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Owner's Manual

DURACELL ENERGY BANK 2
SINGLE PHASE

MODELS:
DUR-EB2-1P-050-3B24 – 7.2kWh
DUR-EB2-1P-050-4B24 – 9.6kWh
DUR-EB2-1P-050-5B24 – 12.0kWh
DUR-EB2-1P-050-6B24 – 14.4kWh

DOCUMENT CONTROL:	
Part Number	CC0015
Version	02
Regions	Australia, NZ/Aotearoa
First Published	30/10/2020

CONTENTS

1. INTRODUCTION

This document details the correct operation and maintenance of your new Duracell Energy Bank 2 (DUR-EB2). It is important to take the time to read through this document and to keep a copy for future reference.

Your Duracell Energy Bank 2 also shipped with an Installation Manual and you should ensure that you know where this manual is located so that technicians working on the Duracell or on any other aspect of your home electrical circuits can refer to the Installation Instructions if needed.

1.1. MODELS COVERED

These instructions detail the operation, maintenance and function of the following models;

Product Range	Model	Storage Capacity
Duracell Energy Bank 2	DUR-EB2-1P-050-3B24	7.2kWh
	DUR-EB2-1P-050-4B24	9.6kWh
	DUR-EB2-1P-050-5B24	12.0kWh
	DURE-B2-1P-050-6B24	14.4kWh

1.2. SYMBOLS USED IN THIS MANUAL

The following symbols are used throughout this document.

 DANGER	This indicates a hazard which, if not avoided or mitigated, will **likely** result in serious injury or death.
 WARNING	This indicates a hazard which, if not avoided or mitigated, could result in serious injury or death
 CAUTION	This icon indicates that there is a hazard which, if not avoided, could cause injury or harm.
 DAMAGE	This indicates that there is a risk of damage to the product if the instructions are not followed.

1.3. ABBREVIATIONS/ACRONYMS USED

The following abbreviations are used throughout this document.

- BMS – Battery Management System
- DoD – Depth of Discharge
- SoC – State of Charge
- LAN – Local Area Network
- PCS – Power Conversion System (i.e. an Inverter)
- VPP – Virtual Power Plant
- DR Program – Demand Response Program
- LFP – Lithium Iron Phosphate
- PV – Photo-voltaic (i.e. Solar)
- EB2 – Duracell Energy Bank 2
- EPS – Emergency Power Supply (i.e. Backup)
- CT – Current Transformer
- DUR-EB2 – Duracell Energy bank 2
- SEBU – Social Energy Backup Unit (sold separately)

1.4. SYMBOLS USED ON THE BATTERY SYSTEM

Symbols used on the Duracell Energy Bank 2 have the following meanings.

	TUV Mark
	RCM Certification (Australia/NZ/Aotearoa)
	CE Certification (EU and UK)
	Recycle – The Battery should be disposed of at a facility specialising in the safe and environmentally responsible recycling of materials

	E-Waste – the Battery System should not be disposed of in household waste
	Danger of High Voltage (danger to life)
	Risk of electric shock
	Read enclosed documentation and instructions
	Do not work on or connect/disconnect the product for 90 seconds after powering off and shutting down. Energy stored in capacitors presents a risk for this period after shutdown.
	Hot surface
	Earth/Ground connection point
	Ventilation point – do not obstruct

2. GENERAL PRECAUTIONS

Read these instructions carefully before operating or interacting with this product.

Only qualified electricians with the appropriate Social Energy accreditations are authorised to install or service this equipment.

2.1. ELECTRICAL DANGERS

There is a significant risk of electrocution in the case of unauthorised access to the unit or in the case of physical damage or flooding. Do not remove any cover panels. Do not approach this unit if it is damaged in such a way as to expose wiring or if liquid is leaking from the unit. Do not squeeze, impact, disassemble or puncture battery modules or battery cells.

Only qualified persons should work on or install this equipment.

Care should be taken to ensure the unit is not exposed to physical damage from moving or falling objects. Multiple Supply Dangers.

3. COMPLIANCE

The Duracell Energy Bank 2 product range has been designed and manufactured to comply with the requirements of the relevant Australian and New Zealand Standards.

The product design has been independently certified and carries the CE and RCM marking.

The Duracell Energy Bank 2 is also designed in compliance with the Australian Best Practice Guide: Battery Storage Equipment – Electrical Safety Requirements.

The design and manufacture of the Duracell Energy Bank 2 range complies with the following Standards:

IEC/AS 62619: 2017	Secondary cells and batteries... Safety requirements for secondary lithium cells and batteries...
IEC 62477-1: 2012	Safety requirements for power electronic converter systems and equipment-Part 1: General
AS 62040.1: 2019	Uninterruptible Power system (UPS) Part 1: Safety requirements (IEC 62040-1: 2017(ED 2.0), MOD)
AS 4777.2 : 2015	Grid connection of energy systems via inverters Part 2: Inverter requirements
G98/G99	UK grid connection Standard

4. OPERATION

4.1. READ MANUAL(S) THOROUGHLY

Before operating or interacting with any part of the product, read the Installation Manual completely.

4.2. CRITICAL INFORMATION

The Duracell Energy Bank 2 **requires a stable, permanent internet connection.** Do not switch off the home modem or disconnect the system from the internet. Your warranty will be void if the system is disconnected from the internet and a fault develops where our monitoring program could have prevented further damage.

Do not switch off your Modem or the Main Power switch to the home when you are going on holidays. Switching off the Main Power to your home (or any switch that will prevent the Battery from being able to connect to the Electricity Grid) will prevent the Duracell Energy Bank 2 from being able to charge. If you are away for an extended period, the Duracell will slowly lose charge and be unable to top itself up to a healthy State of Change . Permanent damage may be done to the batteries if the unit is left without power.

Similarly, if the battery is unable to charge from the Grid for a prolonged period (through disconnection of the house or battery - for example during renovations) the batteries should be above 60% SoC and the "BA switch" on the side of the system should be off.

4.3. PRODUCT OVERVIEW

The Duracell product consists of a number of basic structures/components;

a) An Inverter
b) A Battery Management System (BMS)
c) A number of Battery Modules (3 to 6)
d) A Base
e) A Power Meter (packed with the Base)
f) Accessories (mounting components, connectors etc)

The Battery Modules used in the Duracell Energy Bank 2 series are comprised of high-performance Lithium-Iron-Phosphate (LFP) cells. The operation of the batteries relies on a combined interaction of the Inverter, the BMS and a Social Energy control unit.

The Battery Modules are wired in Series, creating a string of batteries working in combination to provide a storage reservoir of electricity. Larger systems have a greater storage capacity, peak power output and backup power capability.

The Duracell is designed to work in conjunction with a Solar (PV) generator and a series of Meters. A typical installation (without Backup) is represented below.

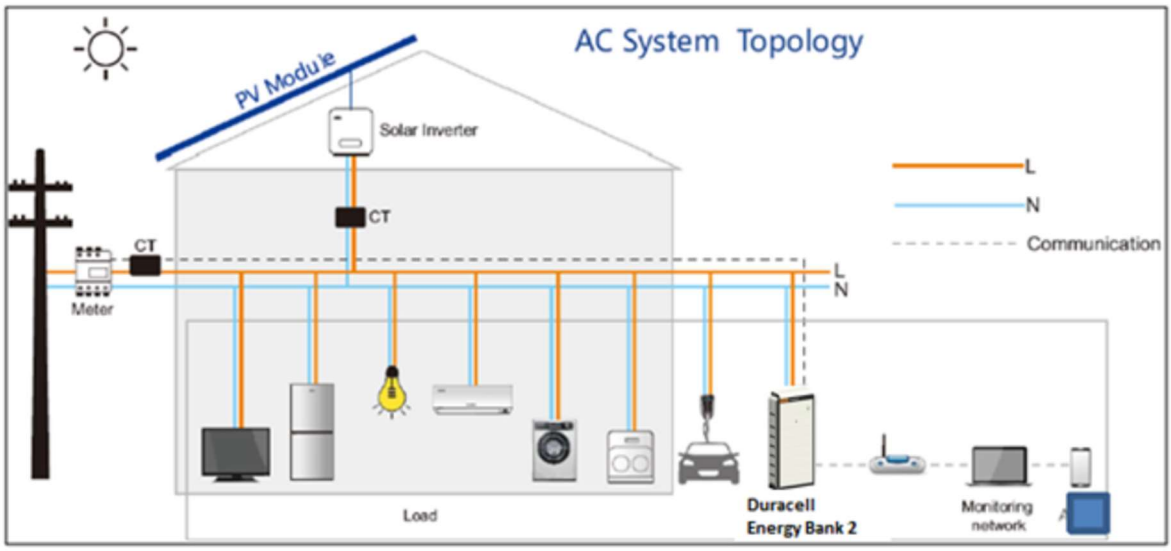


Figure 1 - Typical System Topology in a residential installation

The Duracell Energy Bank 2 is designed to work with integrated optimisation and Virtual Power Plant (VPP) hardware from Social Energy. Installation of this system involves the activation of the Duracell Battery system and the Social Energy integrated control unit.

It is important that the system always has an internet connection. A reliable, constant internet connection is a condition of warranty but it is also used to allow the system to operate in the VPP. This activity provides a revenue stream from the battery that directly benefits you, the owner.

The diagram in Figure 2 shows the basic operating principles of the system. Notable is the presence of a Backup Circuit. It is highly recommended that the Duracell Energy Bank 2 be installed with a Social Energy Backup Unit (SEBU) to provide power from the Duracell system in the event of a power failure. *Without a SEBU Backup unit,* the Duracell System *must* shut down in the event of a blackout.

Solar and Battery systems are *universally required to shutdown* in the event of a Grid failure to ensure that electricity is not unintentionally sent from the house to the Grid while the wires are being worked on by technicians from the Network Company.

The function of a SEBU Backup unit is to isolate the electrical circuits of the home from the electricity Grid, thus allowing the Battery to continue to power the house during a Grid failure.

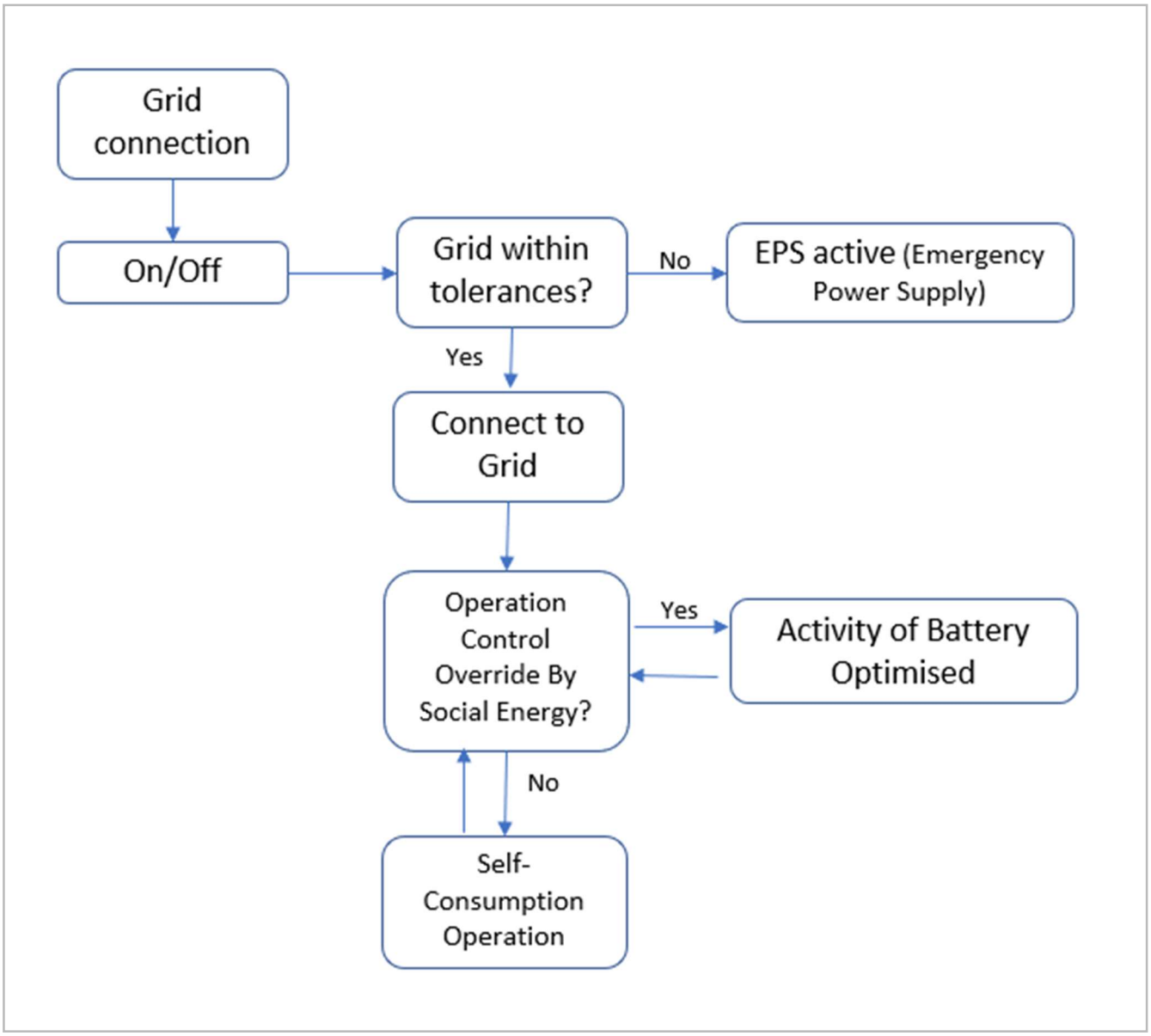


Figure 2 - Connection and operational logic

4.4. PRODUCT COMPONENTS

The Duracell Energy Bank 2 is a modular system and is installed in a series of interconnected modules, starting with the Base.

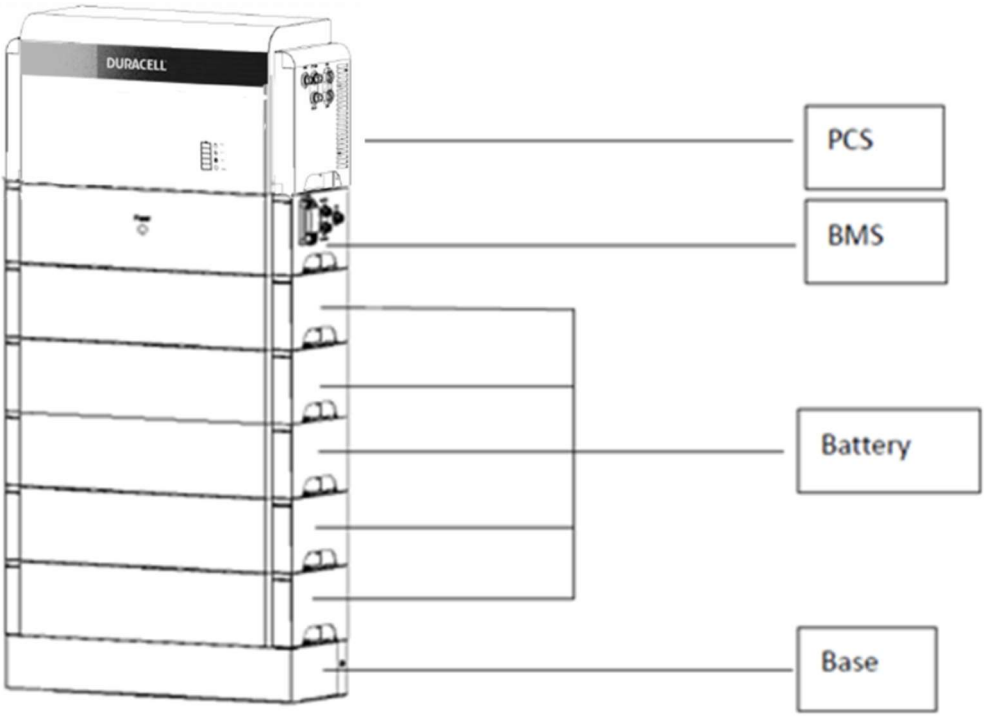


Figure 3 - Duracell Energy Bank 2 Components

4.5. LOCATION

An appropriate location should be considered with your installer when installing the Duracell Energy Bank 2. Local or National guidelines/Standards may restrict where a battery can be installed within or on the outside of your house.

As long as the unit is installed in accordance with the instructions in the Installation Manual and with Local and National Standards, the Duracell Energy Bank 2 is suitable for outdoor installation, although installation locations on North or West-facing walls have limitations (they must not experience direct sunlight due to the heat-loading that would impact the function of the battery cells). Compliant installations may be affected by changes that you, the homeowner, may make. These changes may impact the warranty, reliability and performance of your battery or may mean that any future work on or around your battery would require the unit to be relocated or upgraded.

If possible, do not make changes to the battery surrounds or environment. If changes are to be made, to the building or to the surroundings of the battery, contact your installer to discuss potential impacts.

4.5.1. OUTDOOR INSTALLATION – ENVIRONMENTAL CHANGES

The Duracell Energy Bank 2 is designed for indoor or outdoor installation. Not all outdoor locations are suitable, however.

If you make any changes in the vicinity of the Duracell unit, ensure that the changes do not result in the location being:

a) In areas exposed to direct sunlight between the hours of 10am and 7pm
b) In areas of potential flood or water causeways
c) In areas exposed to erosion
d) On uneven or unstable ground. Installation should be on a concrete slab or similar even, durable surface
e) In areas of traffic that may result in physical damage to the Duracell unit or where the installation of the Duracell unit would restrict entry or egress
f) In areas where temperatures will exceed 50°C (noting that performance will be reduced in temperatures above 40°C) or fall below -10°C (noting that performance will be reduced in temperatures below 10°C)

4.6. OWNER'S INTERACTIONS

The Duracell Energy Bank 2 does not require interaction from the Owner. This system is an automated product that uses monitoring equipment and programmed instructions to respond to your power consumption and solar production.

On a day-to-day basis an Owner should interact only through the Duracell app or web portal.

4.7. SWITCHING THE DURACELL OFF/ON

There will be times when the system may need to be turned off or on. This may be done because works are being carried out in the household electrical circuits or at the request of a service technician or technical support team member from Social Energy.

There are multiple ways to interrupt power to the system but a request to turn the system off or on will generally only involve the operation of the round push-button switch on the front of the unit, as shown in Figure 4.

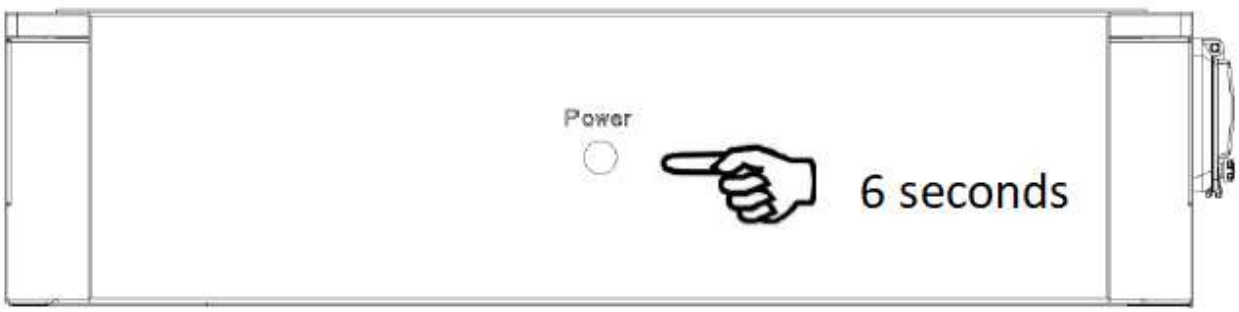


Figure 4 - Power Switch location

Locate the Power button on the second module down from the top.

To turn the system ON, press and hold the button for 6 seconds until the button illuminates. The system is now ON.

To turn the system OFF, press and hold the power button for 6 seconds until the light around the button goes out. The System is now OFF.

4.7.1. ADDITIONAL ISOLATION DEVICES

In addition to the On/Off switch on the front of the system, the Duracell Energy Bank 2 has an isolator on the right hand side of the unit, under the plastic hood.

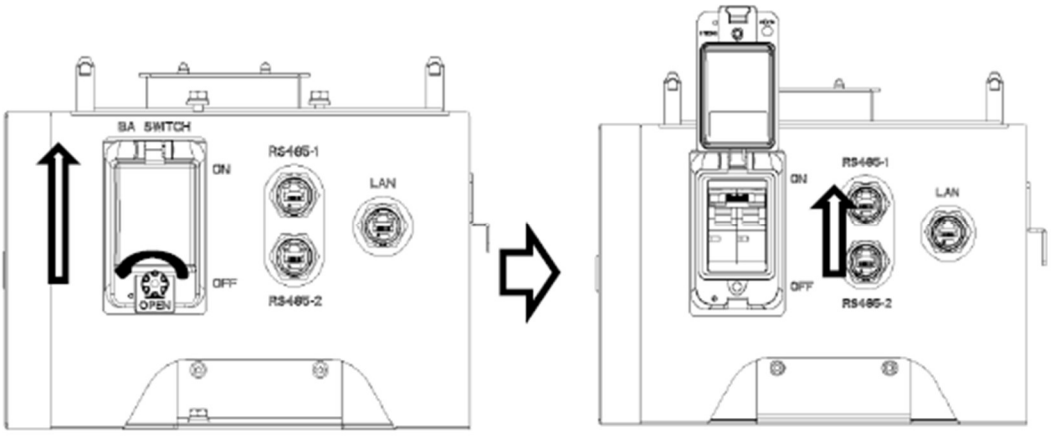


Figure 5 - Isolating Switch

There is generally no requirement for the Owner to turn this Isolating Switch On or Off unless directed by a service technician.

There is also likely to be labelled Battery Isolator Circuit Breakers within the Main Board of the house and possibly in one or more sub-boards. In the SEBU Backup Unit (if purchased with your Duracell system) the switch is located to the left of the house Automated Transfer Switch.

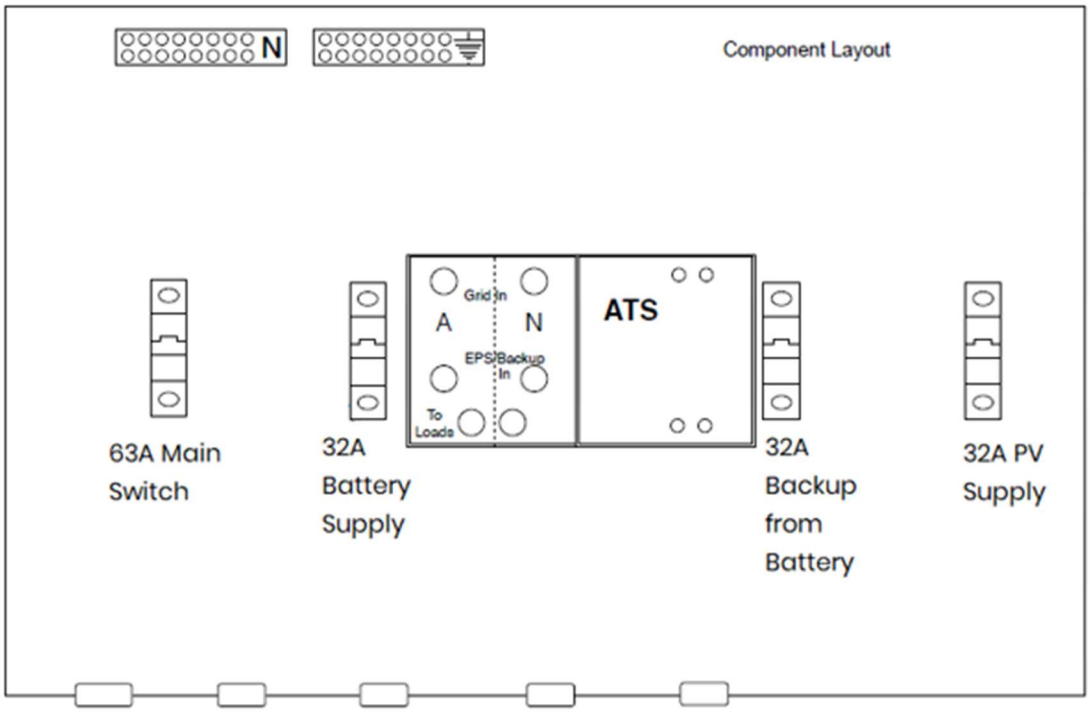


Figure 6 - Backup Unit Example - Additional Isolators

In Figure 6, an example layout of the SEBU Backup Unit shows two Battery Circuit Breakers, one for the battery Supply and one for the battery Backup. This is a good example to demonstrate that the Duracell system has multiple connections back into the home circuit. Switching off the battery Supply circuit breaker at this location will not switch off the Duracell Energy Bank 2 but will rather switch the operating mode to Backup.

For this reason, when asked to switch Off the Duracell Energy Bank 2 you should switch off the Power switch on the front of the unit.

4.8. TEMPERATURES AND STATE OF CHARGE AFFECT PERFORMANCE

The ability to Charge or Discharge the Duracell Energy Bank 2 will depend on the ambient temperature and on the State of charge of the system.

The table below shows an example of part of the performance range of the system. In general, as temperatures decrease, charge and discharge capacity will be reduced. This is normal behaviour for the battery chemistry and is used to protect the batteries from damage and ensure their longevity in terms of performance.

This effect may be noticeable when looking at the Customer App, where you may see that the system charges at a rate that is less than the rated maximum for the system (for example the temperature and SoC combination may see the unit charge at a maximum of 3kW even though it is rated at 4kW).

At high temperatures (> 45°C) a similar reduction in Charge/Discharge performance will occur. Again, this performance management is conducted to protect the batteries and extend their performance life and efficiency.

Charging current limitation					
Temperature (℃)	SOC Range				
	0%-20%	20%-40%	40%-60%	60%-80%	80%-100%
-10~0	1	1	1	1	1
0~5	15	15	15	12	10
5~10	20	20	20	18	12
10~15	25	25	25	22	15
15~20	30	30	30	25	15
20~40	40	40	40	40	40

Figure 7-Charge Limiting Characteristic Example

A simplified table below shows the approximate Output Power at varying temperatures.

Ambient Temperature (°C)	Power
0-10	50% Nominal Power
11-40	Per datasheet (3kW/4kW/5kW)
41-45	50% Nominal Power
46-50	10% Nominal Power

Figure 8 - Simplified Output Power estimate with changes to Temperature

5. BACKUP FUNCTION

The *optional* Social Energy Backup Unit (SEBU) should be wired according to your needs and the household loads.

The Owner's Manual for the SEBU Backup Unit provides more information. In general terms, you should talk with your Installer to determine which circuits will be backed-up. In some cases, the whole house will be able to be backed-up, where other cases will limit the backup circuits. The example in Figure 9 shows a house where the Oven and Stove are not in the backup circuits.

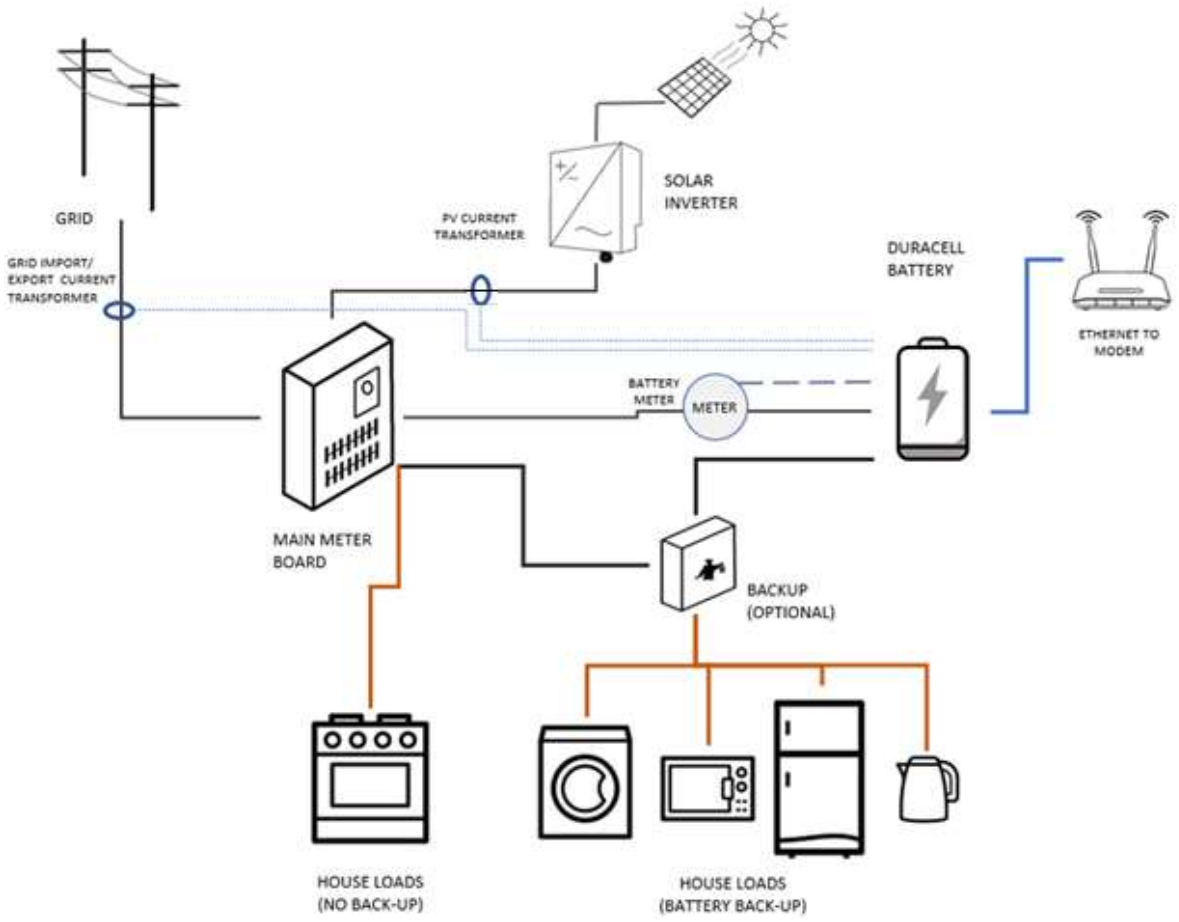


Figure 9 - Battery and Household Connections Diagram – Backup Circuit included

6. UNDERSTANDING THE INDICATOR PANEL

The Indicator Panel on the front of the unit gives some (limited) insight into what is happening with the unit at any given time.

Figure 10 - Indicator Panel Layout

Power	When Green, the unit is Powered ON and the inverter has connected to the Grid.
Internet	Solid Green: Internet connection detected Flashing Blue: No Internet connection.
Error	Solid Red: A fault condition has been detected Flashing Red: An Earth Fault has been detected. Turn off the system until reliable Earth is connected.
Backup	If Illuminated: The Grid connection has been lost (blackout) and the Backup Circuit has been activated (not functional without a Social Energy Backup Unit (Sold separately).
State of Charge (SoC) Indicator Bar	The SoC indicator bar, in the shape of a battery, shows if the system is charging or discharging as well as a rough approximation of the actual State of Charge. The lights work on a loop. 1. Display current State of Charge 2. If charging, cycle the lights from 1 to 5 (lowest panel being 1 and the upper light panel being 5), if discharging, cycle the lights from 5 to 1 3. Repeat from step 1

6.1. STATE OF CHARGE INDICATION

The State of Charge (SoC) indicators display an approximation of the current State of Charge and indicate if the system is charging or discharging.

If you are signed up to Social Energy as your electricity retailer (or another VPP operator) you may see periods where the system is charging or discharging unexpectedly. For example, you may see the system charging at 11pm at night, when there is clearly no solar.

This type of operation occurs when the Social Energy controller inside the Duracell Energy Bank 2 determines that the electricity prices are favourable enough to change the normal behaviour patterns of the Battery. In many cases, this can occur frequently. This behaviour is normal and is how Social Energy can offer the attractive electricity plans that you would already be receiving. Note that participation in the Social Energy electricity plans is not mandatory and a Duracell Energy Bank 2 owner can switch to another retail electricity supplier at any time (check your retail electricity contract or contact Social Energy). In such a case, the Social Energy controller will be turned off and the battery system will revert to its standard "self-consumption" operating mode.

6.1.1. NORMAL "SELF-CONSUMPTION" MODE

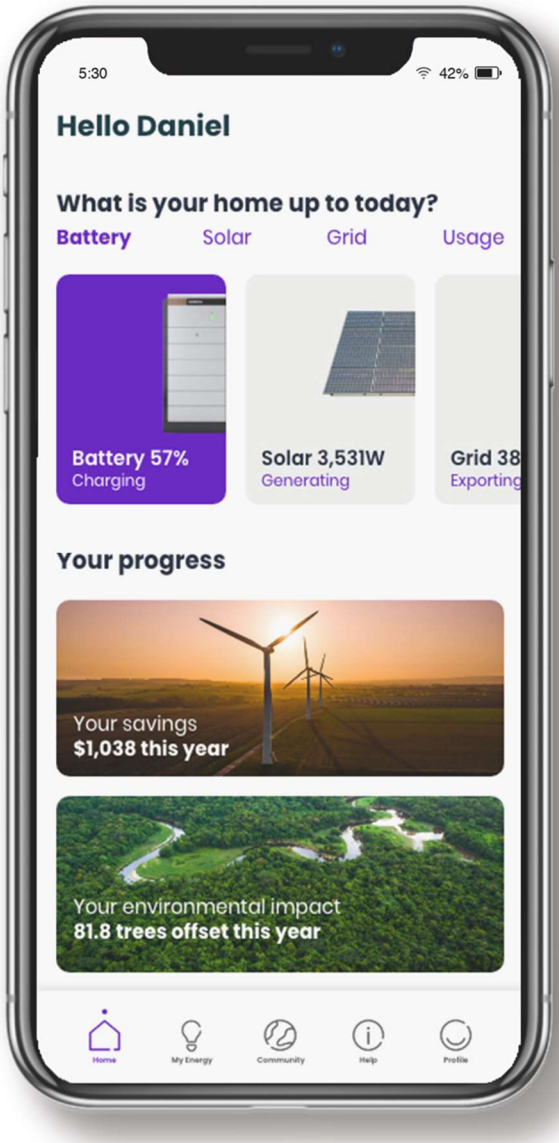
In normal operation, a battery will typically charge when there is surplus solar production and discharge when the house consumption exceeds the solar production. In practice, the battery normally charges through the day and discharges at night.

The Duracell Energy Bank 2 will act in a more intelligent manner, offering automated monitoring, efficiency gains and extended operating life of the system.

7. USER APP

Duracell provides an app in partnership with Social Energy. The App allows you to monitor your battery system and to visualise the savings achieved with your Duracell Energy Bank 2, in combination with the Social Energy VPP controller. Download the Social Energy App from The App Store or the Google Play Store.

A guide to operating and interpreting the data from your app can be found on our Support web page.



8. CARE AND MAINTENANCE

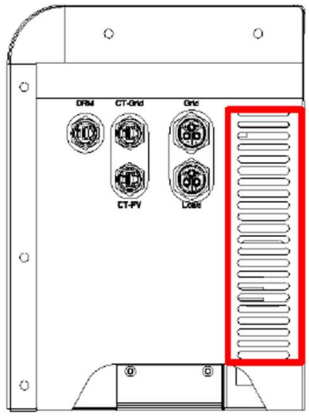
The Duracell Energy Bank 2 requires no user-maintenance, however periodic inspections and function tests are recommended.

On an Annual Basis, check the external surfaces of the system to ensure there are no obvious signs of deterioration in the metal. Touch-up any scratches that expose bare metal to prevent future corrosion.

If you have a backup circuit, at least once per year switch off the Main Switch in your Main Board and check that the Backup system engages. Check that the State of Charge of the battery is greater than 15% before carrying out this test.

Cleaning of the cooling vents of the Duracell Energy Bank 2 should be undertaken regularly. How often the vents should be cleaned will be determined by the environment, so dusty or outside environments should be checked every month or 2 where internal, cleaner environments may only need checking twice a year.

Add a reminder to your calendar as you read this.



To clean the vents (marked in the picture above) of the Battery System, use a vacuum (ideally) or a soft, dry cloth. Ensure that the vents are clean and clear of dust.

Do not hose any part of the Duracell or spray it with a water jet.

DAMAGE

Do not relocate or modify the area around the Duracell such that it becomes exposed to direct sunlight. High temperatures can damage or reduce the functional capability of some components inside the unit.

8.1. MAINTENANCE AND SAFETY AROUND BATTERIES

- When the device is not used for a long time, charge the battery once every six months to ensure that the battery does not become over-discharged
- Ensure reliable grounding/earthing. Do not disturb any Earthing connections (green/yellow wires)
- If replacing a battery module, use the same model/item number (different battery Modules may look the same on the outside but still be incompatible;

- Warning: Do not throw a battery or battery module into a fire. The battery may explode;
- Warning: Do not open or damage the battery. The electrolyte flowing out of the battery is harmful to the skin and eyes. The electrolyte may also be toxic;
- Warning: incorrect use or handling of the battery may cause a shock hazard and/or a large short-circuit current
- When handling the battery, pay attention to the following aspects:
    - Remove watches, rings and other metal products;
    - Use a tool with an insulated handle;
    - Wear rubber gloves and shoes;
    - Do not place tools or metal parts on the battery;
    - Disconnect the charging power supply and switch off the unit and leave it for at least 60 seconds before disassembling the battery;
    - Pay attention to whether the battery is inadvertently grounded. If you find that the battery has been accidentally grounded, remove the power supply from the ground
    - Touching any part of the grounded battery can cause an electric shock
    - Do not touch the battery pack with wet hands
    - Do not crush, drop or puncture the battery
    - Always dispose of the batteries according to local safety regulations.
    - Store and recharge battery in a manner in accordance with this manual

- When storing or transporting the battery, do not stack the battery without protective packaging
- Packaged batteries should not be stacked more than 4 high
- All operators of the energy storage system shall follow the instructions in the Owner's Manual and Installation Manual. Any damage to equipment caused by ignoring and contravening the Manuals will invalidate the product warranty

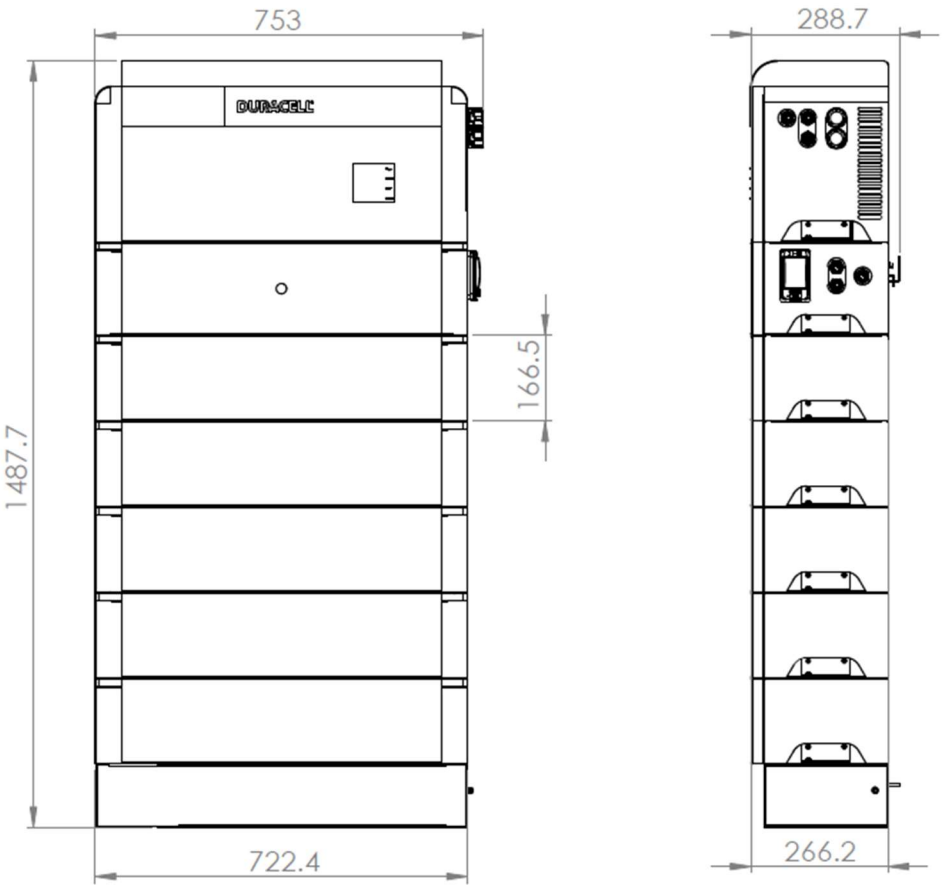
9. DATASHEET/SPECIFICATION

				
Model	DUREB2-1P-050-3B24	DUREB2-1P-050-4B24	DUREB2-1P-050-5B24	DUREB2-1P-050-6B24
Nominal Power (kW)	3kW*	4kW*	5kW*	5kW*
Nominal Voltage (Vac)	230	230	230	230
Operating Voltage Range (Vac)	175-265	175-265	175-265	175-265
Nominal Current (A)	13*	17.3*	21.7*	21.7*
Nominal Frequency (Hz)	50	50	50	50
Max Inrush Current (I)	40			
Operating Frequency range (Hz)	45-65	45-65	45-65	45-65
no. of Phases	single-phase	single-phase	single-phase	single-phase
Short Circuit current (at Grid connection)	102A/190ms			
Batteries				
No. of Batteries	3	4	5	6
Nominal Capacity (kWh)	7.2	9.6	12	14.4
Nominal DC Voltage (Vdc)	96	128	160	192
DC Voltage Range (Vdc)	84-108	112-144	140-180	168-216
Depth of Discharge (Usable capacity) (%)	90			
Maximum Short-Circuit Current (A)	1660A			
Backup				
Nominal Power (kW)	NA	3	4	4
Nominal Current (A)	NA	13	17.4	17.4
Nominal Voltage (Vac)	-	230	230	230

Nominal Frequency (Hz)	-	50	50	50
Max Power - 5 sec (kW)	-	4.5	6	6
Max Power - 5 min (kW)	-	3.6	4.8	4.8
Max Power - 30 min (kW)	-	3.3	4.4	4.4
Environment				
IP Protection rating	IP55 (suited for outdoor installation)			
Optimal Recommended environment	Indoors/protected with ambient temperatures between 15°C – 30°C will provide optimal efficiency and longevity.			
Weight (kg)	126	154	182	210
Height (cm)	1155	1325	1490	1655
Width (cm)	725 (755 with glands & Switch cover)			
Depth (cm)	270 (sits 288 from the wall with standard mounting)			
Noise (dB)	<45dB			
Construction	Transformerless (non-isolated)			
Cooling Method	Forced-air cooling			
Operating Temperature (°C) – incl De-Rating	-10 to +50			
Full-Power Operating Temperature (°C)	+10 to +40			
Storage Temperature (°C)	-20 to +50			
Operating Humidity (%RH)	95% non-condensing			
Altitude	<2000m			
Protective Class	Class I			
Pollution Degree	III			
Communications	LAN & RS485			
Warranty	10 years or 6000 cycles (60% min capacity remaining)			
Standards	AS4777, AS5139 (with Installer), AS62619, G98/G99/G100			
Arc Flash Calculation				
Arcing Time (T_{arc}) (sec)	0.001 (1ms)			
Battery Fault Current (I_{bf}) (A) – Bolted Current	1660			
Example (using the equations from AS/NZS 5139):	For a 9.6kWh unit, working at 20cm distance on part of the battery system Arc Flash incident energy (cal/cm^2) = 0.01 x 160 x (1660/2) x ($0.001/20^2$) x 3 = 0.01 cal/cm^2			

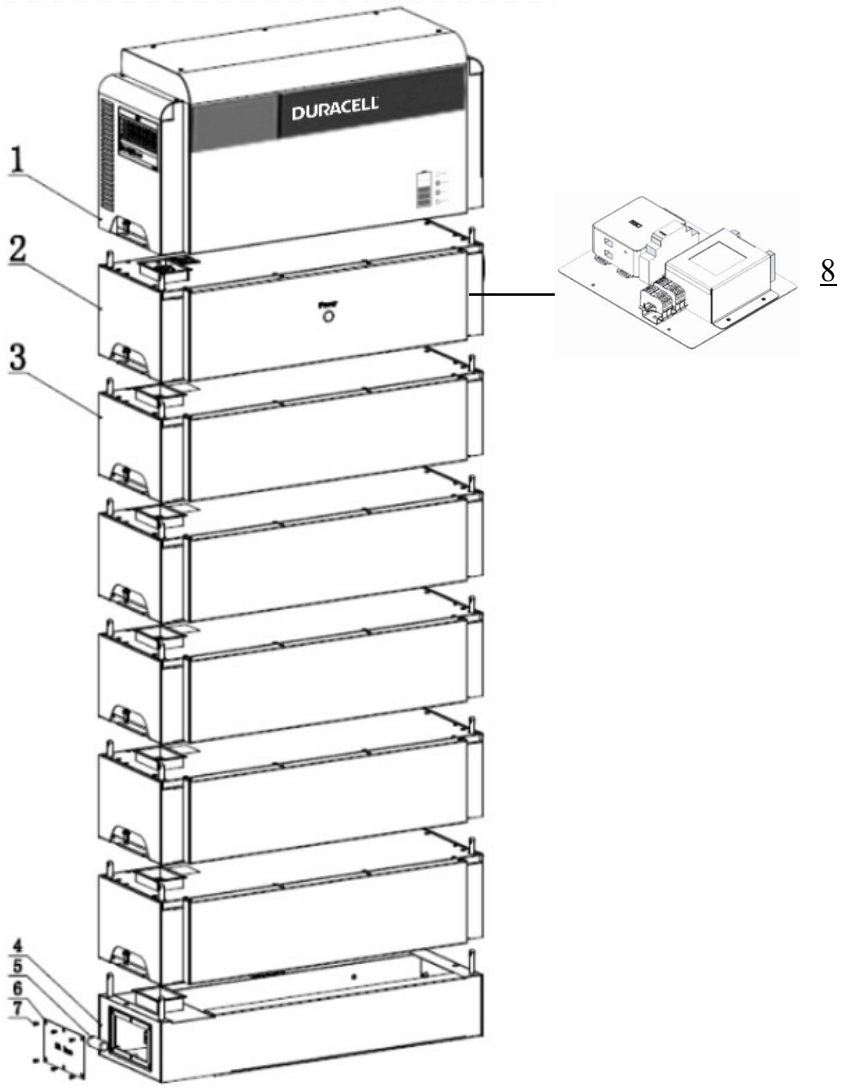
* Where VDE-AR-N 4105 applies, Current limited to 20A

** Where G98/G99 applies (UK) current is limited to 16A


753
288.7
DURACELL
166.5
1487.7
722.4
266.2

10. EXPLODED DIAGRAM

10.1. DUREB2-1P-050-5B24 12.0KWH



Item	Description	Qty
1	Inverter Module	1
2	BMS Module (Includes Social Energy Controls)	1
3	Battery Module	5
4	Base Module	1
5	Fuse – 63A	1
6	Fuse Cover Plate	1
7	Screw – Fuse Cover (T15)	6
8	SE Control unit-ES0004	1

11. WARRANTY

Duracell Energy Bank 2 - Manufacturer's Warranty

1. Definitions

1.1 In this warranty, terms have the following meanings:

a) **Authorised Partner**; Distributors, technicians, installers or service agents authorised by Social Energy to sell, install, repair or service Social Energy and/or Duracell equipment;

b) **Authorised Repairer**; Authorised Partners authorised by Social Energy to repair or service Social Energy and/or Duracell equipment;

c) **Battery Energy Storage System** or **BESS**: Equipment consisting of an inverter, battery management system and one or more battery modules which functions to store energy and release it in a series of charge and discharge cycles;

d) **Customer**: The purchaser of the Equipment, for whose benefit the Equipment is brought into service and where the purchase of the Equipment is not for the purpose of resupply or resale;

e) **Equipment**: The products described in this owner's manual, as first delivered to the Customer and or any replacement or repaired product provided to the Customer under the terms of this warranty;

f) **Full Cycle** means a full charge and discharge cycle of a BESS where the discharge is from full capacity down to the rated depth of discharge and the charge returns the battery to full capacity. A cycle can similarly be made up of any number of fractions of a cycle which, when aggregated together, constitute a full charge and discharge.

g) **Installation Registration**: The registration of the Equipment during the commissioning and installation process whereby details such as serial number and property address are entered into the Social Energy database by the installer via a web portal or applications interface; and

h) **Social Energy**: Social Energy Australia Pty Ltd, ACN 631 510 042.

1.2 This warranty is given to the Customer in respect of the Equipment. To the extent permitted by law, the warranty will not transfer to any subsequent purchasers of the Equipment without the prior, written consent of Social Energy. Such consent will not be unreasonably withheld.

1.3 In the event of a transfer of title over the property on which the Equipment is installed, the warranty will transfer to the new owner of the property only after written advice from the individual(s) transferring ownership of the sale or transfer, the receipt of contact details of the new owner and confirmation that all manuals and warranty documents have been supplied to the new owner by the individual(s) transferring ownership.

1.4 If the Customer subsequently purchases additional Equipment, Social Energy or its Authorised Partner will issue new warranty documents in respect of each new Equipment which will be subject to the terms and conditions of the warranties contained therein.

2. Warranty Details

2.1 If the Equipment develops a fault or defect (as determined by Social Energy) during the warranty period, and subject to the terms and conditions within this document, Social Energy will replace or repair the Equipment. Equipment may be replaced at the discretion of Social Energy by a new or refurbished item of the same type being repaired, being of a similar or superior condition, age and function.

2.2 Subject to the terms of paragraph 2.1, due to the duration of the warranty and the nature of technological changes and advancements, the replacement Equipment may be of a different appearance and may be functionally different to the warranted Equipment. Interaction through technologies such as mobile device Apps may differ and any stored historical data may be unable to be preserved.

2.3 Social Energy offers this warranty in addition to any guarantees imposed by any applicable State, Territory or Federal legislation, including the *Competition and Consumer Act 2010 (Cth)*.

2.4 The warranty period commences on the date that the Equipment is first brought into service as recorded during the installation and commissioning process. The warranty period ends after whichever occurs first: (i) 10 years from the data of commencement of the warranty; or (ii) 6000 Full Cycles of the BESS. Battery modules forming part of the BESS are warranted to retain not less than 60% of their original usable capacity at the end of the warranty period.

2.5 Where Equipment is replaced or repaired under this warranty, the balance of the original warranty period will apply. The replacement parts do not carry a new warranty.

2.6 The warranty does not cover:

a) any Equipment where:
   i) it has not been installed by an Authorised Partner certified by Social Energy to install the Equipment;
   ii) it was installed in an unsuitable location according to the datasheet/specification set out in this owner's manual;
   iii) the sealing of the Equipment has been damaged or compromised;
   iv) it is installed in such a way as to be exposed to direct sunlight in temperatures greater than 40°C for a period greater than 30 minutes;
   v) it has been installed incorrectly or that has not been properly commissioned during the installation process;
   vi) it has been used or maintained other than in accordance with the operating instructions or as set out in the technical datasheet or specification provided with the Equipment;
   vii) Mains Power has been disconnected from the Equipment for more than 10 days where the equipment includes Battery Storage module and the Batteries were not switched off and where the Batteries have become over-discharged;
   viii) regular examinations of the equipment have not been carried out according to Social Energy's instructions;
   ix) it has not been continually connected to a reliable internet connection and where this lack is deemed by Social Energy to have caused, contributed to or prevented the avoidance of a defect; or
   x) the rating plate or serial number has been removed or altered.
b) damage to the Equipment or negligence on the part of the Customer;
c) normal wear and tear;
d) faults or defects caused by third parties including (but not limited to) freight companies, unauthorised installers and unauthorised service agents;
e) damages caused by events beyond Social Energy's control including (but not limited to) fire, flood, vandalism, theft, lightening, hail, earthquake, exposure to a strong magnetic or electromagnetic field, or extreme weather or temperature;
f) any losses, damages, loss of data, loss of profits or any other indirect damages;
g) any costs or expenses incurred by any party for the procurement of alternate or substitute equipment or services;
h) damage caused by excess voltage from the electrical supply or power network which the Equipment is connected; or
i) any transport or travel costs incurred by any party in the repair or replacement of the Equipment in excess of $250 per event or $500 annually.

3. Repair and refurbishment notices

3.1 If we opt to repair the Equipment in accordance with this document the repair of the Equipment may result in the loss of any user-generated data. Customers should ensure that they have made a copy of any data saved on the Equipment.

3.2 Equipment presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the Equipment.

4. Making a Warranty Claim

4.1 If there is a fault or defect within the warranty period, the Customer must stop using the Equipment and take steps to isolate or switch off the Equipment.

4.2 The Customer must contact Social Energy immediately as they become aware of a fault or defect and must assist Social Energy to understand and diagnose the problem as required. Such assistance may include taking photos or video, switching equipment on or off and/or carrying out visual inspections of externally accessible parts of the Equipment under the guidance of Social Energy support staff.

4.3 Warranty claims must be made within 3 months after the date on which the Customer becomes aware of the issue or after which the issue becomes apparent.

4.4 When contacting Social Energy, the Customer must provide the following details;

a) name, address, phone number and email address for a contact person as well as the same details for the property at which the Equipment is installed if different from the details for the contact person;
b) the Equipment model and serial number;
c) proof of purchase with date of purchase and details of the Authorised Partner from whom the Equipment was purchased;
d) installation date;
e) a complete description of the observed fault; and
f) photographs of the Equipment and its surroundings.

4.5 The warranty claim may be dealt with by Social Energy or its Authorised Partner, as follows:
a) accessing the Equipment through remote access in order to assess the warranty claim, and perform any repairs or updates to its software; and/or
b) replacing or otherwise repairing the Equipment.

4.6 Any Physical repairs, replacement or collection of Equipment will be performed by Social Energy or one of its Authorised Partners at the instruction of Social Energy. The repair, replacement or collection will be carried out at the original installation address. Repaired or replaced Equipment will be delivered back to the Customer. Equipment which is not covered under the warranty will also be delivered back to the Customer.

4.7 If a warranty claim is not covered, the Customer will be responsible for any freight, travel or labour costs incurred by Social Energy or by any third party in dealing with the claim.

5. Guarantees under Australian Consumer Law

Social Energy's Equipment come with guarantees that cannot be excluded under the Australian Consumer Law. The Customer is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. The Customer is also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

6. Social Energy Contact Details

Social Energy Australia
Address: Suite 5, Level 13, 465 Victoria Avenue, Chatswood NSW 2067
Email: ausinfo@social.energy
Phone: 1300 322 059

SE Group Limited (UK headquarters)
St Pegs Mill, Thornhill Beck Lane
Brighouse, West Yorkshire
HD6 4AH, United Kingdom
Email: info@social.energy
Website: www.social.energy
Phone: +44 1865 747 711

12. DECLARATION OF CONFORMITY

This Declaration is issued by Social Energy Australia Pty Ltd as the Australian representative of the Manufacturer and Manufactured Product.

Product: **Duracell Energy Bank 2**

Models:
DUREB2-1P-050-3B24 – 7.2kWh
DUREB2-1P-050-4B24 – 9.6kWh
DUREB2-1P-050-5B24 – 12.0kWh
DUREB2-1P-050-6B24 – 14.4kWh

It is Declared that the Products listed have been deemed to be compliant with the Best Practice Guide for Battery Storage Equipment – Electrical Safety Requirements.

It is Declared that the Products meet or exceed the minimum criteria as set out by the Best Practice Guide.

It is Declared that compliance with the Best Practice Guide is made under the following definitions:

Method 3 – Mandatory Requirements

Method 3 – Optional Requirements e, f, g, h, i, j, k, l, m, p, q

It is Declared that the Inverters used in the Products Listed comply with the requirements of the following

ERAC Responsible supplier number: E7832
Standards Compliance:
IEC 62190: 2017
EN IEC AS 62040.1:2017
AS/NZS 4777.2:2015
IEC 62477.1:2012/A1:2017
IEC 62619: 2017

SAA Approval: SAA202681

EN IEC 61000-6-2:2019
EN IEC 61000.6.4:2019
EN 61000.3.12:2011
EN IEC 61000.3.11:2019

Signature:

Gordon Thorpe
Technical Manager AU/NZ

Address: Level 13, 465 Victoria Avenue,
Chatswood,
NSW 2065

Date: 20/10/2020

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