USER MANUAL For Central Battery Systems

CCU12-620 to CCU12-1900 and
CCU24-500 to CCU24-2200

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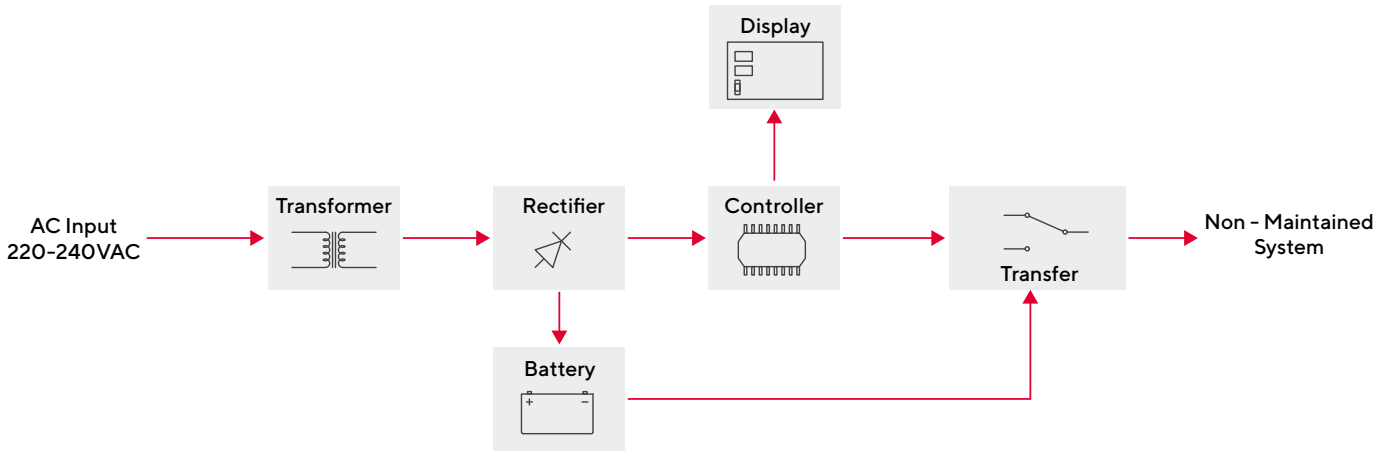
Part 1
Overview Central Battery Systems

1.1 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 12VDC and 24VDC 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.

Principle of Operation – Central Battery Systems: 12V & 24V Series

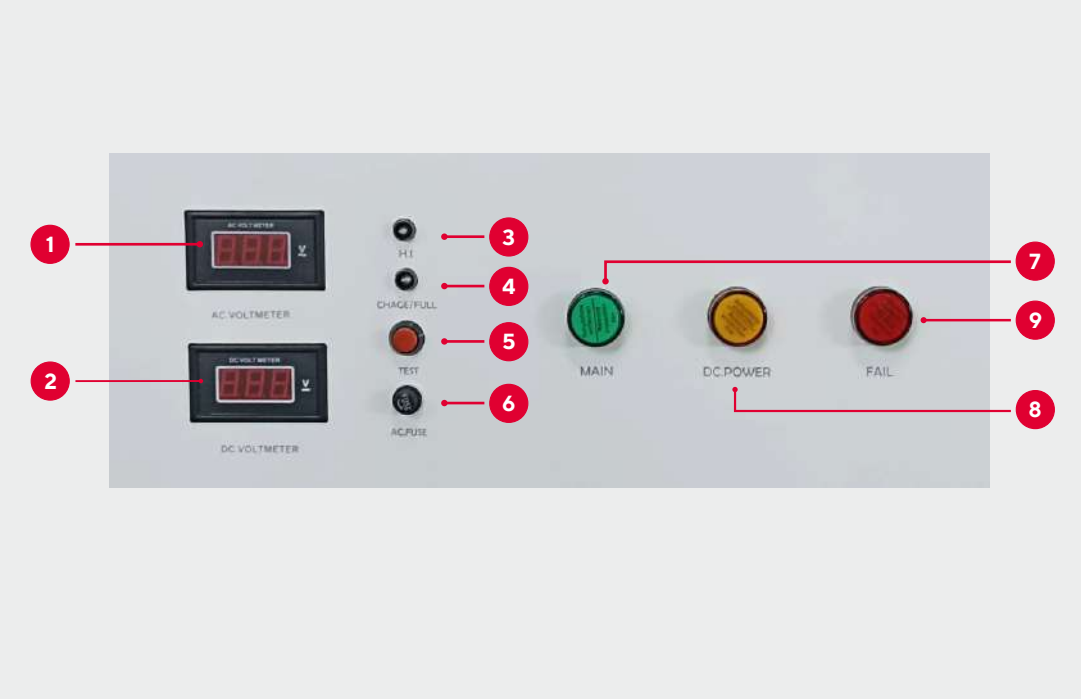


1.2 Technical specifications

Model		CCU12-620	CCU12-720	CCU12-1000	CCU12-1100	CCU12-1400	CCU12-1900
Rated Capacity (Wattage)		620	720	1000	1100	1400	1900
Mode of Operations		Non - Maintained					
Input	Voltage	220 -240VAC					
	Frequency	50Hz					
Output	Voltage	12V					
Terminal Output		2 Output				3 Output	4 Output
Maximum Load (Wattage)		620	720	1000	1100	1400	1900
Battery Type		Sealed Lead – Acid Battery					
Battery Rated Voltage		12V					
Protections		- Overload & Short circuit - Battery Low voltage cut-off - AC Input Low Voltage Protections					
Operating Temperature		10°C to 50°C					
Weight (kg)		76.00	77.00	99.50	119.00	125.00	171.00

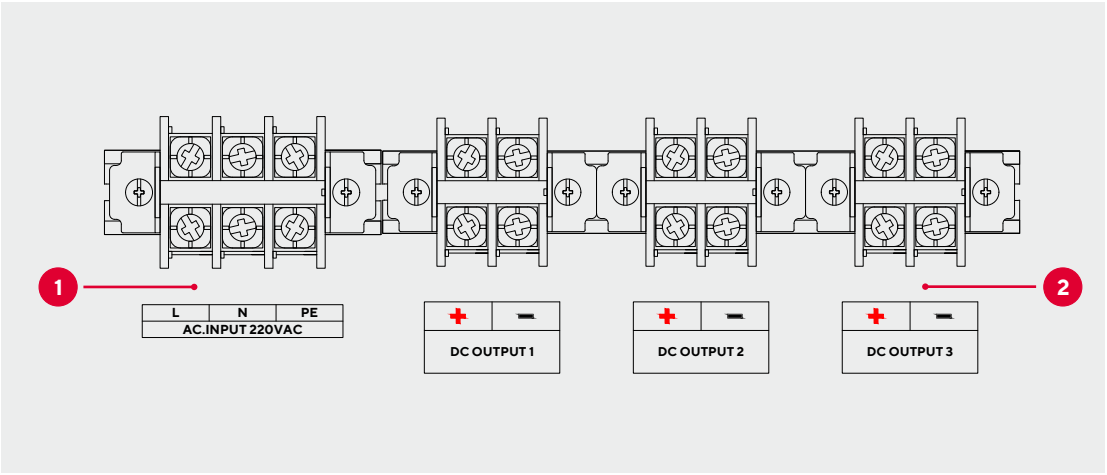
Model		CCU24-500	CCU24-600	CCU24-700	CCU24-950	CCU24-1100	CCU24-1200	CCU24-1440	CCU24-1900	CCU24-2200
Rated Capacity (Wattage)		500	600	700	950	1100	1200	1440	1900	2200
Mode of Operations		Non - Maintained								
Input	Voltage	220 -240VAC								
	Frequency	50Hz								
Output	Voltage	24V								
Terminal Output		1 Output				2 Output				
Maximum Load (Wattage)		500	600	700	950	1100	1200	1440	1900	2200
Battery Type		Sealed Lead – Acid Battery								
Battery Rated Voltage		24V (12Vx2)								
Protections		- Overload & Short circuit - Battery Low voltage cut-off - AC Input Low Voltage Protections								
Operating Temperature		10°C to 50°C								
Weight (kg)		63.10	74.70	100.00	104.00	130.00	135.00	136.00	181.00	228.00

1.3 Status Indicators



No.	Symbol	Description
1	**AC. VOLTMETER**	Indicating the input voltage
2	**DC. VOLTMETER**	Indicating the battery voltage
3	LED **H1**	Indicating the status of the input under voltage or over voltage
4	LED **Charge/Full**	Indicating the status of battery charging/ full
5	Switch **TEST**	For testing the device availability (during normal circumstance)
6	**AC. FUSE**	Short-circuit protection of AC input
7	LED **MAIN**	Indicating the normal operating voltage range of input
8	LED **DC.POWER**	Indicating the normal operating voltage range of output
9	LED **FAIL**	Indicating the failure warning of the control unit

1.4 Electrical Connector



No.	Symbol	Description
1	AC INPUT 220V	For supplying AC220V power into the unit
2	OUTPUT 12V,24V	Terminal for connecting the load power output

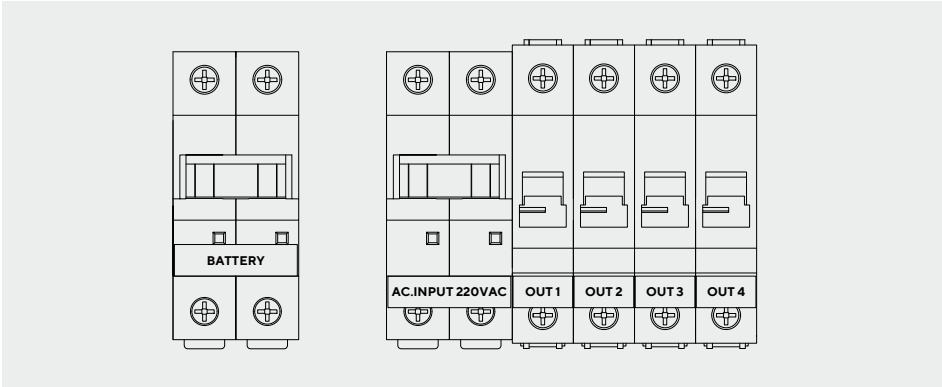
Part 2
Installation and Operation

2.1 Basic Installation and Operation Steps

1.) The control cabinet is floor-mounted. According to the cabinet structure, ensure proper installation to prevent accidents due to improper setup.

2.) Install the cabinet indoors in a well-ventilated area, free from direct sunlight, rain, or water spray.

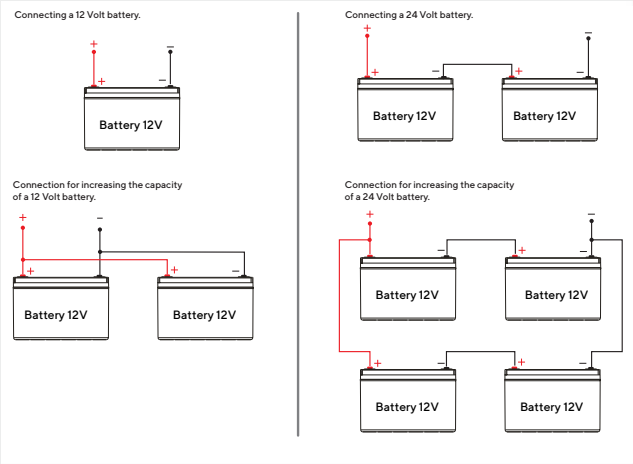
3.) Connection positions for Circuit Breaker Battery, Circuit Breaker AC Input, Circuit Breaker Output 1, 2, 3, 4.



4.) Turn OFF all Circuit Breakers in preparation for connecting AC Input, Load Output, and Battery.

5.) Connect the battery terminals securely to prevent damage from loose connections.

Connect battery cables as per the wiring diagram for the specific model. For CCU 12VDC and CCU 24VDC, connect battery terminals in the cabinet correctly according to the positive (+) and negative (-) wires.



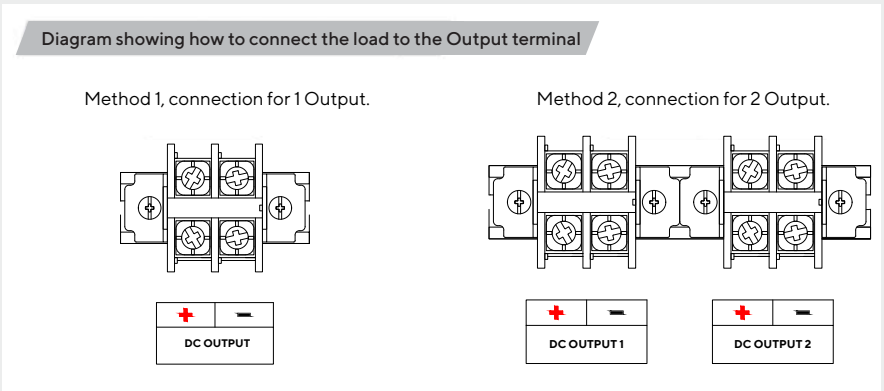
6.) Check the readiness of the load output.

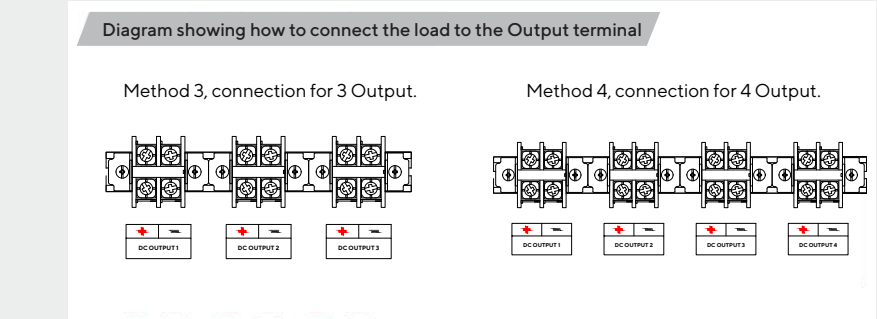
Ensure there is no short circuit and that total load wattage does not exceed the system capacity.

Connect load cables to the Output Terminal of the unit according to polarity: Positive (+) and Negative (-).

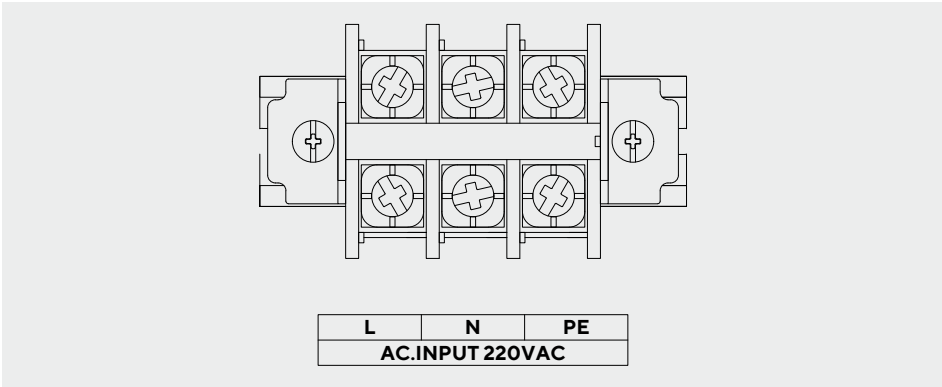
Ensure all internal wiring is secure and free from debris that could cause short circuits.

If there is more than one Output Terminal, distribute the load evenly across all outputs before wiring.

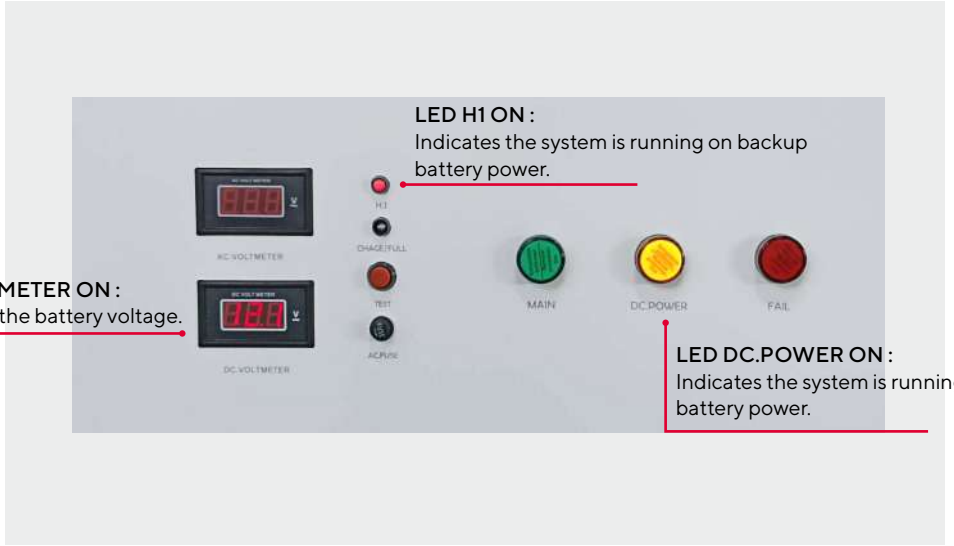




7.) Connect the main input cable to the terminal inside the cabinet at the 220 VAC input point. The wiring must be correct: Line wire to terminal L, Neutral wire to N, and Ground wire to PE. Check that all wiring connections are tight and that there are no loose objects inside the cabinet that could cause a short circuit.

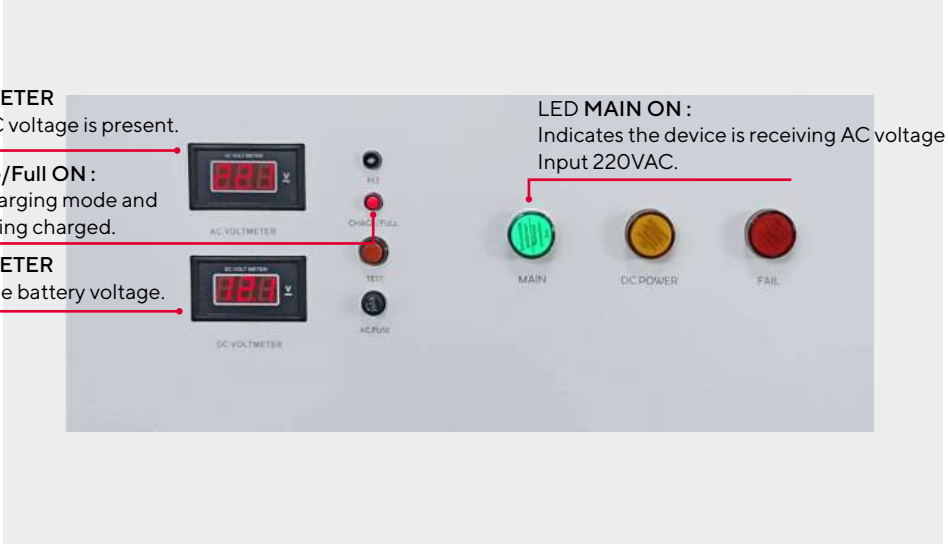


8.) Supply DC voltage from the battery to the system by switching ON the DC Circuit Breaker. The device will indicate its operational status as follows:



9.) Supply 220VAC power to the system by switching ON the AC Input Circuit Breaker. The device will indicate its operational status accordingly.

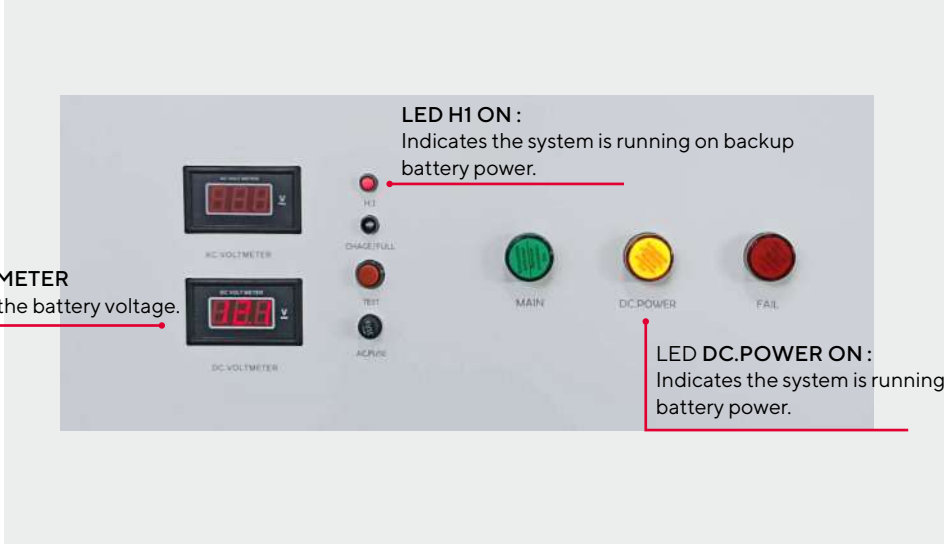
10.) Switch ON the Output Circuit Breaker to prepare the cabinet for use.



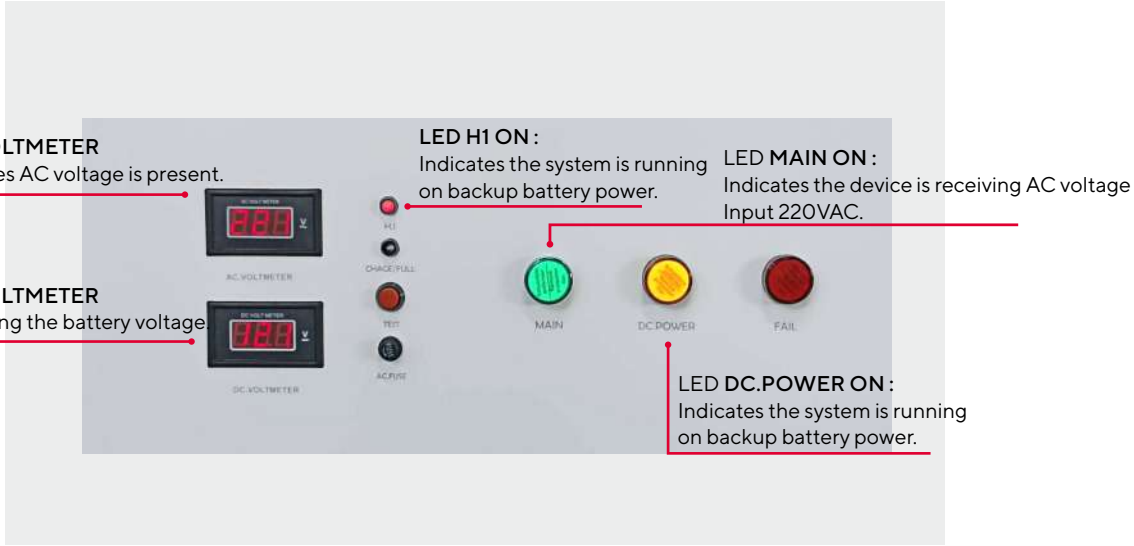
2.2 Initial Device Function Testing

1.) Switch OFF the AC Input Circuit Breaker to simulate a power outage.

The device will indicate the following statuses:



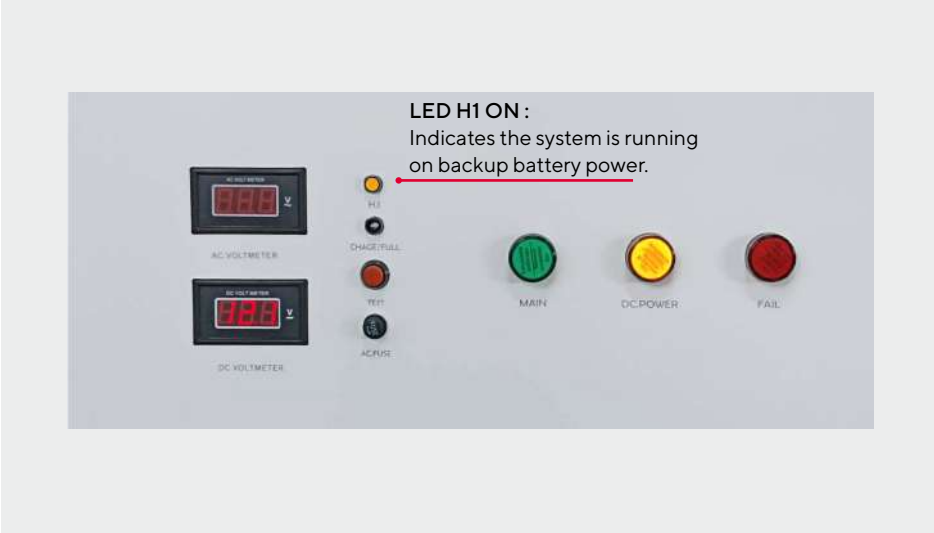
2.) Switch ON the AC Input Circuit Breaker and press the TEST switch on the control panel to initiate system testing.



2.3 Initial Warning Notifications

1.) When input voltage drops to 140–160VAC (H.1), the system shows a red status and switches to backup power immediately.

2.) When input voltage exceeds 270VAC (H.1), the system shows an orange status and switches to backup power immediately.



Part 3
Maintenance

3.1 Device Maintenance

1.) Every 1 month, test the backup system by turning OFF the AC Input Circuit Breaker for 30 minutes, then turn it ON again.

2.) Every 1 year, test the backup system by turning OFF the AC Input Circuit Breaker for 120 minutes, then turn it ON again.

3.2 Initial Trouble Shooting

Cause	Problem	What to do
- No power to the system after power is supplied; Main LED light is off.	- Wall outlets have no voltage. - The system displays a "Fail" status.	- Check to make sure that the power socket of the home or building is providing a 220 VAC current. - Check to make sure that the Circuit Breaker Main is in the ON position.
- During a power outage, the emergency lighting control system does not function.	- 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 lighting provides only brief illumination during an outage.	- Battery is not fully charged. - Battery has expired or deteriorated.	- Fully charge the battery. - Contact customer service to replace the battery.
- The system displays a "Fail" status.	- Circuit Breaker Output Battery is turn off or in the OFF position.	- Check the load connection.

3.3 Important Note on Using the Unit

1.) Always review the product specifications and instructions before each use.

2.) Install the unit in a well-ventilated area.

3.) Do not connect batteries with reversed polarity.

4.) Inspect the load wiring every time before installation and use.

5.) Do not connect wiring or loads that are not in good working condition.

6.) The system is intended for use only with emergency lighting.
Do not connect other equipment not approved by the manufacturer or designer.

7.) For battery storage: Keep the battery in a room at 25°C and recharge it every 3 month to maintain voltage and lifespan.

Part 4
Terms for Warranty and Service

4.1 Terms for Warranty and Service

1. The Warranty will only be covered if the customer fills in the "warranty registration form" and mail the return part back to the company within 7 days from the day of purchase. If this is not carried out the warranty will be considered void.
2. The warranty only covers the unit's internal parts. The conditions and durations for the warranty of each part is as specified and the duration of the warranty is calculated from the date of purchase.
3. Please show your warranty card every time you contact our service center or the dealer you purchased the product from.
4. Products that fall into the following category are considered not covered by the warranty.
   - 4.1 The product was used in a way not specified in the manual.
   - 4.2 The product was used with accessories not meeting the required specifications specified in the manual.
   - 4.3 The product seems to have been damaged from being dropped or from strong impact, for example, the parts are loose, dented, scrapped or misshapen.
   - 4.4 The product has been repaired or modified by personnel not authorized by our company.
   - 4.5 The Warranty Void sticker is torn or removed.
   - 4.6 The product is damaged from careless use or incorrect maintenance, for example, the battery is swollen from overcharging, quick charging was used on the battery, the battery terminals have been short-circuited, the unit was used until the battery was completely discharged and not recharged immediately, the product was stored for long periods until the Battery Checker warning activates and still it is not plugged-in to charge or taking the battery to normal temperature conditions and not recharging it every 1 month.
   - 4.7 The product was stored in an unsuitable environment, for example, a location with moisture or water vapor.
   - 4.8 The product was supplied with a faulty AC power supply such as electrical overvoltage, electrical current surges, or lightning strikes entering the AC power line.
   - 4.9 Damages from natural causes such as fire, being summered in fluids, humidity, chemicals or force majeure.
   - 4.10 Damages from insects or animals.

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

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