

# BORRI<sup>®</sup> LEONARDO UPS

## Battery box





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## 1 Safety instructions

### Save these instructions

This manual contains important instructions that should be followed during installation and maintenance of the battery box and batteries.

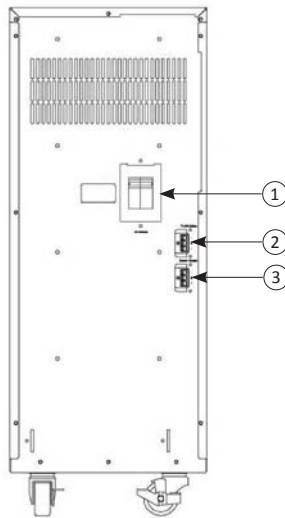
### An important notice

- This battery box is connected to an UPS. There will be over 240 DC voltage at the output terminals if the UPS or DC breaker is turned on.
- Do not try to repair the unit yourself, contact your local supplier or your warranty will be void.
- To eliminate any overheating of the battery box, keep all ventilation openings free from obstruction and do not place any foreign objects on top of the battery box. Keep the battery box 30 cm away from the wall.
- Make sure the battery box is installed within the proper environment as specified. (0°C -40°C and 30-90% non-condensing humidity)
- Do not install the battery box under direct sunlight. Your warranty will be void if the batteries fail due to overheating.
- This battery box is designed for indoor use only.
- This battery box is not designed for use in dusty, corrosive and salty environment .
- The warranty for this battery box will be void if water or other liquid is spilt or poured directly onto the battery box. Similarly we do not warrant any damage to the battery box if foreign objects are deliberately or accidentally inserted into the battery box enclosure.
- The battery will discharge naturally if the system is unused for a period of time.
- It should be recharged every 2-3 months if unused. If this is not done, then the warranty will be null and void. During normal operation, the batteries will be automatically remained in charged condition.
- Servicing of batteries should be performed or supervised by trained personnel with knowledge of batteries and the required precautions
- When replacing batteries, replace with the same quantity, type & capacity.
- CAUTION - Do not dispose of battery or batteries in an open fire. The battery may explode.
- CAUTION - Do not open or mutilate the batteries. The electrolyte from the batteries is toxic and harmful to the skin and eyes.
- CAUTION - Risk of electric shock - battery circuit is not isolated from AC, hazardous voltage may exist between battery terminals and ground. Test before touching with bare hands.
- CAUTION - A battery can present a risk of electrical shock and high short circuit current. the following precaution should be observed when working on batteries:
  - A. Remove watches, rings, or other metal objects.
  - B. Use tools with insulated handles.
  - C. Wear rubber gloves and boots.
  - D. Do not lay tools or metal parts on top of batteries.
  - E. Disconnect charging source prior to connecting or disconnecting battery terminals.

## 2 Introduction to the panel

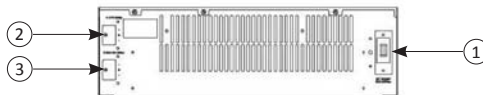
### Rear panel descriptions

Tower



- |   |  |
|---|--|
| <b>1. DC Breaker</b>                    | <ol style="list-style-type: none"> <li>1. Battery over-current protection breaker.</li> <li>2. To easy swappable battery, please put the position of the breaker in "O" position. In case there is 2<sup>nd</sup> (or next) battery box connected with the battery box, the DC voltage from the UPS Bat.+/- will flow through without any interruption to the 2<sup>nd</sup> battery box.</li> </ol> |
| <b>2. UPS connector +/-</b>             | To the UPS DC connected.   |
| <b>3. Battery/Charger connector +/-</b> | To the DC connected of the 2 <sup>nd</sup> (or next) battery box connected.  |

Rack



- |  |  |
|--|--|
| <b>1. DC Breaker</b>                         | <ol style="list-style-type: none"> <li>1. Battery Over-current Protection Breaker.</li> <li>2. To easy swappable battery, please put the position of the breaker in "O" position. In case there is 2<sup>nd</sup> (or next) battery box connected with the battery box, the DC voltage from the UPS Bat.+/- will flow through without any interruption to the 2<sup>nd</sup> Battery Box.</li> </ol> |
| <b>2. UPS battery +/-</b>                    | To the UPS DC terminal or the next battery box.  |
| <b>3. External battery +/- connector +/-</b> | To the DC terminal of the 2 <sup>nd</sup> (or next) battery box connected.   |

### 3 Installation and operation

*The packing condition and the external outlook of the unit must be inspected carefully before installation.  
Retain the packing material for future use.*

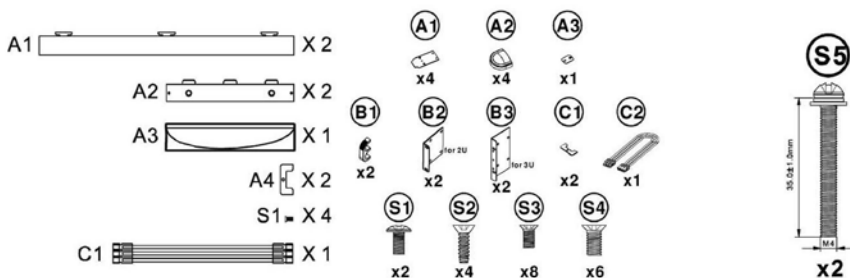
#### Unpacking

Take the battery box out of the PE foam.  
Remove the packing materials.

*Note: The battery box module is approx. 120 kgs, be cautious when unpacking and lifting the unit to avoid injury.*

#### Standard package includes:

DC connect cable (C1 or C2).  
A pair of kits to fix DC connect cable (A4 or C1).  
The casters cover kits A1~A3 and S1 for Tower model.  
The Rack/Tower kits A1~A3, B1~B3, C1~C3 and S1~S4 for RT model.



#### Installation position

It is necessary to select a proper environment to install the unit, in order to minimize the possibility of damage to the battery box and extend the life of the batteries.

Please follow the instructions below:

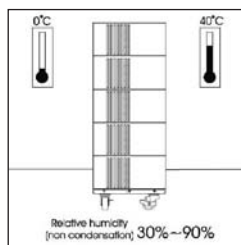
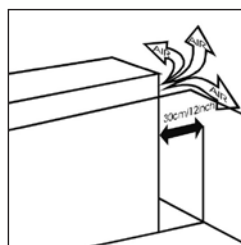
Keep at least 30cm (12 inches) clearance from the rear panel of the battery box from the wall or other obstructions.

Do not block the air-flow to the ventilation openings of the unit.

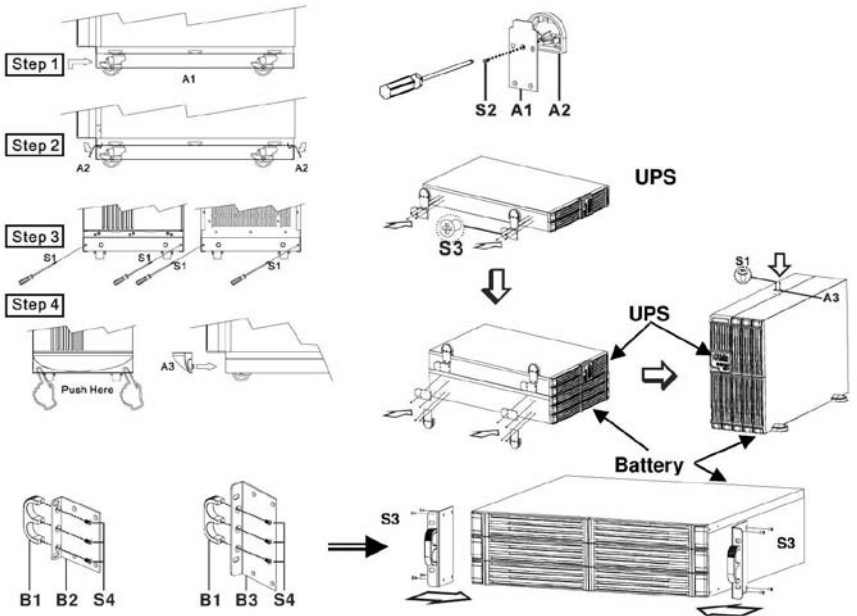
Please ensure the installation site environmental conditions are in accordance with the battery box working specifications to avoid overheat and excessive moisture.

Do not place the battery box in a dusty or corrosive environment or near any flammable objects.

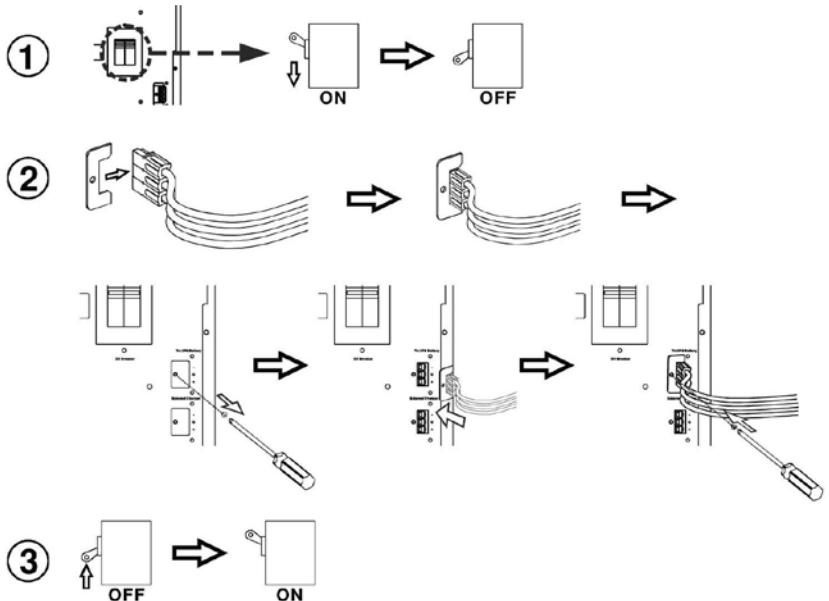
This battery box is not designed for outdoor use.



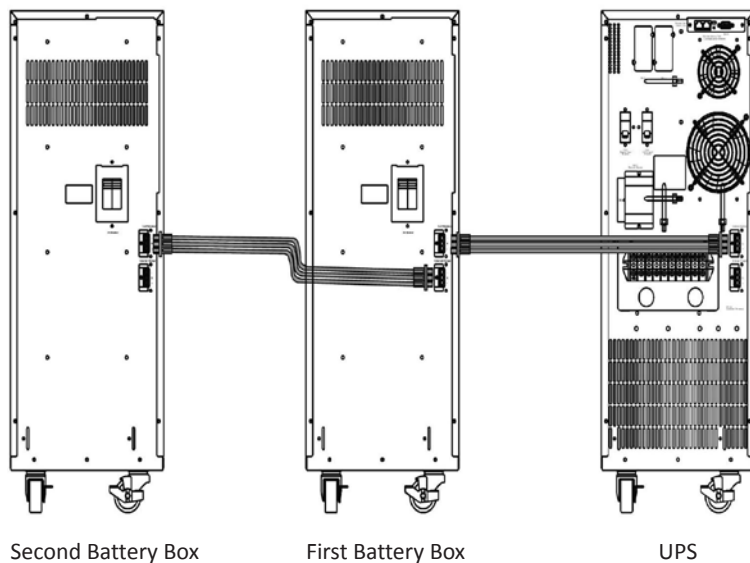
## Installation of Casters Cover and Rack/Tower kits



## Installation Instructions



## DCT connection cable



## Storage instructions

For extended storage through moderate climate(-15 °C to +30 °C / +5 °F to +86 °F), the batteries should be charged for 12 hours every 6 months by plugging the UPS power cord into the wall receptacle. Repeat this every 3 months under high temperature (+30 °C to +45°C/+86 °F to +113 °F) environment.



## 4 Battery box specification

### Battery box LEONARDO T specification

UPS	6/10 kVA
Battery box code	MUPSBATT0004
Nominal system voltage	240 VDC
Battery quantity	60
Battery type	9 Ah
Max UPS charge current*	
Standard	2.1 A
External charger	4.5 A
Connector color	Red ( + ), Black ( - ), Green (Gnd)
Dimensions W x D x H (mm)	
Unit	290 x 631 x 748
Shipping	468 x 810 x 961
Weight (kg)	
Unit	194
Shipping	212

### Battery box LEONARDO RT specification

UPS	6/10 kVA
Battery Box Code	MUPSBATT0005
Nominal System Voltage	240 VDC
Battery Quantity	20
Battery Type	9 Ah
Max UPS charge current*	
Standard	2.1 A
External charger	4.5 A
Connector color	Red ( + ), Black ( - ), Green (Gnd)
Dimensions W x D x H (mm)	
Unit	440 x 680 x 132
Shipping	560 x 804 x 272
Weight (kg)	
Unit	65.2
Shipping	68.2

\* Battery box requires an external 1000 W battery charger for charging the batteries cod. MUPSACC0007

Contact your local recycling or hazardous waste center for information on proper disposal of the used battery.



