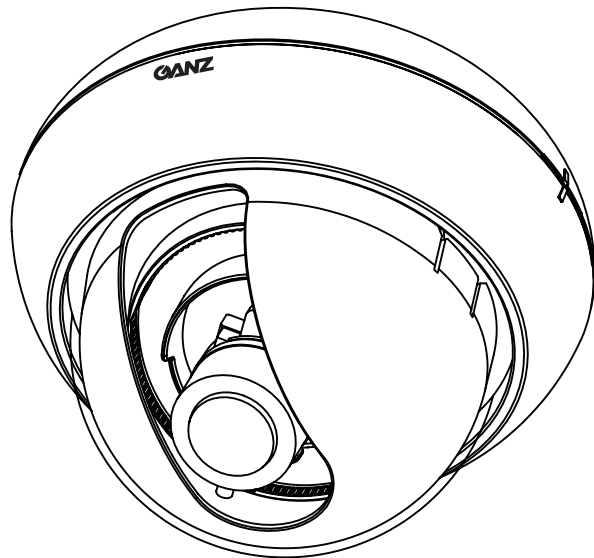


MINI DOME CAMERA

# ZC-D7000 SERIES

INSTRUCTION MANUAL



Color / High Resolution

Digital Day & Night

**ZC-D7312NHA**

Mechanical Day & Night

**ZC-DN7312NHA**



**GANZ**®

ENGLISH  
ESPAÑOL  
繁体字 中文  
日 本 語

Thank you for your purchase of this product. Before operating the product, please read this instruction manual carefully to ensure proper use of the product. Please store this instruction manual in a safe place for future reference.

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## PRODUCT FEATURES

- High resolution surveillance camera with a built-in 1/3-type CCD.
- Integrated varifocal lens allows for versatile application and easy installation.
- Accept either 12V DC or 24V AC power input. (Automatic switching)
- Manual pan/tilt/rotation mechanism.
- Day/Night function  
D-DN (Digital Day/Night) function model: ZC-D7312NHA  
The digital processing function provides a high sensitivity black and white picture in low light conditions (e.g. nighttime) by automatically switching the camera to black and white mode. The camera is automatically switched to color mode in brighter light conditions (e.g. daytime).
- M-DN (Mechanical Day/Night) function model: ZC-DN7312NHA  
The IR cut filter automatic switching function provides a high sensitivity black and white picture in low light conditions (e.g. nighttime) by automatically switching the camera to black and white mode. The camera is automatically switched to color mode in brighter light conditions (e.g. daytime).

## SAFETY PRECAUTIONS

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

### WARNING

This symbol indicates that there is a possibility of death or damage to operator or others.  
To prevent fire or electric shock, do not expose this product to rain or moisture.

### CAUTIONS

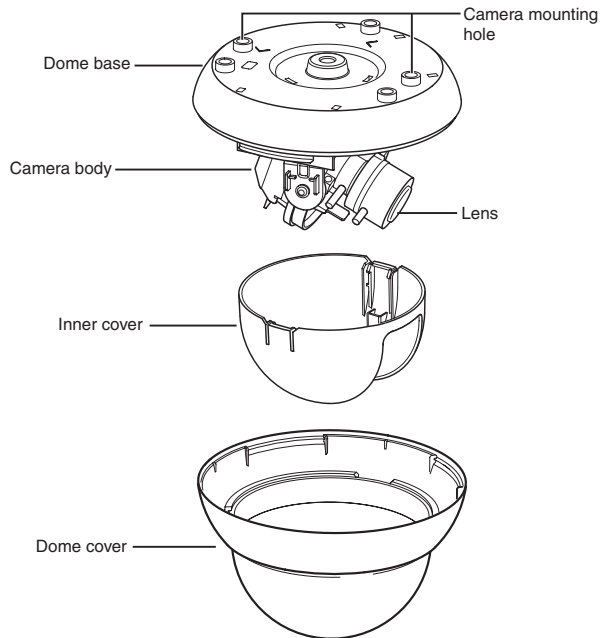
- This symbol indicates that there is a possibility of injury or damage to equipment.
- (1) Use only 24V AC power supply marked class 2 or +12V DC regulated power supply marked class 2.
  - (2) To prevent fire or electrical shock, UL listed class 2 wiring should be used for the 12V DC or 24V AC input terminal.
  - (3) Be sure to connect each lead to the appropriate terminal. Wrong connection may cause malfunction and/or damage to the video camera.
  - (4) Do not attempt to aim the camera at the sun or other extremely bright objects that cause smear to appear irrespective of whether the camera is operating or not. This can damage the CCD (Charge Coupled Device).
  - (5) Do not place the camera in the following locations.
    - ① Locations subject to extremely high or low temperatures.  
(Operating temperature range: -10°C to +50°C {14°F to 122°F})  
(Storage temperature range: -20°C to +60°C {-4°F to 140°F})
    - ② Locations subject to high levels of humidity and dust.  
(Operating humidity range: max 85% {No condensation})  
(Storage humidity range: max 95% {No condensation})
    - ③ Locations where there are large amounts of water vapor and steam.
  - (6) Ensure the location selected is sufficiently strong enough to support the weight of the camera and is free from vibration.
  - (7) When this camera is installed near equipment that emits a strong electromagnetic field, some irregularity such as noise on the monitor screen may happen.
  - (8) Be sure to use screws suitable for the type of material to which the camera is being mounted.
  - (9) Do not allow the camera to be subjected to strong impacts or shocks. The camera could be damaged by improper handling or storage.
  - (10) Never attempt to disassemble or modify the camera.
  - (11) If an abnormality should occur, immediately turn off the power and consult your dealer.

This device complies with Part 15 of the FCC Rules. Operation is subject to following two conditions:

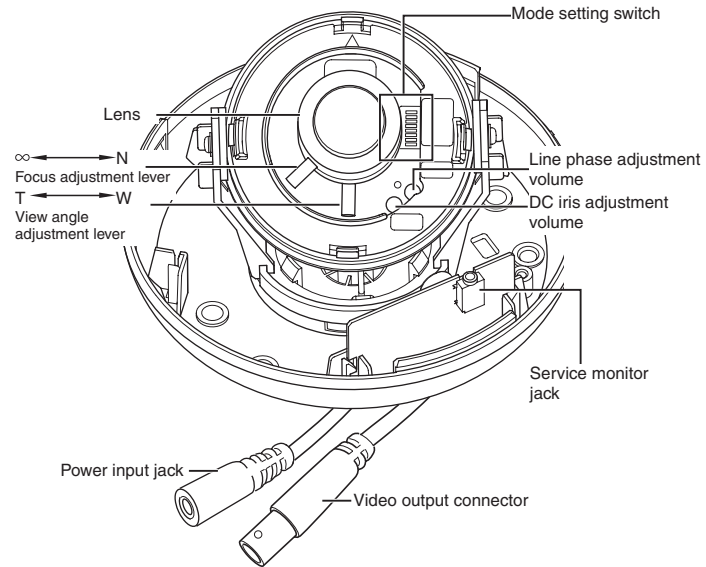
- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

# PARTS DESCRIPTION

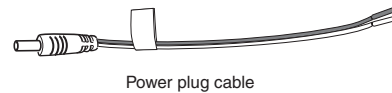
## ● Exterior



## ● Camera body interior



## ● Accessories

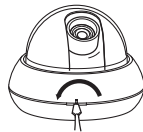


## INSTALLATION AND ADJUSTMENT

### ● Installation preparation

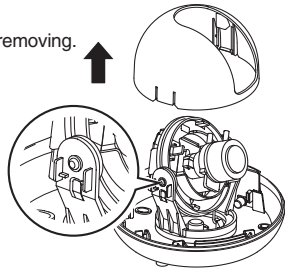
#### 1 Remove the dome cover.

Insert a flat-bladed screwdriver into the groove between the dome cover and the dome base, and then twist the screwdriver.



#### 2 Remove the inner cover.

Pull up the inner cover gently when removing.



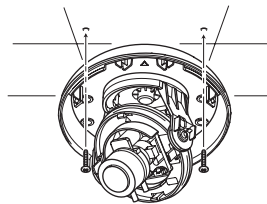
### ● Installation to the ceiling or wall

#### 1 Drill holes in the ceiling or a wall.

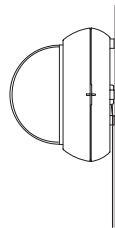
- ① Mark the position where you want to install the unit on the ceiling or wall using the template included.
- ② Drill two holes for screws used to attach the camera body and one hole for cables.
- ③ Connect the video and power cables. For cable connection, refer to page EG-5, "Connecting the cables."

#### 2 Attach the camera body.

Attach the camera body to the ceiling or wall.



You can have the cables run on the exterior surface of the ceiling or wall.



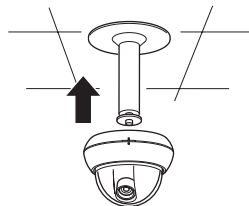
- Please use fixing screws suitable for the material of the ceiling or wall when attaching the camera body. We recommend using screws with a 4mm diameter.

#### ■ Attaching to the bracket

You can use the tripod screw hole (1/4" - 20UNC) to attach the camera body to the bracket.

#### 👉 Attention

- Tightening the screws with excessive force may damage the camera.

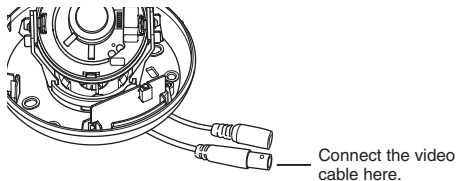


## ● Connecting the cables

Connect the power and video cables.

### 1 Connect the video cable.

Connect the video cable to the video output connector on the camera body.

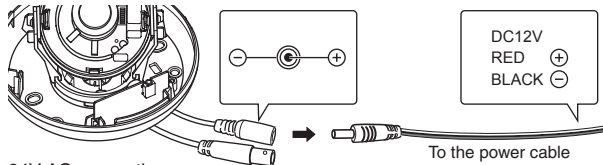


### 2 Connect the power cable.

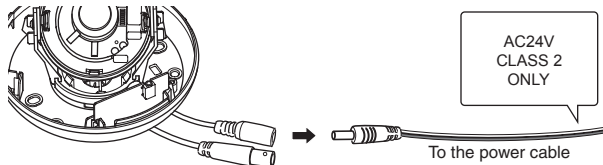
① Connect the power cable and the power plug included.

② Connect the power plug included to the power input jack on the camera body.

12V DC connection



24V AC connection



## ⓘ Attention

- Be sure to check that the cables are connected correctly before turning the power on.
- Turning on the power when the cables are connected with incorrect polarity may damage the camera.

### ☑ Important

Use only power supply marked class 2.

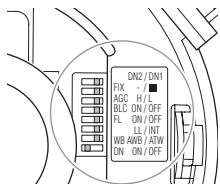
Use the service monitor jack when adjusting the lens focus.



## ● Setting the mode setting switch

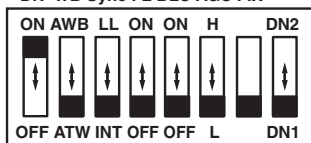
### Attention

- Do not alter the position of the mode setting switch marked “FIX” from its factory default setting. If the set position is changed, the auto iris may become inoperable.



Mode setting switch

DN WB Sync FL BLC AGC FIX



1 2 3 4 5 6 7 8

Factory default switch settings

1	Digital Day/Night model: ZC-D7312NHA	ON	Enables the automatic Day/Night switching. (Low light conditions: B/W, Normal light: color) The digital processing provides high sensitivity pictures.
		OFF	Color images only.
	Mechanical Day/Night model: ZC-DN7312NHA	ON	Enables the automatic Day/Night switching. (Low light conditions: B/W, Normal light: color) The IR cut filter automatic switching provides high sensitivity pictures.
		OFF	Color images only.
2	White Balance (WB)	AWB	Locks the white balance setting.
		ATW	Adjusts white balance according to the color temperature of light source.
3	Synchronization (Sync)	INT.	Internal synchronization mode
		LL.	Line lock mode (24V AC, 60Hz only)
4	Flickerless (FL)	ON	Shutter speed to be fixed at 1/100.
		OFF	Normal position
5	Backlight compensation (BLC)	ON	Set to this position when a strong light is in the back ground.
		OFF	Normal position
6	Auto Gain Control (AGC)	H	Adjusts brightness by a high sensitivity gain in low lighting conditions. The sensitivity is higher than in the “L” setting.
		L	Adjusts brightness by a standard gain in low lighting conditions.
7	FIX		Do not change the switch position from the factory setting.
8	Day/Night sensitivity switching	DN1	Standard brightness setting to activate the automatic Day/Night switching.
		DN2	Brightness setting to activate the automatic Day/Night switching in lower lighting condition than in DN1.

### Attention

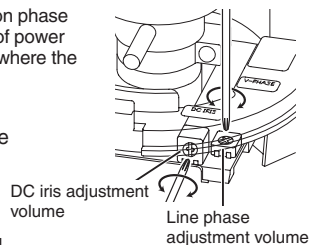
- Setting the flickerless function to “ON” will give a darker picture than when set to “OFF” in low light conditions.

## ● Adjusting the line phase

Use an AC power-source synchronization phase adjustment volume to adjust the phase of power synchronization (The default position is where the adjuster is fully turned to the left).

### Attention

When using the line lock function, the line frequency should be as follows:  
NTSC—60Hz, PAL—50Hz

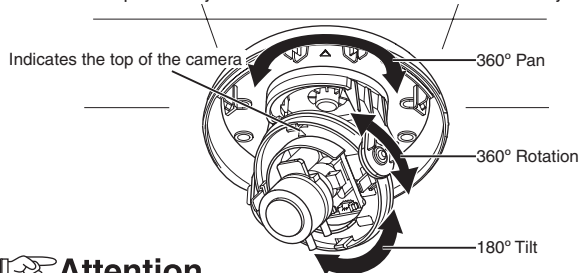


## ● Adjusting the DC iris level

Adjust the DC iris level to suit the environment in which you are using the unit. (The default position for the adjuster is in the center.)

## ● Adjusting the camera direction

The camera body is set in a tri-axial mounting allowing movement in the pan, tilt, and rotational planes. Adjust the direction of the lens so it faces the subject.

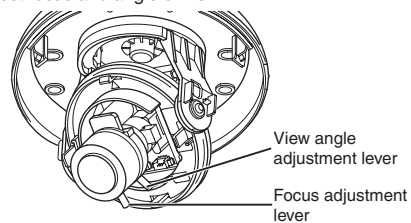


### Attention

- Using the camera in a near-horizontal position will show the camera cover on screen.
- Do not rotate it more than once. The wiring cables within the camera may be twisted and broken, damaging the camera.

## ● Adjusting the view angle and focus

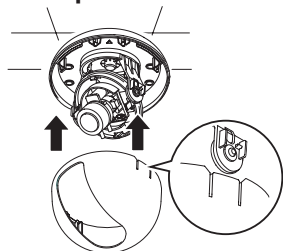
Move the lever to adjust focus and angle of view.



## ● Installation and adjustment complete

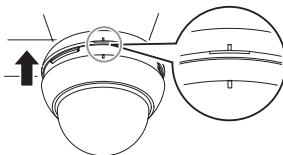
### 1 Attach the inner cover.

After aligning the inner cover as shown in the right figure, push it until you hear a click.



### 2 Attach the dome cover to the dome base.

After aligning the groove between the dome cover and the dome base, push the cover until you hear a click.



# SPECIFICATIONS

Model No.		ZC-D7312NHA		ZC-DN7312NHA	
		D-DN (Digital Day/Night) function model		M-DN (Mechanical Day/Night) function model	
Focal length		3.3 mm - 12 mm			
Max. aperture ratio		1 : 1.4			
Iris		F1.4 - F360C (DC auto iris)			
Angle of view (Wide to Tele)	D	125.7° - 29.9°			
	H	89.8° - 23.9°			
	V	63.6° - 17.9°			
TV system		NTSC			
Scanning system		2:1 Interlace			
Image sensor		1/3-type Interline transfer CCD			
Effective elements		768 (H) x 494 (V)			
Scanning frequency		15.734kHz (H) / 59.94Hz (V)			
Video output		1.0V (p-p) / 75Ω			
Horizontal resolution		More than 540 TVL			
Min. illuminance	AGC L	50IRE	1.74 lx (D D/N : OFF) / 1.14 lx (D D/N : ON)		2.10 lx (M D/N : OFF) / 0.12 lx (M D/N : ON)
		30IRE	0.87 lx (D D/N : OFF) / 0.57 lx (D D/N : ON)		1.05 lx (M D/N : OFF) / 0.06 lx (M D/N : ON)
	AGC H	50IRE	1.41 lx (D D/N : OFF) / 0.84 lx (D D/N : ON)		1.41 lx (M D/N : OFF) / 0.08 lx (M D/N : ON)
		30IRE	0.71 lx (D D/N : OFF) / 0.42 lx (D D/N : ON)		0.71 lx (M D/N : OFF) / 0.04 lx (M D/N : ON)
	With IR illuminance		—		0.00 lx
S/N ratio		More than 50dB (At minimum AGC gain)			
Gamma characteristic		0.45			
Sync. System		Internal synchronization (INT.) / Line Lock (L.L.) : For 60Hz regions only			
Electronic shutter		1/60 sec. fixed (Flickerless: OFF), 1/100 sec. fixed (Flickerless: ON)			
White balance		ATW / AWB			
Power supply		AC24V ± 10% 50Hz/60Hz ± 1Hz, DC12V ± 10%			
Power consumption	DC 12V	4.2W			
	AC 24V	4.2W 250mA			
Ambient temperature		Operational limits - 10°C to + 50°C / Storage limits - 20°C to + 60°C			
Ambient humidity (No condensing)		Operational limit: Maximum 85% RH / Storage limit: Maximum 95% RH			
External dimensions		128 (ø) mm x 100 (H) mm			
Weight		240g			
Adjustable volume		DC iris adjustment volume, AC line lock phase adjustment volume			
Accessories		Power plug cable, Template, Instruction manual (this document)			

\* The specifications and/or appearance of the product may change without a prior notice.



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