

Solar & Wind Energy CCTV System Specification



Description:

As industrialization and urbanization accelerate over the world, the global warming has been a serious problem to every inhabitant on the earth. Many islands will be swallowed by increasing sea level in next twenty years, and more coast cities will also meet such disaster if the sea levels keep rising. Farmland desertification, wide species extinction, air and water pollution as well as extreme weather have posed threats to the continued existence of people.

Every company should transpose the historic task more or less. In order to decrease energy consumption and greenhouse gas, and to serve isolate area with green security, we firstly developed this Solar & Wind CCTV System which will save large

quantity of non-renewable energy resources and decelerate the discharge of greenhouse gas such as CO₂.

This system can support cameras work for 96 hours. People can choose suitable battery to prolong the backup days. The wifi signals will cover 500-800m without AP. A pair of APs can help increase this range for 5km without disturbance. Add the relay of APs, you can cover about 50km at most. In different areas users can adjust the system for better effects.

This System is composed of six parts: **Wind Generator, Solar Panels, Controller, Battery, Access Point and Wireless Camera.**

1. 120W-12A Solar Board

Specifications	
Cell	Monocrystalline silicon solar cells 125*125mm
Temperature and Co-efficients	
NOCT	48°C±2°C
Current Temperature Coefficient	(0.06±0.01) %/K
Voltage Temperature Coefficient	-(78±10) mV/K

Power Temperature Coefficient	-(0.5±0.05) %/K
Characteristics	
Open Circuit Voltage(Voc)	41.5 V
Optimum Operating Voltage(Vmp)	33.8 V
Short Circuit Current(Isc)	4.26 A
Optimum Operating Current(Imp)	3.55 A
Power	120W

2. Controller Specifications

Model	KD-12-400-A2
Input Power of Wind Energy	400W
Input Voltage of Wind Energy	3- phase AC≤50V, P≤400W
Peak Power of Solar Board	350W
Peak Voltage of Solar Board	DC35V, I≤15A
Output Voltage of Controller	DC14.4V
Over Voltage of Protection Output	AC50 ±5V
Over Electricity Protection Output	DC22A ±1A
Storage Battery	Single or Combination of Various Rated Voltages12V, Capability 50~220AH
Max Output Electricity of Load End	Two-way Output Load, Each I<15A
Trigger Voltage Protection	DC10.5±0.3V
Recovery Voltage Protection	DC11.5±0.3V
Voltage Protection of Full	DC14.4±0.2V
Size	300x190x130mm
Work Environment	-20°C~ +50°C, RH 0~90%。
Applicability	Suit for Adopting DC 12V Series Wind Solar Integration
Weight	2.1KG

3. Wind Energy Generator

Starting wind speed	3m/s
Cut-in Wind Speed	3.5 m/s
Rated Wind Speed	12 m/s
Rated DC Voltage	12/24V
Rated Output AC Voltage	220V/50Hz
Rated Power	400W
Over-Speed Protection	Electromagnetic torque control
Engine	Permanent magnetism synchronization generator
Rated Speed	810
Wind Energy Utilization Rate	0.41
Weight	22.8kg
Blade Material	Extra-strong and tenacious engineering plastics
Rotor Diameter	1450mm
Rotor Length	1450mm
Rated Power	400W
Packing Material	Carton box and foam material
Size	1120 x 610 x 250 mm

4. Deep Cycle Battery Specifications

(1). Dimensions

Nominal Voltage	12V
Rated Capacity (10 Hour Rate)	250 Ah

(2). Characteristics

Capacity 25°C (77°F)	10 hour rate(25.0 A) 5 hour rate(40.0 A) 1 hour rate(150 A)	250 AH 200AH 100 AH
	1.5 hour discharge to 10.5V	100 A
Internal Resistance	Full charged Battery at 25°C (77 °F)	5m Ω
Affected Capacity by Temperature (10hour rate)	40°C (104°F) 25 °C (77°F) 0 °C (32 °F) -15 °C (5°F)	102% 100% 85% 65%
Self-Discharge at 25°C (77°F)	Capacity after 3 Months Capacity after 6 Months Capacity after 12 Months	91% 82% 64%
Terminal	T12 / T19	
Recharge (Constant Voltage)	Cycle: Initial Charging Current less than 62.5 A, Voltage 14.40-15.00V,Time, 12-16h Float: Voltage 13.50-13.80V	

5. WIFI Wireless Speed Dome

Description:

WIFI wireless speed dome series is a new era product of Video monitoring by KOPDA based on WIFI wireless Internet technology WIFI wireless speed dome can realize digital video transmission conveniently provided professional long-distance video service for security field. Through network explorer user can explore video images in the computer.

Digital video output utilizing H.264 compression schemes deliver high-quality video at up to 25 fps(PAL) or 30 fps(NTSC). WIFI wireless speed dome owned high speed Dome's features this series can support multi-user' simultaneous accessing built-in web server supports Internet explorer 5.0 or above version.

Features:

1. 18*12 22*12 23*12 26*12 30*12 35*12 and 36 *12 optical/ digital zoom available
2. Small volume high integration
3. video transmits and PTZ controls via network
4. H.264 video compression technology
5. Wireless standard:2.4 GHz 802.11B 802.11G

- 6 . Wireless antenna: gain 8dbi omnidirectional antenna
7. Transmission distance: more than 800 meters without wireless AP and wireless router
- h. Encryption method: wep disable/64bit/128bit
8. Built-in Web server video images can be browsed by IE explorer
9. Supports CIF 2CIF 4CIF four kinds of resolution adjustable
- 10.Motion detection alarm
11. Professional video surveillance client software management
12. View at rates up to 25 fps PAL 30 fps NTSC
13. Supports multi-user simultaneous accessing
14. Pattern auto pan auto flip auto horizontal scan 16 programmable zone privacy masking zone auto home position
15. 2 alarm inputs1 alarm output linking presets
16. Exceeds IP66 Specifications
17. Up to 254 presets with 16 characters each
18. Horizontally control speed 0~400%S (control through software) vertically control speed 0~120%S
19. 6 groups presets Tour function setting delay time possibly
20. Power supply :24V AC,3A

Chart 1: 18X26X36X Camera Specifications

Dome Type	KD- WF18X	KD-WF26X	KD-WI36X
Video Type	PAL/NTSC (Color, B/W)		
Scan System	2:1interlace Scanning		
Image Sensor	1/4"interlace Scanning CCD		
Resolution (H*V)	PAL/440K:752*582; NTSC/380K:768*494		
Horizontal	480TVL		540TVL
Aperture/Focal Length	F1.4- F3.0 (f=4.1-73.8mm)	F1.6- F3.8 (f=3.5-91mm)	F1.6- F4.5 (f=3.4-122.4mm)
Optic Zoom	18X	26X	36X
Digital Zoom	1~12X adjust		
Angle of view	48°(Wide) 2.8°(Tele)	54.2°(Wide) 2.2°(Tele)	57.8°(Wide) 1.7°(Tele)
Focus			
Sensitivity	Color Mode: 1.0Lux (PAL:1/50S, NTSC:1/60S) B/W Mode: 0.01Lux	Color Mode: 1.0Lux (PAL:1/50S, NTSC:1/60S) B/W Mode: 0.01Lux	Color Mode: 1.0Lux (PAL:1/50S, NTSC:1/60S) B/W Mode: 0.01Lux

	(PAL:1/4S, NTSC:1/3S)	(PAL:1/4S, NTSC:1/3S)	(PAL:1/4S, NTSC:1/3S)
WDR	—	—	Off/ On
S/N Ratio	>50dB		
Video Output	1.0V±.02V		
Backlight Compensation	Off/ On		
IRIS	Auto/manual		
White Balance	Auto/Manual		
Shutter Speed	Auto(Default set);Manual :PAL:1/2-1/10000s;NTSC: 1/2-1/10000s		

Chart 2: 23X30X35X Camera Specifications

Dome Type	KD-WF-23X	KD-WF-30X	KD-WF-35X
Video Type	PAL/NTSC (Color, B/W)	PAL/NTSC (Color, B/W)	PAL/NTSC (Color, B/W)
Scan System	2:1interlace Scanning		
Image Sensor	1/4" Progressive Scanning CCD		
Resolution(H*V)	PAL/450K:752*582 NTSC/380K:768*494	PAL/440K:752*582 NTSC/380K:768*494	PAL/440K:752*582 NTSC/380K:768*494
Horizontal	540TVL		
Aperture/Focal Length	F1.6- F3.7 (f=3.6-82.8mm)	F1.4- F3.6 (f=3.4-102mm)	F1.4- F4.2 (f=3.4-119mm)
Optic Zoom	23X	30X	35X
Digital Zoom	12X		
Angle of View	54°(Wide) 2.5°(Tele)	55.8°(Wide) 2.0°(Tele)	55.8°(Wide) 1.7°(Tele)
Focus	Auto/Manual		
Sensitivity	Color Mode: 1.0Lux	Color Mode: 0.5Lux	Color Mode: 0.5Lux

	(PAL:1/50S NTSC:1/60S) B/w Mode: 0.01Lux (PAL:1/4S NTSC:1/3S)	(PAL:1/50S NTSC:1/60S) B/w Mode:0.01Lux (PAL:1/4S NTSC:1/3S)	(PAL:1/50S NTSC:1/60S) B/w Mode:0.01Lux (PAL:1/4S NTSC:1/3S)
WDR	OFF/ MD1/MD2	OFF/MD1/MD2	OFF/MD1/MD2
S/N Ratio	>50dB		
Video Output	1.0V±.02V		
Backlight Compensation	Off/ On		
IRIS	Auto/Manual		
White Balance	Auto/Manual		
Shutter Speed	Auto(Default set);Manual :PAL:1/2-1/10000s;NTSC: 1/2-1/10000s		

Chart 3: High Speed Dome Common Specifications

Preset	254
Horizontally Scan	4
Patterns	4
Zone Set	16
Alarm	2 alarm inputs1 alarm output
Privacy Masking Zone	16
Tour	6
Auto pan	Yes
Auto Home Position	Yes
Control Speed	Horizontal 0~400°/s(adjustable)vertical 0~120°/s;preset speed maximum 400°/s
Mirror	Yes
Image Frozen	Yes
Compass	Yes
Language	English
Communication Mode	RS485
Protocol	PELCO-P/D
Baud Rate	2400 bps4800 bps9600 bps
Address	0~255
Voltage	24VAC
Power	25W(Indoor)/50W(Outdoor)

Operating Temperature	-10℃～50℃(Indoor)/-40℃～50℃(Outdoor)
Humidity	0~90%RH(Non-condensing)

Chart 4:Network Function Specifications

Video Compression	H.264
Resolution	PAL: 704*576 NTSC: 704*480
Wireless Standard	2.4 GHz 802.11B 802.11G
Wireless Antenna	gain 8dbi omnidirectional antenna(outdoor 60cm / indoor 30cm)
Transmission Range	more than 800 meters without wireless AP and wireless router (no shelter materials)
Encryption	wep disable/64bit/128bit
Compression Resolution	CIF/2CIF/ /4CIF
User Management	·Different user rights for each group one user belongs to one group.
Storage Function	·Support central server backup function in accordance with your configuration and setup in alarm or schedule setting ·Support record via Web and the recorded file are storage in the local PC.
Alarm Function	·Real-time respond to external alarm input(within 200MS) as user pre-defined activation setup and exert corresponding message in screen and audio prompt(allow user to pre-record audio file) ·Provide central management server management option so that system can initiatively send alarm notice remotely. Alarm input can connect to various peripheral equipments. ·Provide prompt or alarm option when encounter video loss. Support SMS(short messaging service) function when alarm occurs.
Network Monitor	·IP module support one-channel video data transmit to network terminal and then decode. Delay is within 500ms (network bandwidth support needed) ·Max supports 10 connections. ·Adopt the following video transmission protocol: HTTP TCP UDP and MULTICAST. ·Send some alarm data or message via SMTP. ·Support web access used in WAN.
Network Management	·Realize IP Module configuration and management via Ethernet. ·Support device management via web.
Assistant Function	·Support system resource information and running status real-time display. ·Video format support NTSC and PAL. ·Support log function. ·Support video watermark function to avoid vicious video modification. ·Language: English or Chinese