DOMETIC

ENERGY & LIGHTING
BATTERIES

PLB40

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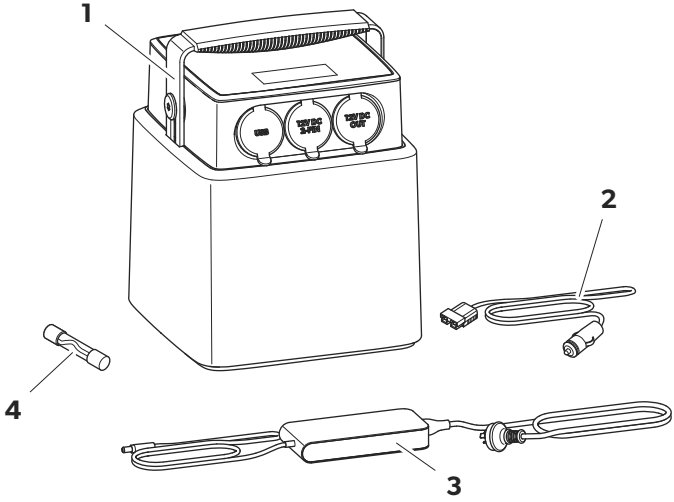
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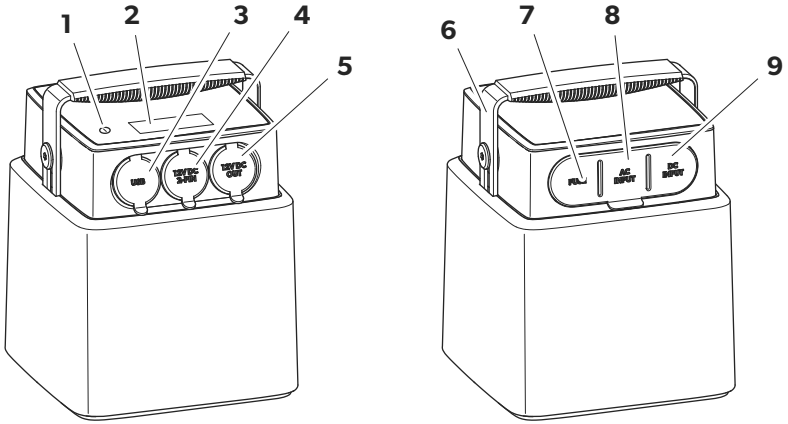
USB
12V DC 3-PIN
12V DC OUT

2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DC INPUT

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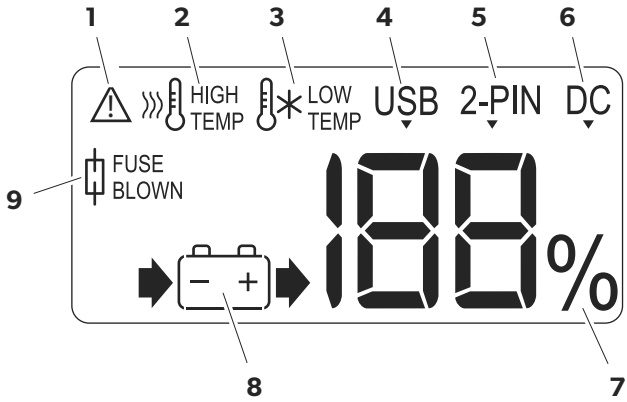

Please read this instruction manual carefully before first use, and store it in a safe place. If you pass on the product to another person, hand over this instruction manual along with it.

Table of contents

1 Explanation of symbols

WARNING!
Safety instruction: Failure to observe this instruction can cause death or serious injury.

CAUTION!
Safety instruction: Failure to observe this instruction can lead to injury.

NOTICE!
Failure to observe this instruction can cause material damage and impair the function of the product.

2 General safety instructions

The manufacturer accepts no liability for damage in the following cases:

- Damage to the product resulting from mechanical influences and incorrect connection voltage
- Alterations to the product without express permission from the manufacturer
- Use for purposes other than those described in the operating manual

The declaration of conformity can be requested from the manufacturer (contact information on the back).

Note the following basic safety information when using electrical devices to protect against:

- Electric shock
- Fire hazards
- Injury

2.1 General safety

WARNING!

- Only use the device as intended.
- Disconnect the device from the mains
  - Before cleaning and maintenance
  - After use
  - Before changing a fuse
- The device may not be used if the device itself or the connection cable are visibly damaged.
- If the power cable for this device is damaged, it must be replaced by the manufacturer, customer service or a similarly qualified person in order to prevent safety hazards.
- This appliance may only be repaired by qualified personnel. Inadequate repairs may cause serious hazards.
- **Electrical devices are not toys.**
  Always keep and use the device out of the reach of children.
- Children must be supervised to ensure that they do not play with the device.

NOTICE!

- Do not insert foreign objects into the output or input terminals.
- Do not attempt to replace the internal battery cells.
- Before using for the first time, charge your battery pack using one of the methods described in chapter "Charging the lithium iron phosphate battery pack" on page 11.
- Before using the device for the first time, check that the voltage specification on the rating plate matches that of the power supply.
- Never pull on the power cord to unplug the device from the power socket.
- Store the device in a dry and cool place.

2.2 Operating the device safely

WARNING!

- Only use the charger supplied to charge the device.
- The power socket to which the device is connected must be close by and easily accessible.

CAUTION!

- Do **not** operate the device
  - In the vicinity of corrosive fumes
  - In the vicinity of combustible materials
  - In areas where there is a danger of explosions

NOTICE!

- Do not disconnect any cables when the device is still in use.
- Only use the device in upright position.

3 Scope of delivery

No. in fig. 1, page 3	Description
1	Portable lithium iron phosphate battery pack
2	DC charge cable
3	AC power supply unit
4	2x DC fuse

4 Intended use

The portable lithium iron phosphate battery pack is for use in camping application. It comes with four outlets to power devices like tablet, mobile phone, portable fridge/freezer etc.

The battery pack is suitable for

- the connection to 12 V appliances with low power consumption e.g. small inverters up to 150 W,
- the connection to a laptop with an additional 150 W inverter connected to the 12 V DC connection socket output.

It is not allowed

- to use the battery pack as a starter battery for a vehicle,
- to use two battery packs in parallel connection.

5 Technical description

The portable lithium iron phosphate battery pack (LiFePO4) enables mobile power supply for portable refrigeration, USB devices and small inverters up to 150 W continuous output.

A DC consumer unit (e.g. a portable refrigeration) can be simultaneously supplied with power while the lithium iron phosphate battery is being charged via the power supply unit.

The housing is shock, heat and UV resistant.

The lithium iron phosphate battery can be charged in three ways:

- via the supplied AC/DC charger on the AC mains (max. 8 A)
- via DC connection through vehicle alternator (max. 8 A)
- via DC connection through solar panel

The device has the following protective functions:

- Overtemperature, undertemperature protection
- Overvoltage protection
- Undervoltage protection
- Overcurrent protection
- Short circuit protection
- Incorrect polarity protection

5.1 Connections and display

No. in fig. 2, page 3	Description
1	Power button
2	Display (LCD)
3	2 x USB socket (5 V, max. 4.2 A overall)
4	12 V⎓ 2-pin connection output to portable refrigeration with a red light for visibility
5	12 V⎓ heavy duty connection socket output for portable refrigeration and 12 V applicances
6	Adjustable handle
7	2x fuse holder
8	AC/DC adapter input socket
9	DC/DC Anderson™ SB™ input socket

5.2 Display

No. in fig. 3, page 4		Description
1		A failure occurred (chapter "Troubleshooting" on page 13).
2		See chapter "Troubleshooting" on page 13.
3		See chapter "Troubleshooting" on page 13.
4		The battery pack supplies energy to an USB device.
5		The battery pack supplies energy to a device connected to the 2-PIN output.
6		The battery pack supplies energy to a device connected to the DC output.
7		State of charge as a percentage
8		Battery is being discharged
		Battery is being charged
		Battery is being charged and discharged at the same time
9		See chapter "Troubleshooting" on page 13.

6 Using the appliance

6.1 Before first use

➤ Before first use or storing plug the battery pack into the wall charger until it is fully charged.

➤ Observe the information given in chapter "Charging the lithium iron phosphate battery pack" on page 11.

6.2 Starting and switching off

Starting the lithium iron phosphate battery pack

➤ Press the power button (fig. 2 1, page 3) for at least 3 seconds to start the device.

✓ The device emits 2 beeps.

✓ The display shows the operational status:
: the lithium iron phosphate battery is being charged
: the lithium iron phosphate battery is being discharged
: the lithium iron phosphate battery is on idle mode

✓ The display switches off automatically after 1 minute.

Switching the display on

➤ Press the power button (fig. 2 1, page 3) briefly to switch on the display.

Switching off the lithium iron phosphate battery pack

The battery pack switches off automatically after 1 hour if no load and no charger are connected.

➤ Press the power button (fig. 2 1, page 3) for at least 3 seconds to switch the device off.

✓ The device emits 1 beep.

✓ The display switches off.

6.3 Charging the lithium iron phosphate battery pack

WARNING!
lithium iron phosphate batteries that are charged with too high voltage can ignite. Use 8 to 25 V input voltage to charge the battery pack.

➤ Adjust the handle upwards.

➤ Place the lithium iron phosphate battery on a firm base.

Charging with the power supply unit

➤ Connect the power supply unit to the connection socket (fig. 2 8, page 3).

➤ Connect the power supply unit to the AC mains.

✓ The symbol lights up.

✓ The display shows the charging status.

Charging with the smart alternator, 12 V accessory socket or solar panel

➤ Connect the charge cable to the connection socket (fig. **2** 9, page 3).

➤ Connect the DC plug to the DC inlet Anderson socket on battery side.

✓ The symbol lights up the battery state of charge as a percentage.

✓ The display shows the charging status.

➤ If charging the battery pack with a solar panel, observe the following requirements:
- **Use without a solar controller:**
  Ensure that the solar panel outputs between 8 – 25 V DC and a maximum charging current of 10 A.
- **Use with a solar controller:**
  Ensure the solar charger does not need a counter voltage from the battery side to start charging. Ensure that the maximum charging current is 10 A (check with the solar panel manufacturer).

6.4 Checking the charge level

➤ Press the power button (fig. **2** 1, page 3).

✓ The display shows the battery state of charge as a percentage.

✓ The symbol flashes when the battery capacity is below 20%.

6.5 Connecting consumer devices

fig. 2, page 3

➤ Open the cap for the desired device:
- USB devices (**3**)
- 2-pin 12 V DC socket outlet (**4**)
- 12 V DC socket (**5**)

➤ Insert your device's plug into the corresponding socket.

✓ The symbol and the related output symbol light up.

6.6 Replacing fuses

➤ Ensure that the battery pack is not connected to AC/DC or DC/DC charger.

➤ Disconnect all loads.

➤ Press the power button for at least 3 s to switch the battery pack off.

➤ Undo the fuse holder.

➤ Replace the fuse with a 20 A 3 AG glass-slow acting fuse.

7 Troubleshooting

Problem	Cause	Remedy
The display shows the warning symbol and the low / high temperature symbol flashes. An error sound is continuously beeping during charging.	The ambient temperature for charging the device is too low / high.	Stop charging the device. Turn the device off. Wait until the ambient temperature comes to a permitted value (chapter "Technical data" on page 15).
The display shows the warning symbol and the low / high temperature symbol flashes. The device beeps for 15 seconds and then switches off automatically during discharging.	The ambient temperature for discharging the device is too low / high.	Stop discharging the device. Turn the device off. Wait until the ambient temperature comes to a permitted value (chapter "Technical data" on page 15).
The display shows the warning symbol and the fuse blown symbol flashes. An error sound is continuously beeping for 30 seconds.	The DC output fuse has blown. Additionally the DC symbol flashes in the display.	Turn the device off. Change the DC fuse (chapter "Replacing fuses" on page 13).
	The 2-PIN fuse has blown. Additionally the 2-PIN symbol flashes in the display.	Turn the device off. Change the 2-PIN fuse (chapter "Replacing fuses" on page 13).
The display shows the warning symbol and the charge arrow symbol flashes. An error sound is continuously beeping.	The input voltage of the charger is wrong.	Turn the charger off. Connect a charger with the standard charge voltage (chapter "Technical data" on page 15).

Problem	Cause	Remedy
The display shows the warning symbol. The discharge arrow and either the USB or 2-pin or DC symbol flashes. An error sound is beeping for 60 seconds.	Over current protection was triggered.	Turn the device off. Release some of the load before switching the device on again.
	Short circuit protection was triggered.	Turn the device off. Clear the short circuit before switching the device on again.
The battery symbol is flashing. An error sound beeps every 3 seconds for 10 times. After the beeps the device switches off automatically.	The battery capacity is 0%.	Charge the device.

8 Maintaining and cleaning the product

NOTICE!

- Do not use sharp or hard objects or cleaning agents for cleaning as these may damage the product.
- Do not use alcohol based cleaning materials for cleaning the gloss top cover.

➤ Occasionally clean the product with a damp cloth.

NOTICE!
Fully charge the lithium iron phosphate battery at least every six months. Overloading the battery or storing it for too long without charging it may cause permanent damage to the battery.

9 Warranty

The statutory warranty period applies. If the product is defective, please contact the manufacturer's branch in your country (see the back of the instruction manual for the addresses) or your retailer.

For repair and warranty processing, please include the following documents when you send in the device:

- A copy of the receipt with purchasing date
- A reason for the claim or description of the fault

10 Disposal

➤ Place the packaging material in the appropriate recycling waste bins wherever possible.

If you wish to finally dispose of the product, ask your local recycling centre or specialist dealer for details about how to do this in accordance with the applicable disposal regulations.

Protect the environment!
Do not dispose of any batteries with general household waste.
Return defective or used batteries to your retailer or dispose of them at collection points.

11 Technical data

	PLB 40
Ref. no.:	9600009460
Battery type:	Lithium iron phosphate/LiFePO4
Battery rated capacity:	40 Ah
Rated battery voltage:	12.8 V⎓
Rated output current (derating of 5% per channel/ per °C for temperatures above 40 °C): DC socket: 2-PIN socket: USB socket:	 15 A 15 A 2.4 A per socket, 4.2 A overall
Input voltage range:	8 – 25 V⎓
Maximum DC/DC charging current:	8 A
Service life:	>2000 charging cycles or 5 years
Rated input voltage: Power supply unit / battery: PWM solar controller:	 12 V⎓ 14.6 V⎓
Cut off voltage:	10 – 11 V⎓
Maximum self-discharge rate at 25 °C:	5% per month

	PLB40
Ambient temperature for operation:	0 °C to +45 °C
Dimensions (L x W x H):	197 x 197 x 257 mm
Weight:	7.54 kg
Inspection/certification:	UN 38.3

Power supply unit

	PLB40
AC supply (power supply unit): AC Input: DC output:	 100 – 240 V~ / 50/60 Hz, 2.5 A 12 V⎓, 10 A