

DC UPS
Installation & Operation Manual
Model: DUPS-1232/1232G

PRODUCT INTRODUCTION

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1.1 Federal Communications Commission Interference Statement
 This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. To assure continued compliance, use only shielded interface cables when connecting to computer or peripheral devices. Any change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

1.2 General Description
 The DC UPS (DC Power Supply /Battery Back-Up Unit) is designed to be mounted inside a customer premise. The DC UPS converts 90-264 Vac to 12Vdc and provides four to eight hours of backup battery power for lifeline equipment service. Alarm outputs are available on the DC UPS to monitor the status of the backup battery (On/Low/Faulty/Missing). The DC UPS indicates its status to the resident with LEDs and to the equipment by a signal return connection.

1.3 Components
 The DC UPS consists of an integrated AC to DC power supply and battery backup unit. The DC UPS houses a dedicated battery charger to maintain a 12V, 7AH (or 7.2Ah) lead-acid sealed battery, battery monitoring and alarm circuitry. User interface for the dedicated power supply consists of a single LED to indicate correct DC output. The DC UPS contains four indicator LEDs to provide operational status at a glance, status audible alarm and two customer operation buttons that one to make the unit enter the Cold Start mode when user replace the battery and the other to Enable/Disable audible alarm.

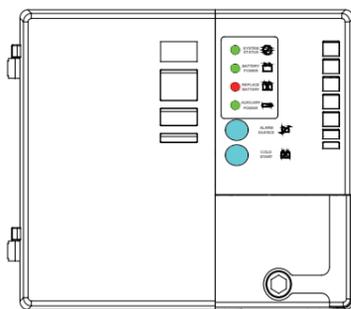


Figure 1: DC UPS Power Supply

IMPORTANT SAFETY NOTES

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- ONLY qualified personnel should service this equipment.
- SAVE THESE INSTRUCTIONS - This manual contains important instructions for our inverter that should be followed during installation and maintenance.
- Verify line voltage requirements and the supplied line voltage prior to installation.
- Verify branch circuit breaker or fuse on the service feed is correct for the equipment being installed.
- The battery contains hazardous currents and may present a burn hazard if damaged or shorted.
- The following precautions should be observed when working on the unit:
 1. Remove watches, rings, or other metal objects.

2. Wear protective clothing and eye protection when working with batteries and installing this equipment.
3. Always carry a water supply to wash eyes and/or skin if exposed to battery electrolyte.
4. Use tools with insulated handles.
5. Examine the packing container for damage. Notify the carrier immediately if damage is present.
6. Do not disassemble the unit.
7. Do not operate near water or excessive humidity.
8. Keep liquid and foreign objects from getting inside the unit.
9. Do not operate close to gas or fire.
10. Do not operate if the unit is leaking liquid or if any liquid residue is present.
11. Auxiliary power source needs to use Alkaline battery (1.5V*12pcs)

2.1 Electrical Warnings

- Servicing this equipment may require working with protective covers removed and utility power connected. Use extreme caution during these procedures.
- Check that the power cord(s), plug(s), and output terminal are in good condition.
- No user serviceable components other than the battery are present in the DC UPS.

2.2 Battery Warnings

- Danger of explosion if battery is incorrectly connected or replaced. Use only approved replacement batteries.
- Worn-out or damaged batteries are considered environmentally unsafe. Always recycle used batteries or dispose of the batteries in accordance with all federal, state and local regulations.
- Any gel or liquid emission from a valve-regulated lead-acid (VRLA) battery contains sulfuric acid, which is harmful to the skin and eyes. Emissions are electrically conductive and corrosive.
- Batteries produce explosive gases. Keep all open flames and sparks away from batteries.
- Batteries contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Battery post terminals and related accessories contain lead and lead compounds. Wash hands after handling (California Proposition 65).
- Wear protective clothing and eye protection whenever installing, maintaining, servicing, or replacing batteries.
- If any battery emission contacts the skin immediately and thoroughly wash with water. Follow approved chemical exposure procedures.
- Neutralize any spilled battery emission with the special solution contained in an approved spill kit or with a solution of one pound Bicarbonate of soda to one gallon of water. Report chemical spills and seek medical attention if necessary.
- Always replace batteries with new batteries of an identical type and rating.
- Never use non-insulated tools or other conductive materials when installing, maintaining, servicing or replacing batteries.
- A battery showing signs of cracking, leaking, or swelling should be replaced immediately with a battery of identical type and rating.

INSTALLATION

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3.1 Prior to Installation

Installation of the unit must be performed by skilled technicians and electricians familiar with electrical equipment. Do not allow unqualified personnel to handle, install, or operate the equipment. Locate a location for the DC UPS within 6 feet or 8 feet power cord of an existing AC receptacle. Different countries have different types of power cords as shown in the specifications.

3.2 Mechanical Installation

Install this unit in a sheltered location away from direct contact with water and rain.

3.3 Mounting Orientation

Locate a stud within the wall the unit is mounted and screw 2, #10-24 pan head screws 2.5" apart into the stud, leaving 1/2" of the shaft of the screw exposed below the screw head. Mount the unit onto the screws and tighten the screw firmly to prevent the unit from sliding after mounting. Ensure that the door has sufficient space to open.

1. Unit must be installed with battery removed.
2. Place the unit against the wall, and using the keyholes (located on rear of enclosure) as a template, drill pilot holes for two 10-24 pan head screws.
3. Insert screws into each hole, leaving approximately 1/2" of screw protruding from wall. Align keyholes with screws, and slide unit into place. Tighten screws firmly.
4. Connect battery wires. Verify that red wire is connected to positive terminal, and black wire is connected to negative terminal. Unit will power up.
5. Carefully insert battery into unit. Do not pinch battery wires. Close front panel.
6. Install AC power cord.

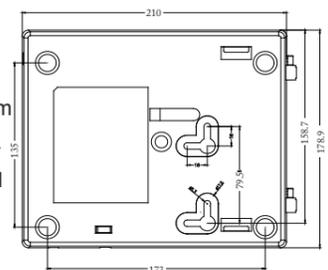


Figure 2: Rear View (Unit: mm)

3.4 Power Wiring Notes

The DC UPS has no electrically conductive parts exposed to the user.

3.5 Alarm Connection

To access the craftsperson interface a standard 216 tool is required.

3.5.1 Alarm Connections

- Alarm connections are made using the supplied insulation displacement connector (IDC).
1. Verify DC UPS is disconnected from AC power.
 2. Connect the 5-wire cable to the IDC in Figure
 3. The connector pins are labeled with their function. Refer to the specific instructions from the equipment supplier to determine what alarms are accepted from the DC UPS to the equipment.

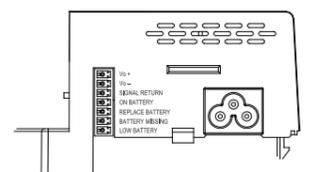


Figure 3: Alarm Signal Craft Interface

3.6 Alarm Conditions/Action (see table1)

3.7 AC Wiring Connection

The Power Supply will come with a separate power cord. The AC plug must be plugged into a grounded 3-wire style of AC receptacle for proper equipment operation.

table1

TYPE	Condition	Alarm Action
ON Battery	Battery being discharged	Open
Replace Battery	Battery failed self test	Open
Battery Missing	No battery installed or battery disconnected	Open
Low Battery	<45% capacity remaining	Open

4.1 Start-Up

The DC UPS starts once the AC power cord is plugged in. Connecting the battery only can not start the power supply, the AC supply must be connected. Once the power supply has started the unit will operate on the battery if the AC supply voltage should fail or the power cord be disconnected.

4.2 Controls

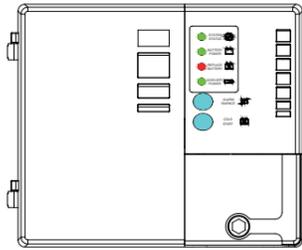


Figure 4: Front Panel LED and Controls

One user control is present in the form of two blue buttons on the front cover of the DC UPS.

The Cold Start button will reconnect the battery to discharge mode when user replace another fresh battery on AC outage.

Table 2 describes the functions of the two blue buttons.

Function	Symbol	Type	Location	Function
ALARM SILENCE		Push	Front Cover	Press and hold the Alarm Silence button for 1-2 seconds to mute/ restore alarm. Muting remains effective for 24 hours.
COLD START		Push	Front Cover	Reconnect the battery discharge when user replace another fresh battery.

Table 2: Customer Button Operation

4.3 Operational LEDs

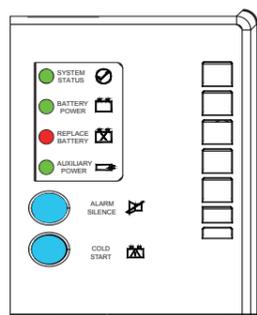


Figure 5: DC UPS Front Panel LEDs

Four status LEDs are displayed on the front panel of the DC UPS. The operation of the DC UPS can be assessed using these LEDs and Table 3.

TYPE	Symbol	Condition	Alarm Action
System Status		System ON and normal, idle or discharging	ON GREEN
Battery Power		Battery Charging	OFF
		Battery discharging	ON GREEN
		<45% capacity remaining	FLASH GREEN
Replace Battery		Battery failed self test	ON RED
Auxiliary Power		Aux source connected to unit.	ON GREEN

Table 3: LED Indicators

4.4 Auxillary Power Connection



The Auxiliary Power Connection is a connection point for customer-supplied DC input voltage (20VDC maximum). When an Auxiliary power source is plugged into the DC UPS, the equipment will be supplied from the auxiliary source. The battery inside the DC UPS will not charge through the auxiliary power but will charge if AC power is present. The auxiliary port is a male coaxial power style connector (3.5mm OD; 1.3mm ID), positive connected to the center pin.

The auxiliary power source can remain attached to the DC UPS indefinitely without any adverse affect to the DC UPS, battery, or auxiliary power source. If the DC UPS has stopped operating due to a long AC power failure and complete depletion of the DC UPS battery, the DC UPS will start to operate once an Auxiliary supply is plugged in the auxiliary port.

4.5 Audible Alarm

TYPE	Condition	Buzzer
Input Power Failure	Loss of input power	Beeps when power loss
Replace Battery	Battery self test fails	Beeps once every 15 minutes.
Low Battery	<45% capacity remaining	Beeps 4 times/minute
On Battery	Battery being discharged	None
Battery Missing	No battery installed or battery disconnected	None

Table 4: Audible Alarm Actions

5.1 Maintenance Mode

Every 45 days the DC UPS automatically self tests the battery to determine its remaining useful life. No user intervention is needed. If the unit detects a failed battery, the "Replace Battery" LED indicator on the unit will illuminate.

5.2 Battery Replacement

1. Open the front cover of the DC UPS.
2. Push the tabs retaining the battery, one above and one below, outward and remove the battery.
3. Disconnect the jack connecting the battery harness to the DC UPS.
4. Disconnect the battery harness from the battery terminals.
5. Reconnect the battery harness to a new, identical type battery.
6. Reconnect the jack of the battery harness to the DC UPS.
7. Push the battery retaining tabs outward and insert the battery into the DC UPS. Make sure the wires of the battery harness are free and not pinched by the battery or the door.
8. Close the door of the DC UPS.

Note: During an AC outage if the battery in the UPS needs to be replaced, you must use the Cold Start button to restart the UPS after the battery is replaced. First replace the existing battery using the instructions already provided in this manual, and then reconnect the fresh battery. Second you must press the Cold Start button to restart the UPS (only needed during an AC outage).

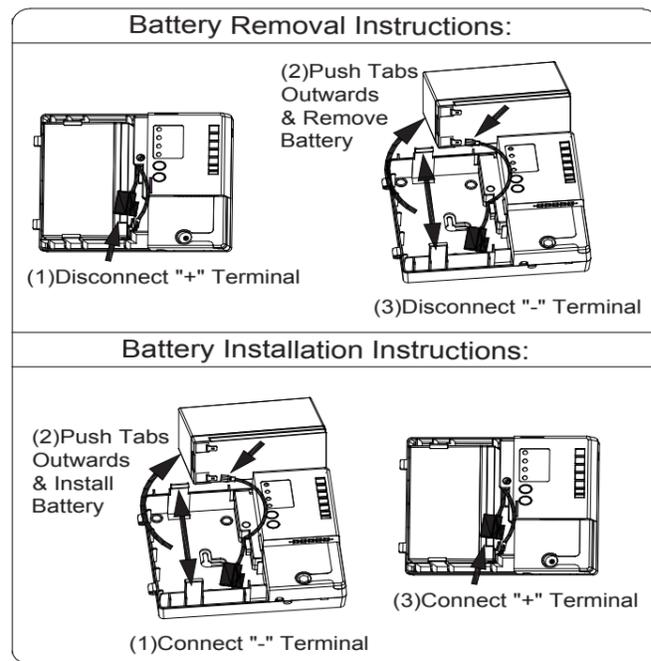


Figure 6: Battery Replacement

Model	DUPS-1232/1232G	
AC Input	90 to 264 VAC, 50/60 Hz	
Input Connector	IEC 320/C5 3-wire	
Input Cord	USA model: NEMA 5/15 8 ft @ 3-prong / with GND	
	GR/ UK/ AU model: 6 ft @ 3-prong / with GND	
Auxiliary Input	12.5 to 20 VDC (Alkaline Battery)	
DC Output	13.3 VDC typical	
Environmental	Temperature	-20°C to 50°C
	Humidity	Operation: 5% to 95%, non-condensing
Battery Type	12V/ 7Ah Sealed Lead Acid Battery	
Safety	UL 60950-1, CAN/CSA-C22.2 No. 60950-1, IEC 60950-1, EN 60950-1, CE,	
EMC	FCC Part15, EN55022(CISPR 22) Class B, C-Tick (AS/ NZS CISPR 22) Class B, EN 300386-1	
Dimensions	Height	178.9 mm/ 7.04"
	Width	210 mm/ 8.26"
	Depth	78 mm/ 3.07"
Weight	3.34Kg/ 7.42lb (net)	

7.1 Recycling Information

Your UPS contains a Non-spill able Sealed Lead Battery. On the battery, you will find the battery name. Please refer to the chart below for recycling information.

Battery Name	Recycling Inside the USA	Recycling Outside the USA
BB Battery	(800) 278-8599	N/A
CSB Battery	(800) 738-7372	1 (817) 244-4415
VISION Battery	(877) 730-2877	N/A
RITAR Battery	(800) 273-8599	N/A

7.2 CAUTION!

- Internal battery voltage is 12V DC.
- The unit is intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants).
- The battery used is Sealed Lead Batteries. The battery must be recycled.

Note: Wall mount screws distance

