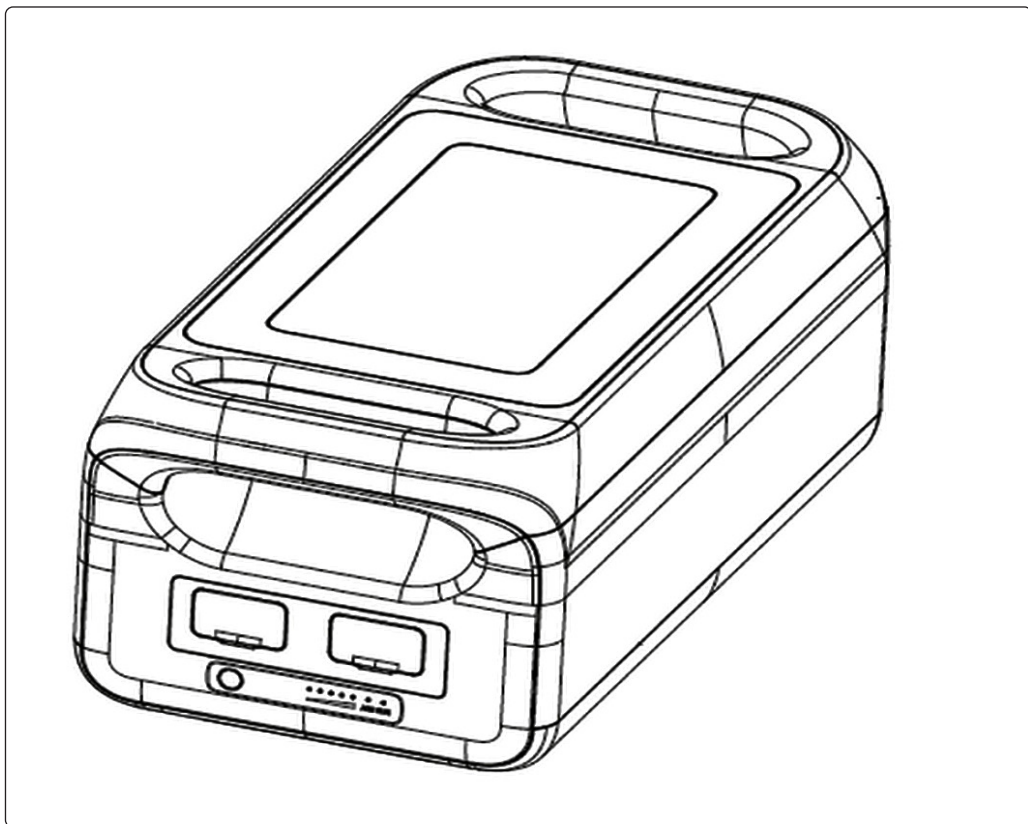# Power Station Expansion Battery, 2560Wh, LiFePO4

Model No. DL164

Thank you for purchasing a Dellonda product. Manufactured to a high standard, this product will,
if used according to these instructions, and properly maintained, give you years of trouble free performance.

Important Information

Please read these instructions carefully. Note the safe operational requirements, warnings & cautions. Use the product correctly and with care for the purpose for which it is intended. Failure to do so may cause damage and/or personal injury and will invalidate the warranty. Keep these instructions safe for future use.

Refer to instruction manual

Indoor use only

1. SAFETY

- **DO NOT** let a working expansion battery pack be close to any heat source, such as fire or heater.
- **DO NOT** allow expansion battery pack contact with any liquid. **DO NOT** immerse this product in water or get it wet.
- **DO NOT** use this product in the rain or in a wet environment.
- **DO NOT** use this product in a strong electrostatic or strong magnetic field environment.
- **DO NOT** disassemble in any way or pierce it with a sharp object.
- **DO NOT** use wires or other metal objects to short-circuit the product.
- **DO NOT** use parts or accessories that are not officially supplied.
- **DO NOT** stop the fan by force or expose expansion battery pack in an non-ventilated or dusty environment when it is working.
- **DO NOT** put other heavy objects on the expansion battery pack except the expansion battery pack; the stacking method of the expansion battery pack has been designed and tested to allow for this. For the stacking method of the expansion battery pack, see section 4.
- When using this product, please strictly follow the ambient temperature in this User Manual. If the temperature is too high, the battery may fire or even explode; if the temperature is too low, the product's performance will be severely degraded, or it may not be able to meet the requirements for normal use.
- Avoid dropping, violent vibration or impacts to the unit. If severe impact happens, shut down the power supply immediately. Please fix expansion battery pack firmly during transportation to avoid vibration and impact.
- If expansion battery pack falls into water accidentally, place it in a safe and wide area, and keep people away from it until it's dry. Dried product shall not be used again. Dispose it properly according to local and industrial regulations and footers on end of these instructions.
- If expansion battery pack is on fire, please use fire extinguishing equipment in the recommended order: water or water mist, sand, fire blanket, dry powder, dioxide carbon fire extinguisher.
- If there is dirt on the connector of this product, wipe it off with a dry cloth.
- Be careful to store the product so that it does not fall over and cause damage to either itself or local area.
- If the product is tipped over and severely damaged, immediately turn it off, place the battery in an open area, away from combustible materials and people, and dispose of it in accordance with local and industrial regulations and footers on rear of these instructions.
- Store this product out of the reach of children and pets.
- The product should be stored in a dry and ventilated place.

2. INTRODUCTION

High quality LiFePO4 battery can be charged and discharged 3600 times before it starts to lose performance. Huge capacity of 2560Wh, which can double the capacity of your power station to 5120Wh. Expansion battery is designed for use with Dellonda 3000W Portable Power Station - Model No. DL163. Built-in carry handles that make lifting and transporting the power station easy. Audible alarm will sound at 5% battery to help ensure you never run out of battery.

3. SPECIFICATION

Model No.:	DL164
Battery Capacity / Type	51.2V ⎓ 50Ah (2560Wh) Lithium Phosphate (LiFeP04)
Capacity:	2560Wh
Charge Time:	1hr 35m
Discharge (Charge) temp range	(20) - 45°C (0 - 45°C)
Input:	1 x Battery Expansion Cable Input (Max. 50A)
Nett Weight:	25.9kg
Output:	1 x Battery Expansion Cable Output (Max. 70A)
Power Input / Output	40 - 57.6V ⎓ / 70A max.
IP Rating	IP20

4. OPERATION

NOTE: This product cannot be used alone, it needs to be used together with our Dellonda 3kW Portable Power Supply (DL163).
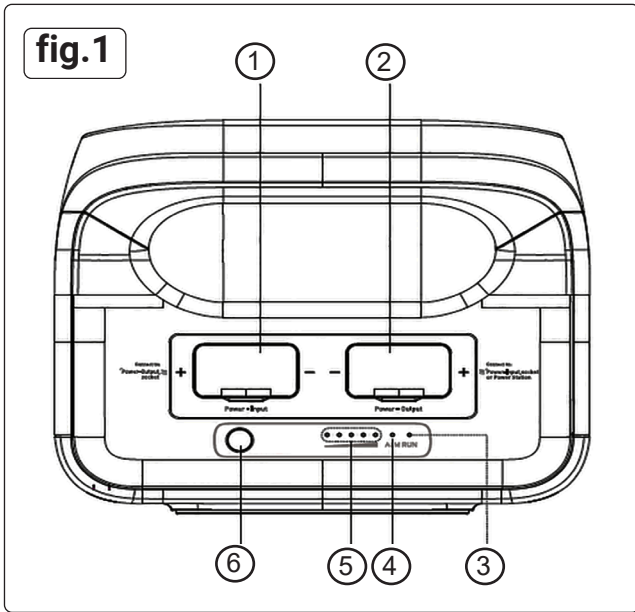

Figure 1 Key		
Item	Title	Description/Function
1	Power input	Connect to the power output interface of another power pack
2	Power output	Connect to the expansion port of power station or the power input interface of another power pack.
3	Blue light	Run indicator
4	Red light	Alarm indicator
5	Blue light	SOC indicator
6	Power button	Power button

- When combined with a 3kW portable power supply, the on/off function is controlled by the power button of the 3kW portable power station.
- If this product is used alone, press the power switch button (fig.1.6) of this product to display the current capacity of the battery, but it cannot output power, and it will automatically shut down after 2 minutes.
- Switching on/off: After pressing the power button (fig.1.6), the indicator light is on (fig.1.3), showing the current operating status light (fig.1.5) and the power light (fig.1.3). Press the power button (fig.1.6) for 3 seconds, the expansion battery pack turns off, and the indicator light (fig.1.3) goes out.
- See tables below for indicator light meanings (fig.1.3, 1.4, 1.5).

Indicator	Status
Blue light: Run indicator	Standby, working
Red light：Alarm indicator	Alert, faulty
Blue light: SOC indicator	SOC indicator

SOC indicator	Description
ALM RUN	0%≤SOC≤20%
ALM RUN	20%<SOC≤40%
ALM RUN	40%<SOC≤60%
ALM RUN	60%<SOC≤80%
ALM RUN	80%<SOC≤100%

- Up to six battery expansion packs can be connected simultaneously for greater capacity requirements.
- Before connecting the expansion battery pack, please ensure that the power station and the expansion battery pack are both in off state.
- After connecting the expansion battery pack, make sure that the number of parallel expansion battery pack icon appears on the LCD of the power station before starting to use it.
- Please **DO NOT** connect or remove the power station directly during the charging and discharging processes if you need to connect or remove the expansion battery pack in process, please turn off the power first and then operate.
- **DO NOT** touch the metal terminal at the connection port of expansion battery pack with your hands or other objects. If the metal terminal has been attached to other objects, please gently wipe all terminals clean with a dry cloth.

4.1. 1 PORTABLE POWER STATION AND 1 EXPANSION BATTERY PACK IN PARALLEL MODE (FIG.2)

- Turn off all portable power station and expansion battery packs to be paralleled.
  The parallel connection cable is plugged into the expansion port of the portable power station and the Power Output of the expansion battery pack.

- After the parallel connection is completed, press the switch button of the portable power station to wake up the parallel power station and the expansion battery pack to display the current capacity. If the power station shows the paralleled quantity, then the parallel capacity expansion is successful.
- After the parallelization is completed, connect the corresponding outlet of the portable power station to charge or discharge (refer to the Power Station User Manual).

fig.2

Portable Power Station

Extension battery pack
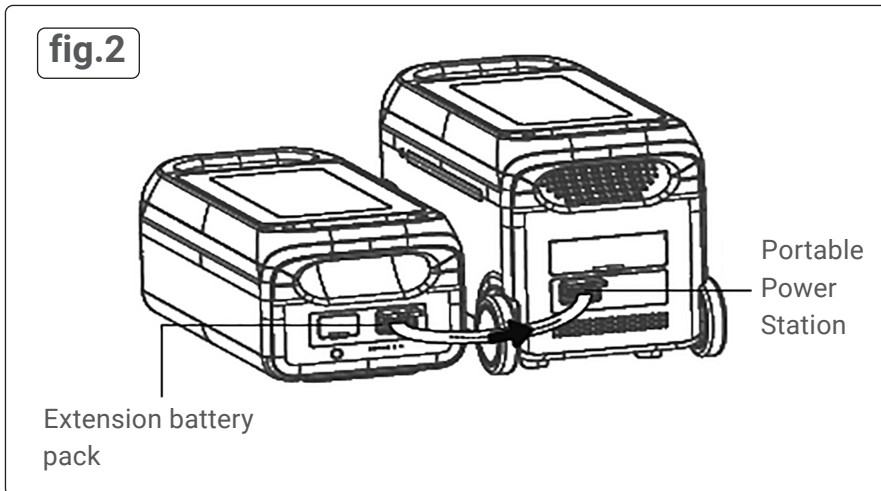
4.2. 1 PORTABLE POWER STATION WITH MULTIPLE EXPANSION BATTERY PACKS IN PARALLEL (FIG.3)

- Turn off all portable power station and expansion battery packs to be paralleled.
- The parallel connection cable is plugged into the expansion port of the portable power station (external power supply) and the Power Output of Expansion Battery Pack#!, the Power Input of Expansion Battery Pack#! is connected
- After the parallel connection is completed, press the switch button of the portable power station to wake up the parallel power station and the expansion battery pack to display the current capacity. If the power station shows the paralleled quantity then the parallel capacity expansion is successful.
- After the parallelization is completed, connect the corresponding outlet of the portable power station to charge or discharge (refer to the Power Station User Manual)).
- After the parallel connection is completed, press the switch button@of the portable power station to wake up the parallel portable power station and the expansion battery pack to display the current power level and the current number of parallel expansion battery packs and the parallel expansion is successful.
- After the parallelization is completed, connect the corresponding outlet of the portable power station to charge or discharge (refer to Power station user Manual).

Expansion battery Pack #3

Expansion battery Pack #1

Expansion battery Pack #2

Portable power station

fig.3
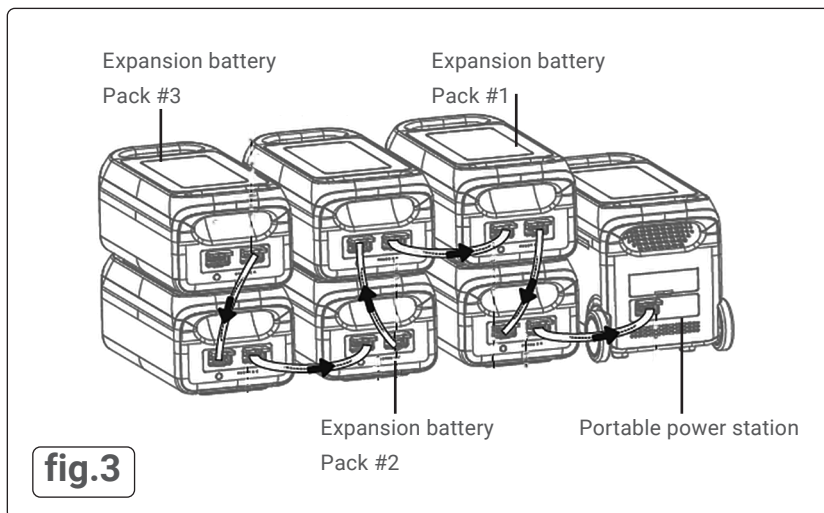
5. MAINTENANCE

- Keep battery away from water, heaters and metal parts.
- It is recommended to use or store expansion battery pack at 20-30°C ambient temperature for optimum use and storage.
- For long-term storage, charge and discharge every 3 months (i.e. discharge to 0% then charge to 100%, then discharge to 60% for long-term storage); products that have not been charged and discharged for more than 6 months are not warranted.
- For safety, **DO NOT** store expansion battery pack in temperatures above 45°C or below -10°C.
- If the capacity is seriously insufficient and idle time is too long, the product will enter deep sleep mode, and the product can only be used after being charged.

6. DISPOSAL

- When conditions permit, please be sure to completely discharge the battery of this product before placing the product in the designated battery recycling system.
- This product contains batteries. Batteries contain hazardous chemicals. It is strictly forbidden to dispose of in ordinary waste bins. For details, please follow WEEE regulations, local laws and regulations on battery recycling and disposal.

- If the battery cannot be completely discharged due to the failure of the product itself, please **DO NOT** dispose of the battery directly in the battery recycling bin, but contact a professional battery recycling company for further disposal.
- The battery will not start after over-discharging, please dispose of it as discarded.

7. TROUBLESHOOTING

7.1. WARNING LIGHT (RED) FLASHING

Button Indicator	SOC indicator	Alerting	Solution
Red light blinks		Battery over voltage	Restart the battery. If it's still not fixed, contact customer service.
		Battery under voltage	Charge the battery, waiting for the voltage to recover.
		Unit under voltage	
		VTOP under voltage	
		VTOP over voltage	Restart the battery. If it's still not fixed, contact customer service.
		Battery over temperature	Turn off and wait for 2 hours. If it's still not fixed, contact customer service.
		Battery low temperature	Turn off, wait the temperature to recover, restart the battery. If it's still not fixed, contact customer service.
		Overcurrent when charging	Restart the battery. If it's still not fixed, contact customer service.
		Overcurrent when discharging 1	
		Overcurrent when discharging 2	
		Short when discharging	Turn off, remove and check equipment, restart the battery. If it's still not fixed, contact customer service.
		Short when charging	
		PCB over temperature	Turn off and wait for 2 hours. If it's still not fixed, contact customer service.
		Pre-charge resistor over temperature	
		Battery under voltage	Charge the battery, waiting for the voltage to recover.
		IUIP parallel signal fault	Turn off, check the communication cable, restart the battery. If it's still not fixed, contact customer service.
		I_WORK parallel signal fault	
		Parallelization over time	
		Parallelization readiness failure	

7.2. WARNING LIGHT (RED) SOLID

Button Indicator	SOC indicator	Alerting	Solution
Red light always on	ALM RUN	Battery voltage sampling wire broken	Restart the battery. If it's still not fixed, contact customer service.
	ALM RUN	MOS failure	
	ALM RUN	AFE communication failure	
	ALM RUN	EEPROM failure	
	ALM RUN	Voltage sensor failure	
	ALM RUN	Current sensor drift failure	Contact customer service.
	ALM RUN	Main circuit fault	
	ALM RUN	Pre-charge over time	Restart the battery. If it's still not fixed, contact customer service.
	ALM RUN	Current sensor failure	
	ALM RUN	Dead battery	
	ALM RUN	Inverter communication failure	Turn off, check the communication cable. If it's still not fixed, contact customer service.
	ALM RUN	CAN bus failure	
	ALM RUN	RS485 bus failure	
	ALM RUN	Parallel address recognition failure	
	ALM RUN	Short circuit protection fuse circuit fault	Contact customer service.

BATTERY REMOVAL
Under the Waste Batteries and Accumulators Regulations 2009, Jack Sealey Ltd are required to inform potential purchasers of products containing batteries (as defined within these regulations), that they are registered with Valpak's registered compliance scheme. Jack Sealey Ltd's Batteries Producer Registration Number (BPRN) is BPRN00705.

WEEE REGULATIONS
Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

ENVIRONMENT PROTECTION
Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.