

# DURACELL<sup>®</sup> ENERGY

## Duracell 5+ Battery Module **USER MANUAL**



**PD-5KWH-50V-1G**

Duracell 5+ Battery Module | USER MANUAL

# Content

PRODUCT SPECIFICATIONS .....	3
ERRORS OR OMISSIONS .....	3
ELECTRONIC DEVICE: DO NOT THROW AWAY .....	3
<b>1. Important Safety Instructions</b>	<b>4</b>
1.1 Symbols in this Document.....	4
1.2 General Information .....	4
<b>2. Standard Packing List</b>	<b>6</b>
<b>3. Mechanical Installation</b>	<b>7</b>
3.1 Single battery installation .....	7
<b>4. Electrical Connection</b>	Error! Bookmark not defined.
4.1 Top connection interface .....	8
<b>5. Start the Battery Array</b>	<b>9</b>
<b>6. System Setting</b>	<b>10</b>
6.1 Normal Operation .....	10
6.2 Duracell 5+ Battery Module Care .....	10

To secure the full 10-year product warranty, ensure your Duracell 5+ battery is installed by a qualified installer.

Warning: Read this entire document before installing or using Duracell 5+ battery modules. Failure to follow any of the instructions or warnings in this document can result in electric shock, serious injury, or death - or you may damage the battery module, potentially rendering it inoperable.



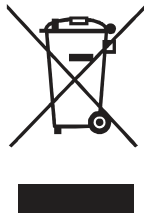
## PRODUCT SPECIFICATIONS

All specifications and descriptions contained in this document are verified to be accurate at the time of printing. However, because continuous improvement is a goal at Duracell, we reserve the right to make product modifications at any time.

The images provided in this document are for demonstration purposes only. Depending on the product version and market region, details may appear slightly different.

## ERRORS OR OMISSIONS

To communicate any inaccuracies or omissions in this manual, please send an email to [sales@duracellenergy.co.uk](mailto:sales@duracellenergy.co.uk).



## ELECTRONIC DEVICE: DO NOT THROW AWAY

Proper disposal of batteries is required. Refer to your local codes for disposal requirements (i.e. EC N 1013/2006 among European Union).



©2020 Duracell Energy Ltd. All rights reserved.

All information in this document is subject to copyright and other intellectual property rights of Duracell Energy Ltd. and its licensors. This material may not be modified, reproduced, or copied, in whole or in part, without the prior written permission of Duracell Energy Ltd. and its licensors. Additional information is available upon request. The following are trademarks or registered trademarks of Duracell Energy Ltd. in the UK and other countries.

All other trademarks contained in this document are the property of their respective owners and their use herein does not imply sponsorship or endorsement of their products or services. The unauthorized use of any trademark displayed in this document or on the product is strictly prohibited.



# 1. Important Safety Instructions

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS. Duracell 5+ battery module installation and repair instructions assume knowledge of high voltage electricity and should only be performed by certified installers.

Duracell Energy Ltd assumes no liability for injury or property damage due to repairs attempted by unqualified individuals or a failure to properly follow these instructions. These warnings and cautions must be followed when using.

## 1.1 Symbols in this Document

This manual uses the following symbols to highlight important information:

 Warning	WARNING indicates a hazardous situation that, if not avoided, could result in injury or death.
 Caution	CAUTION indicates a hazardous situation that, if not avoided, could result in damage to the equipment.
Note	NOTE indicates an important step or tip that leads to the best results but is not safety or damage related.

## 1.2 General Information



Warning: Read this entire document before installing or using Duracell 5+ battery. Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death, or can damage the battery, potentially rendering it inoperable.



Warning: A battery can present a risk of electrical shock, fire, or explosion from vented gases. Observe proper precautions.



Warning: Duracell 5+ battery installation must be carried out only by certified installers, who have been trained in dealing with high voltage electricity.



Warning: the battery is heavy and challenging to lift.



Warning: Use Duracell 5+ battery only as directed.



Warning: Do not use Duracell 5+ battery if it is defective, appears cracked, broken, or otherwise damaged, or fails to operate.



Warning: Before beginning the wiring portion of the installation, first power off the inverter and then open the AC and DC disconnect switches (if applicable for the installation).



Warning: Do not attempt to open, disassemble, repair, tamper with, or modify Duracell 5+ battery. Duracell 5+ battery is not user serviceable. Battery cells in Duracell 5+ batteries are not replaceable. Contact the authorised reseller who sold the Duracell 5+ battery for any repairs.



Warning: Do not connect Duracell 5+ battery to alternating current (AC) carrying conductors. Duracell 5+ battery must be wired to either an inverter or a DC combiner panel that is then wired to an inverter. No other wiring configuration may be used.



Warning: Duracell 5+ battery contains components, such as switches and relays, that can produce arcs or sparks.



Warning: Duracell 5+ battery contains components, such as switches and relays, that can produce arcs or sparks.



Warning: To protect Duracell 5+ battery and its components from damage when transporting, handle with care. Do not impact, pull, +



Warning: Do not insert foreign objects into any part of Duracell 5+ battery.



Warning: Do not expose Duracell 5+ battery or its components to direct



Warning: Do not install Duracell 5+ battery near heating equipment.



Warning: Do not immerse Duracell 5+ battery or its components in water or other fluids.



Caution: Do not use cleaning solvents to clean Duracell 5+ battery or expose Duracell 5+ battery to flammable or harsh chemicals or vapours.



Caution: Do not use fluids, parts, or accessories other than those specified in this manual, including use of non-genuine Duracell 5+ parts or accessories, or parts or accessories not purchased directly from a certified party.



Caution: Do not place Duracell 5+ battery in a storage condition for more than one (1) month, or permit the electrical feed on the Duracell 5+ battery to be severed for more than one (1) month, without placing Duracell 5+ battery into a storage condition in accordance with 's storage specifications.



Caution: Do not paint any part of Duracell 5+, including any internal or external components such as the exterior shell or casing.



Caution: Do not connect Duracell 5+ battery directly to photovoltaic (PV) solar wiring.



Caution: When installing Duracell 5+ battery in a garage or near vehicles, keep it out of the driving path. If possible, install the Duracell 5+ battery on a side wall and/or above the height of vehicle bumpers.

### 1.3 ENVIRONMENTAL CONDITIONS



Warning: Install Duracell 5+ battery at a height that prevents damage from flooding.



Warning: Operating or storing Duracell 5+ battery in temperatures outside its specified range might cause damage to the battery.



Warning: Do not expose the Duracell 5+ battery to ambient temperatures above 60°C (140°F) or below -30°C (-22°F).

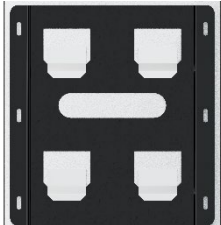


Caution: Ensure that no water sources are above or near the Duracell 5+ battery, including downspouts, sprinklers, or faucets.

# 2. Standard Packing List



Duracell 5+ LFP Battery



Battery Bracket



Battery Power Cables  
Battery<\_>inverter



Communication Cable  
Battery<\_>Inverter



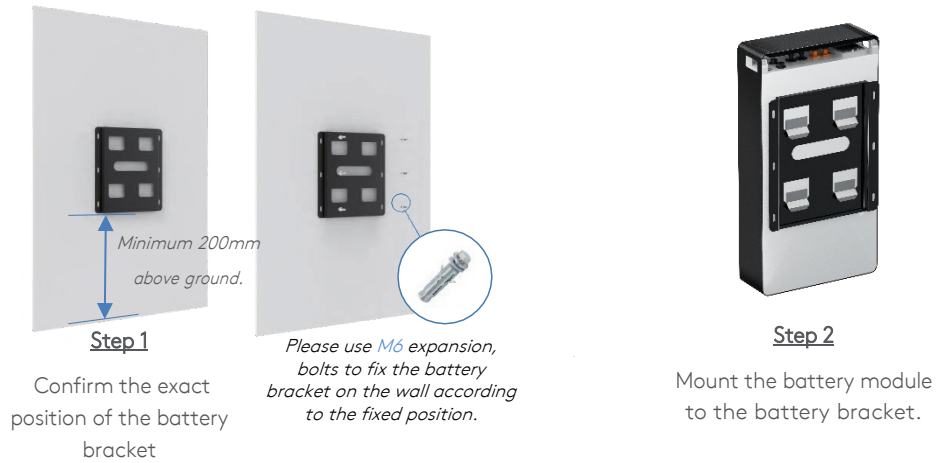
M6 Expansion Bolts



Terminator

# 3. Mechanical Installation

## 3.1 Single battery installation



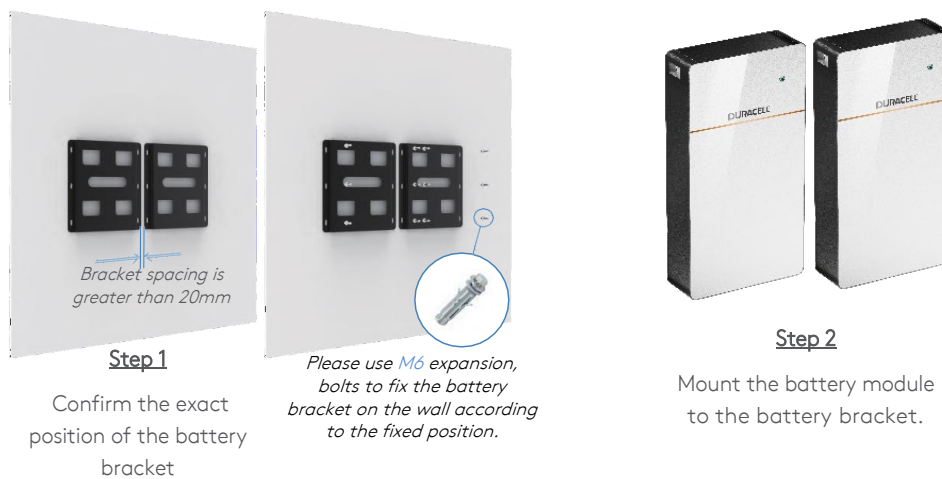
**Step 1**  
Confirm the exact position of the battery bracket

Minimum 200mm above ground.

Please use M6 expansion bolts to fix the battery bracket on the wall according to the fixed position.

**Step 2**  
Mount the battery module to the battery bracket.

## 3.2 Multiple battery



**Step 1**  
Confirm the exact position of the battery bracket

Bracket spacing is greater than 20mm

Please use M6 expansion bolts to fix the battery bracket on the wall according to the fixed position.

**Step 2**  
Mount the battery module to the battery bracket.

# 4. Electrical connection

## 4.1 Top connection interface

- ① Battery<-->Inverter Power Cables (+)
- ② Battery<-->Inverter Power Cables (-)
- ③ Communication cables(up)
- ④ Communication cables(down)
- ⑤ Battery reset button
- ⑥ DC Isolator
- ⑦ Grounding Point



- ⑧ Communication cable

- ⑨ COM resistor

1. Plug in COM Resistor



2. Put on a protective cap



### Step 3, Cable Connection and COM Resistor

Connect battery power cables and communication cables as shown below. Plug in the COM resistor to the last communication interface, which is open.

Please note that even with a single battery installation or multi battery installation, the COM resistor is required to strengthen the CAN Bus signal.



- ⑩ standard parallel kits withstand maximum of 100A current. If you have a larger load demand, you can choose to configure the DC combiner box.



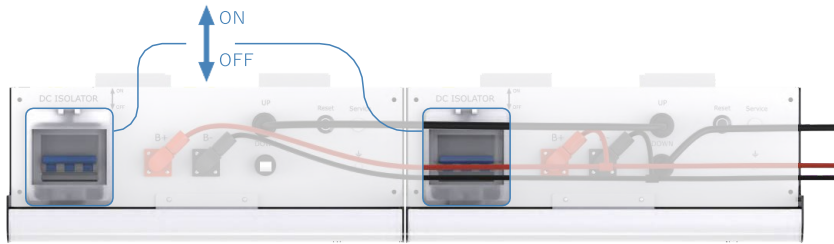
DC combiner box





# 5.Start the Battery Array

Step 4, please pull on the DC Isolator



The indicator light is on, showing green, and the machine is on

	<b>Green</b> Normal, 30%<SOC<100%
	<b>Flashing Green</b> Normal, 10%<SOC<30%
	<b>Red</b> Alarm or Protection
	<b>None</b> Power Off or Sleep

# 6. System Setting

## 6.1 NORMAL OPERATION

During normal operation, if Duracell 5+ Battery Modules are installed correctly, the inverter and battery will start communication immediately, then begin to process power commands. See the inverter manual for further configuration instructions.



Warning: Do not operate Duracell 5+ battery module unless all covers are in place.



Warning: Do not disconnect anything from or add anything to Duracell 5+ battery module.



Caution: Do not try to communicate with Duracell 5+ battery module using thirdparty tools or diagnostics.



Caution: Do not lean on, stack anything on top of, or hang anything from the Duracell 5+ battery module or the conduit.

## 6.2 Duracell 5+ BATTERY MODULE CARE

Keep the top edge of the Duracell 5+ battery module clear of particles to maintain optimal airflow.

To clean Duracell 5+ Battery Module, use a soft, lint-free cloth. The cloth can be dampened with only water if needed. It should not be dripping.



Caution: Do not use cleaning solvents to clean Duracell 5+ battery module.