

IR WATERPROOF CAMERA SK-P461(D)/M844AI



NEW

CCD II
700 TVL

SONY
SUPER HAD II CCD
Model. SK P461 /M844AIP V2
High Resolution Camera. Up 700 TVL



WITH 40 PCS IR LED AND 2.8/12mm VARIFOCAL D&N LENS

FEATURE

1. New generation, new technology Gen II DSP adopted.
2. This camera is incredibly flexible to install with its 3-axis camera construction, which makes the camera ceiling, wall or slope mountable.
3. This product is weather-proof to resist rain, snow and other weather factors(IP66).
4. 40M range visible in total darkness with 40pcs of IR LEDs.(Indoor)
5. Adopted DNR technology, It reduces noise efficiently in low light condition.
6. Supreme Resolution(600 TV-Line)
7. Day & Night function
8. Support 8 different privacy zone
9. Provide Max. 10x digital zoom
10. DIS(Digital Image stabilizer) relieves any picture tremble due to external factor such as wind.
11. LWDR(Low frame Wide Dynamic Range) & DWDR(Digital Wide Dynamic Range)
12. Dynamic IR : When IR LED is turned on in B/W, the objects can be clearly identified due to the function that decreases screen saturation of objects within a short distance.
13. Multi function : High Light Mask, Lens Shading Compensation, Motion Detection
14. Multi-language full OSD support

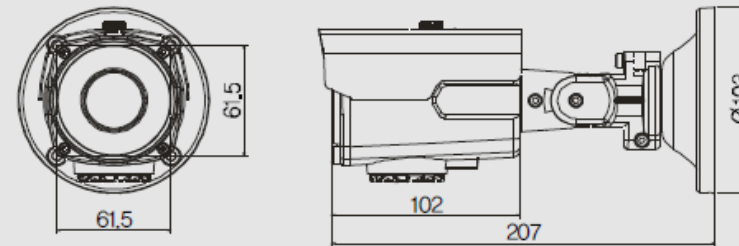
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CAUTION

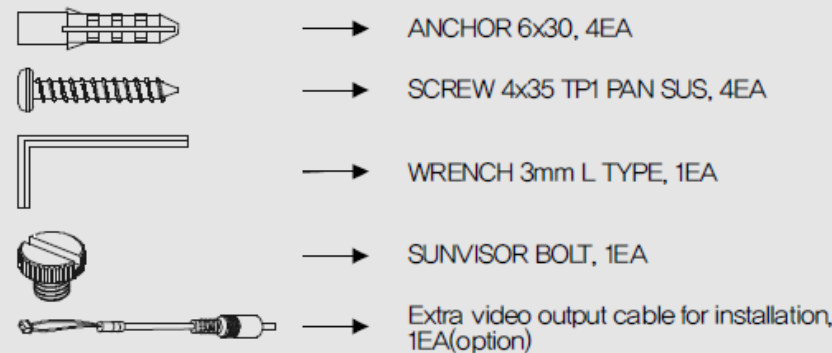
1. Please study the instruction manual before your applications and keep it for your future reference.
2. Do not flash LED light directly on the eyes when LEDs are on.
3. Do not install the camera on a unstable surface.
It will cause falling or other hazards.
4. Do not use improper power, it could cause fire or electric shock.
(Use the AC adaptor 12V DC regulated, 1A)
5. Do not disassemble or re-model the camera, it could cause fire, electric shock or other hazards.
6. Stop using the camera when you find a malfunction like smoke or unusual heat, it could cause fire or electric shock.
7. Due to the possibility of water leakage, do not cut or peel off the cable. In case you cut or peel off the cable, the warranty will be void.
8. Do not adhere dangerous articles to the camera.

9. Power cable or video cable should be always loose.
Do not keep the cables tight or twisted.
10. Do not leave the unit along with an unstable stand or table.
11. Please use the camera unit within given temperature and electricity limit.
12. Please make sure that installation should be done by qualified service person only.
13. Do not disassemble the unit by yourself. When there is problem with the unit please contact after-sale service center or the shop where you bought.

DIMENSION

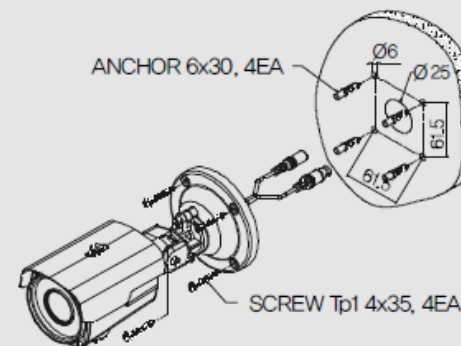


ACCESSORIES

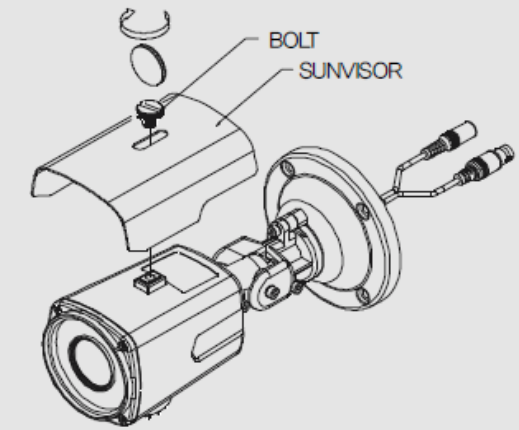


HOW TO INSTALL(Built-in bracket type)

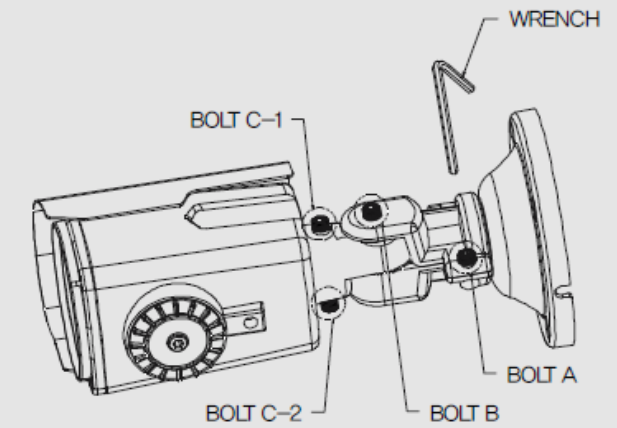
1. Make a hole of $\varnothing 25$ mm in diameter for passing cable.
2. Drill four holes on the wall or ceiling and insert the anchors.
3. Arrange the cables and fix the screws.



4. Attach the sunvisor and fix the sunvisor fixing bolt.

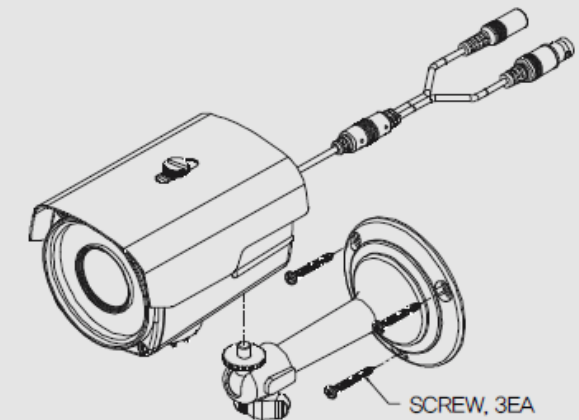


5. Loosen the bolt A, C-1 and C-2 by using the 3mm wrench included.
6. Face the direction of the camera to monitor.
7. Tighen the bolt A, B, C-1, C-2 to complete adjustment.



HOW TO INSTALL(Stand bracket type – Option)

1. Attach the bracket to the camera's bottom hole tightly.(In case of installing the camera on the ceiling, attach the bracket to the sunvisor fixing bolt hole on top of the camera.)
2. Fix the camera and bracket on the wall or ceiling.

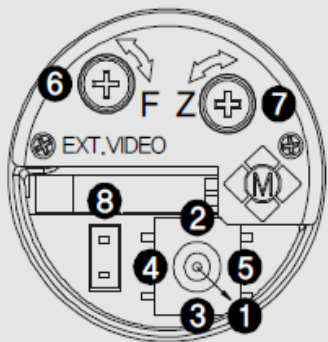


SPECIFICATION

Model No.	SK-P461(D)/M844AI
Image Sensor	1/3" SONY SUPER HAD CCD II
Effective Pixel	768(H) X 494(V) PIXEL(NTSC), 752(H) X 582(V) PIXEL(PAL)
Cell Size	6.35μm(H) X 7.4μm(V)(NTSC), 6.5μm(H) X 6.25μm(V)(PAL)
Scanning System	2:1 Interlace
Sync. Type	Internal/ Line-Lock(option)
Resolution	600 TV-LINE(COLOR), 700 TV-LINE(B/W)
S/N	52dB or More(AGC OFF)
Video Output	1.0 Vp-p(Sync. Negative) Termination 75Ω
Min. Illumination	0.01Lux(F/1.2), 0.0003Lux(Sense up), 0Lux(40M Range with 40pcs LED) – Indoor
Gamma	γ = 0.45 typ.(0.45, 0.6, 1.0, user)
OSD	Yes(Multi Language)
White Balance	ATW(2,500°K ~ 9,500°K)/MANUAL/AWC
Shutter Speed	1/60(1/50) ~ 1/100,000sec
Sense up	Auto(Selectable limit 2X~256X)/FIXED/OFF
Backlight	BLC, LWDR, DWDR, HLC(ON/OFF)
AGC	LOW/MIDDLE/HIGH/OFF
DNR(3D)	LOW/MIDDLE/HIGH/OFF
Motion Detection	ON/OFF(240 Block)
Privacy Zone	ON/OFF(8 Zone)
Mirror	H/V/BOTH
Freeze	ON/OFF
Day & Night	AUTO, COLOR, B/W(Option : ICR)
LED Brightness	40pcs, Dynamic IR
DIS	ON/OFF
Digital Zoom	ON(10X)/OFF
Blemish Compensation	AUTO/OFF
Communication(option)	RS-485(Protocol : Pelco D, Pelco P)
Lens	Vari-focal auto iris lens
Power Supply	12V DC ±10%(24V AC : option)
Current Consumption	Max. 850mA(at 12V DC, 24V AC) : LED ON
Operation Temp.	-10°C ~ 50°C
Preservation Temp.	-20°C ~ 60°C
Dimension	61.5(W) X 61.5(H) X 102(D)mm
Weight	Approx. 900g

FUNCTION SETTING

1. How to use the jog lever



*OSD menu & Focus/Zoom adjustment direction

1. Unfasten the screw of the bottom door
2. Adjust the jog lever & Focus/Zoom trimmers
3. Tighten the screw of the bottom door

⑧EXT. VIDEO : Extra video output terminal for installation. The cable is option.

①ENTER :

- Push the lever : Used to access the menu and confirm selection.
- Push the lever for one second : Used to return to previous menu from the privacy mask setting section.

②UP, ③DOWN : Used to move the cursor to up or down.

④LEFT, ⑤RIGHT : Used to move the cursor to left or right and change the value.

⑥ FOCUS, ⑦ ZOOM : Use a '+' type driver for adjusting zoom and focus. (In case of operation Focus/Zoom, don't put stress excessively.)

2. OSD menu structure

Function setting menu	Select menu	Sub menu	Contents	
1. EXPOSURE	LENS	MANUAL↵, DC↵	Fixed focal lens or Vari-focal auto iris lens	
	LEVEL	0~99	Adjust the brightness	
	E.SHUTTER	AUTO		Shutter speed auto adjustable
		1/60(1/50)~1/100,000		Select shutter speed manually
	AGC	OFF, LOW, MIDDLE, HIGH	Determines that use the AGC function or not and AGC level selectable(You can not use the Auto D&N change mode when AGC is off)	
	SENSE UP	OFF, X2~X256	Using sense up when it is low luminance(OFF, X2~X256 selectable)	
	BLC	OFF, ON↵	BLC function	
	LEVEL	0~20	Adjust BLC level	
	LWDR	OFF, ON	Select LWDR	
	DWDR	OFF, LOW, MIDDLE, HIGH	Digital Wide Dynamic Range	
	HLC	OFF, ON↵	High Light Mask function	
	LEVEL	0~60	According to the threshold value, the camera will recognize as High light or not.	
	DNR	OFF, ON↵	Reduce noise in low illumination	
	LEVEL	0~20	Level is selectable	
2. WHITE BALANCE	WB MODE	ATW	Color temperature 2500 ~ 9500°K	
		MANUAL↵	Adjust the Red or Blue values	
		AWC ↵	Move the camera lens toward to white paper then press the enter button to find the optimal white balance for current environment	
	MANUAL RED	0~255	Adjust the Red value to shift the color of the object	
	MANUAL BLUE	0~255	Adjust the Blue value to shift the color of the object	
	R-Y GAIN	0~255	Adjust Red tone of the image	
	B-Y GAIN	0~255	Adjust Blue tone of the image	
	3. DAY&NIGHT	D&N MODE	AUTO↵	Auto day&night switching mode
COLOR			Fixed at color(LED OFF)	
B&W			Fixed at B/W(LED level selectable)	
COLOR→BW		45~160	Select brightness of illumination about changing the day ↔ night mode	
BW→COLOR		30~125	Select the duration time about changing the day ↔ night mode	
DELAY TIME		3~12	Select the duration time about changing the day ↔ night mode	
BURST		OFF, ON	Determines whether to transmit the burst signal or not in B/W mode	
DYNAMIC IR		OFF, MODE1, MODE2	When IR LED is turned on in B/W, the objects can be clearly identified due to the function that decreases screen saturation of objects within a short distance.	
4. IMAGE ADJ.	FLIP	OFF, VERT, HORI, BOTH	VERT : Set a vertical image inversion HORI : Set a horizontal image inversion BOTH : set a image rotation	
	SHARPNESS	0~49	Sharpness adjustable	
	GAMMA	0.45, 0.6, 1, USER	Gamma adjustable	
	FREEZE	OFF, ON	Get a still image	
	LSC	OFF, ON↵	Determines whether to use the brightness compensation of four lens' corners(LSC) or not	
	LEVEL	0~50	The LSC level selectable	
	DZOOM	OFF, ON↵	Max 10x digital zoom available(Default value is X3)	
	ZOOM	X1.0~X10	Digital zoom adjustable	
	PAN	-128~127	Zoomed in image can be moved to horizontal	
	TILT	-110~109	Zoomed in image can be moved to vertical	
	DIS	OFF, ON	This function can be mitigates image movement from external factors(This function uses digital zoom)	
PATTERN GENERATOR↵		Test signal. Press the enter button, color bar appeared on the screen and press any key to return to menu.		
5. ALARM	MOTION	OFF, ON↵ NONE	Determines whether to use the motion detection function or not No display on the screen though movement is detected	
	DISPLAY	MESSAGE	The words 'MOTION' appear on the screen when movement is detected	
	SET WINDOW		Press the enter button to move into the motion detection area section to set the 240 blocks. To escape this menu, you should press the left button at the far left or press the right button at the far right.	
	ALL SET ↵		Press the enter button to select all area	
	ALL CLEAR ↵		Press the set button to remove all area	
	SENSITIVITY	0~120	Motion detection sensitivity	
	HOLD TIME	1~15	Set the duration of alarm out. If the way of display is message, it means display time of message	
	IMPACT	OFF	Not available	

6. PRIVACY ZONE	MASK 1 ~8	OFF, ON↵	Display each privacy mask or not	
	SET WINDOW↵		Press the enter button at first time, you can move the mask's position. After press the enter button again, you can adjust the size of mask. If you press the set button once more, you can adjust position of edge. After decided position of edge then press the enter button, it will be back to previous menu.	
	COLOR SET	BLACK, GRAY...	Select mask color(8 color is available)	
7. SPECIAL	LANGUAGE	ENGLISH, ...	Select language	
	TITLE	OFF, ON↵	Display the camera ID on the screen	
	EDIT ↵		Camera ID setting	
	RESET ↵		Camera ID reset	
	POSITION↵		Camera ID position	
	DPC	OFF, AUTO↵	Defect pixel correction in low illumination	
	WHITE THR	0~255	Setup the limited value of white pixel correction	
	BLACK THR	0~255	Setup the limited value of black pixel correction	
	DPC LEVEL	0~255	Setup the DPC(Defect Pixel Correction) level	
	SYNC	INT		Internal Sync with 12V DC power
		L/L↵		Setting the phase is selectable when used 24V AC(Dual power only)
	VPHASE	0~255	Phase controllable at 24V AC input(L/L mode)	
	MONITOR	CRT, LCD	Monitor setting	
	COMMUNICATION↵		Communication setting(option)	
COM. ID	1~255	Select the camera ID for RS-485 communication		
BAUDRATE	2400, 4800, 9600	Select baud rate		
PROTOCOL	PELCO-D, PELCO-P	Select protocol		
FACTORY SET ↵		Reset your camera to factory default condition and then restart Notice : Lens, communication and language is not changed		
8. EXIT	SAVE AND EXIT ↵		Save the value and then restart	
	EXIT ↵		Escape the menu without save	
	RETURN↵		Move back to previous menu	

- The '↵' icon appeared with desired function, press the set button to move sub menu.
- The '---' icon appeared with function that is unavailable according to function setting.

3. How to control through RS-485 communication(Optional)

- 1) Match the camera with controller's ID, baudrate and protocol
- 2) Up, Down, Left and right of Jog lever is same as Up, Down, Left and right of RS-485 controller
- 3) Enter of Jog lever is the same as menu key or IRIS open key of RS-485 controller

4. Cable array(Optional)



Nb.	Function	Remark
A	RX +	RS-485A
B	RX -	RS-485B



If the product is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.