REVOV™

E300 USER MANUAL

51.2V 314Ah (16.0 kWh) Rack Mount LiFePO4 Battery

Document name	E300 User Manual V2.3
Product name	REVOV E300
Nominal voltage / capacity	51.2 V (16S) / 314 Ah (16.0 kWh)
Issue date	2026-03-10

Important Notice

This manual and associated documentation may be updated from time to time. It is the responsibility of the installer and/or end user to ensure they are using the latest revision.

Installation must follow applicable local electrical codes and good engineering practice. Where applicable, installations should adhere to ALL local and national electrical safety and operational guidelines.

Document Usage

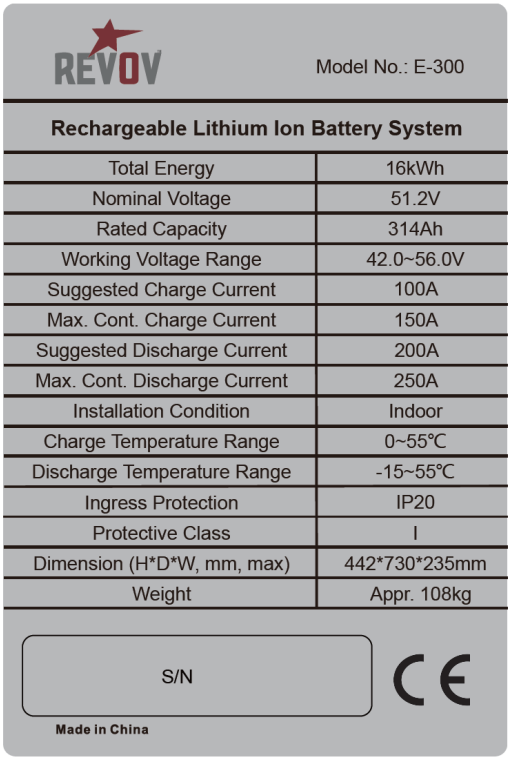
This document provides the installation, operation, safety, transport, and warranty guidance for the REVOV E300 51.2 V 314 Ah (16.0 kWh) rack-mount $LiFePO_4$ battery.

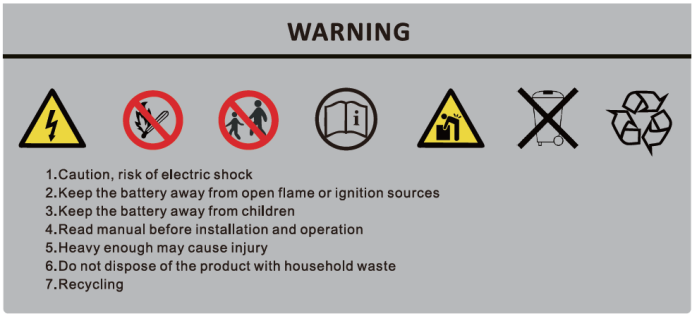
The REVOV E300 is a modular, parallel-connected lithium iron phosphate ($LiFePO_4$) energy storage battery designed for residential, commercial, and light-industrial backup and hybrid solar applications. It incorporates an integrated Battery Management System (BMS) with multi-level protection and supports CAN Bus and RS485 communication with approved inverter platforms.

This manual is intended for qualified installers, commissioning engineers, and technically competent users. It defines safe handling practices, installation requirements, electrical connection procedures, inverter communication rules, master–slave BMS configuration, mixed-battery system constraints, and warranty conditions.

The E300 shares a common mechanical, electrical, and communication architecture with other REVOV rack-mount batteries larger than 200 Ah (>10.2 kWh), enabling flexible system expansion. Where inverter communication is used in mixed systems, specific master battery requirements are defined to ensure correct system operation and accurate state-of-charge reporting.

Failure to comply with the instructions and limitations contained in this manual may result in unsafe operation, equipment damage, or voiding of the product warranty.


REVOV
Model No.: E-300
Rechargeable Lithium Ion Battery System
Total Energy 16kWh
Nominal Voltage 51.2V
Rated Capacity 314Ah
Working Voltage Range 42.0~56.0V
Suggested Charge Current 100A
Max. Cont. Charge Current 150A
Suggested Discharge Current 200A
Max. Cont. Discharge Current 250A
Installation Condition Indoor
Charge Temperature Range 0~55℃
Discharge Temperature Range -15~55℃
Ingress Protection IP20
Protective Class I
Dimension (H*D*W, mm, max) 442*730*235mm
Weight Appr. 108kg
S/N
CE
Made in China


WARNING
1.Caution, risk of electric shock
2.Keep the battery away from open flame or ignition sources
3.Keep the battery away from children
4.Read manual before installation and operation
5.Heavy enough may cause injury
6.Do not dispose of the product with household waste
7.Recycling

Related Documents

The following other documents may need to be used in conjunction with this document for the safe and operational usage of this product.

Document	Application	Notes/Validity
Material Safety Data Sheet	Identification of substances, hazards, chemical composition, first aid, firefighting, accidental release, handling and storage, exposure and personal protection, physical and chemical properties, stability and reactivity, toxicology, ecological information and disposal information.	In case of conflicting information, the MSDS document will take precedence over others.
UN38.8 Testing Document	Test data and results for testing procedures carried out for the battery and internal components (LFP cells).	Tests in the UN38.8 are strain/destructive tests and DO NOT indicate the operational conditions of the battery. Operational conditions are defined and stated as per the product user manual.
Inverter Compatibility Guide	Information relating to configuration and connection of tested and approved inverters for use with this product.	In case of conflicting information, the Inverter Compatibility Guide will take precedence for the correct information relating to connection to inverters/external devices.
Prospective Short Circuit Current (PSCC)	DCIR, OCR, P+S configuration, resistances of internal conductors etc. for assisted calculation of PSCC values for low-voltage installations and certificates of compliance associated with the product.	Individual breakdowns of sources and impedances are provided, and calculations are provided for worst case characteristics. However, the operational delivery and responsibility of calculation in each installation is up to the responsible commissioning person per installation.
Specification Document	Marketing/Sales document for customer consumption relating to key characteristics of the product	In case of conflicting information, the User Manual is to be referred to, unless it is explicitly stated that precedence should be given to another document (e.g. MSDS above).
Warranty Conditions	Conditions for registering, upkeeping, and operating the battery and associated warranty periods associated with the product.	In case of conflicting information relating to Warranties, the Warranty Document by the manufacturer will take precedence over all other material relating to the validity of the warranty.
Transportation Document	Certificate for Identification and Classification for transport of goods (product) and conditions for transport.	In case of conflicting information, the Transportation Document and UN38.8 will take precedence for all transportation clearance matters.

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1. Safety Information

1.1. General Precautions

Read and understand all safety information before installing, operating, transporting, or servicing the battery. Failure to follow instructions may result in injury, fire, or equipment damage.

- DO NOT immerse the battery in water.
- DO NOT use or store the battery near heat sources or open flames.
- DO NOT reverse the positive (+) and negative (-) terminals.
- DO NOT short-circuit the battery terminals in any way.
- DO NOT pierce, crush, drop, strike, or disassemble the battery.
- DO NOT attempt to modify the battery, BMS, or connectors.
- DO NOT directly solder the battery terminals.
- DO NOT use the battery if it emits odour, becomes hot, deformed, discoloured, or otherwise abnormal.
- DO NOT arrange batteries in series for increased voltage. Series Connection Is PROHIBITED. Parallel operation ONLY.
- DO NOT connect the terminals to anything except what is approved for connection.
- DO NOT place the battery in a microwave oven or pressurized container.
- DO NOT use the battery in combination with primary batteries (such as dry cell batteries) or batteries of different cell count, cell-capacity, type, or brand.
- Do not use the battery if it gives off an odour, generates heat, becomes discoloured or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.
- Do not dispose the battery in conventional means.
- DO NOT overcharge or overdischarge the battery. Follow provided recommended and adhere to minimum/maximum settings.

⚠ The E300 is not intended for life-sustaining medical equipment.

⚠ DO NOT connect batteries directly to AC supplies or solar PV strings.

⚠ A LiFePO4 battery can contain significant energy reserves – even when presumed empty or at 0% State of Charge. Please never treat a battery as “dead” or “empty” – it almost never is. Please always take suitable electrical care and prioritise safety even when moving or working with empty batteries.

1.2. Fire And Emergency

In case of fire, ensure appropriate firefighting equipment is available. Depending on your installation, please ensure that you follow all suitable fire-prevention methods and have all suitable fire-fighting equipment available.

If a battery leaks electrolyte, avoid contact with leaked liquid or gas. Ventilate the area and seek medical attention if exposure occurs.

1.3. First Aid

- Inhalation:
  Move to fresh air. Provide artificial respiration if breathing is difficult. Seek medical attention.
- Skin contact:
  Remove contaminated clothing. Wash with water and soap. Seek medical attention.
- Eye contact:
  Rinse with flowing water for several minutes. Seek medical attention.
- Ingestion:
  Seek medical attention.

LiFePO4 Batteries both contain chemicals harmful to health. If any level of exposure to these occur, externally or internally, please seek medical advice and attention IMMEDIATELY from qualified personnel.

1.4. Installation Requirements

Make sure that the installation location meets the following conditions:

- The installation site must be suitable for the size and weight of the battery.
- Must be installed on a firm surface to sustain the weight of battery.
- The area must be waterproof.
- There are no flammable or explosive materials in proximity.
- The ambient temperature is within the range from 0℃ to 45℃.
- The temperature and humidity are maintained at a constant level.
- There are minimal dust and dirt sources in the area.
- Installation must be vertical
- Avoid forward or sideways tilting.

1.5. Qualified Personnel

Installation and commissioning must be performed by qualified personnel familiar with DC power systems, battery hazards, and the connected inverter/charger equipment.

1.6. Intended Use

Energy storage for backup power and solar hybrid systems. The battery is designed for parallel connection to increase energy and power at a constant 51.2 V class DC bus.

1.7. Package contents

- E300 battery module (rack-mount battery)
- Mounting ears/fasteners

2. Product Overview

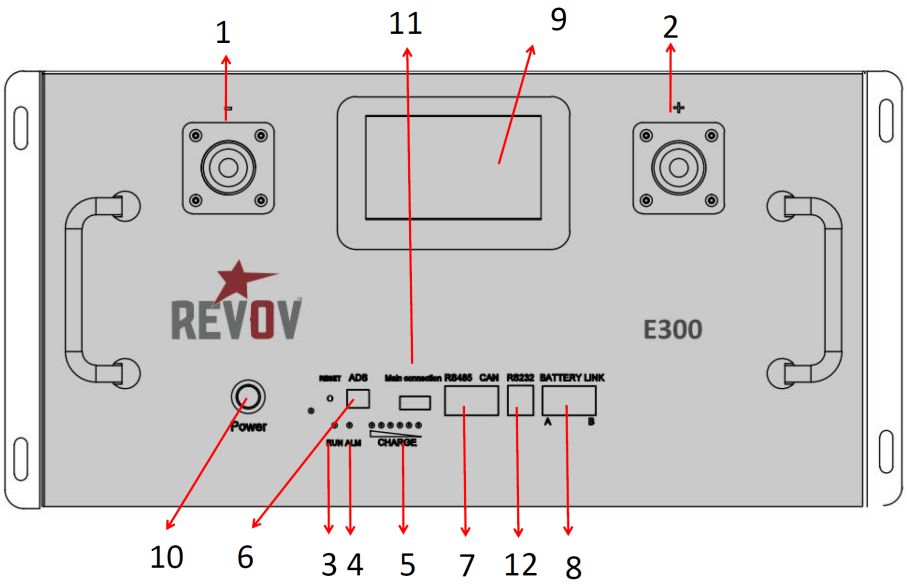


Figure 1: E300 product interface

#	Name	Label	Notes	Location in this Manual
1	Positive	+	M10 screw nut / Red	Section 4. Installation
2	Negative	-	M10 screw nut / Black	
3	RUN LED	RUN	Operation indicator	Section 7.2.2. Battery Operational Info and Configuration: LED Indicators
4	ALM LED	ALM	Alarm indicator	
5	SOC LED	SOC	State of Charge	
6	DIP switch	ADDR	Battery addressing for inter-battery communication.	Section 6.3. Inter-BMS Communication (6.3.1 and 6.3.3)
7	RS485/CAN	RS485/CAN	Communication with inverter	Section 6.2. Inverter Communication
8	Parallel port	BATTERY LINK	Inter-battery parallel communication port	Section 6.3. Inter-BMS Communication
9	LCD	/	Display of battery info.	Section 7.2.1. Battery Operational Info and Configuration: Screen
10	Power button	ON/OFF	/	Section 4. Installation Section 5. Commissioning and Operation
11	Dry node	Main connection	DCT relay	N/A, Not Supported
12	RS232	RS232	RS232 for PC/3rd party devices	Section 7.1. BMS RS232 Connectivity

Table 1: E300 interface definitions

3. Technical Specifications

3.1. General Specifications

Specification	Value
Battery Chemistry	Lithium Iron Phosphate ($LiFePO_4$)
Cell Configuration	16S (pack); rack-mount module
Nominal Voltage	51.2 V
Rated Capacity	314 Ah
Nominal Energy	16.0 kWh
Communications	• CAN-bus 2.0A (500 kbit/s, 11-bit) • RS485 half-duplex (9600-8-N-1)
Mounting	19-inch rack; front/side/top orientation as permitted by enclosure

Table 2: E300 general specifications

3.2. Electrical Specifications

Parameter	Value	Notes
Nominal Voltage	51.2 V	16S $LiFePO_4$
Nominal Capacity	314 Ah	
Total Energy	16.0 kWh	
Output Power Capacity	12800 W	Measured DC side maximum
Maximum Continuous Charge Current	150 A	
Recommended Charge Current	100 A	Recommended for longer lifespan
Maximum Continuous Discharge Current	250 A	
Recommended Discharge Current	<200 A	Recommended for longer lifespan
Recommended Recharge Time	2-4 h	
Maximum Charge Voltage	58.4 V	Maximum permitted open terminal voltage
Low Voltage Disconnect (LVD)	42.0 V	Minimum permitted open terminal voltage

Table 3: E300 electrical specifications

3.3. Environmental Specifications

Parameter	Range	Notes
Recommended Operating Temperature	10 – 45°C	Recommended range for operation under both charge and discharge conditions.
Charge Temperature Maximum Range	0 – 55°C	
Discharge Temperature Maximum Range	-15 – 55°C	Derating may apply
Storage Temperature	20 – 30°C	Recommended range for storage.
Humidity	≤95% RH	Non-condensing

Table 4: E300 environmental conditions

3.4. Mechanical Specifications

The following show the dimensions and weight of the E300 battery as well as its packaging.

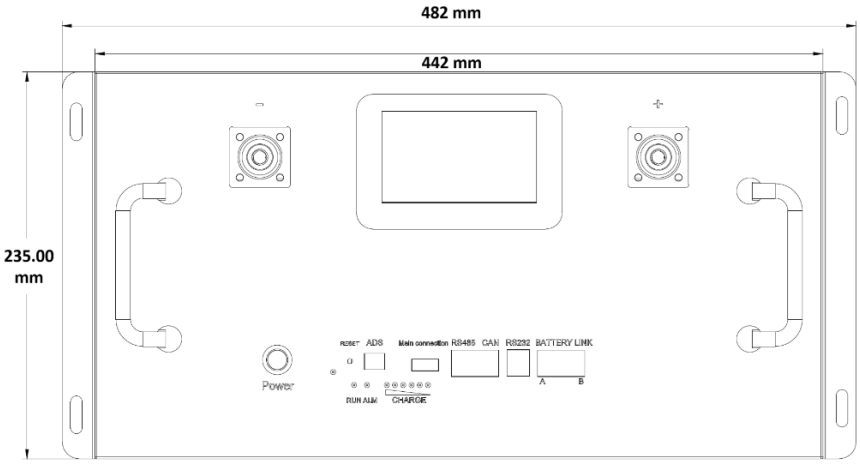


Figure 2: E300 Forward Dimensions

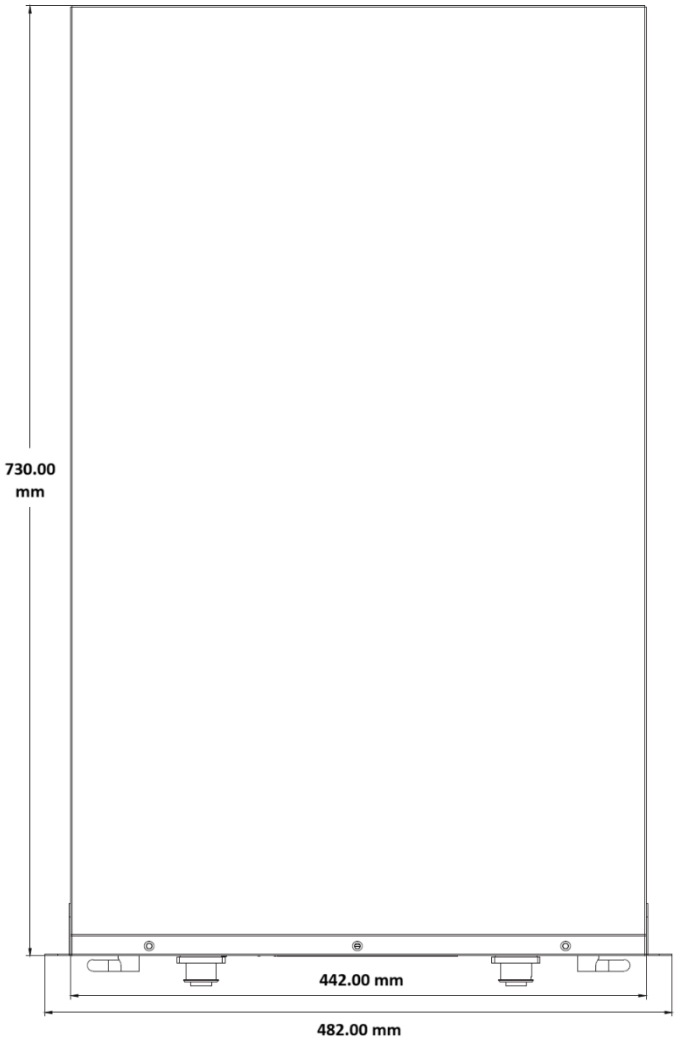


Figure 3: E300 Top-down Dimensions

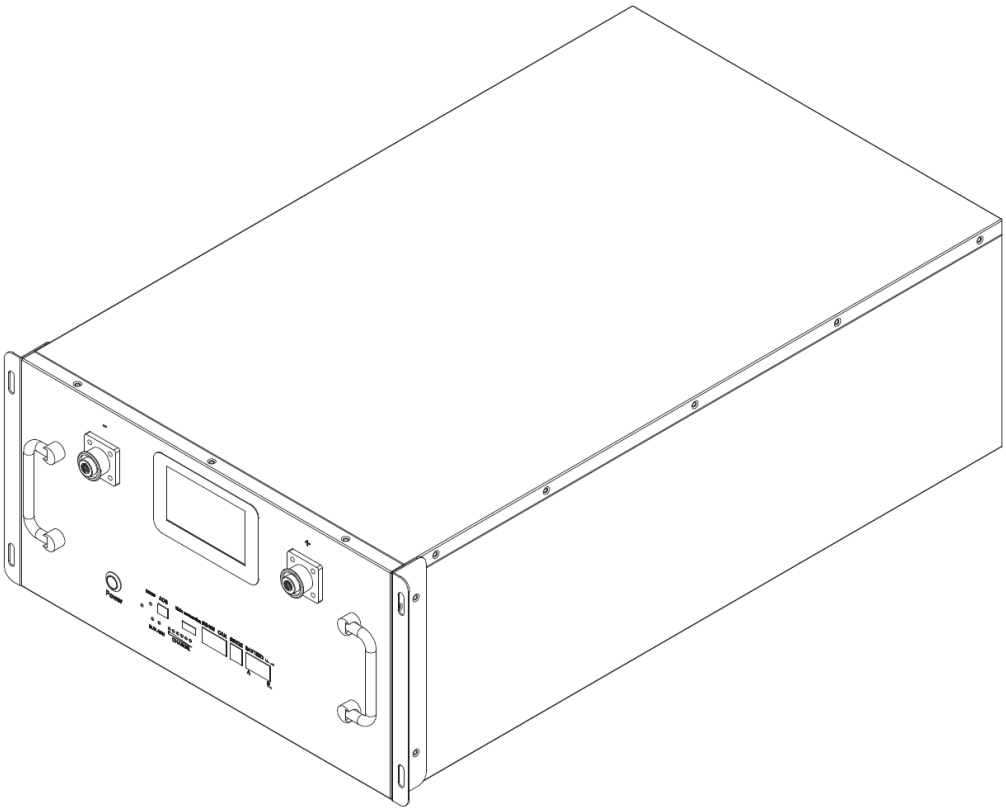


Figure 4: E300 Isometric View

Battery Model Dimensions (mm)					
Item	Type	Length (mm)	Height (mm)	Width (mm)	Weight (kg)
E300 Rack Mount Battery	LFP Battery	730	235	442	108
E300 Packaging	Cardboard Box with Polystyrene shock foam	800	500	510	115

Table 5: E300 battery and packaging dimensions.

4. Installation

4.1. Pre-Installation checks

- Inspect packaging and the battery enclosure for damage. Do not install a damaged battery.
- Confirm the inverter/charger is compatible with 51.2 V class LiFePO4 batteries and the required communications (if used).
- Confirm appropriate DC protection is installed: fuses/breakers, DC isolator, and correctly sized cables/busbars.

4.2. Installation Environment

- The installation site must be suitable for the size and weight of the battery.
- Must be installed on a firm surface to sustain the weight of battery.
- The area must be waterproof.
- There are no toxic, harmful gases and from flammable, explosive and corrosive materials in the proximity.
- The ambient temperature is within the range from 0℃ to 45℃.
- The temperature and humidity must be maintained a constant level.
- There is minimal dust and dirt in the area.
- Installation must be vertical.
- Avoid forward or sideways tilting.

4.3. System Installation

On the AC side, the inverter system used with the battery supplies power to designate loads and interfaces with the utility grid.

4.3.1. AC Protection and Metering:

- Main AC breaker between inverter and distribution board.
- Earth leakage protection (RCD) for final circuits as per SANS 10142-1.
- Utility-approved energy meter (where required) to measure grid import and export.
- Clearly labelled essential loads distribution board, if applicable.

4.3.2. Grid Connection:

- Grid connection includes a lockable AC isolator accessible to utility personnel.
- Anti-islanding protection ensures automatic disconnection during grid outages.

4.3.3. Earthing and Bonding

- All metallic enclosures, PV frames, inverter chassis, and battery enclosures are bonded to the main earth.
- DC and AC earthing systems are installed in accordance with SANS 10142-1.
- Surge protection devices are correctly earthed to ensure effective operation.

4.3.4. Compliance Statement

This DC system is designed to be installed in accordance with:

- NRS 097-2-1 (Grid interconnection of embedded generation)
- SANS 10142-1 (Wiring of premises)
- Applicable manufacturer installation manuals
- Local authority and utility requirements

4.3.5. Fire Safety Considerations:

- Batteries are installed in a well-ventilated location, away from combustible materials.
- Enclosures are non-combustible or fire-retardant where required.
- Clear labelling indicates the presence of stored energy and DC voltage hazards.

4.3.6. Location and Environment

- Install in a clean, dry, and ventilated environment, away from corrosive substances, heat sources, and direct sunlight.
- Ensure sufficient clearance for cable routing, airflow, and access to indicators and communication ports.
- Mount the battery securely in a 19-inch rack or approved bracket system. Do not rely on connectors to support weight.

4.3.7. Mechanical Installation - Rack Mount

- De-energise the inverter/charger and confirm DC bus is isolated.
- Fit rack rails / mounting ears according to the rack manufacturer instructions.
- Using two-person lift (recommended), slide the battery into position and secure with fasteners.
- Ensure the battery is level and mechanically supported before making electrical connections.

4.4. Electrical Connection

4.4.1. DC System Description (Residential PV–Battery Energy Storage System)

The system is a residential solar photovoltaic (PV) energy storage system designed to supply DC power from PV modules to an inverter and battery energy storage system (BESS), with conversion to AC power for household loads. The installation MUST incorporate appropriate DC protection, isolation, metering, fire safety measures, and incident handling provisions in accordance with NRS and SANS requirements.

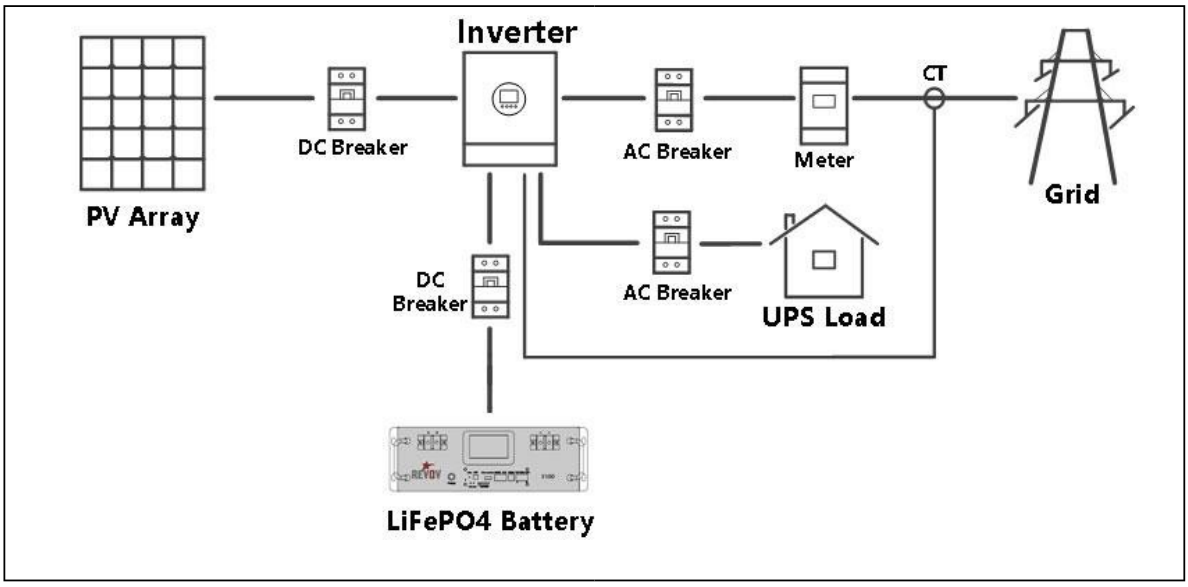


Figure 5: Installation and product utilisation overview

4.4.2. DC Protection and Isolation (PV Side)

The inverter converts DC power from the PV array and battery into AC power for household use and grid interaction.

DC Side (Inverter Input):

- Separate DC inputs for PV and battery, each protected by:
  - DC isolators
  - DC breakers or fuses (where not integrated)
- The inverter complies with NRS 097-2-1 anti-islanding and grid protection requirements.

Monitoring and Control:

Ensure that Battery-Inverter communication is set correctly, depending on your inverter. If communication is not available, operate with the inverter voltage settings specified in this document (Section 5.2: Inverter Settings (Voltage-Based)).

DC Protection

Ensure that:

- String fuses or DC-rated breakers are installed where multiple PV strings are paralleled, sized according to module short-circuit current and manufacturer specifications.
- DC isolators are installed:
  - At the PV array (where required)
  - At the inverter DC input
- Surge Protection Devices (SPDs) (Type 2, or Type 1+2 where required) are installed on the DC side to protect against transient overvoltage due to lightning or switching events.
- All PV DC cabling is UV-resistant, double-insulated, correctly sized, and routed to minimise mechanical damage and fire risk.

4.4.3. Battery DC

- A DC-rated circuit breaker and/or fuse is installed on the positive battery conductor, as close to the battery terminals as practicable, in accordance with SANS 10142-1. THIS IS REQUIRED PER BATTERY.
- A lockable DC battery isolator is provided to allow safe maintenance and emergency disconnection. THIS IS REQUIRED PER BATTERY.
- The battery module is connected to the inverter using appropriately sized DC cables, rated for the system voltage and current.

Battery DC protection mechanisms stated above are the required installation conditions for this battery.

However, according to your installation's applicable local/national electrical code, additional methods of protection may be required.

4.5. Electrical Connection Steps

WARNING: Risk of electric shock, arc flash, and burns. Use insulated tools and appropriate PPE.

- Confirm battery power switch is OFF and any external DC isolators are OPEN.
- Connect the battery negative (-) cable to the common negative busbar/terminal first through the required fusing/isolation as per electrical code.
- Connect the battery positive (+) cable to the common positive busbar/terminal second through the required fusing/isolation as per electrical code.
- Tighten terminals to the specified torque for the terminal type (use inverter/busbar manufacturer specifications).
- Install appropriately sized fuses/breakers for each battery where required by local regulations.
- For multiple batteries, use equal-length cables and a common copper busbar to promote current sharing.
- Before closing isolators, verify polarity with a DC voltmeter on the busbars.

4.6. Paralleling Multiple Batteries - Best Practice

- All batteries in the same parallel bank should be at similar state of charge before final connection to reduce inrush currents.
- Do not parallel batteries with significantly different open-circuit voltages unless performed by qualified personnel with controlled pre-charge methods.
- Keep total DC resistance per battery similar (similar cable length, gauge, and terminations).

5. Commissioning and Operation

5.1. Power-Up Sequence

- Confirm all DC connections are correct and mechanically secure.
- Close the battery DC breaker/fuse (if external) but keep inverter DC isolator open.
- Switch ON the Master battery (see Master/Slave section). Allow the battery to boot (typically 30 seconds).
- Switch ON remaining slave batteries (if applicable).
- Ensure that the Master battery is connected via the correct communication cable to the inverter system. If operating without communication, please refer to the section below: (Section 5.2: Inverter Settings (Voltage-Based)) for voltage settings.
- Close inverter DC isolator and follow inverter commissioning steps.

5.2. Inverter Settings (Voltage-Based)

If CAN/RS485 communications are not used, configure the inverter/charger with conservative LiFePO4 voltage limits. Ensure DC cable losses are considered.

Voltage setpoints used in these types of inverter setups:

- Float: 54.5 V
- Absorption: 55.5 V
- Equalization: 57.0 V (with equalization disabled - 0 days / 0 hours)
- Cut-off Voltage: 42.0 V

It is often a good idea to pre-set these values for the inverter, even if operating with communication is enabled. This ensures that in case of a communication issue, the fallback method of no-communication based operation is suitably set up.

Please refer to your respective inverter's documentation on best set-up procedures for operation.

6. BMS Communications, DIP Switches, and Protocols

6.1. Communication Interfaces

The BMS supports CAN-bus 2.0A (500 kbit/s, 11-bit addressing) and RS485 half-duplex (9600 bps, 8-N-1).

Inter-battery BMS communications use RS485 daisy-chain connections on the designated inter-BMS ports.

6.2. Inverter Communication

The following shows the dedicated CAN and RS485 pinout for communication use with approved inverter brands.

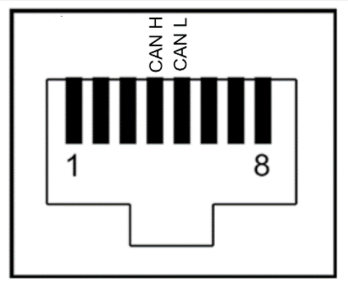
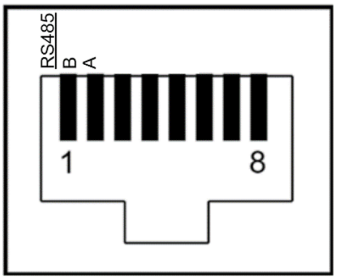
Interface	BMS Pinout	Diagram	Notes
CAN	• Pin 4 = CAN High • Pin 5 = CAN Low		Use the CAN port on the Master battery for inverter comms as per inverter specifications.
RS485	• Pin 1 = RS485 B • Pin 2 = RS485 A		Use the RS485 inverter comm port as required by specific inverter brands.

Table 6: BMS CAN/RS485 to inverter communication pinout

6.3. Inter-BMS Communication

6.3.1. Master/Slave Battery DIP Switch Addressing

In a parallel bank, one battery must be configured as the Master BMS. The Master queries slave batteries, consolidates state of charge (SOC) and other parameters, and communicates the consolidated data to the inverter.

Up to 15 batteries may be paralleled (addresses 1 to 15). Address 0 is reserved and must not be used.

Addressing uses 4 DIP switches (4 bits). Example configurations:

- Address 1 (MASTER): 1000
- Address 2 (SLAVE): 0100
- Address 3 (SLAVE): 1100
- Address 4 (SLAVE): 0010

The 'Master' BMS should be connected to the slave BMS's via a standard straight-through RJ45 cable using the right most RS485 ports on the BMS. No two batteries should have the same address, and no battery should be set to address 0 (all dip switches are then off). This is necessary for the Inverter to have a true reflection of SOC of the entire system, including the slave BMS's.

6.3.2. Dip Switch Examples

The dip switches (red with white switches) in the following figures are examples of how to refer between the figures and tables.

Example: Dip switch configuration(s):

1. 1000: ADR = 1 (Master E100)

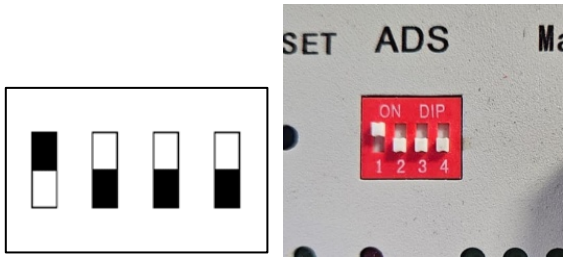


Figure 6: Image of BMS orientation (indicating 1000 BMS DIP setting).

2. 0100: ADR = 2 (Slave E100)

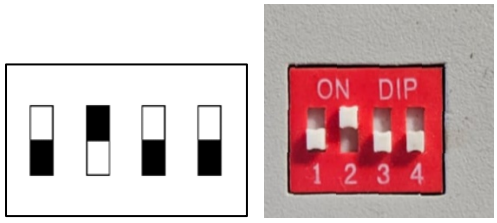


Figure 7: Dip switches on the BMS. In the image the bits are set for the master BMS.

3. 1100: ADR = (Slave E100)

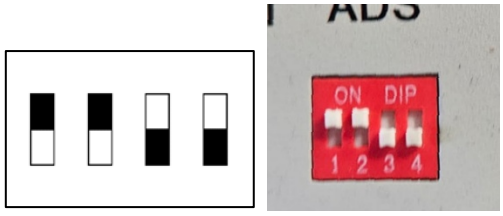
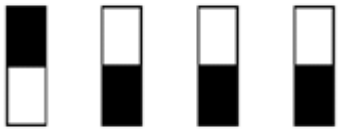
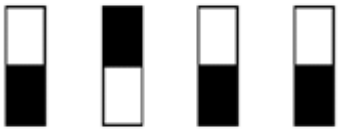
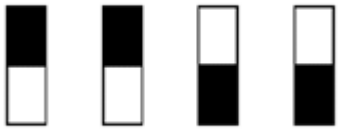
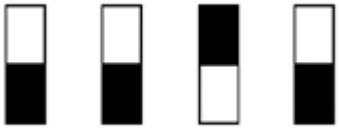
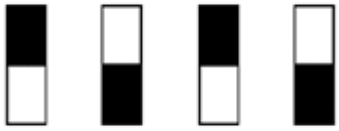
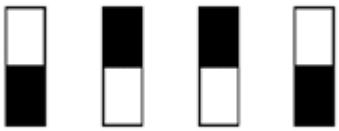
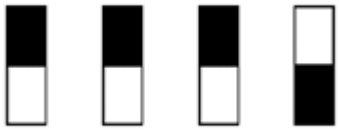
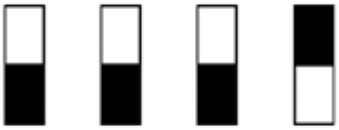
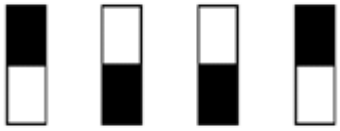
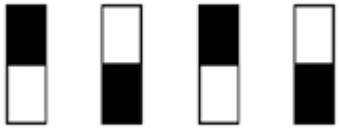
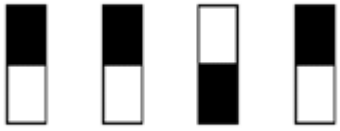


Figure 8: Dip switches on the BMS. In the image the bits are set for a slave BMS 2.

Please refer to the proceeding table (Table 7) for the full list of dip switches and values.

6.3.3. Full List of Master/Slave BMS Addresses

Address	Dip-switch address	Image
1 (MASTER Battery)	1000	
2 (SLAVE Battery)	0100	
3 (SLAVE Battery)	1100	
4 (SLAVE Battery)	0010	
5 (SLAVE Battery)	1010	

6 (SLAVE Battery)	0110	
7 (SLAVE Battery)	1110	
8 (SLAVE Battery)	0001	
9 (SLAVE Battery)	1001	
10 (SLAVE Battery)	0101	
11 (SLAVE Battery)	1101	

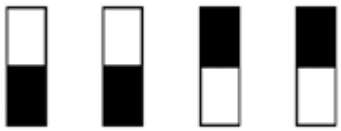
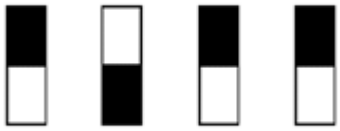
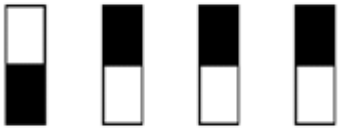
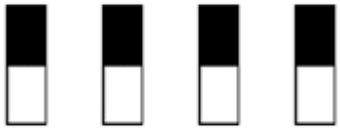
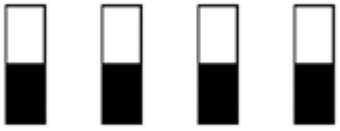
12 (SLAVE Battery)	0011	
13 (SLAVE Battery)	1011	
14 (SLAVE Battery)	0111	
15 (SLAVE Battery)	1111	
N/A (RESERVED: DO NOT USE)	0000	

Table 7: E100 Master/Slave dip-switch addresses

6.4. Parallel Operation & Mixed Battery Systems

6.4.1. General Rules

- Parallel connection only
- Maximum of 15 batteries
- Common DC busbar recommended
- Each battery must be protected

6.4.2. Mixed E300 / R200 / B220 Systems

Mixed E300 and R200/B220 systems are permitted under the following conditions:

With inverter CAN/RS485 communication:

- An E300 must be the Master battery
- The Master battery is the unit connected to the inverter CAN port
- R200/B220 batteries must be configured as slave units

Without inverter communication:

- E300 and R200/B220 batteries may operate as lead-acid replacements in parallel
- As there is no master, please set inverter charge/discharge voltages and currents as per the lowest rated battery's specifications

E300-only systems:

- Any E300 may be assigned as Master
- DIP switch addressing follows standard REVOV procedure

7. Interface and Configuration

7.1. BMS RS232 Connectivity

Each E300 battery contains an RS232 connection via an RJ12 port. This is commonly used for either:

1. Connection to a PC for firmware updates/advanced technical configuration via a USB-RS232 cable.
2. Usage with 3rd party monitoring or inverter compatibility devices (ESP BMS / Solar Assistant etc.) via their own designated cable.

In the case of option 1, this will commonly be done with your technical support contact at REVOV.

In the setup of a battery for most cases, unless the battery requires a firmware update OR the installation involves usage of a 3rd party monitoring device, there will be no requirement for usage of this port.

7.1.1. RS232 Port Pinout

The following refers to the pinout for the RS232 port and its configuration.

Please note that the utilised PORT is an RJ12 port. This generally means that an RJ12 cable head is required. However, note that RJ11 connectors share 4 of the 6 conductors with RJ12, and as such – RJ11 cable heads may also be used for this purpose.

Commonly, RJ11 cable heads contain 4 x conductors: 1 – 4, while RJ12 cable heads contain 6 x conductors: 1 – 6. However, RJ11 maps these conductors to RJ12 connections such that the outermost RJ12 conductors do not have a matching RJ11 conductor. Please refer to the picture below on how these connectors are set up.

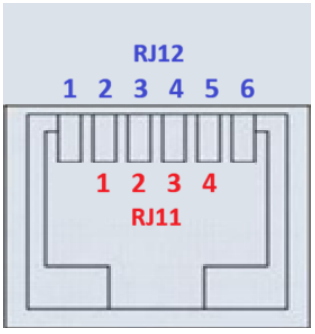


Table 8: RJ12 6-conductor pinout (blue) and RJ11 4-conductor pinout (red).

Connection to the E300 battery only requires a set of pins that are BOTH common to RJ11 and RJ12 connectors. Please note this information and ensure understanding in the case that you create your own cables or when purchasing cables.

Please refer to the table below for the specific pinout of the RJ12 RS232 connector:

PIN (RJ11)	PIN (RJ12)	Definition	Notes
N/A	1	NC	No Connection
1	2	NC	No Connection
2	3	TX (of BATTERY)	TRANSMIT (RS232 Send) of Battery – Should be connected to RECEIVE (RS232 Receive) of device at other end of cable.
3	4	RX (of BATTERY)	RECEIVE (RS232 Receive) of Battery – Should be connected to TRANSMIT (RS232 Send) of device at other end of cable.
4	5	GND	Communication Ground, shared between the battery and the other device on the RS232 connection.
N/A	6	NC	No Connection

Table 9: RS232 Communication mapping to RJ12 and RJ11 pinout.

7.2. Telemetry and Configuration

Common battery telemetry can be accessed via the touch screen located on the face of the battery. This section shows how this screen can be used for both viewing any telemetry information as well as and associated configuration

7.2.1. Battery Operational Info and Configuration: Screen

Landing Page

Upon touching the screen (when the battery is turned ON) the following will be visible, showing that specific E300's SoC (%), total voltage (V), current (A), capacity remaining (Ah), and operational status (e.g. normal, fault etc.)

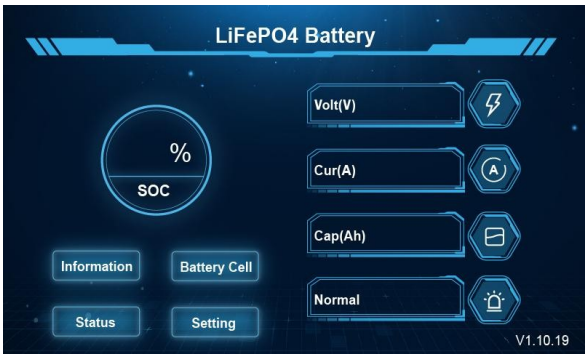


Figure 9: E300 battery screen landing page.

The bottom left contains 4 buttons that can provide further information/configuration options:

Information:

Additional information of battery sensors

Figure 10: E300 screen; Information page for additional battery telemetry.

Status

Operational status of the battery.

Figure 11: E300 screen; Status page for battery operational status.

Battery Cell

- Indicates each cell voltage (16 cells for E300)
- Indicates temperatures (4 distributed temperature sensors, 1 MOSFET temperature sensor, 1 ambient temperature sensor).

Figure 12: E300 screen; Battery Cell page for cell/temperature information.

Setting

Allows configuration of the utilised INVERTER protocol; use this with REVOV/Inverter documentation for setup with various inverters.

Figure 13: E300 screen; Setting page for setting Inverter Protocol.

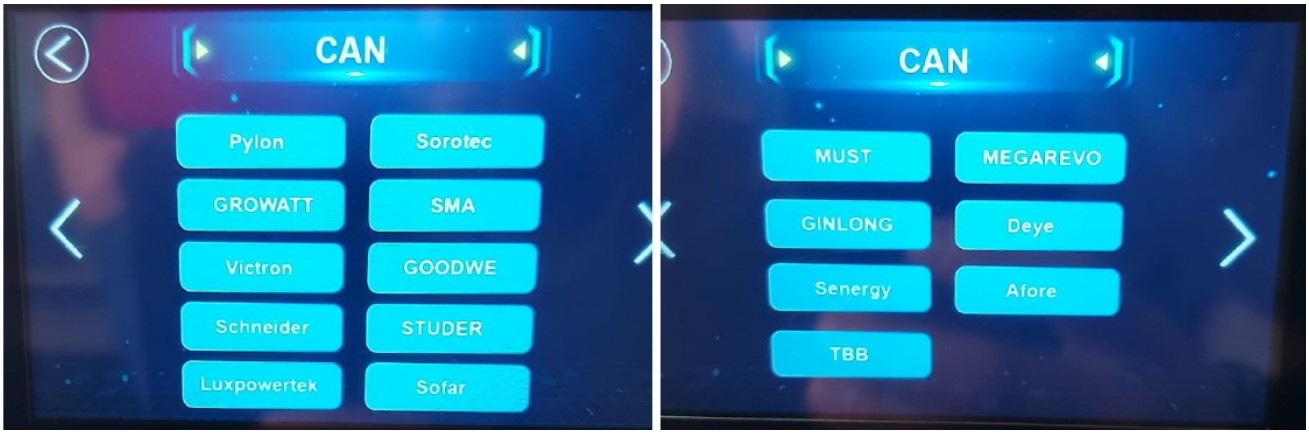


Figure 14: Example selection of CAN protocols for inverters.

7.2.2. Battery Operational Info and Configuration: LED Indicators

The front of the battery contains a set of LEDs that can be used for simple referral of operational status. These are referred to below as per their labels on the battery as well as per Table 1: E300 interface definitions.

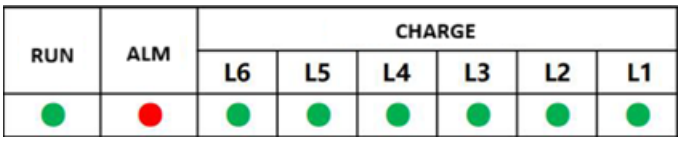


Figure 15: LED Indicators

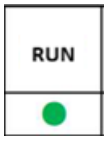
These are defined as follows:

LED	Colour	Function
RUN	Green	Indicates battery operating status
ALM	Red	Indicates alarm or fault condition
L1–L6	Green	State of Charge (SoC) indication

Figure 16: LED definitions

RUN LED Indications:

The following apply to the RUN green LED:

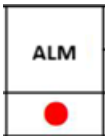


RUN LED State	Description
OFF	Battery is powered down or in sleep mode
ON (steady)	Battery operating normally
Flashing: (0.25 seconds ON, 3.75 seconds OFF)	Battery online, standby mode
Flashing: (0.5 seconds ON, 1.5 seconds OFF)	Battery discharging

Figure 17: RUN LED states

ALARM LED Indications:

The following apply to the RUN green LED:

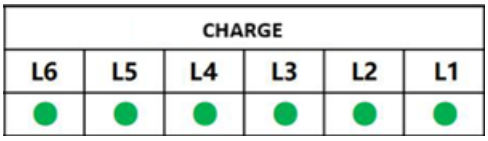


ALARM LED State	Description
OFF	No alarms or faults present
Flashing: (0.5 seconds ON, 1.5 seconds OFF)	Warning or protection condition active
ON (steady)	Fault condition – charging and/or discharging disabled

Figure 18: ALARM LED states

(State of) CHARGE LED Indications:

The following apply to the SoC LEDs:



Please note that these operate in different conditions, depending on whether the battery is CHARGING or DISCHARGING as well as the battery's current SoC. These are listed in the table below.

Furthermore, please note that:

- During CHARGING, the highest active LED flashes
- During DISCHARGING, SoC LEDs remain solid ON (no flashing).

Battery SoC	SoC LEDs (Charging)	SoC LEDs (Discharging)
0%	N/A	All LEDs off
0 – 17%	L1 flashing	L1 ON
18 – 33%	L1 ON, L2 flashing	L1–L2 ON
34 – 50%	L1–L2 ON, L3 flashing	L1–L3 ON
51 – 66%	L1–L3 ON, L4 flashing	L1–L4 ON
67 – 83%	L1–L4 ON, L5 flashing	L1–L5 ON
84 – 100%	L1–L5 ON, L6 flashing	L1–L6 ON

Figure 19: SOC LED states

8. Handling and Storage

8.1. Handling

- Handle with care. Do not throw or drop the battery; avoid mechanical shock and collision.
- Do not transport with flammable/explosive materials or sharp metal objects.
- Protect terminals from short circuit during handling and transport (covers/insulation).

8.2. Storage

- Store at approximately 50% state of charge for long-term storage.
- Store in a clean, dry, ventilated environment (typical recommendation 20-30 °C), away from heat and fire.
- Recharge at least once every 180 days during storage to maintain health.

9. Maintenance and Troubleshooting

9.1. Routine Checks

- Inspect terminals and cables periodically for corrosion, looseness, and overheating signs.
- Verify rack mounting hardware remains secure.
- Check that ventilation openings are unobstructed and that the environment remains within specification.

9.2. Common Issues

Symptom	Possible cause	Corrective action
Battery will not power on	Battery in protection state or very low SOC	Ensure correct polarity and DC voltage. Attempt to charge. If unable, contact REVOV support.
Inverter does not detect battery on CAN/RS485	Wrong protocol, wrong port, wrong pinout, Master not configured	Confirm Master address=1, connect inverter to Master CAN/RS485 port, set protocol correctly on Master.
Unequal currents between parallel batteries	Unequal cable lengths/resistance; different SOC at connection	Use equal-length cables and busbars; balance SOC before paralleling.

Table 10: Common troubleshooting issues

10. Warranty

Warranty term: 10 years from date of purchase, subject to meeting installation, commissioning, and operating requirements.

Warranty Cycles are subject to Depth of Discharge validations as seen below:

Depth of Discharge (DoD)	Cycle rating
80% DoD	6000 cycles
90% DoD	5000 cycles
100% DoD	3500 cycles

Table 11: Warranty DoD conditions

Please Note:

- Failure to adhere to safety, operational, storage, handling or any other mentioned conditions will result in a voiding of the battery warranty.
- Please refer to REVOV's Warranty Terms and Conditions on https://revov.co.za/product-warranty/ for the most up-to-date warranty terms applicable to your product.

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