



DAKER DK Plus Battery Cabinets

Manuel d'installation • Installation manual



Part. LE09779AC-03/18-01 GF

DAKER DK Plus Battery Cabinets

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Congratulations on your recent LEGRAND purchase!



ATTENTION

It is necessary to read the whole manual carefully before doing any operation.
DAKER DK Plus must be used only in residential, commercial and industrial environments.

1.1 Use of the manual

This manual must be kept in a safe, dry place and must always be available for consultation.

The manual reflects the state of the art when the equipment was put onto the market. This publication conforms to the standards current on that date; the manual cannot be considered inadequate when new standards come into force or modifications are made to the equipment. The version of the manual updated to its latest release is available on the Internet from the website <http://www.ups.legrand.com>

INDICATION

The installation manual is an integral part of the equipment supplied and must therefore be kept for its entire lifetime. In case of need (for example in the case of damage that even partially compromise its consultation) a new copy must be requested from the Manufacturer, quoting the publication code on the cover.

1.2 Guarantee terms

The terms of the guarantee may vary depending on the country where the battery cabinet is sold. Check the validity and duration with LEGRAND's local sale representative.

The Manufacturer declines all indirect or direct responsibility arising from:

- failure to observe the installation instructions and use of the equipment which differs from the specifications in the installation manual;
- use by personnel who have not read and thoroughly understood the content of the installation manual;
- use that does not comply with the specific standards used in the country where the equipment is installed;
- modifications made to the equipment, software, functioning logic unless they have been authorized by the Manufacturer in writing;
- repairs that have not been authorized by the LEGRAND Technical Support Service;
- damage caused intentionally, through negligence, by acts of God, natural phenomena, fire or liquid infiltration.

1.3 Copyright

The information contained in this manual cannot be disclosed to third parties. Any partial or total duplication of the manual which is not authorized in writing by the Manufacturer, by photocopying or other systems, including by electronic scanning, violates copyright conditions and may lead to prosecution. LEGRAND reserves the copyright of this publication and prohibits its reproduction wholly or in part without previous written authorisation.

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2 Safety Instructions

This section contains important safety instructions that should always be followed during the installation, use and maintenance of the battery cabinet.

- This product should be installed in compliance with installation rules, preferably by a qualified electrician. Incorrect installation and use can lead to risk of electric shock or fire. Before carrying out the installation, read the instructions and take account of the product's specific mounting location. Do not open up, dismantle, alter or modify the device except where specifically required to do so by the instructions. All Legrand products must be opened and repaired exclusively by personnel trained and approved by Legrand. Any unauthorised opening or repair completely cancels all liabilities and the rights to replacement and guarantees. Use only Legrand brand accessories.
- If any visible damage is found on the product during the unpacking operation, do not install the battery cabinet but repack the unit and return it to your reseller or distributor.
- Connection to earth ground is required for safety and proper product operation. Before operating the battery cabinet, ensure it is connected to the UPS and that the AC utility outlet is properly grounded.
- The battery cabinet is supplied with a DC power plug. Do not modify this cable.
- The terminals may carry live voltage even when the battery cabinet is connected to the UPS.
- Do not attempt to open or disassemble the battery cabinet; there are no user replaceable parts. Opening the case will void the warranty and introduces the risk of electric shock even when the input plug is disconnected.
- Ensure all power is disconnected before performing installation or service.
- The batteries tend to discharge if the battery cabinet is not connected to the UPS. They should be recharged every 2-3 months if unused. During normal operation, the batteries will be kept charged.



Servicing of batteries must be performed only by electrical hazard authorized personnel. Batteries may only be replaced with the same number and type.



CAUTION: A battery can present a risk of electrical shock and high short circuit current. The following precautions 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 the charging source prior to connecting or disconnecting battery terminals.
 - f) Determine if battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electrical shock.
-

2 Safety Instructions

The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance (applicable to equipment and remote battery supplies not having a grounded supply circuit).



CAUTION: Do not dispose of batteries in a fire. The batteries may explode.



CAUTION: Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

- Operating temperatures above the recommended range will result in decreased battery life and performance and will reduce or void the battery warranty.
 - Do not allow any liquid or any foreign object to enter the battery cabinet.
 - The battery cabinet is intended for indoor installation in a ventilated, controlled indoor environment (0°C/+32°F - 40°C/+104°F, 20%-80% non-condensing humidity). Do not install battery cabinet in locations with sparks, smoke and hazardous gas or where there is water and excessive humidity. Dusty, corrosive, and salty environments can damage the battery cabinet.
 - To prevent damage or safety hazard, keep the battery cabinet away from flames and any other device that may cause sparks.
 - Do not plug the cable of the battery cabinet into its own battery connector.
 - To reduce the risk of overheating the battery cabinet, do not block any ventilation openings and keep a clearance of 20 cm beyond the rear panel. Avoid exposing it to direct sunlight or installing it near heat emitting appliances such as space heater or furnaces.
-

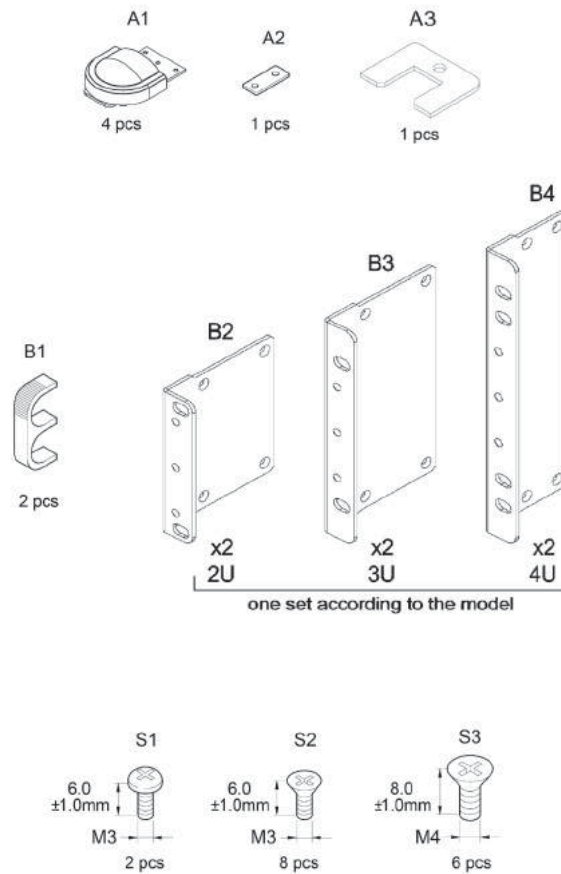
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3 Installation

3.1 Package content

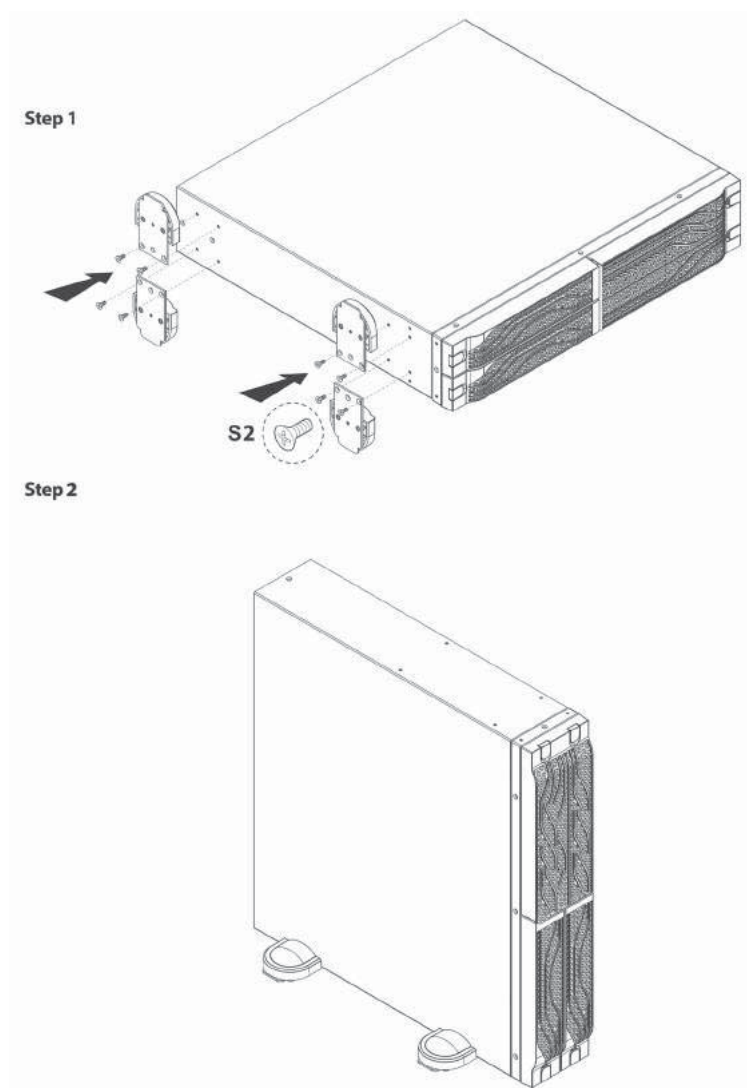
Check for the following package content:

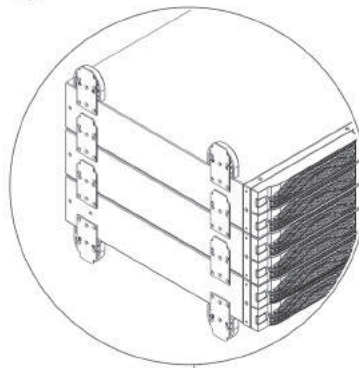
- installation manual;
- wires and cable ties (only for the empty battery cabinets);
- tower/rack accessories kit as shown in the following figure:



3.2 Tower configuration setup

3.2.1 Battery cabinet

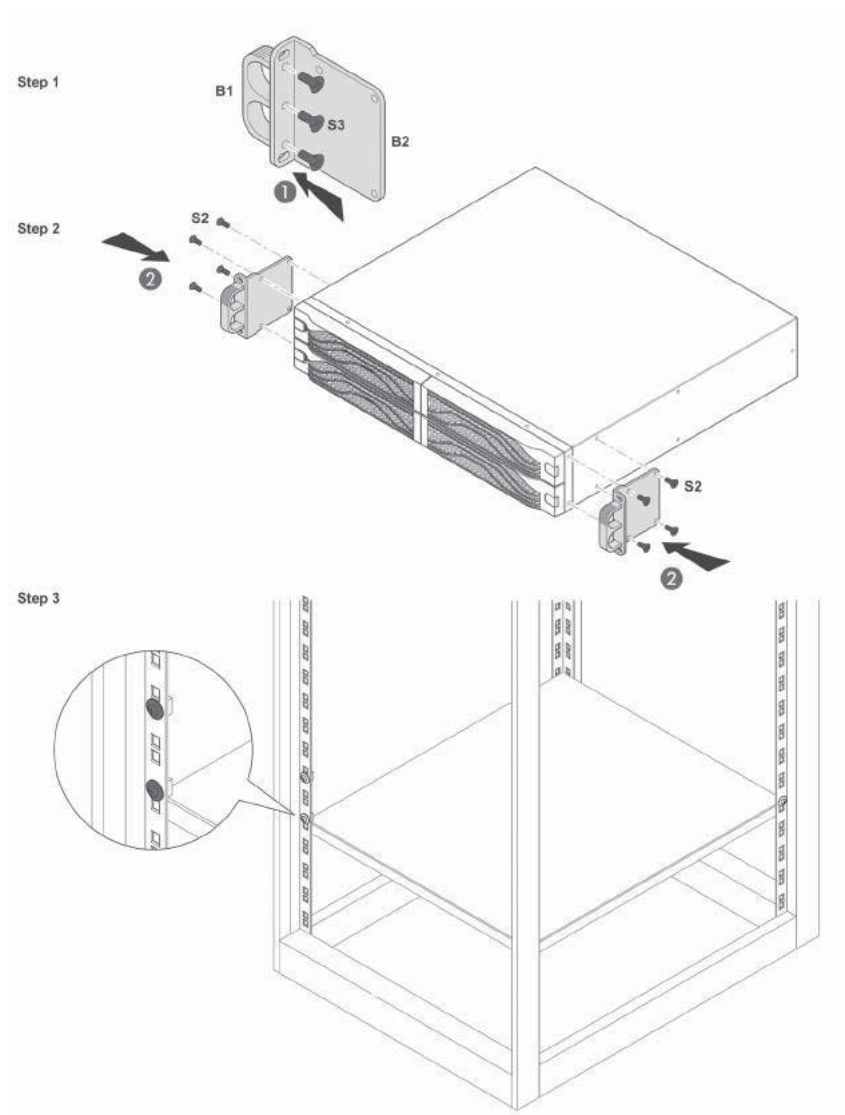




3.3 Rack configuration setup

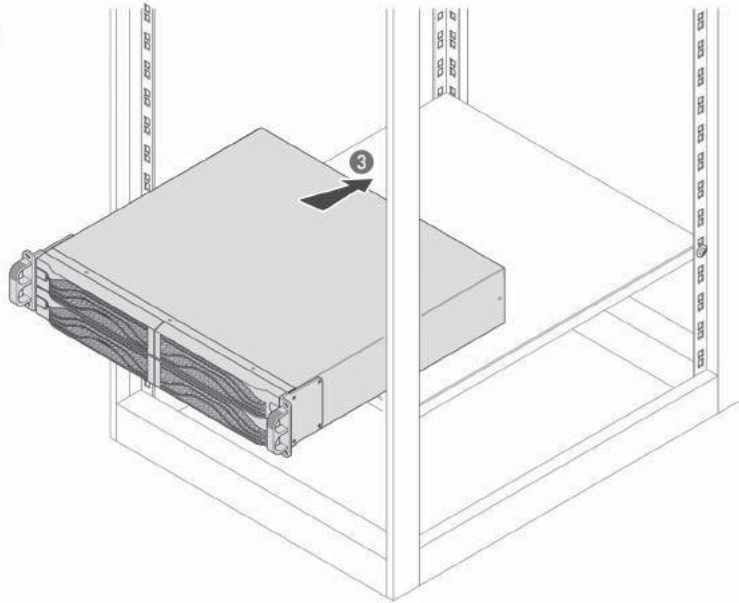
INDICATION

For the rack configuration setup it is also possible to use the rack support bracket kit 3 109 52. In this case, follow the instruction sheet contained in the kit.

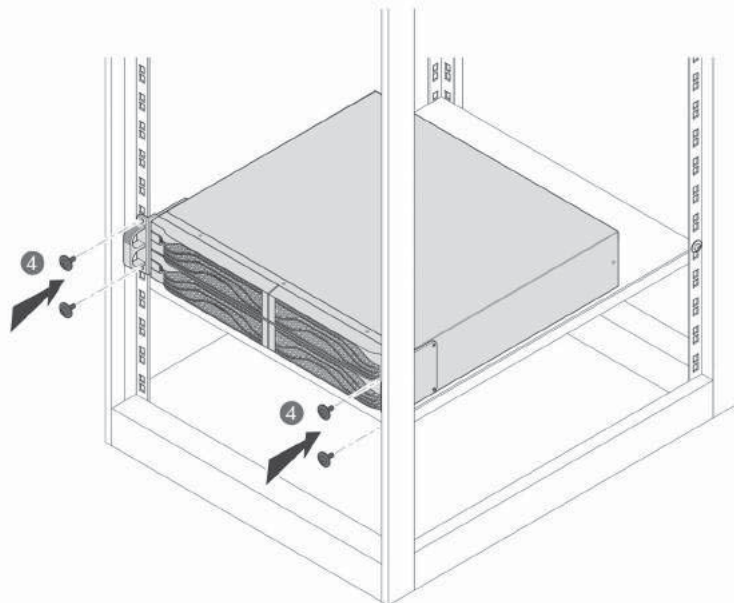


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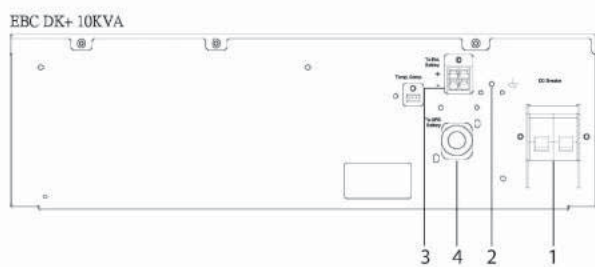
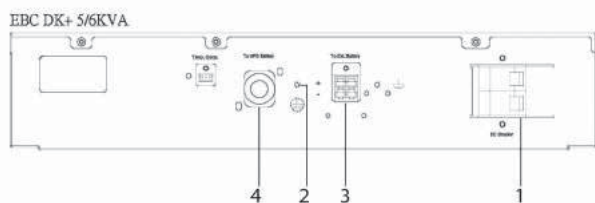
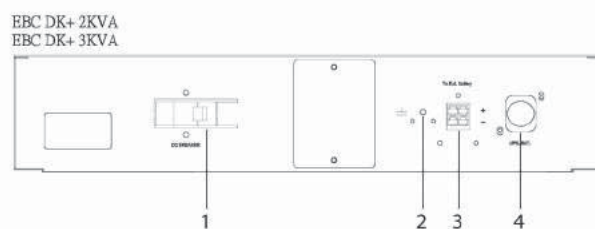
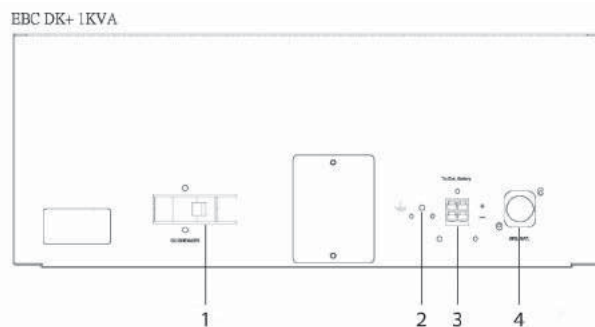
Step 4



Step 5



3.4 Rear panel



1. DC breaker
2. Earth terminal
3. Battery connector
4. DC power cord

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3.5 Installation procedure



WARNING

Read the safety instructions on chapter 2 before installing the battery cabinet.

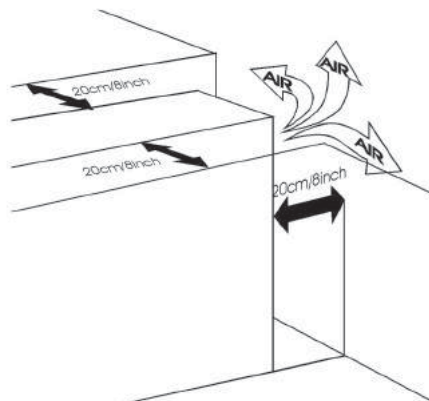
1. Ensure that the battery cabinet chosen is compatible with the UPS



ATTENTION

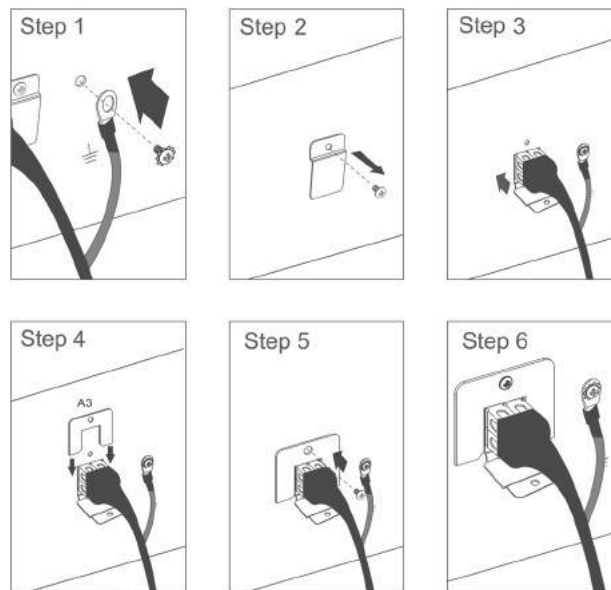
The table on chapter 6 indicates the compatibility between UPS and battery cabinets. Wrong installations are hazardous for people and cause irreversible damages to the UPS and the battery cabinet.

2. Position the battery cabinet visible in the following figure:



3 Installation

3. Ensure the UPS is not functioning. Connect the DC power cord to the external battery connector of the UPS respecting the steps illustrated in the following figure:



4. If the battery cabinet must be connected to another battery unit, connect the DC power cord to the external battery connector of the existing battery cabinet following the steps illustrated in the previous figure.
5. Remove the bracket (if present) that blocks the DC breaker of the battery cabinet.
6. Turn on the DC breaker of the battery cabinet.
7. Turn on the UPS.

INDICATION

If it is necessary to replace or add the batteries of the battery cabinet, follow the instructions of chapter 7.






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4 Setting





INDICATION

This chapter is valid for all the UPSs of the Daker DK Plus series excluding the 3-1 version 3 101 78. If the UPS is connected to one or more battery cabinets, it is necessary to set their number to forecast a realistic backup time. This can be done from the display of the UPS or by using the software "UPS Setting tool". The UPS must be in standby mode (mains connected to the UPS input).

Follow this procedure to change the UPS settings:

- press simultaneously  and  for approximately three seconds, until the buzzer sounds twice;
- scroll the different settings pressing  until the setting "Battery" is visualized;
- select the number of battery cabinets installed by pressing ;
- after changing settings, scroll to the "End" screen and then press  to save all changes;
- the UPS restarts automatically. However, it is also suggested to remove the mains for at least 30 seconds.

EN

PARAMETER	SETTING	DISPLAY
NUMBER OF BATTERY CABINETS	1-9 Select the number of battery cabinets connected to the UPS  ATTENTION This parameter cannot be set on the UPS 10 kVA 3 101 78	
END SCREEN	Press  to save all changes	

5 Warehousing and dismantling

5.1 Warehousing

The battery cabinet must be stored in an environment with a room temperature between 0°C (+32°F) and +50°C (+122°F) and humidity less than 90% (not condensing).

The batteries installed inside the battery cabinet are lead-acid sealed and do not require maintenance (VRLA). The batteries should be charged for 12 hours every 3 months by connecting the battery cabinet to the UPS and turning on the DC breaker located on the rear panel. Repeat this procedure every two months if the storage ambient temperature is above +25°C (+77°F).



CAUTION

The battery cabinet must never be stored if the batteries are partially or totally discharged. LEGRAND is not liable for any damage or bad functioning caused to the UPS by wrong warehousing.

5.2 Dismantling



DANGER

Dismantling and disposal operations may only be done by a qualified electrician. These instructions are to be considered indicative: in every country there are different regulations with regard to the disposal of electronic or hazardous waste such as batteries. It is necessary to strictly adhere to the standards in force in the country where the equipment is used.

Do not throw any component of the equipment in the ordinary rubbish.

Batteries must be disposed of in a site intended for the recovery of toxic waste. Disposal in the traditional rubbish is not allowed.

Apply to the competent agencies in your countries for the proper procedure.



Pb



WARNING

A battery may constitute a risk of an electric shock and high short-circuit current. When working on batteries, the prescriptions indicated in chapter 2 are to be adhered to.

It is important to dismantle the various parts the battery cabinet consists of. For these operations, Personal Protective Equipment must be worn.

Sub-divide the components separating the metal from the plastic, from the copper and so on according to the type of selective waste disposal in the country where the equipment is dismantled.

If the dismantled components must be stored before being properly disposed, be careful to keep them in a safe place protected from atmospheric agents to avoid soil and groundwater contamination.

For the disposal of electronic waste it is necessary to refer to the industry standards.

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6 Technical specifications

	3 106 60 3 106 65 *	3 106 61 3 106 66 *	3 106 62 3 106 67 *	3 106 63 3 106 68 *	3 106 64 3 106 69 *
General characteristics					
to be installed with UPS (Cat. Nos.)	3 101 70	3 101 71	3 101 72	3 101 73 3 101 74 3 101 75 3 101 76	3 101 77 3 101 78
Connector color	Red (+), Black (-), Green (GND)				
Batteries					
Number of batteries	12	12	12	20	20
Battery type	Lead-acid sealed without maintenance (VRLA)				
Unitary voltage (V) and capacity (Ah)	12 Vdc - 7 Ah	12 Vdc - 7 Ah	12 Vdc - 9 Ah	12 Vdc - 5 Ah	12 Vdc - 9 Ah
Rated Battery Voltage (V)	36	72	72	240	240
Number of battery strings	4	2	2	1	1
Battery extension	Yes				
Mechanical characteristics					
Dimensions W x H x D (mm)	440 x 176 (4U) x 425	440 x 88 (2U) x 600		440 x 88 (2U) x 680	440 x 132 (3U) x 680
Net weight (kg)	31 6*	32 6*	35 6*	42 12*	62 14*

* empty battery cabinets (no battery installed)

7 Battery replacement



A battery can present a risk of electrical shock and high short circuit current. Only electrical hazard authorized personnel and service personnel are authorized to replace the batteries. Before the replacement, it is mandatory the reading of chapter 2.

Batteries may only be replaced with the same number and type. Batteries must be brand new and the voltage difference between the strings must be less than 1V.

If the battery brand is different from the one originally installed by Legrand, the estimated battery autonomy indicated on the display of the UPS may not be reliable.

INDICATION

Follow the instructions in the appendix at the end of the manual.
