

USER MANUAL

Central Battery Systems | CCU 12V And CCU 24V Series



Features

Central Battery Systems by CCU 12V And CCU 24V Series or the central control unit is used to detect any abnormalities of the main power distribution system. In case of error or emergency, the unit is designed to allow the emergency lighting system to bear large loads or larger loads than that the automatic emergency light (complete unit) can. The 12 VDC or 24 VDC unit is compatible with halogen lamp or MR16 LED lamp. The unit installation and usage are centrally controlled so that it supplies power to the lamp installed.

Technical Specifications

CCU 12V Series

		CCU12V Series							
Rated Capacity		620W	720W	1000W	1100W	1400W	1900W		
Input	Voltage	220 Vac <u>+</u> 10%							
	Frequency			50	Hz	Hz			
Output	Voltage	12VDC (Battery Mode)							
Battery		Sealed Lead-Acid Battery							
Battery Ra	ated Voltage	12 V							
Charging Current		0-20A		0-35A 0-50A					
Protections		- AC, DC Fuse							
		- AC Under Voltage Protection							
		- Battery Low Voltage Cut-Off							
Operate Temperature		+10°C To +40°C							
Size LxWxH (mm)		620 x 350 x 750 620 x 400 x 950							

CCU 24V Series

					CC	CU24V Se	ries			
Rated Capacity		500W	600W	700W	950W	1100W	1200W	1440W	1900W	2200W
Input	Voltage		220 Vac ± 10%					•		
	Frequency					50Hz				
Output	Voltage		24VDC (Battery Mode)							
Battery			Sealed Lead-Acid Battery							
Battery Rated Voltage		24 V								
Charging Current		0-15A			0-25A 0-35A					
Protections		- AC. Fuse								
		- AC, DC Circuit Breaker								
		- Output Circuit Breaker								
		- AC. Input Over & Under Voltage								
		Protection								
		- Battery Low Voltage Cut-Off								
Operate O	fTemperature	+10°C To +40°C								
Size LxWxH (mm)		620 x 300 x950					620 x 40	00 x 950		

Indicators

AC. VOLTMETER	H1 CHARGE/FULL			
DC. VOLTMETER	TEST (Russ) ACFUSE	MAIN	DC.POWER	FAIL

AC. VOLTMETER		Indicating the input voltage.
DC. VOLTMETER	►	Indicating the battery voltage.
LED H1	►	Indicating the status of the input under voltage or over voltage.
LED Charge/Full	►	Indicating charging status.
SWITCH TEST	►	For testing the device's availability (during normal circumstance)
AC. FUSE	►	Short-circuit protection of AC input.
LED MAIN	►	Indicating the status of the input voltage of 220VAC.
LED DC.POWER	►	Indicating the status of the output voltage.
LED FAIL		Indicating the failure status of the control unit.

Installation and Operation

- 1. The inverter must be installed on the floo. Check the installation to make sure the unit is properly secured to prevent possible accidents.
- 2. The inverter should be installed indoors away from direct sunlight and rain or moisture.
- 3. Position to connect Circuit Breaker Battery, Circuit Breaker Ac input, and Circuit Breaker Output 1,2,3,4

Illustration for number 3

L

Circuit Breaker AC input





Circuit Breaker Battery

Circuit Breaker Output 1,2,3,4



4. Shut off every Circuit Breaker for preparing to connect AC Input, Load Output and Battery.

Figure showing the indications at the front of the unit



5. Connect the cables securely to the battery terminals to prevent damage (for models that does not come with the battery preconnected). Connect the cables as shown in the wiring diagram for the battery for model CCU12 VDC and CCU24 VDC. Connect the positive (+) and negative (-) cables correctly.



6. Connect the load to the terminal output of the central battery system. Check the short circuit of the load and the total wattage of each CCU 12V and CCU24V for how many outputs are there, then the output should be properly connected with the Load Output inside the cabinet at the power connector of the output of CCU 12 and CCU24 by connecting the wires must be corrected by connecting the red positive light to the positive (+) at the positive electrode (+) and the black positive light to the negative (-) at the negative electrode (-). Connecting the output wires, each model may have more than 1 point, at most 4 output points, each output current should not be more than 50 Amp for general products and check the internal order that the wiring point fasten firmly, is not lose or has scraps, must not be in the cabinet, may cause a short circuit.

Diagram showing how to connect the load to the Output terminal



Method 1, connection for 1 Output.

Method 2, connection for 2 Output.



Diagram showing how to connect the load to the Output terminal

Method 3, connection for 3 Output.



Method 4, connection for 4 Output.



7. Connect the AC.Input cable to the Input 220 VAC terminal inside the unit. The Line cable should be connected to the L terminal, Neutral cable to the N terminal and Ground cable to the G terminal. All cable connections should be secured and no foreign objects should be in the unit that could cause a short-circuit.



Diagram showing how to connect the AC.Input cable to the terminal

8. Test the battery power input into the unit by setting the DC Circuit Breaker to ON, the indicators on the unit should show the following.



9. Provide the unit with a 220VAC current by setting the AC Input Circuit Breaker to ON, the indicators on the unit should show the following.

Figure showing the indicati	ions at the fro	nt of the unit				
	220 AC. VOLTMETER 24 XC. VOLTMETER	CHARCE/FULL EFST CHARCE/FULL CHARCE/FULL CHARCE/FULL CHARCE/FULL CHARCE/FULL	MAIN	DC.POWER	FAIL	
AC. VC DC. VC LED HI LED CI LED M	DLTMETER DTTTTTTT DLTMETER DLTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	Shows the c Indicating th The indicato The indicato Che indicato current shou	urrent level at ne battery vol ⁻ or is not showi or showing that or showing that uld be on.	t the Input to B tage. ng. at the battery i at the unit is re	be about 220 is charging sho eceiving a 220	/AC. ould be on . VAC
LED D 4 LED F 4	C.POWER >	The indicato	or is not showi or is not showi	ng. ng.		

10. Setting the AC Input Circuit Breaker to ON.

Figure showing the indications at the front of the unit

AC. VOLTMETER	HI CHARGE/FULL TEST ACFUSE MAIN MAIN DC.POWER FAIL
AC. VOLTMETER	Shows the current level at the Input to be about 220VAC.
DC. VOLTMETER	Indicating the battery voltage.
LED H1	The indicator is not showing.
LED Charge/Full	The indicator showing that the battery is charging should be on
LED MAIN	The indicator showing that the unit is receiving a 220VAC current should be on.
LED DC.POWER	The indicator is not showing.
LED FAIL	The indicator is not showing.

11. Set the AC Input Circuit Breaker to Off to simulate the power outage status. The unit will display the status as follows.

Figure showing the indications at	the front of th	e unit		
AC. VOLTMET	ER	MAIN	DC.POWER	FAIL
AC. VOLTMET	ER 🕨 Thei	ndicator is not shov	ving.	
DC. VOLTMET	ER 🕨 India	ating the battery vo	oltage.	
LED H1	The information of the second seco	ndicator showing th battery should be c	nat the unit is u on.	sing the power
LED Charge/F	ull 🕨 Thei	ndicator is not show	ving.	
LED MAIN	The i	ndicator is not shov	ving.	
LED DC.POW	ER ► The i from	ndicator showing th battery should be c	nat the unit is u on.	sing the power
LED FAIL	The i	ndicator is not show	ving.	

12. Set the AC Input circuit breaker to On to test the unit by pressing the TEST switch.

Figure showing the indications at the front of the unit					
220	е н •				
AC. VOLTMETER	CHARGE/FULL C TEST MAIN ACFUSE C ACFUSE C C DC.POWER FAIL FAIL				
AC. VOLTMETER	 Shows the current level at the Input to be about 220VAC. Indicating the batton violtage 				
LED H1	 The indicator showing that the unit is using the power from battery should be on. 				
LED Charge/Full	 The indicator is not showing. 				
LED MAIN	• The indicator showing that the unit is receiving a 220VAC current should be on.				
LED DC.POWER	The indicator showing that the unit is using the power from battery should be on.				
LED FAIL	• The indicator is not showing.				

Malfunction indicator of AC Input (LED H.1)

1. Under Volt is AC INPUT status, power supply of 0-160VAC. The LED H.1 will turn on to indicate with red light.

Figure showing the indications at the front of the unit



2. Over Volt is AC Input status, power supply over 270VAC. The LED H.1 will turn on to indicate with orange light.

Figure showing the indications at the front of the unit



Testing the unit's operation

- 1. To test the operation of the unit, user can switch the AC Input circuit breaker to "OFF" position, the unit will immediately supply voltage to emergency light.
- 2. To stop testing the operation of the unit, user can switch the AC Input circuit breaker to "ON" position, the unit will turn off and return to ready mode.

Maintenance

- 1. Every 1 month, to test the Backup power supply system, user can switch the AC input circuit breaker to "OFF" position for 30 minutes, then switch the AC input circuit breaker back to "ON" position.
- 2. Every 6 months, to test the Backup power supply system, user can switch the AC input circuit breaker to "OFF" position for 60 minutes, then switch the AC input circuit breaker back to "ON" position.

Initial Trouble Shooting

Cause	Problem	What to do
- 220 VAC light not getting to the unit.	- The power socket might not have any power.	- Check to make sure that the power socket of the home or building is providing a 220 VAC current.
	- Circuit Breaker Main is turn off or in the OFF position.	- Check to make sure that the Circuit Breaker Main is in the ON position.
	- Fuse AC. Input is in unavailable condition.	- Contact customer service.
- The Backup power supply of the unit has failed .	 Circuit Breaker Battery is turn off or in the OFF position. Circuit Breaker Output Battery is turn off or in the OFF position. 	 Check to make sure that the Circuit Breaker Battery is in the ON position. Check to make sure that the Circuit Breaker Output is in the ON position.
- Emergency light only turns on for a short time after the power went out.	- The battery is not fully charged. - The battery has degraded.	- Fully charge the battery. - Contact customer service to replace the battery.
- The unit shows failure status.	- Circuit Breaker Output Battery is turn off or in the OFF position.	- Check the load connection.

Important Note on Using the Unit

- 1. Please read the manual carefully before installation and operation.
- 2. Installation area should be good ventilation.
- 3. Do not connect the battery in reverse polarity.
- 4. Check the power load before installing the unit.
- 5. Do not use with the power load when it is in an unstable condition.
- 6. The power load must be an emergency light only. Do not use with the other power load that is not approved by the manufacturer.
- 7. The unit should be stored in temperatures under 25 Degree Celsius and the battery should be charged every 1 month to maintain its operational life.

Terms for Warranty and Service

- The product will only be under warranty if the customer fills in the "warranty card" and return the "return part" to the company within 7 days of purchasing the product. If this is not done within the specified time, then the warranty will be considered void.
- 2. The warranty only covers the unit's internal parts for the duration specified by the company counting from the date of purchase.
- 3. Please show the warranty card every time when contacting our service department or the dealer you purchased the unit from.
- 4. The warranty will be considered void in the following cases.
 - The unit has been used outside of its intended use specified in the manual.
 - The unit has been used with equipment that does not meet the specifications specified within the manual.
 - The unit has been damaged from impact, for example parts are dented, scratched missing or distorted.
 - The unit has been modified or repaired by people not officially certified by our compan.
 - The Sticker Warranty Void has been removed or torn.
 - The unit is damaged from negligence or incompetent use, for example, the battery is swollen, the batter has been overcharged, the battery has been damaged from quick charging, the battery has been short-circuited, the battery's charged has been completely drained.
 - The unit has been stored improperly, for example, it was exposed to moisture causing rust and damage to the internal circuitry.
 - Damaged was caused by a malfunction in the AC power supply.
 - Damage from natural disaster such as fire, moisture, submersion in liquids, chemical damage or from unavoidable circumstances.
 - Damage from animals or insects.

Note : Please read the manual carefully before installation and operation to understand how to properly operate the unit.

For any further questions about your product please feel free to contact SUNNY's customer service department. Tel. (+66) 02-948-4450-2 E-mail: service@sunnyemergencylight.com

IsOn Import-Export Co., Ltd. 2915-2917 Ladprao Road, Klongjan, Bangkapi, Bangkok 10240

