USER'S MANUAL

Surveillance UPS

Thank you for selecting this uninterruptible power system (UPS).
It provides you with better protection for connected equipment.

Please read this manual!

This manual provides safety, installation and operating instructions that will help you derive the fullest performance and service life that the UPS has to offer.

Please save this manual!

It includes important instructions for the safe use of this UPS and for obtaining factory service should the proper operation of the UPS come into question.

Please save or recycle the packaging materials!

The UPS`s shipping materials were designed with great care to provide protection from transportation related damage.
These materials are invaluable if you ever have to return the UPS for service.
Damage sustained during transit is not covered under the warranty.

INTRODUCTION

1-1 System Description

The Surveillance UPS Series is an innovative and professional battery backup solution for all your surveillance needs. You will be kept at ease knowing that during a power outage, your CCTV camera and DVR/NVR equipment will continue running so you can keep monitoring and recording your premises.

Applications: Provides battery backup, noise filtering, and surge protection for 12VDC/24VAC cameras, monitor and DVR/NVR systems.

1-2 Features:

- 12VDC / 24VAC Battery Power Backup for CCTV Cameras.
- Automatic Voltage Regulation (AVR) for Wide Input Operation Voltage and Stable Output Voltage.
- 12-13VDC Adjustable Output Voltage to Enhance Video Quality for Long-Distance Cameras.
- 9/18 Ports Overload Protection (fuse optional) for CCTV Cameras.
  Batteries are Hot Swappable (cameras, DVR, & monitors are always on).
- Multi-LED Indicators for AC/DC Power Supply and UPS Power Status.
- 2 Amp Fuse or PTC (Break) Power Protection for High Power CCTV Cameras.
- Two AC Outlets (NEMA 5-15R/110V or IEC/220V) with Battery Backup and Surge Protection for DVR and Monitor.
- Cameras Power Failure and AC Power Failure Notification through DVR/ NVR or Alarm System.

1 INTRODUCTION

1-2 Features:

- Two Step Automatic Battery Charger (extends battery life).
- Able to Extend Runtime with External Battery Pack (Optional).
- EMI / RFI Power Line Noise Filtering.

2 CAUTION

- To prevent the risk of fire or electric shock,install in a temperature and humidity controlled indoor area free of conductive contaminants. (See the specifications for the acceptable temperature and humidity range.)
- To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment,microwave ovens, or vacuum cleaners to UPS.
- Do not plug the UPS input into its own output.
- Do not allow liquids or any foreign object to enter the UPS.
- Do not place beverages or any other liquid-containing vessels on or near the unit.
- In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Do not attach a power strip or surge suppressor to the UPS.If the UPS is with metal chassis, for safety purpose, grounding is a must during UPS installation in order to reduce leakage current below 3.5mA.
- Attention hazardous through electric shock.
- Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the UPS is necessary.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions.
- Keep unauthorized personnel away from batteries.
- When replacing the batteries, use the same number and type of batteries.Internal battery voltage is 12Vdc. Sealed, lead-acid, 6-cell battery. Do not dispose of batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes.

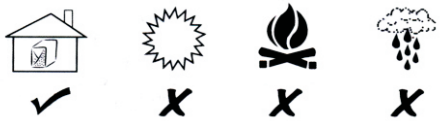
2 CAUTION

- Unplug the UPS prior to cleaning and do not use liquid or spray detergent. A battery can present a risk of electric shock and high short circuit current. The following precaution should be observed before replacing batteries:

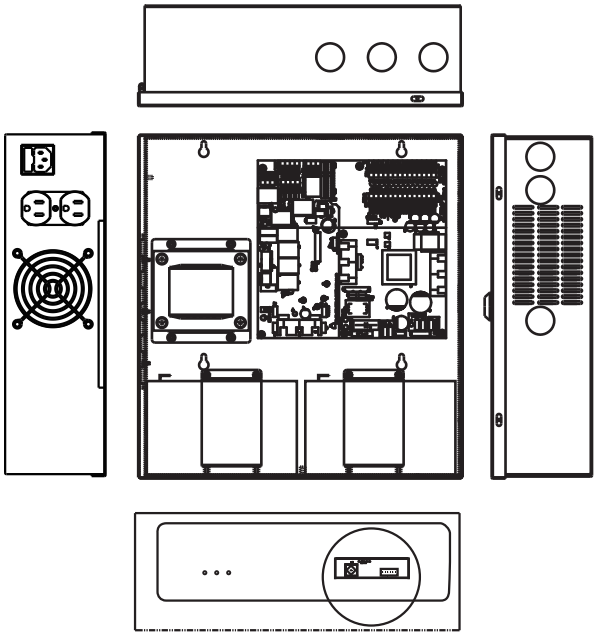
  1) Remove watches, rings, or other metal objects.
  2)Use tools with insulated handles.
  3)Wear rubber gloves and boots.
  4)Do not lay tools or metal parts on top of batteries.
  5)Disconnect charging source prior to connecting or disconnecting batteries terminal.

3 INSTALLATION

The CCTV UPS must be installed in a protected environment away from heat-emitting appliances such as a radiator or heater.
Do not install this product where excessive moisture is present.

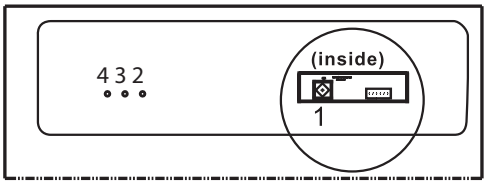


4 OVERVIEW



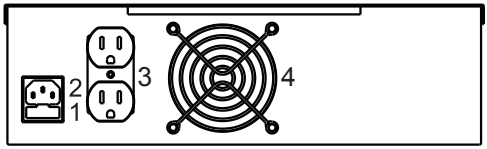
4 OVERVIEW

Front Panel



1. Master power switch: "ON/OFF/TEST/SILENCE" button.
2. Normal LED: AC normal.
3. Back-Up LED: Battery in backup.
4. Fault LED: Overload or Fault or Replace Battery.

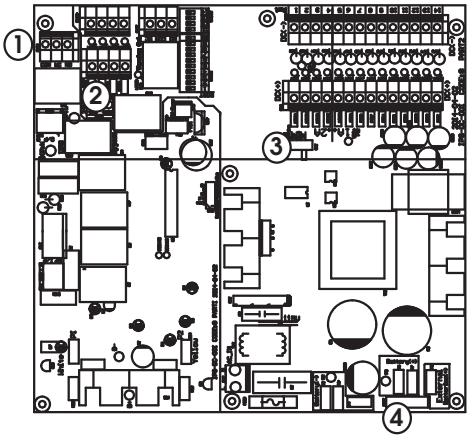
Side Panel



1. Input Fuse
2. AC Input
3. AC Output
4. Fan : Operating on battery mode and overheat *

* Model CP-SV414-360W and CP-SV018-360W only

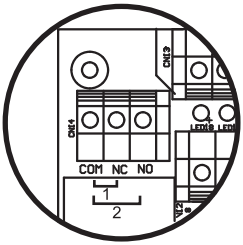
4 OVERVIEW



1.

AC power failure notification port:	
1. COM:NC	Normal Close
2. COM:NO	Normal Open

When AC power fails, "NC" and "NO" connection will provide a notification signal to the DVR/NVR or alarm system. Majority of DVR/NVR systems also have e-mail alert features to send notification of AC power failure.



2. UPS Bypass Switch

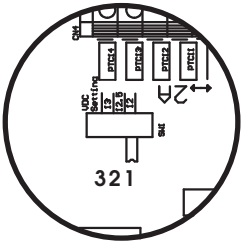
A) UPS Mode: Unit will go into backup mode if power fails.

B) AC Bypass Mode: Switch to this mode when batteries need to be changed or UPS is abnormal. "AC Bypass" mode will continue to offer power to cameras, DVR and monitor.

3.

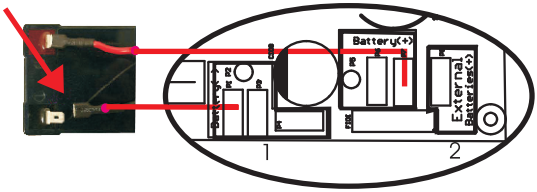
Vdc Settings	DC Output Voltage
1	12.0Vdc
2	12.5Vdc
3	13.0Vdc

Long-distance cameras tend to lose voltage due to distance from power source. Setting Vdc to a high setting will improve long-distance camera picture quality.

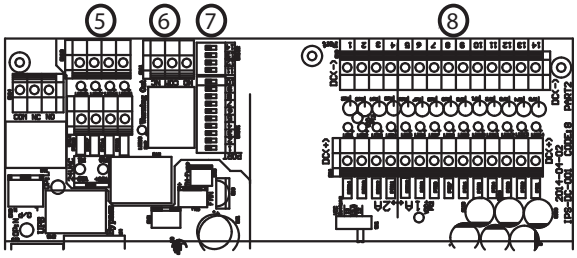


4. Battery Ports

	Battery Terminals
1	P1～P4 battery negative
2	P5～P8 battery positive



4 OVERVIEW



5. 24VAC Port 15 ~Port 18 (CP-SV414-360W)
   12VDC Port 15 ~ Port 18 (CP-SV018-360W)

6.

Camera Power Failure Notification Port	
1. COM : NC	Normal Close
2. COM : NO	Normal Open

7.

Model	Camera DC Power Failure Notification Setting Dip Switch
CP-SV009-250W	Port: 1 -9
CP-SV414-360W	Port: 1 -14
CP-SV018-360W	

* Dip switrch ports need to be switch to ON for the DC camera ports and DVR /NVR to receive DC power failure notification.

* You can only turn dip switches ON with ports number you have your camera connected to.

* You will get an wrong message if you switch ON with ports that have no camera connected.

8. 12VDC Port 1 ~ Port 9 (CP-SV009-250W)
   12VDC Port 1 ~ Port 14 (CP-SV414-360W)
   12VDC Port 1 ~ Port 14 (CP-SV018-360W)

Model	12VDC	24VAC
CP-SV009-250W	1A , Green LED , Port : 5 - 9 2A , Orange LED, Port : 1 - 4	N/A
CP-SV414-360W	1A , Green LED, Port : 5 - 14 2A , Orange LED,Port : 1 - 4	1A , Orange LED , Port 15 - 18
CP-SV018-360W	1A , Green LED, Port : 5 - 18 2A , Orange LED , Port : 1 - 4	N/A

1) Connect all camera ports before connecting battery.
2) Connect battery before turning on UPS. (bypass switch must also be in " UPS mode "

5 OPERATION

5.1 Turning on the unit: The UPS automatically charges the Battery when the unit is connected to AC power. When the UPS is off, the green LED will flash every 2 seconds.
If the AC "auto turn-on" function is enabled during a power failure, the UPS will automically turn on once AC power is available.
If "auto turn-on" is disable, please press the button on the front panel for about one second for the UPS to provide power to the outlets.

5.2 Turning off the unit: Push the button for 4 seconds to turn the UPS power off.The UPS will turn off power completely within 10 seconds if there is a utility failure during off mode. If the utility power is normal, the UPS will continue to charge the battery.
When utility power is normal, please unplug the power cord if you want to turn off the UPS completely.

5.3 DC start: During a blackout, push the button for 4 seconds to turn on the UPS and enter into back-up mode. To turn off the power from UPS, please push the button for 4 seconds. After turning off the UPS, please wait for 10 seconds if you need to DC-start the UPS again.

*5.4 Battery protection:*Under back-up mode, when battery voltage reaches low or too high, the UPS will emit an alarm. If battery voltage exceeds the minimum or maximum rated limit the UPS will automatically turn off.

*5.5 Green mode function:*When"Green mode" function is enabled, the UPS will turn off the power within 60 seconds after blackout occurs with the power consumption lower than the pre-set level.

6 STORAGE

This unit is shipped from the factory with its internal battery fully charged, however, some charge may be lost during shipping and the battery should be recharged prior to use. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 10 hours.

Extended Storage

Storage Temperature	Recharge Frequency	Charging Duration
5 to 86℉ (-15 to 30℃)	Every 6 Months	10 Hours
86 to113℉ (30 to 45℃)	Every Month	10 Hours

10 hours

7 BASIC INDICATION TABLE

	STATUS	YELLOW LED	GREEN LED	RED LED	BUZZER
Backup Mode	Battery normal Load normal	2 flashes every 4 seconds	OFF		2 beeps every 8 seconds
	No load (For green mode function only)	One flash every 4 seconds	OFF		One beep every 8 seconds
	Over load (will shut down at 120% of full load)	2 flashes every 4 seconds	OFF	ON	Continuous beep
	Over Temperature	32 flashes every other 2 seconds	OFF		Depending on load situation
	O/P short circuit	32 flashes every other 2 seconds	OFF		32 beeps every other 2 seconds
	Low battery	4 flashes every second	OFF		4 beeps every second
	Over battery voltage (For external battery)	8 flashes every second	OFF		8 beeps every second
	Inphase lock (AC good, PLL working)	OFF	4 flashes every second	OFF	OFF

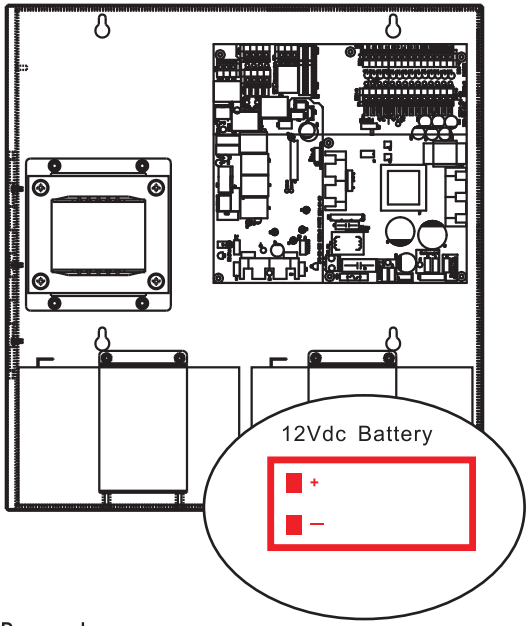
	STATUS	YELLOW LED	GREEN LED	RED LED	BUZZER
AC normal mode	Battery full	OFF	Continuous ON	OFF	OFF
	Battery charge 70%~90%	OFF	One blink every 8 seconds	OFF	OFF
	Battery charge 50%~70%	OFF	One blink every 4 seconds	OFF	OFF
	Battery charge 30%~50%	OFF	One blink every 2 seconds	OFF	OFF
	Battery charge 0%~30%	OFF	One blink every second	OFF	OFF
	Over load(shut off at 120% of full load)	OFF	**ON**		Continuous Beep★

Note"★":The buzzer will keep continuous beeping until the control button is pushed for one second.

	STATUS	YELLOW LED	GREEN LED	RED LED	BUZZER
OFF mode	AC I/P disconnected (UPS OFF completely)	OFF		OFF	
	AC I/P normal (Batt. In charging)	OFF	1 flash every 2 seconds	OFF	
	UPS timer is set (Through RS232)	1 flash every 2 seconds	1 flash every 2 seconds	OFF	

8 BATTERY REPLACEMENT

Note: Please read the cautions in the Safety Information Guide first!



Battery Replacement Procedures:

1. This UPS utilizes voltage that may be hazardous and should only be handled by certified electricians or qualified maintenance personnel.
2. The battery presents a risk of electrical shock and high short circuit current. Turn off UPS power to prevent risk of electric shock or switch to "AC Bypass" model if camera and DVR must continue running.
3. Unplug the "+" and "-" connected battery wires. Take precautions to keep the "+" and wires separate and do not allow contact with the circuit boards or the cabinet case.
4. Take the battery out.
5. Place the new battery into the UPS and connect the battery wires.

Note1: Take precautions to make sure the red wire is to "+" and the black wire is to "-".

Note2: Small sparks at the battery connections are normal during connection.

Note3: Do not directly touch any part of the circuit board without taking proper precautions first. The circuit board poses a high risk of electric shock if proper precautions are not taken.

Dispose of the old battery properly at an appropriate recycling facility or return it to the supplier in the new battery`s packing material.

9 TROUBLESHOOTING

If UPS is failed to show abnormal operation, firstly user can check following points step by step. If the UPS problem is still existing after checking following steps, please contact Technical Service Center to go further analysis by Exprienced Engineer.

Is the Master power switched on?
Is the UPS plugged into a correct working outlet?
Is the line voltage within the rating specified?
Is the fuse blowned (at rear panel)?
Is the UPS over loaded?
Is battery not fully charged? Dead battery? Charger failure?

Please provide the following information when call for service.

1. Model number, serial number.
2. Date of the problem occurred, date of purchase.
3. Full description of the problem, including load, LED, and alarm status, installation condition, working environment, etc.

TROUBLESHOOTING CHART		
PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE
UPS cannot turn on LED not light	ON/OFF/TEST/SILENCE button not pushed or push-time too short	Press the ON/OFF/ TEST/SILENCE button more than 1 second
	Battery voltage less than 10V	Recharge the Battery
	PCB failure	Replace the PCB, call for service
	Load less than 25w at battery mode	Normal condition,"No load shutdown function" is active

TROUBLESHOOTING CHART		
PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE
UPS always at battery mode	Power cord loose	Plug in the power cord
	AC fuse burn out	Replace the AC fuse
	PCB failure	Replace the PCB, call for service
Backup time too short	Battery not fully charged	Recharge the UPS at least 5 hours
	Battery defective	Replace the Battery, call for service
Buzzer continuous beeping	Overload	Remove some loads

10 SPECIFICATIONS

Model		CP-SV009-360W	CP-SV414-360W	CP-SV018-360W
Capacity		500VA/250W	700VA /360W	700VA /360W
Input	Voltage	110/115/120VAC or 220/230/240VAC		
	Voltage Range	80-145VAC or 154-280VAC		
	Frequency	47Hz~63Hz (Auto Sensing)		
Output	Voltage regulation(Batt. Mode)	110/115/120VAC or 220/230/240VAC		
	Frequency	50Hz or 60Hz +/- 1Hz		
	Waveform	Simulated Sinewave		
	Transfer Time	< 6ms (Typical)		
Output (12Vdc/CCTV)	DC Voltage(Adjustable)	12-13Vdc (12,12.5,13) selectable voltage range		
	Amps (@120Vac)	10A	14A	14A
	Watts	120W	168W	168W
	Ports	9 ports	14 ports	18 ports
Output (24Vac / CCTV)	Watts	None	100W	None
	Ports	None	4 ports	None
Battery	Battery Type	12V/7AH *1pc (7 AH*2 Optional)	12V/7AH *2pcs (9 AH*2 Optional)	12V/7AH *2pcs (9 AH*2 Optional)
	Recharge Time	< 6 Hours to 90% capacity	< 12 Hours to 90% capacity	
	User's Replacement	Yes		
	Battery Protection	Over discharge protection & short circuit Protection by fuse		
	Battery Back-up Time	35~50 minutes	55~75 minutes	60~80 minutes
Function	Display	LED status indicators for AC normal (Green), back-up(Yellow), UPS cut off (Red)		
	Alarm	Buzzer on for Back-up mode,Battery low,Overload		
	Output Short Protection	AC fuse and electronic circuit (Line mode); Electronic circuit (Backup mode)		
	Overload / Short Protection (Camera)	PTC 12VDC 2A * 4 ports 12VDC 1A * 5 ports	PTC12VDC 2A * 4 ports 12VDC 1A * 10 ports 24VDC 2A * 2 ports 24VDC 1A * 2 ports	PTC 12VDC 2A * 4 ports 12VDC 1A * 14 ports
	Lightning/Suge Protection	240joules		
	AVR (Auto. Voltage Regulation)	2-step Boost/1-step Buck		
	DC Cold Start Function	Yes		
	Auto.Restart UPS	Yes		
	Over/Under Voltage Protection	Yes		
Environment	Operating Temperature	0~40°C		
	Relative Humidity	0~95%, non-condensing		
	Audible Noise	< 40dB at 1M		
Physical	Unit Weight(lbs)	22lbs	24.5lbs	24lbs
	Dimension(H*W*D)	4.0 x 12.75 x 13.5 inches		
	Form Factors	Desktop or wallmount (screws included)		
Design,Manufaure,Servies		ISO 9001-2008		

*Battery backup time varies with equipment, configuration, battery age, temperature, etc. Turning off the monitor will extend backup time.
*additioinal batteries and cable are optional. Specifications are subject to change without further notice.