **F**	72 mm × 63 mm × 145 mm (2 7/8 inches × 2 1/2 inches × 5 3/4 inches) not including the projecting parts and lens
Mass	SNC-VB640: Approx. 565 g (1 lb 3.9 oz) (with lens) SNC-EB640: Approx. 550 g (1 lb 3.4 oz) (with lens)
Supplied accessories	Wire rope (1) Screw M4 (1) Safety Regulations (1) DC 12 V/AC 24 V connector (1) (SNC-VB640 only)

Design and specifications are subject to change without notice.