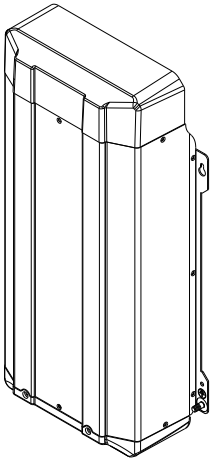
ENERDRIVE | DOMETIC

MOBILE POWER SOLUTIONS

3-IN-1 CHARGER



3 in 1 Charger

EN **Battery charger**
Installation and Operating Manual..... 3

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1 Important notes

Please read these instructions carefully and follow all instructions, guidelines, and warnings included in this product manual in order to ensure that you install, use, and maintain the product properly at all times. These instructions MUST stay with this product.

By using the product, you hereby confirm that you have read all instructions, guidelines, and warnings carefully and that you understand and agree to abide by the terms and conditions as set forth herein. You agree to use this product only for the intended purpose and application and in accordance with the instructions, guidelines, and warnings as set forth in this product manual as well as in accordance with all applicable laws and regulations. A failure to read and follow the instructions and warnings set forth herein may result in an injury to yourself and others, damage to your product or damage to other property in the vicinity. This product manual, including the instructions, guidelines, and warnings, and related documentation, may be subject to changes and updates. For up-to-date product information, please visit documents.dometic.com.

2 Explanation of symbols

A signal word will identify safety messages and property damage messages, and also will indicate the degree or level of hazard seriousness.

DANGER!

> Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

WARNING!

> Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION!

> Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE!

> Indicates a situation that, if not avoided, could result in property damage.

NOTE Supplementary information for operating the product.

3 Safety instructions

General safety

Also observe the safety instructions and stipulations issued by the vehicle manufacturer and authorized workshops.

DANGER! Electrocution hazard

> Do not touch exposed cables with your bare hands. This applies especially when operating the device from the AC mains.

WARNING! Electrocution hazard

> This device may only be repaired by qualified personnel. Inadequate repairs can lead to considerable hazards. Contact an authorized service center in case of repair.

> 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.

> If disassembling the device:

- Detach all connections.
- Ensure that no voltage is present on any of the inputs and outputs.

WARNING! Health hazard

> **For the European Union, UK and Turkey:** This device can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the device in a safe way and understand the hazards involved. **For all other regions:** This device is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the device by a person responsible for their safety.

> **Electrical devices are not toys.** Always keep and use the device out of the reach of very young children.

> Children must be supervised to ensure that they do not play with the device.

> Cleaning and user maintenance shall not be made by children without supervision.

WARNING! Risk of asphyxiation

> The cable and control unit of the device can give rise to risks of entanglement, strangulation, tripping or treading if not correctly arranged. Ensure that excess ties and power cables shall be arranged in a safe way.

NOTICE! Damage hazard

> Do **not** use the device in a salty, damp, or wet environment or immerse it in any liquids. Set up and store the device in a dry location where it is protected against splashing water.

> Before start-up, check that the voltage specification on the rating label is the same as that of the power supply.

> Ensure connection to mains is in accordance with national wiring rules.

> Ensure that other objects **cannot** cause a short circuit at the contacts of the device.

> Never pull the plug out of the socket by the cable.

Installing the device safely

WARNING! Electrocution hazard

> Installation and removal of the device may only be carried out by qualified personnel in accordance with the national wiring regulations.
> When positioning the device, ensure that the supply cable is not trapped or damaged. Crushed cables can lead to serious injury.

WARNING! Explosion hazard

> Do not set up the device in areas where there is a risk of gas or dust explosion.

CAUTION! Risk of injury

> Ensure that the device is stable. The device must be set up and secured in such a way that it cannot tip over or fall down.
> When positioning the device, ensure that all cables are suitably secured to avoid any form of trip hazard.

Safety when connecting the device electrically

DANGER! Electrocution hazard

> If you are working on electrical systems, ensure that there is somebody close at hand who can help you in emergencies.
> **For installation on boats:** If electrical devices are incorrectly installed on boats, corrosion damage might occur. Have the device installed by a specialist (marine electrician).

WARNING! Fire hazard

> Observe the recommended cable cross-sections, cable length and fuse(s).

CAUTION! Fire hazard

> Place the fuses near the batteries to protect the cable from short circuits and possible burning.

NOTICE! Damage hazard

> Use ductwork or cable ducts if it is necessary to lay cables through metal panels or other panels with sharp edges.
> Do **not** lay the 230 V mains cable and the 12 V⎓ cable in the same duct.
> Do **not** lay the cables so that they are loose or heavily kinked. Lay the cables so that they cannot be damaged by doors or hoods.
> Ensure that the negative and positive poles never come into contact.
> Do not reverse the polarity.

Operating the device safely

DANGER! Electrocution hazard

> To be able to disconnect the device quickly from the mains, the socket must be close to the device and be easily accessible.

WARNING! Explosion hazard

> Only use the device in closed, well-ventilated rooms.
> Do not operate the device near flammable fumes or gases.
> Ensure that the air inlets and outlets, for example ventilation grilles, of the device are not covered. Ensure good ventilation around the device.

WARNING! Electrocution hazard

> Do not use the device if the device itself or its connection cables are visibly damaged.
> Before starting the device, ensure that all cables and connections are dry, and free of dirt or corrosion.
> Always disconnect the power supply when working on the device.
> Observe that parts of the device may still conduct voltage even if the fuse has blown.
> Do not disconnect any cables when the device is still in use.

NOTICE! Damage hazard

> Do **not** use the device near aggressive vapors or combustible materials, or in potentially explosive areas.
> Do not place the device near heat sources like heaters, direct sunlight, or gas ovens.
> Only use accessories that are recommended by the manufacturer.
> DO NOT MODIFY OR ADAPT ANY OF THE COMPONENTS IN ANY WAY.

Safety when handling batteries

WARNING! Fire hazard

> Only use rechargeable batteries. Do not attempt to charge non-rechargeable batteries.

WARNING! Risk of injury

> Batteries contain aggressive and caustic acids. Avoid battery fluid coming into contact with your body. If your skin does come into contact with battery fluid, wash that part of your body thoroughly with water. If you sustain any injuries from acids, contact a doctor immediately.
> Wear goggles and protective clothing when working on batteries. Do not touch your eyes when working on batteries.
> When working on batteries, do not wear any metal objects such as watches or rings. Lead acid batteries can cause short circuits which can cause serious injuries.
> Only use insulated tools.
> Do not place any metal parts on the battery and prevent any metal parts from falling on the battery. This can cause sparks or short-circuits the battery and other electrical devices.

CAUTION! Explosion hazard

> Never attempt to charge a frozen or defective battery. Place the battery in a frost-free area and wait until the battery has acclimatised to the ambient temperature. Then start the charging process.
> Do not smoke, use an open flame, or cause sparking near the engine or a battery.

NOTICE! Damage hazard

> Ensure that the polarity is correct when connecting the battery.
> Follow the instructions of the battery manufacturer and those of the manufacturer of the system or vehicle in which the battery is used.
> If the battery has to be removed, disconnect the negative pole (ground connection) before disconnecting the positive pole to avoid a short circuit. Disconnect all connections and all consumers from the battery before removing it.
> Only store fully charged batteries. Recharge stored batteries regularly.
> Do not carry the battery by its terminals.

Special precautions for vented lead acid (VLA) batteries

CAUTION! Health hazard

> The water-acid liquid inside the battery can evaporate and cause an acidic odor. Use the battery only in a well-ventilated area.

NOTICE! Damage hazard

> The battery is not sealed. Do not turn the battery on its side or upside down. Place the battery on a horizontal surface.
> Check the acid level for open lead acid batteries regularly.
> Immediately recharge deeply discharged lead acid batteries to avoid sulfation.

Special precautions for lithium batteries

CAUTION! Risk of injury

> Only use batteries with integrated battery management system and cell balancing.

NOTICE! Damage hazard

> Only install the battery in environments with an ambient temperature of at least 0 °C .
> Avoid deep discharge of the batteries.

4 Scope of delivery

Description	Quantity
Battery charger	1
Display panel	1
7.5 m remote cable	1
IEC AC input cord	1

5 Intended use

The battery charger is intended to monitor and charge 12 V house batteries from the following power sources:

- Utility AC Power/Generator
- Vehicle Alternator (via starting battery)
- Solar Power (via built-in MPPT solar controller)

The battery charger is intended to be used to charge the following battery types:

- GEL
- AGM
- Flooded
- Lithium
- Programmable (custom settings)

The battery charger is **not** intended to be used to charge other types of batteries, such as NiCd or NiMH batteries.

The battery charger is suitable in the following applications:

- Residential homes
- Marine vessels (boats and yachts)

- Recreational vehicles (RVs)
- Caravans
- Four-wheel drive (4WD) vehicles
- Commercial vehicles

The battery charger is **not** suitable for outdoor use.

The battery charger can charge up to 4 batteries in parallel. Each connected battery should have a minimum capacity of 100 Ah.

This product is only suitable for the intended purpose and application in accordance with these instructions.

This manual provides information that is necessary for proper installation and/or operation of the product. Poor installation and/or improper operation or maintenance will result in unsatisfactory performance and a possible failure.

The manufacturer accepts no liability for any injury or damage to the product resulting from:

- Incorrect installation, assembly or connection, including excess voltage
- Incorrect maintenance or use of spare parts other than original spare parts provided by the manufacturer
- Alterations to the product without express permission from the manufacturer
- Use for purposes other than those described in this manual

Dometic reserves the right to change product appearance and product specifications.

6 Technical description

The battery charger is a multi-input, multi-stage charging system designed to safely and efficiently charge a house battery bank across a wide range of operating conditions. The charger integrates AC power, solar power, and vehicle alternator input into a single coordinated charging architecture, automatically selecting and managing available power sources while enforcing battery-specific limits.

Charging behavior is governed by House Battery Bank (CH1) configuration, which defines battery type, voltage limits, current limits, and charging mode. Based on these settings, the charger applies battery-appropriate multi-stage charging algorithms, adapts to connected DC loads through smart (load-aware) charging, and maintains accuracy using temperature compensation where applicable. For flooded lead-acid batteries, an optional equalization feature supports periodic maintenance.

Together, these functions enable reliable, automatic operation that protects battery health, optimizes charging performance, and supports both stationary and mobile installations.

6.1 Charging power sources and source coordination

The battery charger supports three independent charging inputs, each with distinct characteristics. The charger coordinates these sources automatically to deliver optimal charging performance.

Supported power sources

Power source	Channel	Typical use
AC charger	AC input	Shore power, generator, home installation
Solar charger (MPPT)	CH2	Off-grid, supplemental, maintenance charging
Alternator / starter battery	CH3	Charging while driving or engine running

Each source is monitored independently. Availability of a source does **not** override battery charging limits configured on CH1.

6.1.1 AC charging input

The AC charging input allows the battery charger to charge the house battery from utility power, generator output, or shore power.

Key characteristics:

- Provides up to 40 A of charging current
- Typically stable and continuous
- Often the primary charging source when AC power is available

When AC power is present, the AC charger contributes charging current within the limits defined by the CH1 configuration.

AC charging can operate at the same time as DC charging and does not automatically disable solar or alternator inputs.

AC charging is commonly used for:

- Rapid battery recovery
- Long-duration charging and maintenance
- Stationary or shore-connected operation

6.1.2 Solar charging input (CH2)

The solar charging input (CH2) accepts power from a photovoltaic (PV) array and uses an integrated MPPT (Maximum Power Point Tracking) controller to maximize energy harvest.

Key characteristics:

- Optimizes solar output under changing light and temperature conditions
- Operates independently of AC power
- Limited by defined PV voltage and current ranges

Solar charging can act as:

- A primary power source in off-grid installations
- A supplemental source when the there is no Alternator power
- A maintenance source during long-term parking or storage

6.1.3 Alternator/starter input (CH3)

The CH3 DC input allows the charger to use power from a vehicle alternator or starting battery to charge the house battery while the engine is running.
Alternator charging is fully automatic. The charger continuously monitors the alternator input and adjusts charging behavior to protect the vehicle electrical system and the starter battery.

When the charger is first connected to the CH3 input, it measures the input voltage to confirm a 12 V system:

If the voltage **< 17 V**: 12 V system

This information is stored in the microprocessor and erased only if the input battery is disconnected or the input voltage drops below 7 V⎓.

Normal Operation	**12 V input source**
Input voltage range	10.5 V … 16 V
Start-up voltage CH3 setting	11.5 V … 13.8 V
Under voltage recovery voltage	0.4 V below normal start-up voltage
De-rated voltage (with load)	11.5 V
Under voltage shutdown voltage (with load)	10.5 V

Normal Operation	12 V input source
Over voltage shutdown	16 V
Over voltage recovery	15.5 V
Input battery system reset voltage	< 8 V
Maximum input current (CH3)	50 A

6.1.4 Power source priority and charging mechanism control

The charger automatically manages how available power sources are used to charge the house battery bank.

AC and DC charging coordination

The battery charger can charge the house battery from the following inputs:

- AC charger: maximum 40 A
- DC charger (solar input CH2 or alternator input CH3): maximum 40 A

When both AC and DC sources are available simultaneously, the charger can deliver a combined maximum of 80 A, depending on the selected current and priority settings.

Charging current contributions

The following table illustrates how the AC and DC chargers contribute to charging the house battery under various maximum current settings:

Maximum current setting	Maximum charging current with the availability of AC and DC charger		
	Only AC	Only DC	Both AC and DC
80 A	40 A	40 A	80 A total (40 A from AC charger, 40 A from DC charger)
60 A	40 A	40 A	60 A total (shared between AC and DC chargers)
40 A	40 A	40 A	40 A total (40 A from AC charger)
20 A	20 A	20 A	20 A total (20 A from AC charger)

There is no fixed priority between AC and DC charging. During the absorption stage, if the battery requires less current than the maximum setting, the charger dynamically supplies current from either source or both, depending on availability.

DC source selection (Solar vs Alternator)

While AC and DC charging may operate together, only one DC source is used at a time.

Selection between solar input (CH2) and alternator input (CH3) is controlled by the DC charging priority setting.

DC charging priority modes (P1 and P2)

Mode	Description	Primary source	Fall back
P1	Alternator priority with ignition start signal	Alternator	Solar
P2	Alternator priority without ignition start signal	Alternator	Solar

The priority setting determines whether an ignition start signal is required.

6.2 House battery bank (CH1) configuration

The House Battery Bank (CH1) configuration defines how the battery charger is allowed to charge the battery.

The CH1 configuration establishes the electrical limits, charging behavior, and operating rules that apply to the house battery, regardless of which charging power source is used.

All charging features—including AC, solar, and alternator charging—operate within the limits defined by CH1 configuration.

6.2.1 Charging and recharging voltage settings

The charger uses a voltage-controlled charging framework to ensure safe operation across different battery chemistries. These voltage limits are defined by the selected CH1 battery type and apply equally to all charging sources (AC, solar, alternator).

WARNING! Fire hazard

> When choosing the battery type, double check that the charging voltage setting matches with the recommended charging voltage from the battery manufacturer. Using the wrong values may overcharge and damage the battery and may cause a fire.

Key voltage parameters

- **Bulk / Absorption Voltage** – Maximum charging voltage
- **Float Voltage** – Maintenance voltage after full charge
- **Recharge Voltage** – Voltage level that restarts a new charging cycle

Refer to the table below for the voltage settings for GEL, AGM, Flooded, Lithium, and Program batteries.

Battery type	Charging voltage setting		
	Bulk/Absorption	Float	Recharge voltage (0.1 V step)
GEL	14.4 V	13.7 V	12.8 V … 13.5 V
AGM	14.6 V	13.6 V	12.8 V … 13.4 V
Flooded	14.4 V	13.3 V	12.8 V … 13.1 V
Lithium	13.9 V … 14.6 V (0.1 V step)	13.5 V … 14.5 V (0.1 V step)	12.8 V … 13.8 V
Program - custom settings	13.9 V … 14.6 V (0.1 V step)	13.5 V … 14.5 V (0.1 V step)	12.8 V … 13.8 V

NOTE

- Float voltage must be at least 0.2 V lower than Bulk / Absorption voltage.
- Recharge voltage must be at least 0.2 V lower than Float voltage.

6.2.2 Charging current settings

Charging current settings define how aggressively the battery is charged and how stage transitions occur.

Unlike voltage limits, current settings depend on battery capacity and thermal considerations.

Lead acid batteries (GEL, AGM, Flooded)
Maximum charge current (H)

The Bulk/Absorption current should not exceed 1/5 of battery capacity.

Battery Bank Capacity (Ah)	Recommended Max Current
100 Ah	20 A
200 Ah	40 A
300 Ah	60 A
≥ 400 Ah	80 A

Absorption-to-Float current (L)

The absorption-to-float current defines when the charger moves from Absorption to Float.

Recommended value: **~10% of H setting** (or the highest available when DC loads are present).

Bulk/Abs ("H")	Abs-Float ("L")
20 A	2 A / 4 A / 6 A
40 A	4 A / 6 A / 8 A
60 A	4 A / 6 A / 8 A
80 A	4 A / 6 A / 8 A

Lithium and program batteries

WARNING! Fire hazard

> When choosing the Lithium Battery or Program-Custom Setting type, a wide range of charging currents are available. Consult the battery manufacturer for the maximum allowable charging current. Using charging current higher than the allowable charging current may result in damaging the battery and may cause a fire.

Lithium and Program batteries use **CC/CV logic**, not traditional float behavior.

- **Charge Current (H)** – Maximum Constant Current (CC)
- **Termination Current (L)** – Current at which charging ends and power-supply mode begins

Charge current ("H")	Termination current ("L")
20 A	2 A / 3 A / 4 A
40 A	4 A / 6 A / 8 A
60 A	4 A / 6 A / 8 A
80 A	4 A / 6 A / 8 A

6.2.3 Charging mode selection

Depending on battery type and configuration, the charger operates in one of the following modes:

- **Three–stage mode**

  (Bulk → Absorption → Float)
- **Two–stage mode**

  (Bulk → Absorption, then charging terminates)

Three-stage charging is recommended for most lead-acid applications, especially when DC loads remain connected. Two-stage charging is typically used for Lithium or custom battery setups where float charging is undesirable.

6.3 Multi-stage charging and battery behavior

The charger applies adaptive, chemistry-specific charging algorithms to maximize battery life and charging efficiency.

Battery Type	Charge Stages	Float Behavior
GEL / AGM / Flooded	Bulk → Absorption → Float → Recharge	Continuous maintenance float
Lithium	CC → CV → Terminate / Power Supply → Recharge	Controlled termination, minimal float
Program	User-defined	Fully customizable

6.3.1 GEL, AGM, and Flooded Batteries (Lead–Acid)

Lead–acid batteries use a four–stage charge process designed to balance charging speed with battery protection.

Stage	Charger behavior	Battery behavior
Stage 1 **Bulk charge**	Supplies maximum constant current (as configured)	• Rapid energy acceptance. • Battery voltage rises steadily. • Around 80 % of capacity restored.
Stage 2 **Absorption charge**	• Holds a constant absorption voltage. • Charging current tapers down. • The remaining 20 % of battery capacity is restored gently to prevent battery stress.	• Charge acceptance slows. • Remaining 20 % of capacity restored.
Stage 3 **Float charge**	• Reduces voltage to a safe float level • Supplies only current required by the battery and connected loads	• Remains fully charged • Self-discharge compensated • No overcharging or excessive gassing **NOTE** At this stage, the charger also functions as a DC power supply for on-board loads.
Stage 4 **Recharge**	• Monitors battery voltage continuously • Automatically restarts charging when voltage drops below the Recharge Voltage	Enters a new Bulk → Absorption → Float cycle as needed

6.3.2 Lithium and custom batteries

Stage	Charger behavior	Battery behavior
Stage 1 **Constant Current (CC)**	Delivers a fixed charging current (“H” setting)	• High charge acceptance • About 80 % … 90 % of capacity restored quickly

Stage	Charger behavior	Battery behavior
Stage 2 **Constant Voltage (CV)**	• Maintains a fixed charging voltage • Current tapers as battery approaches full charge	• Final 10 % … 20 % of capacity restored • Charge acceptance decreases naturally
Stage 3 **Terminate/Float**	• Terminates charging when current reaches the Termination Current ("L") • Transitions to stable power supply operation at the Float Voltage	• Remains fully charged • Avoids prolonged high–voltage stress **NOTE** This behavior is critical for Lithium batteries and differs from continuous float charging used with lead–acid batteries.
Stage 4 **Recharge**	Restarts CC → CV charging when battery voltage drops below the Recharge Voltage	Charging resumes only when real discharge is detected, preventing unnecessary cycling

6.4 Smart charging feature (load-aware charging)

The charger includes a smart charging feature that adapts charging behavior based on both battery state and connected DC loads.

Rather than reacting solely to voltage changes, the charger evaluates charging current behavior. This prevents unnecessary recharge cycles and reduces long-term battery stress.

6.5 Temperature compensation features (GEL, AGM, Flooded only)

Temperature compensation adjusts the battery charging voltage based on battery temperature to improve charging accuracy and extend battery life. These features apply only to GEL, AGM, and Flooded batteries and are not used with Lithium or Program battery types.

For lead–acid batteries (GEL, AGM, Flooded), charging voltage must be:

- Increased in colder temperatures to avoid under–charging
- Decreased in warmer temperatures to prevent over–charging

The charger supports both manual and automatic temperature compensation.

6.5.1 Manual temperature compensation

Manual temperature compensation allows the user to adjust charging voltage based on the ambient battery room temperature when a BTS is not installed.

The unit offers three manual battery temperature settings: **Low**, **Normal (nor)**, and **High (hi)**. Select the appropriate setting based on the room temperature.

Temperature setting	Room temperature	Battery type	Voltage adjustment from 25°C normal setting
Low (Low)	< 5°C	GEL, Flooded	0.68 V
		AGM	0.52 V
Normal (nor)	> 5°C and < 30°C	GEL, Flooded, AGM (always for Lithium)	0 V
			0 V
High (hi)	< 30°C	GEL, Flooded	– 0.27 V
		AGM	– 0.21 V

NOTE For more accurate and automatic temperature compensation, use the optional Battery Temperature Sensor (BTS). See "Automatic temperature compensation using BTS on page 15" for more details.

6.5.2 Automatic temperature compensation using BTS

The Battery Temperature Sensor (BTS) is an optional accessory that enhances battery protection by automatically adjusting the charging voltage based on real-time battery temperature. This ensures accurate charging and extends battery lifespan.

No special settings are required; the unit automatically detects the sensor when plugged into the "BTS" port in the DC wiring compartment.

The BTS overrides manual temperature settings ("**Low**", "**Nor**", and "**Hi**").

It is highly recommended to install the BTS on the main battery bank's negative terminal.

Automatic voltage adjustments

With the BTS, the charging voltage is automatically adjusted according to the following table:

Measured Battery Temperature	Automatic Battery Charging Voltage Adjustment from 25°C	
	Flooded and GEL type	AGM type
< 25°C	0.03 V / °C	0.02 V / °C
25°C	0 V	0 V
25°C	– 0.03 V / °C	– 0.02 V /°C

Additionally, the BTS triggers E07 and A02 messages for battery over-temperature shutdown and alarm, respectively.

Special note on Lithium batteries

When the BTS is installed and Lithium battery type is selected:

- No voltage compensation is applied.
- Charging is disabled below 0°C or above 50°C.
- Charging automatically resumes when battery temperature returns to the safe range: 5°C … 45°C.

6.6 Flooded battery equalization

DANGER! Explosion hazard

> The battery generates explosive gases during equalization. Follow all the battery safety precautions listed in battery manual.

DANGER! Explosion hazard and risk of battery damage

> Ensure the connected battery is a flooded lead-acid battery. Equalizing a non-flooded battery may cause overcharging, overheating, or explosion.

> Disconnect all DC loads from the battery during equalization. The charger will output 15.5 V (12 V model), which can damage connected devices.

> Monitor the battery's specific gravity throughout the process to determine when to end the equalization cycle.

Battery equalization is a controlled over–voltage charging process designed exclusively for Flooded lead–acid batteries. The battery charger includes an equalization function to help restore battery performance by reducing sulfation and balancing individual cell voltages.

Equalization is not part of normal charging operation and should be used only when specifically recommended by the battery manufacturer.

Purpose and function

During long–term operation, flooded batteries may experience:

- Uneven charge levels between individual cells
- Sulfation caused by repeated partial charging

The equalization function temporarily raises the charging voltage above normal absorption levels to:

- Promote controlled gassing
- Mix the battery electrolyte
- Balance the state of charge across all cells

When applied correctly and infrequently, equalization can help improve usable capacity and extend battery service life.

Equalization charging characteristics

When equalization is active, the battery charger applies the following controlled behavior:

- Equalization voltage: **15.5 V** on 12 V systems
- Equalization current: Approximately 10 % of the configured Bulk charging current
- Activation condition: Equalization occurs only after the battery has reached Float stage, ensuring the battery is already fully charged

This design prevents equalization from being applied to a partially charged or unstable battery.

Manual activation and safety control

Equalization on the battery charger is not automatic and must be manually initiated by the user.

A one–hour time limit is enforced as a safety feature to prevent prolonged over–charging.

If additional equalization time is required:

- The user must manually re–activate the function
- Battery condition must be checked before repeating the process

This design ensures that equalization remains a deliberate maintenance action, not a routine charging stage.

Operational and safety requirements

Before enabling equalization, the following conditions must be met:

- Battery type must be set to Flooded
- All sensitive DC loads should be disconnected
- Battery electrolyte levels must be checked and monitored
- Adequate ventilation must be provided

During equalization:

- Battery temperature and gassing should be observed
- Electrolyte levels may need to be topped up with distilled water only
- Battery specific gravity should be monitored to assess progress

7 Installation

The electrical installation and setup of the device must be performed by qualified personnel who has demonstrated skill and knowledge related to the construction and operation of electrical equipment and installations, and who is familiar with the applicable regulations of the country in which the equipment is to be installed and/or used, and has received safety training to identify and avoid the hazards involved.
All other actions are intended also for non-professional users.

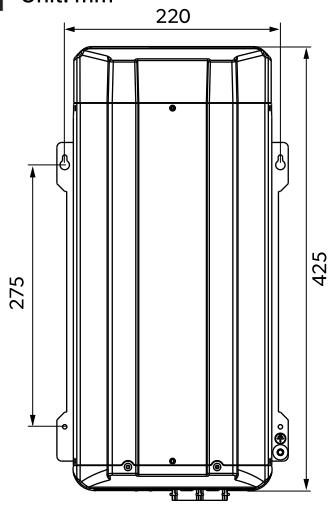
7.1 Installation location

- Install the battery charger in a well-ventilated indoor area, away from direct sunlight, heat, moisture, or conductive contaminants.
- Ensure at least 75 mm of clearance around the battery charger for optimal ventilation.

7.2 Mounting the battery charger

NOTE
The charger is designed for permanent mounting. Ensure that the mounting surface is sturdy and can support the weight of the charger.

1 Unit: mm



1. Select a suitable mounting location (see Installation location on page 17).
2. Use the charger base as a template to mark the positions of the four fixing holes on the mounting surface.
3. Drill the four fixing holes and place the charger in position.

NOTE Mount the charger vertically, with the battery terminals facing downwards. Do not mount the charger upside down, as this may compromise its performance and safety.

4. Fasten the unit to the mounting surface using suitable screws or fasteners.

7.3 Connecting the battery charger

WARNING! Electrocution hazard

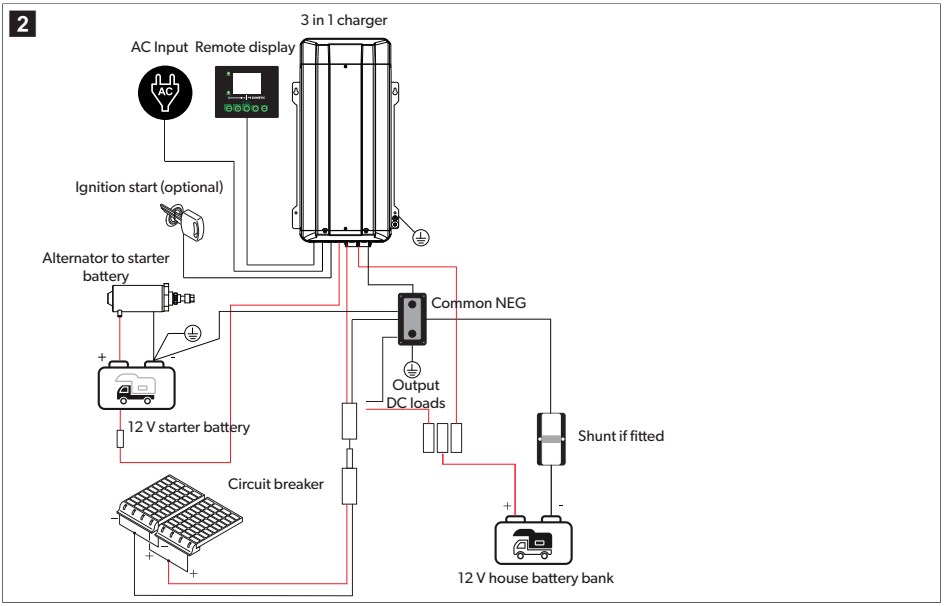
> Observe the recommended cable cross-sections, cable length and fuse(s).

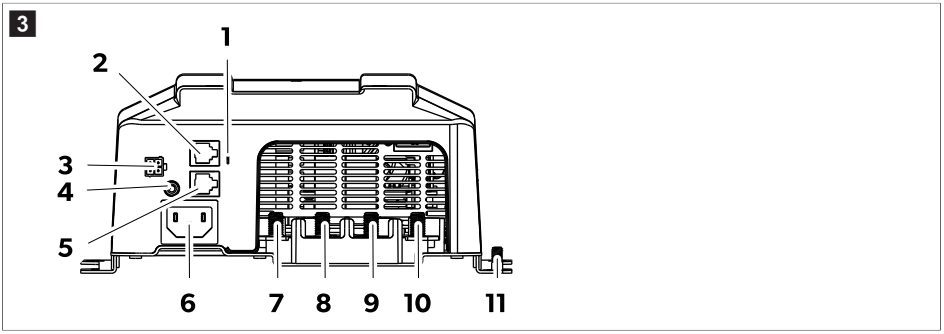
CAUTION! Fire hazard

> Place the fuses near the batteries to protect the cable from short circuits and possible burning.

NOTICE! Damage hazard

> Do not reverse the polarity.





No.	Description	No.	Description
1	Ignition start point	7	Alternator Input CH3+
2	Remote port	8	Solar Input CH2+
3	CAN port	9	DC Output CH1+
4	On/Off switch	10	Common ground
5	BTS Port	11	Chassis ground
6	IEC AC input		

7.3.1 Connecting the chassis ground

DANGER! Risk of severe injury or death

> The battery charger must be properly grounded.
> Never operate the charger without proper grounding. Failure to do so will result in death or serious injury.
> All grounding connections must comply with applicable local and application-specific electrical codes and ordinances.

1. Locate the "Chassis Ground" stud on the battery charger.
2. Connect the battery charger's chassis ground stud to the common ground point in the system.

7.3.2 Connecting the DC inputs and outputs

WARNING!

> Use DC cables of the appropriate size.
> Each battery connection must be protected by an individual over-current protection device (fuse or circuit breaker) installed within 18 cm of the battery.
> A DC disconnect switch is strongly recommended.

NOTE All protection devices must be rated for DC voltage and current and withstand the maximum short-circuit current available from the connected battery bank.

Recommended cable and fuse sizing

Alternator Input (CH3) and House Battery Output (CH1) (Cable length < 1.5 m)

Unit connection	Fuse/circuit breaker	Minimum wire size
CH1 - House Battery Bank	100 A	AWG #2, 35 mm^2
CH3 - Alternate Input (12 V)	70 A	AWG #6, 16 mm^2

NOTE

- Keep the cable between the house battery and CH1 as short as possible.
- Fuse ratings must match the wire capacity, not only the charger current.

Solar Input (CH2) (Cable length < 6 m - reference only)

Solar panel configuration	1 panel		2 panels		3 panels	
	Fuse size	**Wire size**	**Fuse size**	**Wire size**	**Fuse size**	**Wire size**
12 V, 200 W	15 A	6 mm²	30 A	16 mm²	40 A	16 mm²
24 V, 200 W	10 A	6 mm²	15 A	6 mm²	30 A	16 mm²
12 V, 400 W	30 A	16 mm²	50 A	25 mm²	N/A	N/A
24 V, 400 W	15 A	6 mm²	30 A	16 mm²	N/A	N/A

NOTE
- Fuse size should typically be 10 % … 15 % higher than the total panel short-circuit current.
- Always follow the solar panel manufacturer's wiring recommendations.
- Increase wire size for longer cable runs.

1. Determine the recommended fuse and wire size for the DC inputs and outputs.
2. Detach the plastic cover of the DC wiring compartment by removing the two screws on its top.
3. Connect the House Battery Output (CH1):
   - Connect **CH1 (+)** in series to:
     - Over-current protection device
     - DC disconnect switch
     - House battery positive (+) terminal
   - Connect Common Ground to the house battery negative (–) terminal or the system common ground point.
4. Connect the Alternator / Starter Battery Input (CH3):
   - Connect the starter battery or alternator positive (+) terminal to CH3 (+).
   - Connect the negative (–) terminal to Common Ground.
5. Connect the Solar Input (CH2):
   - Connect the solar array positive (+) terminal to CH2 (+).
   - Connect the solar array negative (–) terminal to Common Ground.
6. Tighten all terminals to 4 N·m … 5 N·m. Do not over-tighten.
7. Replace the plastic cover to its original position and secure the two screws on its top.

NOTE The negative terminals of CH1, CH2, and CH3 are internally connected through the Common Ground port.

7.3.3 Connecting controls and signal interface

Connecting the display panel

Use the remote port to connect the external display panel to the unit.

1. Connect one end of the supplied RJ12 cable to the Remote port on the battery charger.
2. Connect the other end of the RJ12 cable to the Remote port on the back of the display panel.

Connecting the battery temperature sensor (BTS - optional)

NOTE The battery temperature sensor is sold separately.

NOTE It is recommended to use a battery temperature sensor with lead acid styles of battery.

1. Connect the RJ12 plug from the battery temperature sensor to the "**BTS**" port on the battery charger.
2. Connect the other end of the battery temperature sensor (ring terminals/lug) to the negative terminal of the main house battery bank.

See Automatic temperature compensation using BTS on page 15

.

Connecting the ignition start port (optional)

NOTE This connection is required for DC charger priority P1 only (see "Power source priority and charging mechanism control on page 10").

> Connect the Ignition signal from the vehicle to the Ignition Start port on the battery charger.

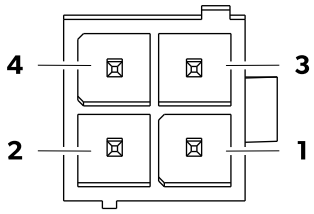
Connecting the CAN Port (optional)

The CAN port allows the battery charger to communicate with an external CAN bus (CANBUS) communication system.

NOTE

- Use a properly twisted, shielded CAN bus cable where required by the system design.
- Ensure correct polarity when connecting CAN High and CAN Low.
- Do not connect unused pins.
- Follow the CAN bus system manufacturer's termination and wiring guidelines.

> Connect the communication port for use with CANBUS communication system.

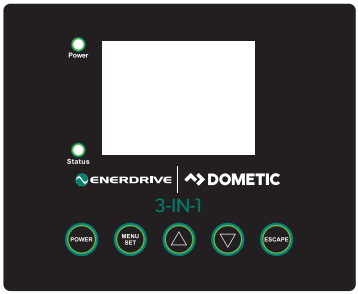
Pin		Designation
	1	Not connected
	2	CAN Low
	3	CAN High
	4	Not connected

8 Operation

To ensure optimal performance and battery safety, always consult your battery manufacturer's specifications before configuring the charger.

8.1 Display panel

4



Push buttons

Button	Description
POWER	• To turn on the charger, press the POWER button on the main unit or the remote. • To turn off the charger, press and hold the POWER button on the main unit or the remote for about 3 s. The display will show **PWR - OFF** and the unit will shut down.

MENU SET	Press MENU SET for about 3 s to enter parameter display mode. The display shows the following parameters. Use △/▽ button to toggle between parameters.
	• **PRI** (priority setting): follow with the existing setting ("P1" or "P2")
	• **bAT** (battery type):
	  • AGM
	  • GEL
	  • Flooded
	  • Lithium
	  • Program
	• **CH3** (alternator start-up voltage): 11.5 V … 13.8 V
	• **SIL** (restart a latched lithium battery): OFF/ON
	• **MFd** (manufacturing default setting):
	  • **PRI - P1**
	  • **bAT - Li**
	  • **BUL - 14.4 V**
	  • **Flo - 13.5 V**
	  • **REC - 13.2 V**
	  • **H80 A**
	  • **L8 A**
	  • **CH3 - 13.2 V**
	  • **STC - OFF**
	  • **SIL - OFF**
	Press MENU SET again to enter setting change mode. The selected setting will be shown on the display. Use △/▽ to toggle between available settings. Press SET to confirm the new setting.

Button	Description
△ / ▽	Toggle between parameters in parameter display mode. Toggle between settings in setting change mode.
ESCAPE	To exit parameter setting mode.

LCD Status

LCD		Description
CH1		Display shows house battery's battery information: • Voltage • Charging current • State of charge (**BUL** – Bulk stage, **Flo** – Float stage)
CH2	Solid	**PV** input **CH2** is charging the house battery.
	Flashing	**CH2** is in standby, PV input **CH2** is available and is in operating range. The house battery is charging from the other channel.
	OFF	**CH2** is out of operating range or is not connected.
CH3	Solid	Alternator input **CH3** is charging the house battery.
	Flashing	**CH3** is in standby, alternator input **CH3** is available and is in operating range. The house battery is charging from the other channel with higher priority, or the ignition start signal is not available with P1 setting.
	OFF	**CH3** is out of operating range or is not connected.
PV	Solid	PV input **CH2** is charging the house battery.
AUX	Solid	Alternator input **CH3** is charging the house battery.
AC	Solid	AC charger is charging the house battery.
DC OUTPUT	Solid	DC output is available and is charging the house battery.
AC INPUT	Solid	AC input is available and is charging the house battery.

State of charge codes

Code	Status	Description
bUL	Bulk charging stage	The battery is charged at full rated output current until it reaches its final charging voltage (absorption voltage). • SLA or flooded batteries: around 80 % capacity • Lithium batteries: around 90 % … 95 % capacity
Abs	Absorption charging stage	The battery is charged at a constant voltage, allowing the current to gradually decrease as the battery approaches full charge.
FLo	Floating charge stage	The charger voltage is lowered to a safe level, preventing overcharging while compensating for self-discharge and supporting connected loads.

Code	Status	Description
CHE	**CH3** input voltage check	This code appears for 5 s every 3 min when charging from the **CH3** start-battery/alternator input. This code indicates the **CH3** input voltage is 0.4 V below the startup voltage. The **CH3** is internally disconnected during this check to ensure proper voltage recovery. See "Alternator/starter input (CH3) on page 9".

8.2 Before first use

Before turning on the charger:

- Verify correct polarity on all DC connections.
- Ensure all cables are secure and protected from abrasion.
- Confirm fuses and disconnects are correctly rated.
- Verify grounding connection.
- Ensure ventilation openings are unobstructed.

8.3 Connecting the AC power cable

NOTE Ensure the AC supply matches the charger rating (see Technical data on page 32).

> Plug the supplied IEC AC power cable to the charger.
> Plug the cable into a properly grounded AC mains outlet.

8.4 Turning on the battery charger

NOTE Automatic turn-on via Ignition Start signal (Optional):
If the Ignition Start port is connected to the vehicle's ignition signal:

- The battery charger turns on automatically when an ignition voltage greater than 8 V is present.
- Once turned on, the charger remains on even if the ignition signal is later removed.

NOTE Automatic turn-on via solar input (optional): If solar panels are connected to the Solar Input port (CH2), the battery charger turns on automatically when the solar input voltage exceeds **20 V**.

> Press and hold the **Power** button on the main unit or the display panel for about 1 s to turn on the battery charger.

8.5 Setting the charger

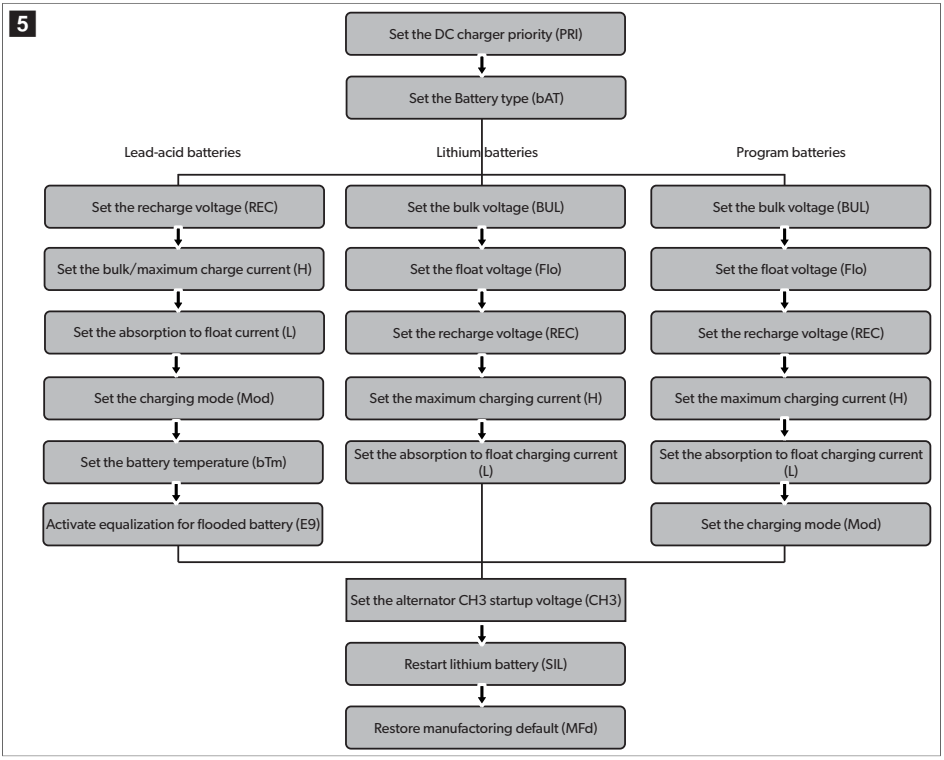
This section will guide you through the process of accessing and configuring the unit setting mode.

8.5.1 Entering the unit setting mode

To access the unit setting mode, proceed as follows:

> Press and hold the POWER button for 3 s during normal operation.
< You are now in the settings loop. The first parameter shown is **PRI** (DC charging priority).

Setting overview



8.5.2 Setting the DC charging priority (PRI)

The DC priority setting determines which DC source (solar or alternator) is preferred when both are available.

This setting affects source selection only. It does not change charging stages or battery behavior.

The display shows "**PRI - P1-P2**", indicating the current priority setting.

Selectable priority setting type:

- **P1**: Alternator priority with ignition start signal
- **P2**: Alternator priority without ignition start signal

For more information, see "Power source priority and charging mechanism control on page 10".
To change the priority setting, proceed as follows:

1. Press the MENU SET button once.
   - The current priority setting will begin flashing.
2. Use the △/▽ button to choose the desired setting.
3. Press the MENU SET button to confirm the selection.
   - The display will go to "Setting the battery type (bAT) on page 26".

8.5.3 Setting the battery type (bAT)

The battery type setting determines which charging algorithm and voltage framework the charger applies.

The display shows "**bAT - battery type**", indicating the current battery type setting on the unit.

To change the battery type:

1. Press the MENU SET button once.
2. Use △/▽ to select the battery type:
   - GEL, AGM or Flooded
   - Lithium
   - Program
3. Press the MENU SET button again to confirm the selection.
   - For **GEL** or **AGM** or **Flooded** battery, go to "GEL, AGM and Flooded batteries (Lead-Acid) on page 26".
   - For **Lithium** battery, go to "Lithium batteries on page 27".
   - For **program** battery, go to "Program batteries on page 28".

8.5.4 Setting the battery–specific charging parameters

8.5.4.1 GEL, AGM and Flooded batteries (Lead-Acid)

After battery selection, the following settings appear in fixed order.

*Setting the recharge voltage (**REC**)*

The display shows "**REC**" and is flashing.

The selectable recharge voltage depends on the battery type:

- GEL: 12.8 V ... 13.5 V
- AGM: 12.8 V ... 13.4 V
- Flooded: 12.8 V ... 13.1 V

1. Press the MENU SET button once to show the set battery recharge voltage setting.
2. Use △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

✓ The display will go to "Setting the bulk/maximum charge current".

*Setting the bulk/maximum charge current (**H**)*

The display shows the existing maximum current setting ("**H and current in A**").

The selectable choices are: H20 (=20A), H40 (=40A), H60 (=60A), H80 (=80A).

1. Press the MENU SET button once to show the setting.
2. Use △/▽ button to change the current setting.
3. Once the setting is chosen, use MENU SET button to confirm and display will go to "Setting the absorption to float stage current".

*Setting the absorption to float current (**L**)*

The display shows existing Absorption to Float current setting ("**L and current in A**").

The selectable choices depend on the selected Bulk/Maximum charge current setting.

Selected bulk/maximum charge current	Selectable ABS to float stage current		
H20	2	4	6
H40	4	6	8
H60	4	6	8
H80	4	6	8

1. Press the MENU SET button once to show the setting.
2. Use △/▽ button to change the current setting.
3. Once the setting is chosen, use MENU SET button to confirm and display will go to "Setting the 2-stage or 3-stage".

*Setting the charging mode (**Mod**)*

The display shows "**Mod**" and is flashing.

1. Press the MENU SET button once to show the setting.
2. Use △/▽ button to change the charging mode.
3. Once the setting is chosen, use the MENU SET button to confirm and display will go to "Setting the battery temperature".

*Setting the battery temperature (**bTm**)*

The display shows "**bTm**".

1. Press the MENU SET button once to show the setting.
2. Use △/▽ button to change the battery temperature.
3. Once the setting is chosen, use the MENU SET button to confirm the setting.
   - If Flooded battery type is chosen in "Setting the battery type (bAT) on page 26"., the display will go to "Activating the battery equalization process for flooded battery type only".
   - If GEL or AGM is chosen in"Setting the battery type (bAT) on page 26"., the display will go to "Setting the alternator CH3 startup voltage on page 30".

Activating the battery equalization process for flooded battery type only

The display shows "**E9**" and is flashing.

1. Press the MENU SET button once to show the setting.
2. Use △/▽ button to switch the process between on and off.
3. Once the setting is chosen, use the MENU SET button to confirm the setting.

8.5.4.2 Lithium batteries

*Setting the bulk voltage (**BUL**)*

The display shows "**BUL**" and is flashing (Voltage range available for selection is 13.9 V … 14.6 V).

1. Press the MENU SET button once to show the bulk voltage setting.
2. Use △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

- The display will go to "Setting the float voltage".

*Setting the float voltage (**Flo**)*

The display shows "**Flo**" and is flashing. (Voltage range available for slection is 13.5 V … 14.4 V).

1. Press the MENU SET button once to show the float voltage setting.
2. Use the ▲/▼ button to change setting.
3. Press MENU SET button to confirm the setting.

- The display will go to "Setting the battery recharge voltage".

*Setting the battery recharge voltage (**REC**)*

The display shows "REC" and is flashing (Voltage range available for slection is 12.8 V … 13.8 V).

1. Press the MENU SET button once to show the recharge voltage setting.
2. Use the ▲/▼ button to change setting.
3. Press MENU SET button to confirm the setting.

- The display will go to "Setting the maximum charging current".

Setting the maximum charging current

The sisplay shows current maximum current setting ("**H and current in A**"). The selectable choices are: "H20" (=20A), "H40" (=40A), 'H60" (=60A), "H80" (=80A).

Selected bulk/maximum charge current	Selectable ABS to float stage current		
H20 (= 20 A)	2	4	6
H40 (= 40 A)	4	6	8
H60 (= 60 A)	4	6	8
H80 (= 80 A)	4	6	8

1. Press the MENU SET button once to show the maximum charging current setting.
2. Use the ▲/▼ button to change setting.
3. Press MENU SET button to confirm the setting.

- The display will go to "Setting the absorption fot float stage current".

Setting the absorption to float stage current

The display shows current Absorption to Float current setting ("**L and current in A**"). The selectable choices depend on the selected Bulk/Maximum charge current setting.

1. Press the MENU SET button once to show the absorption to float stage current setting.
2. Use the ▲/▼ button to change setting.
3. Press MENU SET button to confirm the setting.

- The display will go to "**bAT - battery type**" indicating current battery type setting on the unit.

8.5.4.3 Program batteries

Setting the bulk voltage

The display shows "**BUL**" and is flashing (Voltage range available for selection is 13.9 V … 14.6 V).

1. Press the MENU SET button once to show the bulk voltage setting.
2. Use the △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

v The display will go to "Setting the float voltage".

Setting the float voltage

The display shows "**Flo**" and is flashing. (Voltage range available for selection is 13.5 V … 14.4 V).

1. Press the MENU SET button once to show the float voltage setting.
2. Use the △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

v The display will go to "Setting the battery recharge voltage".

Setting the battery recharge voltage

The display shows "**REC**" and flashing (Voltage range available for selection is 12.8 V … 13.8 V)

1. Press the MENU SET button once to show the battery recharge voltage setting.
2. Use the △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

v The display will go to "Setting the maximum charging current".

Setting the maximum charging current

The display shows current maximum current setting ("**H and current in A**"). The selectable choices are: "H20"(=20A), "H40" (=40A), "H60" (=60A), "H80" (=80A).

1. Press the MENU SET button once to show the maximum charging current setting.
2. Use the △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

v The display will go to "Setting the absorption to float stage current".

Setting the Absorption (ABS) to Float Stage Current

The display shows current Absorption to Float current setting ("**L and current in A**"). The selectable choice depends on the selected Bulk/Maximum charge current setting chosen in the previous step.

Selected bulk/maximum charge current	Selectable ABS to float stage current		
H20 (= 20 A)	2	4	6
H40 (= 40 A)	4	6	8
H60 (= 60 A)	4	6	8
H80 (= 80 A)	4	6	8

1. Press the MENU SET button once to show the absorption to float stage current setting.
2. Use the △/▽ button to change setting.
3. Press MENU SET button to confirm the setting.

v The display will go to "Setting the charging mode".

*Setting the charging mode (**Mod**)*

The display shows "**Mod**" and is flashing.

1. Press the MENU SET button once to show the setting.
2. Use △/▽ button to change the charging mode.
3. Once the setting is chosen, use the MENU SET button to confirm.

- The display will go to "**bAT - battery type**" indicating current battery type setting on the unit.

8.5.5 Setting the alternator CH3 startup voltage

The setting defines the voltage at which the charger begins charging from the alternator.

The display shows "**CH3 - Input Voltage**".

Voltage range available for setting: 12 V system: 11.5 V … 13.8 V

For more information, see "Alternator/starter input (CH3) on page 9".
To change the CH3 input startup voltage, proceed as follows:

1. Press the MENU SET button once.
2. Use the △/▽ buttons to change the voltage setting.

NOTE The CH3 Input Startup voltage setting configures the unit for a 12 V (11.5 V … 13.8 V range) alternator system. Incorrect selection will cause improper operation or potentially over discharging your vehicle's start battery.

3. Once the setting is chosen, press the MENU SET button to confirm the setting and the display will go to "Restarting a latched Lithium battery or a dead SLA battery (SIL) on page 30".

8.5.6 Restarting a latched Lithium battery or a dead SLA battery (SIL)

This unit includes a manual startup charging mechanism to reset a Lithium battery that has been latched off by its internal Battery Management System (BMS) due to undervoltage or other faults. This function is for Lithium battery settings only.

Restarting a latched Lithium battery

1. Go to the unit settings and set "**SIL**" to on.

- The unit will provide 12 V, 1 A charging current to the House Battery for 30 s.

2. After completion, the unit will automatically switch off and resume normal operation.
3. If the Lithium battery remains latched, consult the battery manufacturer for further instructions.

Restarting a dead SLA battery

1. Set the battery type to **Lithium**.
2. Go to the unit settings and set "**SIL**" to on.
3. After completion, change the battery type back to **SLA**.

8.5.7 Restoring the manufacturing defaults (MFd)

The display shows "**MFd-no**".

1. Press the MENU SET button once.
2. Use the △/▽ button to change the display to "**YES**".
3. Press the MENU SET button again to confirm.

- ⌄ The display will show "**MFd-no**" again and all the user-configured settings on the unit will be restored to the manufacturing defaults.

8.6 Turning off the battery charger

There are two methods to turn off the battery charger:

- Using the POWER button on the main unit and on the display panel
- Using the automatic turn-off function

Using the Power button (recommended)

- > Press and hold the POWER button on the main unit or the display panel for about 1 s until the display shows **PWR OFF**.
- ⌄ The unit will turn off.

NOTE The POWER button is a signal switch and does not disconnect power from the AC input or DC inputs/outputs.

Using the automatic turn-off function

The battery charger turns off automatically when all of the following conditions are met:

- The AC utility input is unavailable.
- Both CH2 (Solar Input) and CH3 (Alternator Input) are out of operating range or unavailable.

NOTE If the Ignition Start Port is connected to a high-voltage signal, neither the POWER button nor the automatic turn-off function can be used to turn off the charger. In this case, the ignition signal must be removed to allow the unit to turn off.

9 Cleaning and maintenance

WARNING! Electrocution hazard

- > Disconnect the device from the power supply before each cleaning and maintenance.

NOTICE! Damage hazard

- > Never clean the device under running water or in dish water.
- > Do not use sharp or hard objects, abrasive cleaning agents or bleach during cleaning as these can damage the device.

- > Occasionally clean the device with a soft, dry cloth.
- > Regularly check cables and leads for insulation faults, breaks or loose connections.
- > VLA batteries only: Carry out the battery equalization function regularly (once a month to every 6 months, depending on the number of charging cycles) to remove sulphate layers (see chapter Flooded battery equalization on page 15).

10 Troubleshooting

11 Disposal

Recycling packaging material: Place the packaging material in the appropriate recycling waste bins wherever possible. This separation is necessary, as packaging is valuable resource and improper disposal may impact human health and the environment.

Recycling products with non-replaceable batteries, rechargeable batteries, or light sources:

- If the product contains any non-replaceable batteries, rechargeable batteries, or light sources, you don't have to remove them before disposal.
- If you wish to finally dispose of the product, ask your local recycling center or specialist dealer for details about how to do this in accordance with the applicable disposal regulations.

12 Warranty

If the product does not work as it should, please contact your retailer or the manufacturer's branch in your country (see enerdrive.com.au). The warranty applicable to your product is 5 year(s).

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

Note that self-repair or nonprofessional repair can have safety consequences and might void the warranty.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are 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. The benefits provided to you as the consumer by this warranty are in addition to other rights and remedies available to you under the law.

This warranty policy is subject to the conditions and guarantees which are mandatory as implied by the Consumer Guarantees Act 1993(NZ).

13 Technical data

Output rating		**EN31240DC**
Output current (maximum)		80 A (AC Charger 40 A, DC Charger 40 A)
Output voltage		12 V Nominal
Output power (maximum)		1000 W
Selected battery type		GEL, AGM, Flooded, Lithium, Program
Bulk/float voltage/restart range	GEL	14.4 V⎓ / 13.7 V⎓ / 12.8 V⎓ … 13.5 V⎓
	AGM	14.6 V⎓ / 13.6 V⎓ / 12.8 V⎓ … 13.4 V⎓
	Flooded	14.4 V⎓ / 13.3 V⎓ / 12.8 V⎓ … 13.1 V⎓
	Lithium	13.9 V⎓ … 14.6 V⎓ / 13.5 V⎓ … 14.4 V⎓ / 12.8 V⎓ … 13.8 V⎓
	Program	13.9 V⎓ … 14.6 V⎓ / 13.5 V⎓ … 14.4 V⎓ / 12.8 V⎓ … 13.8 V⎓
Charger current (user selectable)		20 A … 80 A (20 A steps)
Equalized Voltage (Flooded battery only)		15.5 V⎓
Equalized charging current		10 % of Bulk Current Setting
Charging control	GEL, AGM Flooded	Selectable Two or Three stages
	Lithium, Program	Three stages
DC output bank		Single

Output rating	EN31240DC
Current draw from CH1 with unit on	< 300 mA
Current draw from CH1 with unit off	< 30 mA
Battery temperature setting	Low / Normal / High (automatically overridden by optional BTS)
Efficiency	95 %
Minimum operating voltage	8 V⎓
PV input voltage	14.5 V⎓ … 55 V⎓
Maximum Solar input current	40 A
Maximum Solar input power	1000 W
Alternator Input Voltage	10.5 V⎓ … 16 V⎓
CH3 Alternator maximum input current	50 A
Storage range	– 40°C … 70°C
Operating range	– 20°C … 60°C
Humidity	5 % … 95 %, RH non-condensing

14 FCC and CE EMC information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and comply with the limits for CE EMC. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Limitations on use

Do not use in connection with life support systems or other medical equipment or devices.

enerdrive.com.au

YOUR LOCAL SUPPORT

support.enerdrive@dometic.com
call 1300 851 535

A complete list of Dometic companies, which comprise the Dometic Group, can be found in the public filings of:
DOMETIC GROUP AB • Hemvärnsgatan 15 • SE-17154 Solna • Sweden

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