Network Camera

Installation Manual

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

IPELA

SNC-DF85N/DF85P DynaView SNC-DF80N/DF80P SuperExwave

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http://www.sony.net/

Owner's Record

The model and serial numbers are located on the bottom. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer

regarding this product.

_ Serial No. Model No.

WARNING

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

This installation should be made by a qualified service person and should conform to all local codes.

WARNING

A readily accessible disconnect device shall be incorporated in the building installation wiring.

WARNING (for Installers only)

Instructions for installing the equipment on the ceiling or the wall:

After the installation, ensure the connection is capable of supporting four times the weight of the equipment downwards.

The rating label is located on the bottom.

CAUTION for LAN port

For safety reason, do not connect the LAN port to any network devices that might have excessive voltage.

The LAN port of this unit is to be connected only to the devices whose power feeding meets the requirements for SELV (Safety Extra Low Voltage) and complies with Limited Power Source according to IEC 60950-1 Second Edition.

Power Supply

Caution for U.S.A. and Canada

The SNC-DF85N/DF80N operates on 24 V AC or 12 V DC. The SNC-DF85N/DF80N automatically detects the power Use a Class 2 power supply which is UL Listed (in the U.S.A) or CSAcertified (in Canada)

Caution for other countries

The SNC-DF85N/DF85P/DF80N/DF80P operates on 24 V AC or 12 V

The SNC-DF85N/DF85P/DF80N/DF80P automatically detects the

Use a power supply rated 24 V AC or 12 V DC which meets the requirements for SELV (Safety Extra Low Voltage) and complies with Limited Power Source according to IEC 60950-1 Second Edition.

After incorporating the heater unit, the rated power of the camera will be

Ensure the power source is capable of providing the total power.

For customers in the U.S.A. (SNC-DF85N/DF80N only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules

For Customers in Canada (SNC-DF85N/DF80N only)

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada

For customers in other countries

WARNING

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures In the case that interference should occur, consult your nearest

authorized Sony service facility

ATTENTION The electromagnetic fields at specific frequencies may influence the

picture of the unit.

For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokvo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This apparatus shall not be used in the residential area.

· You should keep in mind that the images or audio you are monitoring may be protected by privacy and other legal rights, and the responsibility for making sure you are complying with applicable laws is yours alone

- Access to the images and audio is protected only by a user name and the password you set up. No further authentication is provided nor should you presume that any other protective filtering is done by the service. Since the service is Internet-based, there is a risk that the image or audio you are monitoring can be viewed or used by a thirdparty via the network.
- SONY IS NOT RESPONSIBLE, AND ASSUMES ABSOLUTELY NO LIABILITY TO YOU OR ANYONE ELSE, FOR SERVICE INTERRUPTIONS OR DISCONTINUATIONS OR EVEN SERVICE CANCELLATION. THE SERVICE IS PROVIDED AS-IS, AND SONY DISCLAIMS AND EXCLUDES ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE SERVICE INCLUDING, BUT NOT LIMITED TO, ANY OR ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THAT IT WILL OPERATE ERROR-FREE OR CONTINUOUSLY.
- Always make a test recording, and verify that it was recorded successfully. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
- If you lose data by using this unit, SONY accepts no responsibility for restoration of the data.

Features

This product is a network camera adopting the 1/3 type CCD (SNC-DF85N/ DF85P) and SuperExwave_{TM} CCD sensor 1/3 type CCD (SNC-DF80N/ DF80P)

- The camera has the following features:
- · High sensitivity
- Day/night function which can switch between black & white mode and color Automatic white balance tracking and adjustment (ATW/ATW-PRO/Dual WB (SNC-DF85N/DF85P))
- Manual setting of the camera direction panning, tilting and rotating
- · Vari-focal auto iris lens as standard equipment. The focal length of the
- lens is from 2.8 mm to 10 mm. • High quality CCD and clear dome cover enable high sensitivity.
- Backlight compensation through the center measurement (SNC-DF80N/ DF80P) • ×128 Wide Dynamic Range camera with DynaView technology (SNC-
- DF85N/DF85P)
- 24 V AC / 12 V DC power supply system/corresponding to PoE. • 3 video compression formats (video codecs) available: JPEG, MPEG4 and
- H.264
- Single codec mode and dual codec mode switchable
- · Up to 20 users can access an image of a camera simultaneously.
- · You can monitor a high-quality live image of 30 frames per second maximum (SNC-DF85N/DF80N) and 25 frames per second maximum (SNC-DF85P/
- · Date/time can be superimposed on the image.

Notes on Use

Operating or storage location

Do not shoot an extremely bright object (an illumination, the sun, etc.). Also, avoid operating or storing the camera in the following locations, as these can be a cause of a malfunction

- Extremely hot or cold places (Operating temperature: -10°C to +50°C [14°F to 122°F])
- Close to heating equipment (e.g., near heaters)
- · Close to sources of strong magnetism
- · Close to sources of powerful electromagnetic radiation, such as radios or
- TV transmitters Locations subject to strong vibration or shock
- Dusty locations
- Locations under the influence of fluorescent light or reflection of a window · Under an unsteady light (the image will flicker.)

Ventilation

To prevent heat buildup, do not block air circulation around the camera.

Transportation

When transporting the camera, repack it as originally packed at the factory or in materials of equal quality

Cleaning

- Use a blower to remove dust from the lens.
- Use a soft, dry cloth to clean the external surfaces of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.

To install the camera outdoors

Attach the dome casing securely to the unit casing. Make sure you seal the locations listed below with sealant (e.g. silicon sealant) to prevent moisture from getting inside the casing.

 Camera installation holes (4) - Conduit holes (side/bottom)

Using in cold climates (with YT-HU75)

The heater may not defrost snow and frost attached on the dome cover under certain environment condition

Note on laser beams

Laser beams may damage a CCD. You are cautioned that the surface of a CCD should not be exposed to laser beam radiation in an environment where a laser beam device is used.

Typical CCD Phenomena

The following phenomena that may appear in images are specific to CCD (Charge Coupled Device) image sensors. They do not indicate malfunctions

White flecks

Although the CCD image sensors are produced with high-precision technologies, fine white flecks may be generated on the screen in rare cases, caused by cosmic rays, etc

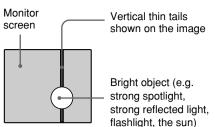
This is related to the principle of CCD image sensors and is not a malfunction.

- The white flecks especially tend to be seen in the following cases: · when operating at a high environmental temperature
- when you have raised the gain (sensitivity)

from the factory.

Vertical smear

When an extremely bright object, such as a strong spotlight or flashlight, is being shot, vertical tails may be produced on the screen, or the image may



Aliasing

When fine patterns, stripes, or lines are shot, they may appear jagged or

About the Supplied Manuals

Names of Manuals

The following manuals are supplied with this unit.

Installation Manual (this document)

The Installation Manual describes the names and functions of the parts of the camera, the installation and connections of the camera, etc. Be sure to read it before operating the camera

User's Guide (stored in the CD-ROM)

The User's Guide describes the setup of the camera and the operations from the Web browser.

To open the User's Guide, see "Using the CD-ROM Manuals" below.

Using the CD-ROM Manuals

The supplied CD-ROM disc includes the User's Guides for this unit (Japanese, English, French, German, Spanish, Italian and Chinese versions) in PDF format.

Preparations

The Adobe Reader Version 6.0 or higher must be installed on your computer in order to use the User's Guide stored in the CD-ROM disc. Note

If Adobe Reader is not installed, it may be downloaded from the following UBL: http://www.adobe.com/

Reading the manual in the CD-ROM 1 Insert the CD-ROM in your CD-ROM drive.

A cover page appears automatically in your Web browser. If it does not appear automatically in the Web browser, double-click on the index.htm file on the CD-ROM.

2 Select and click on the manual that you want to read. This opens the PDF file of the manual.

Clicking an item in the Table of Contents allows you jump to the relevant

Notes

• The files may not be displayed properly, depending on the version of Adobe Reader. In this case, install the latest version, which you can

download from the URL mentioned in "Preparations" above. • If you have lost or damaged the CD-ROM, you can purchase replacement. Contact your Sony service representative.

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

Location and Function of Part

The figure shows the camera without the dome casing and slit cover.

Α Side

The connector with the longer cable is used for the line output connector, and the shorter cable is used for the microphone input connector.

Audio cable (supplied)

2 I/O (Input/Output) cable (supplied) This cable is provided with a sensor input and two alarm outputs.

The wires of the cable control the following signals.	
Color of wire	Name
Red	Sensor In +
White	Sensor In – (GND)
Black	Alarm Out 1 +
Yellow	Alarm Out 1 –
Brown	Alarm Out 2 +
Green	Alarm Out 2 –

For details on each function and required settings, see the User's Guide

stored in the supplied CD-ROM. For the wiring, see "Connecting the I/O cable."

- Camera head holder
- 4 Lens

6 BNC cable

6 24 V AC/12 V DC (power input) cable

Connect to a 24 V AC or 12 V DC power supply system. You can screw an extension cable in the connector tip attached at the end of the cable.

Outputs a composite video signal. Connect to a composite video input connector of a video monitor, VCR, etc.

Conduit holes (3/4 inches) Connect a pipe to this hole. There are two conduit holes on the unit casing, one on the side and one at the bottom. The cover plug is installed in the side conduit hole at the factory. Remove the plug as

8 Lens ring fixing screw

Zoom ring

Loosen this screw before adjusting the zoom and focus, then tighten it to fix the lens position. The screw can be inserted at one of three points.

needed and connect the pipe to the hole.

Focus ring Turn this ring to adjust the focus.

Turn this ring to adjust the field of view.

1 HEATER unit connector Connect the cable of the optional YT-HU75 Heater Unit. Camera head fixing screw First loose the screw and face the camera head to the desired

direction, then tighten the screw to fix it.

® MONITOR output jack

Connect to a video input connector of a monitor. You can adjust the camera while looking at the image on the monitor. After adjusting the camera, disconnect the cable.

В

Inside

CF card slot This slot is used to insert a commercially available CF memory card. Insert the CF memory card with its front side (with the ▲ mark)

inward, as far as it goes. (C)

(B) CF card lever Press the lever to remove the CF memory card from the CF card

MIC/SP (Microphone/Speaker) connector

Connect the supplied audio cable to this connector. **1** EXT CTRL (External control input/output) connector Connect the supplied I/O cable to this connector.

AC / DC IN (power input) connector Connect an 24V AC / 12V DC cable to this connector.

19 VIDEO OUT (Video output) connector Connect the BNC cable to this connector.

4 LAN port (RJ45) Connect to a hub or computer on the 10BASE-T or 100BASE-TX

network using a network cable (UTP, category 5). 4 Unit casing The unit casing is made of die-cast aluminum and has conduit holes

on the side and at the bottom Camera installation hole (4 positions)

Make sure to tighten the screws securely when installing the

camera

Reset switch To reset the camera to the factory default settings, hold down this

When the power is supplied to the camera, the camera starts

switch with a point and supply the power to the camera. 2 POWER indicator (green)

checking the system. If the system is normal, this indicator lights up. 4 LAN indicator (green) The indicator flashes in green when the camera is connected to the network. The indicator goes off when the camera is not connected to

the network.

 Cable clamp (2 positions) Secure the BNC cable, 24V AC/12V DC cable, I/O cable, audio cable and network cable with these clamps.

This cord prevents the dome casing from falling off the unit casing.

Make sure that the cord does not get caught between the dome casing and the unit casing. Rotate the cord and adjust the position of

Safety cord

the cord.

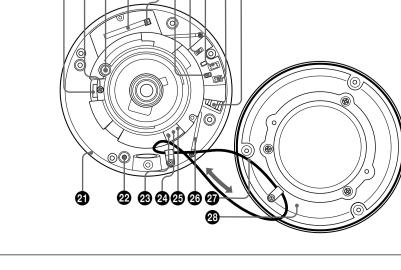
Dome casing

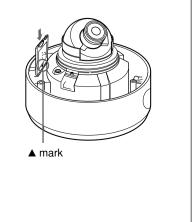
The dome cover is made of polycarbonate. A waterproof rubber gasket is provided on the joint surface to the unit casing.

Monitoring the Camera Image

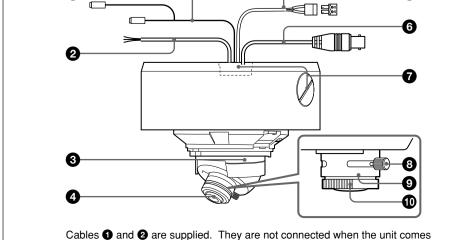
Install and connect the camera properly following the instructions in this manual, then operate the camera referring to the User's Guide contained in the supplied CD-ROM.

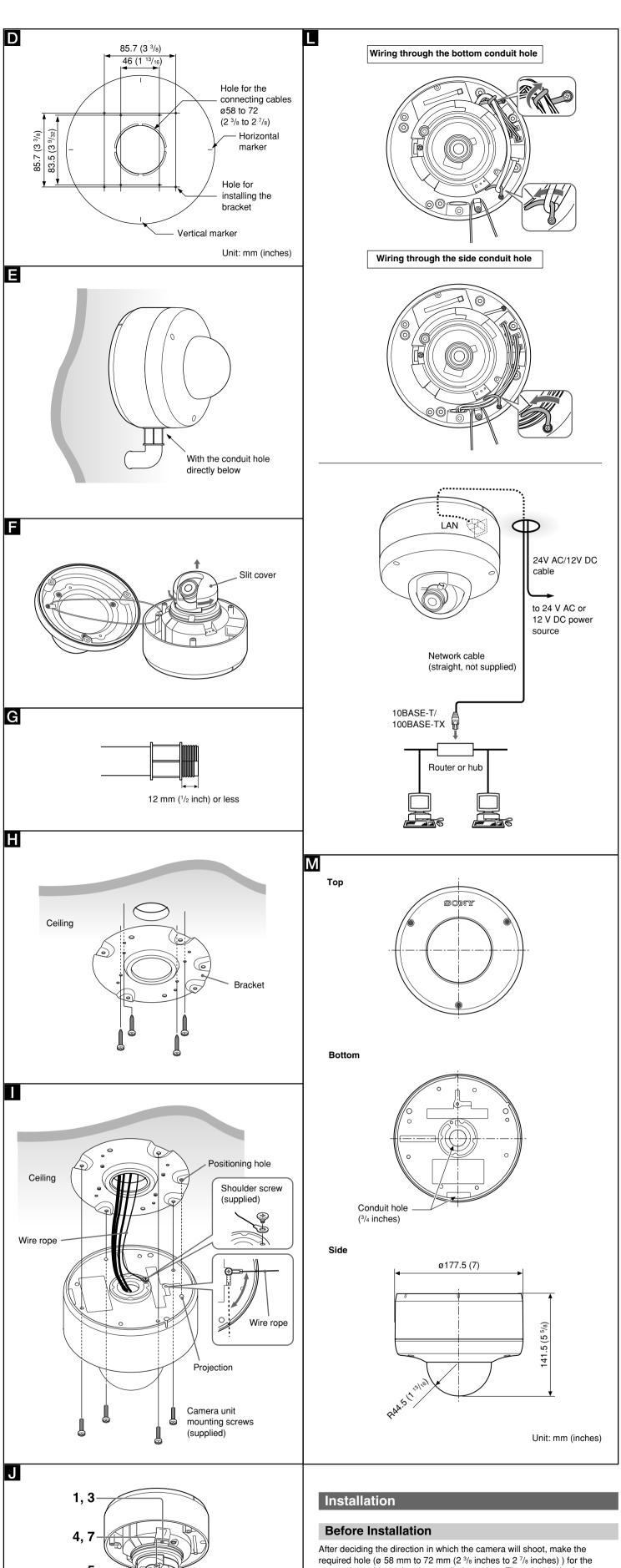
(continued on the reverse side)

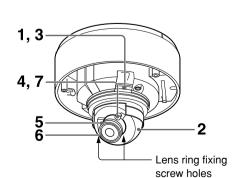


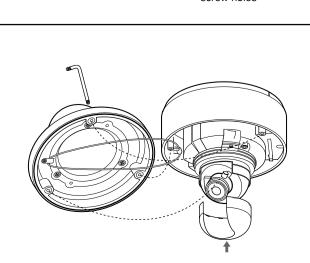


C









connecting cables using the supplied template. Then decide the four mounting hole positions to install the bracket. (D)

Installing on the wall

When you install the camera on a wall lengthwise, position the side conduit hole directly below to prevent moisture from getting inside the casing. (

Mounting screws

The supplied bracket is provided with eight ø 4.5 mm (3/16 inch) mounting

holes. Install the bracket on a ceiling or wall with screws through these four of the eight holes.

The required mounting screws differ depending on the installation location and its material. (Mounting screws are not supplied.) Steel wall or ceiling: Use M4 bolts and nuts.

Wood wall or ceiling: Use M4 tapping screws. The panel thickness must

Concrete wall: Use appropriate anchors, bolts and plugs for concrete

Junction box: Use screws to match the holes on the junction box.

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.

Installing the Camera

1 Remove the dome casing. Loosen the three dome casing screws with the supplied wrench, and remove the dome casing.

2 Remove the slit cover.

Remove it expanding the slit cover. (E)

3 Check the conduit of the cables

The cables are set up at the factory to pass through the bottom conduit hole. If you want to use the side conduit hole, perform the following

1 Remove the conduit hole cover.

- ② Disconnect the cables from the connectors, and pull them out from the bottom conduit hole.
- 3 Insert the cables through the side conduit hole, and connect the cables to their respective connectors.
- 4 Attach the conduit hole cover that was removed from the side conduit hole to the bottom conduit hole.

Notes

- If the bottom conduit hole is dirty, the conduit hole cover cannot be fixed firmly. In this case, moisture may leak into the casing and this may cause a malfunction. Wipe off the dust with a soft cloth, and fix the conduit hole cover firmly.
- · Cover the joint part of the pipe/cover with silicon sealant, etc. to prevent moisture from getting inside the casing.
- Use a pipe/plug with a thread length of 12 mm ($^{1}/_{2}$ inch) or less so that it does not damage the camera. (G)
- 4 Connect the cables.

Feed the network cable through the conduit hole and connect it to the LAN port of the camera unit.

When you use the supplied audio cable and/or I/O cable, feed the cable through the conduit hole and connect it to the appropriate connector. Connect the audio cable to the MIC/SP connector, and the I/O cable to the EXT CTRL connector

Then secure the cables with the cable clamps.

For the wiring, see Fig. .

- 5 Install the supplied bracket on the ceiling or wall. (H) Refer to "Mounting screws" for screws to be used.
- 6 When installing on a ceiling or wall, fix the supplied wire rope to the camera and the ceiling or wall. (
- ① There are two screw holes for wire rope on the bottom of the camera. Fix the wire rope with the supplied shoulder screw as required.
- 2 Fix the wire rope to the ceiling or wall. 7 Attach the camera unit to the bracket with the supplied camera unit mounting screws. (

Turn the camera unit to click and fix one of the projections on the bottom of the camera to the positioning hole of the bracket. There are four projections with an angle of 90 degrees, so you can select one of four

WARNING

- If you want to install the camera at a height such as on a ceiling, entrust the installation to an experienced contractor or installer.
- If you install the camera at a height, ensure that the installation location and its material are strong enough to withstand a weight of 20 kg (44 lb 1 oz) or more, and then install the camera securely. If they are not strong enough, the camera may fall and cause serious injury.
- · To prevent the camera from falling, be sure to attach the supplied wire • If you install the camera at a height, check periodically, at least once a
- year, to ensure that the connection has not loosened. If conditions warrant, perform this periodic check more frequently.

If you cannot use screws on a ceiling or wall, or if you want to hide the camera to be less conspicuous, use the YT-ICB45 in-ceiling bracket (optional) with which you can mount the camera on the ceiling.

Adjusting the Camera Direction and Coverage

- 1 Loosen the camera head fixing screw.
- 2 Adjust the camera to turn the lens in the desired direction.
- 3 Tighten the camera head fixing screw to fix the camera. 4 Loosen the lens ring fixing screw.
- 5 Turn the zoom ring to adjust the angle of view.
- **6** Turn the focus ring to adjust the focus.
- 7 Tighten the lens ring fixing screw to fix the zoom and the focus. 8 Repeat steps 1 to 7 until the coverage and the focus are determined.

Notes

- · When you adjust the camera head angle without loosening camera head fixing screw, an internal metallic part may be damaged.
- · If the camera head is too heavy to be adjusted, loosen the camera head fixing screw until it moves freely.
- · When the lens is not put in the slit of the camera head holder, the moving range of the camera head is limited
- Do not turn the lens more than 360 degrees. As this may damage the
- There are three screw holes for fixing the lens ring at 120 degree intervals. If the lens ring fixing screw poses a problem for adjusting the camera direction and coverage due to the direction of the camera head, detach the screw and reattach it to another screw hole, then adjust the camera direction and coverage again.
- · When adjusting the angle, be sure that the TOP mark on the camera head section faces the ceiling. If the camera is installed with the TOP mark facing the floor, the image appears upside down.

Attaching the Dome Casing

1 Attach the slit cover.

- The proper position of the slit cover is slightly apart from the camera mount. Do not push in by force.
- If you cannot attach the slit cover because the barrier of the lens ring fixing screw prevents it, attach the lens ring fixing screw to another screw hole. There are three screw holes for the lens ring fixing screw on the concentric circle
- 2 Fix the dome casing and the camera unit.

Align the three screw holes on the dome casing with those on the camera unit, and tighten the screws with the supplied wrench to secure the dome casing and unit casing.

Connection

Connecting to the network

Connect the LAN port of the camera unit to a router or hub in the network using the network cable (straight, not supplied) Arrange wiring of the network cable and secure it with the cable clamps, as shown in the figure.

To connect to a computer

Connect the LAN port of the camera unit to the network connector of a computer using the network cable (cross, not supplied).

Connecting the power source

There are three ways to supply the power source to this product, as follows.

24 V AC

 Power supply equipment pursuant to IEEE802.3af (PoE* system) *PoE means Power over Ethernet.

If the power is supplied from the power input terminal and LAN port at the same time, the power from the LAN port has priority over the other.

Connecting to 12 V DC or 24 V AC source

Connect the 24 V AC/12 V DC cable 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. Each usable voltage ranges are as follows.

12 V DC: 10.8 V to 13.2 V 24 V AC: 21.6 V to 26.4 V • Use UL cable (VW-1 style 1007) for these connections.

Connecting to the power supply equipment pursuant to

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

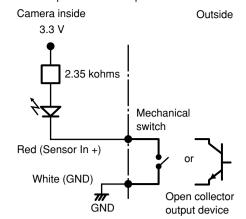
through a LAN port. For details, refer to the Instruction Manual of the equipment.

Connecting the I/O cable

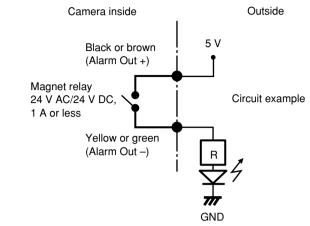
Connect the wires of the I/O cable as follows:

Wiring diagram for sensor input

Mechanical switch/open collector output device



Wiring diagram for alarm output



Specifications

Network Protocol

Image size

Web browser

Camera

Signal system

Image device

Video S/N

AGC

White balance

I/O port

Video output

K

TCP/IP, ARP, ICMP, HTTP, FTP (server/ client), SMTP (client), DHCP (client), DNS (client), NTP (client), SNMP (MIB-2) RTP/RTCP

Compression Video compression format Audio compression format

JPEG/MPEG4/H.264 G.711/G.726 (40.32.24.16 kbps) $640 \times 480 \text{ (VGA)}, 320 \times 240 \text{ (QVGA)},$ 160 × 120 (QQVGA)

SNC-DF85N/DF80N: 30 fps Maximum frame rate SNC-DF85P/DF80P: 25 fps Internet Explorer Ver. 6.0 or higher Available OS:

SNC-DF85N/DF85P Microsoft Windows XP, Windows Vista SNC-DF80N/DF80P Microsoft Windows 2000, Windows XP,

Windows Vista Computer environments CPU: Pentium 4, 1.5 GHz or higher (Pentium 4, 2.4 GHz or higher recommended)

RAM: 256 MB or more Display size: 1024 × 768 Maximum user access 20 users

Network security Password (basic authentication), IP filtering Homepage customization Starting from a homepage in the built-in flash memory or a CF memory card possible. Other functions Detection, image trimming, built-in clock, etc.

> SNC-DF85N/DF80N: NTSC color system SNC-DF85P/DF80P: PAL color system SNC-DF85N/DF85P: 1/3 type interline

transfer CCD SNC-DF80N/DF80P: 1/3 type interline transfer (SuperExwave™) CCD Total picture elements

SNC-DF85N/DF80N: Approx. 410,000 SNC-DF-85P/DF80P: Approx. 470,000 Effective picture elements: SNC-DF85N/DF80N: Approx. 380,000

SNC-DF85P/DF80P: Approx. 440,000

Synchronization Internal synchronization SNC-DF85N/DF85P: 480 TV line (analog Horizontal resolution

SNC-DF80N/DF80P: 540 TV line (analog

SNC-DF85N/DF85P Minimum illumination Color: 0.7 lx (AGC ON, F 1.3, 50 IRE)

Black & White: 0.15 lx (AGC ON, F 1.3, SNC-DF80N/DF80P:

Color: 0.6 lx (AGC ON, F1.3, 50 IRE) Black & White: 0.06 lx (AGC ON, F1.3, 50 IRE)

ON/OFF Shutter speed

SNC-DF85N/DF80N: 1/60-1/10000 sec.

SNC-DF85P/DF80P: 1/50-1/10000 sec.

ATW-PRO

Lens (standard equipment)

Dual WB (SNC-DF85N/DF85P)

Focal length 2.8 mm to 10 mm Maximum relative aperture F1.3 Vertical 73.9° to 20.8° View angle

Horizontal 100.8° to 27.7° Minimum object distance 300 mm

Interface 10BASE-T/100BASE-TX, auto negotiation LAN port

(RJ-45) Sensor input: × 1. make contact. break contact Alarm output : × 2, 24 V AC/DC, 1 A

(mechanical relay outputs electrically isolated from the camera) VIDEO OUT: BNC, 1.0 Vp-p, 75 ohms,

unbalanced, sync negative CF card slot Type I

Microphone input Minijack (monaural) Plug-in-power supported (rated voltage:

2.5 V DC) Recommended load impedance 2.2 khoms Line output

Minijack (monaural), Maximum output level: 1 Vrms

Others 12 V DC ± 10% Power supply 24 V AC ± 10%, 50/60 Hz

Power consumption 10 W max. 22 W max. with the optional YT-HU75 **Heater Unit**

Operating temperature -10°C to +50°C (14°F to 122°F) *1 Storage temperature -20° C to $+60^{\circ}$ C (-4° F to $+140^{\circ}$ F) Operating humidity 20% to 80% (Non-condensing) 20% to 95%

Storage humidity Dimensions (diameter/height) (M) $177.5 \text{ mm} \times 141.5 \text{ mm} (7 \times 5.5/8 \text{ inches})$ not including the projecting parts

Mass Approx. 1.9 kg (4 lb 3 oz), not including Supplied accessories CD-ROM (User's Guide and supplied programs) (1), Bracket (1), Template

(1), Wire rope (1), Camera unit mounting screws (4), Shoulder screw M4 (1), Wrench (1), Audio cable (1), I/O cable (1), Installation Manual (1)

Optional accessories In-ceiling bracket YT-ICB45

Heater Unit YT-HU75

*1 When using the Heater Unit YT-HU75 Start temperature

-10°C to +50°C (14°F to 122°F) Working temperature -40°C to $+50^{\circ}\text{C}$ (-40°F to 122°F) Design and specifications are subject to change without notice.

Regular parts replacement

Some of the parts that make up this product (electrolytic condenser, for example) need replacing regularly depending on their life

The lives of parts differ according to the environment or condition in which this product is used and the length of time it is used, so we recommend regular checks. Consult the dealer from whom you bought it for details.