



VLVDIR



# **Vandal-Proof** **Dome Camera**

## Instruction Manual

VER.:2.0, NO.: R040152A/3

Thank you very much for purchasing our product. Before operating this product, please read this instruction manual carefully to ensure proper use.

## 1. Safety Precautions



**CAUTION**  
RISK OF ELECTRIC  
SHOCK. DO NOT OPEN!



**CAUTION : TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS.  
NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED  
SERVICE PERSONNEL.**



Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).

- ◆ Please do not directly touch the sensor element. If necessary, use a soft cloth moistened with alcohol to wipe off any dust.
- ◆ Please be extra careful not to shake the camera.
- ◆ Please avoid places where there is direct sunlight.
- ◆ When using this camera in places where the lighting differs greatly, please use the auto iris lens with ND filter.
- ◆ Please avoid places where temperatures exceed 50°C or more, high humidity or where direct rain drops hit, frequent vibrations, or shocks occur.
- ◆ During the night, if a minimum brightness of 0.1 Lux can not be achieved, install appropriate light fixtures.

## 2. Description

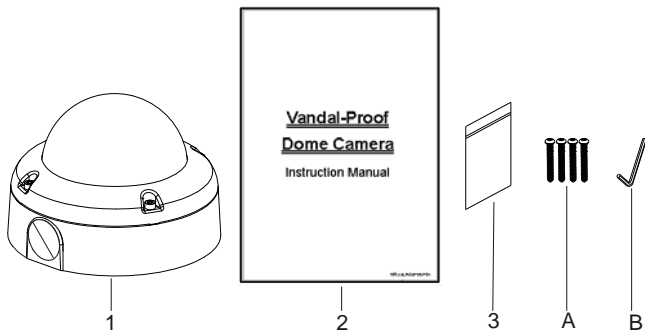
The camera uses Sony high sensitive super HAD interline transfer image sensor, and employs digital signal processor (DSP) chip-set for image control, and all integrated state circuitry which provide extremely long life and high reliability. This camera offers excellent image quality with low lag and high burn resistance, and is not subject to distortions from magnetic fields.

Highly resistance to shock and vibration, easy to install, this camera is a very good choice for your color CCTV system.

### 3. Feature

- ◆ Rugged and vandal-Proof.
- ◆ Employs Digital Signal Processor (DSP) chip-set for image control.
- ◆ Pixel number: NTSC=380K/ PAL=440K (EIA=440K/ CCIR=380K) for high resolution models, and NTSC=250K/ PAL=290K (EIA=290K/ CCIR=250K) for normal resolution models.
- ◆ High sensitivity, low smear, high anti-blooming and high S/N ratio.
- ◆ Powerful functions: Auto Electronic Shutter (AES), Auto Iris (AI), Auto Gain Control (AGC), Auto White Balance (AWB), and Back Light Compensation (BLC).
- ◆ ICR: IR cut filter removable (optional).
- ◆ Built-in IR LED, effective range up to 20M (optional).
- ◆ Weatherproofing criterion IP66.

### 4. Contents



Item	Name of Part	Quantity
1	Camera	1
2	Instruction Manual	1
3	Appurtenance Bag	1
A	Screws	4
B	L-Wrench	1

## 5. Installation & Operation

1. Use the provided L-wrench; loosen the tamper-resistant housing cover with screws still attached on the cover (Fig. 1).

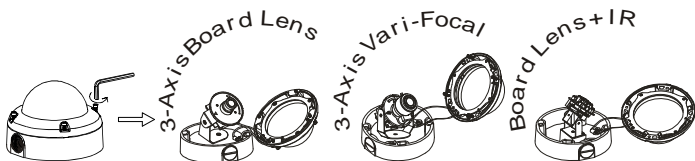


Fig. 1

*Note: The inner parts may differ depending on the camera model type.*

2. The unit has a factory installed side conduit entry and one may adjust the cables to back conduit entry according to installation requirement (Fig. 2).

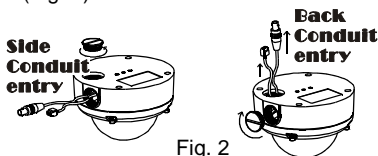


Fig. 2

3. Set the mounting base onto the wall or ceiling and center it over the mounting hole, using the supplied four retaining screws to secure the main body (Fig. 3).

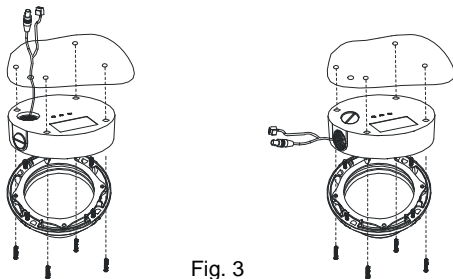
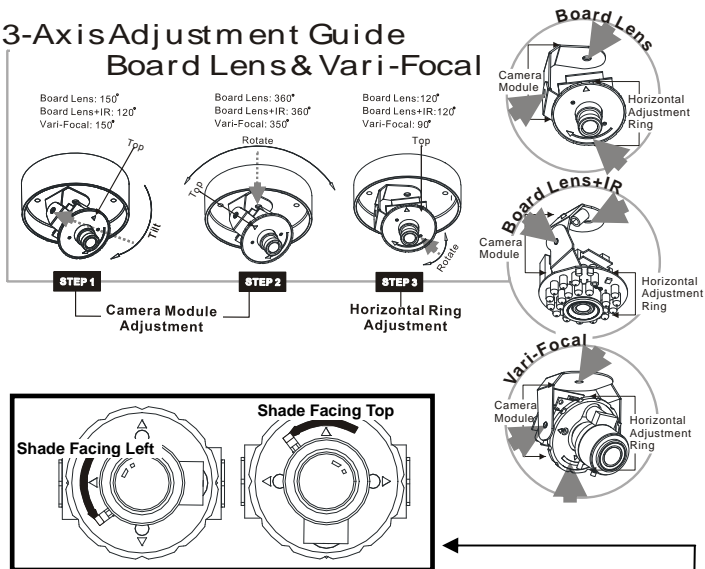


Fig. 3

#### 4. Camera Image Adjustment:

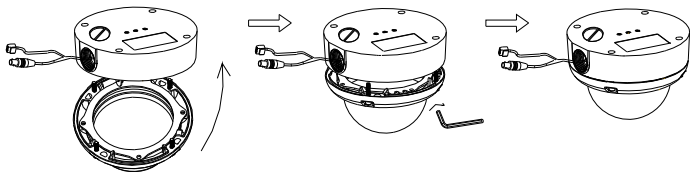
- 2-Axis – Set proper image by moving the camera module and set the focus by turning the lens to the left or right direction.
- 3-Axis – First tilt then rotate the camera module to obtain desired viewing angle, and then turn the horizontal adjustment ring to correct the image and achieve proper orientation.

### 3-Axis Adjustment Guide Board Lens & Vari-Focal

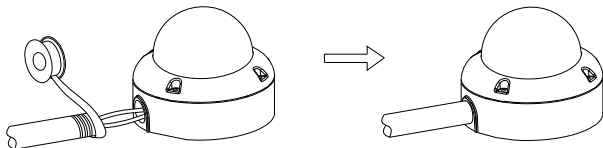


**Note:** When adjusting 3-Axis Vari-Focal lens, before following the **Camera Image Adjustment** setup, you must turn the horizontal adjustment ring so that the shaded area is facing toward you on the top or left side.

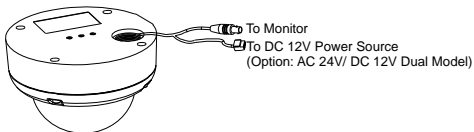
5. When the camera focus adjustment has been completed, use the provided L-wrench to fasten the tamper-resistant housing to the main body.



6. When using the side conduit cabling, it is suggested to cover the cables using metal covers (to prevent external damage and for waterproof prevention), and wind the waterproof adhesive tape (P.T.F.E. THREAD SEAL TAPE) onto the metal cover before installation.



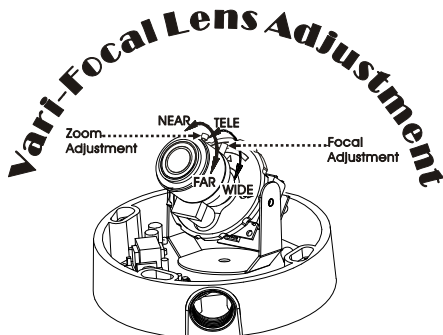
7. Connect the video output to the monitor or other video device through a 75 Ohms type coaxial cable and the DC-Jack or AC/DC-Terminator to the power source.



*Note: Power adapter is sold separately.*

## 8. Vari-Focal Dome Operation Guide

Once the picture appears on the monitor, open the cover and adjust the lens wrench to "NEAR $\longleftrightarrow$ FAR", get the view zoom that you desire, and then adjust the focus wrench of the lens to obtain the best picture. After adjustment, tighten both wrenches.

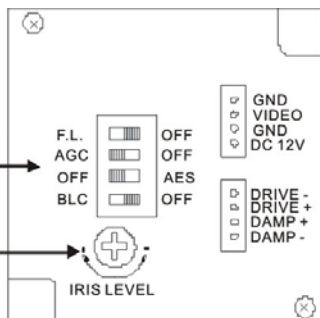


### DIP Switch Setting

- **Flickerless Function**  
Set switch-OFF/ F.L. to Flicker to enable flickerless function, in this mode, the switch-AES/ OFF is auto disabled.
- **AGC-Hi/ AGC-Lo Function**  
Adjust the switch to AGC indicates AGC-Hi and OFF indicates AGC-Low. AGC-Hi mode--The maximum AGC gain is approximately 26dB. AGC-Lo mode--The maximum AGC gain is approximately 16dB.
- **Auto Iris Function**  
When using an auto iris lens, the switch-AES/ OFF should be in the OFF position to disable the AES function. Adjust VR to the proper level.
- **BLC Function**  
Set switch-OFF/ BLC to BLC to enable Back Light Compensation (BLC) function.

FL: Flickerless ON/OFF  
 AGC: Auto Gain Control High/Low  
 AES: Auto Electronic Shutter ON/OFF  
 BLC: Back Light Compensation ON/OFF

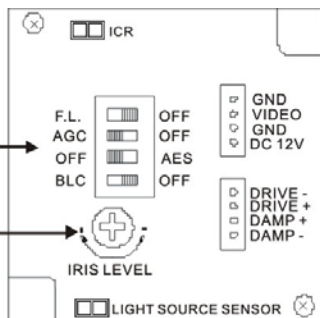
VR Adjustment level for DC Drive Lens



**Inside Control Board  
 (Color High Resolution & Normal Resolution)**

FL: Flickerless ON/OFF  
 AGC: Auto Gain Control High/Low  
 AES: Auto Electronic Shutter ON/OFF  
 BLC: Back Light Compensation ON/OFF

VR Adjustment level for DC Drive Lens



**Inside Control Board  
 (Color ICR High Resolution & Normal Resolution)**



## 6. Specification

According to the camera purchased, select and refer to the appropriate specification below:

Color Camera							
Image Device		1/3" Color CCD (Sony Chipset)		1/3" Hi-Res. Color CCD (Sony Chipset)	1/3" Ultra Hi- Res. Color CCD (Sony Chipset)	1/4" Color CCD (Sony Chipset)	
Picture Elements		NTSC: 510 x 492 PAL: 500 x 582		NTSC: 768x494 PAL: 752x582		NTSC: 510x492 PAL: 500x582	
Resolution		380 TVL		470 TVL	550 TVL	330 TVL	
Min. Illumination	Day	0.3Lux/ F2.0	0.2Lux/ F2.0	0.3Lux/ F2.0	0.4Lux/ F2.0	0.5 Lux/ F2.0	
	IR On	0Lux					
S/N Ratio		More than 48 dB					
Electronic Shutter		NTSC: 1/60~1/100,000, PAL: 1/50~1/110,000					
Iris Control		DC Drive (for Vari-Focal & Vari-Focal+ICR model)					
Gamma		0.45					
Gain Control		Auto					
Lens Furnished (option)		Vari-Focal Lens, Vari-Focal Lens with ICR, and Board Lens					
White Balance		Auto					
Back Light Comp.		On/ Off					
Sync. System		Internal.					
Video Output		1 Vp-p/ 75 Ohms.					
Power Supply		DC12V±10% (optional: DC12V/ AC24V Dual)					
Power Consumption	Board Lens		160mA Max.	150mA Max.	180mA Max.	180ma Max.	160mA Max.
	Board Lens+IR	IR On	440mA Max.	430mA Max.	440mA Max.	440mA max.	440mA Max.
		IR Off	160mA Max.	150mA Max.	180mA Max.	180mA Max.	160mA Max.
	Vari-Focal Lens		190mA Max.	180mA Max.	210mA Max.	210Ma Max.	190mA Max.
Operating Temp.		-10℃ to 50℃					
Infrared Illuminator Module (for board lens type only)							
Infrared Luminary				24 pieces IR-LED			
Wavelength				850nm			
Illuminate Distance				20M			