



Mobile Power Station 7.5

MPSNA7K5B10

User Manual

V 1.0

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REON Technology, Inc.

ABOUT REON

REON Technology, Inc. is a Delaware (USA) registered company headquartered in Massachusetts that operates and manufactures in both the USA and Singapore.

REON provides intelligent, reliable, and accessible energy storage & microgrid solutions that accelerate the global adoption of renewable energy. Our cutting-edge technology leverages AI to optimize system performance through customized power management of batteries and PV panels, significantly extending their usable life and delaying recycling to maximize return on investment and carbon footprint reduction.

Following extensive research & development, REON's team has developed unprecedented methods of managing and controlling batteries. Backed by multiple patent-pending technologies, REON enables the efficient aggregation and application of heterogeneous battery cells. REON's technology can systematically unleash full battery capacities to achieve up to 2-4X performance compared to conventional battery system design.

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General Instructions

Information

The product information provided here is subject to updates with limited notice.

For the latest version, please visit <https://reoncorp.com/>.

The user manual contains detailed instructions on operating and maintaining the product.

Safety Instructions

To ensure your safety and the proper operation of REON Mobile Power Station 7.5, please thoroughly review the Safety Instructions of the User Manual. Improper use of the product can pose risks to the operator and surrounding property. REON is not liable for any damages or losses resulting from user negligence or failure to follow the provided Safety Instructions.

Operation

- ALWAYS operate or store the product within the specified temperature and humidity ranges.
- DO NOT expose the product to fire, liquids, dirt, or other contaminants since they may cause fire and electric shocks.
- DO NOT dismantle, crush, puncture, or otherwise damage the product since these may cause fire and electric shock.
- DO NOT remove or ignore the warning signs on products provided by manufacturers.
- DO NOT insert foreign objects into the vents, ports, or any other opening.
- DO NOT attempt to modify or replace any components of the product. If support is needed, contact the REON Customer Service.
- Connection from the PV inlet should be executed by a qualified electrical engineer or person with established electrical engineering experience, as it may be exposed to high voltage.
- ONLY use provided or approved accessories.
- Lock the wheels whenever placing the product on a tilted surface or unstable place.
- Ensure ventilation around the product during operation.
- Keep away from children and pets.

- Power off the product immediately in case of malfunction.
- Use a dry powder fire extinguisher in case of fire.

Maintenance and Service

- When the product is not in use for a period, power it off and disconnect all cords from its inlets and outlets.
- Keep the ventilation channels, input ports, and output ports clean.
- Always clean the units with a dry cloth.

Storage and Transportation

- Store the product within the specified temperature and humidity ranges.
- During outdoor usage, ensure the product is protected from rain, snow, or other extreme climates.
- Always use the original REON package during long-distance transportation, including air, train, sea, etc.
- When transporting the product in a vehicle, secure it firmly to prevent it from shifting or tipping during travel.

Grounding and Lightning Protection

- When the product is connected to the AC grid, it is grounded to the AC grid system. Ensure that the connections between the inlets and the AC grid, as well as between the outlets and the load equipment, are proper and stable.
- When the product is off the grid, its neutral and ground are automatically connected. If RCD protection is in place, ensure that the loads are grounded robustly along with the product.
- The product is equipped with an LPS-3 (Lightning Protection System Level 3). It is recommended that the product be installed after an LPS-2 (Lightning Protection System Level 2). Ensure stable connections for both the inlet and outlet.

Product Overview

Key Specifications

Power and Connections	
Continuous Output Power	7.5kW
Overload Output Power	9.3kW for 10 minutes
Surge Output Power	11.25kW for 10 seconds
Battery Capacity	10kWh
AC Output Voltage	110Vac/120Vac
AC Output Frequency	50/60Hz
AC Outlets	(2) NEMA 5-20R GFCI (2) NEMA 5-20R (1) NEMA L14-30R
DC Outlets	(2) USB-A 30W Max (2) USB-C 100W Max (1) 12Vdc Auxiliary Power Outlet
AC Charging Inlets	Fast Charge 30A@120V/240V NEMA L15-30P Slow Charge 15A@120V NEMA 5-15P
PV Charging Inlets	(2) MC4 ports, Max 5.6kW x2
Auto Switching Duration	10ms typical (From AC input to Battery Backup)
Environmental	
Operation Temperature	32°F-113°F / 0°C-45°C
Optimal Operation Temperature	59°F-95°F / 15°C-35°C
Storage Temperature	-4°F-140°F / -20°C-60°C
Humidity	0-95% non-condensing
Mechanical	
Dimensions	29.5* 21.3 *27.2 (L*W*H Inch) with wheels
Weight	362lbs/164kg
Mobility	Flexible Wheels Towing Crane Lifting
Additional Features	Adjustable priority settings for PV, grid power, and battery Generator Mode adaptable to fuel generators Eco Mode for energy-saving
Certifications	UL1973, UL1741 FCC Part 15B Class A UN 38.3 RoHS conformity (2011/65/EU) directive (EU)2015/863

What is in the Box

Mobile Power Station (MPS) 7.5

15A AC Slow Charging Cable

Raincoat

Printed User Manual

Optional Kits

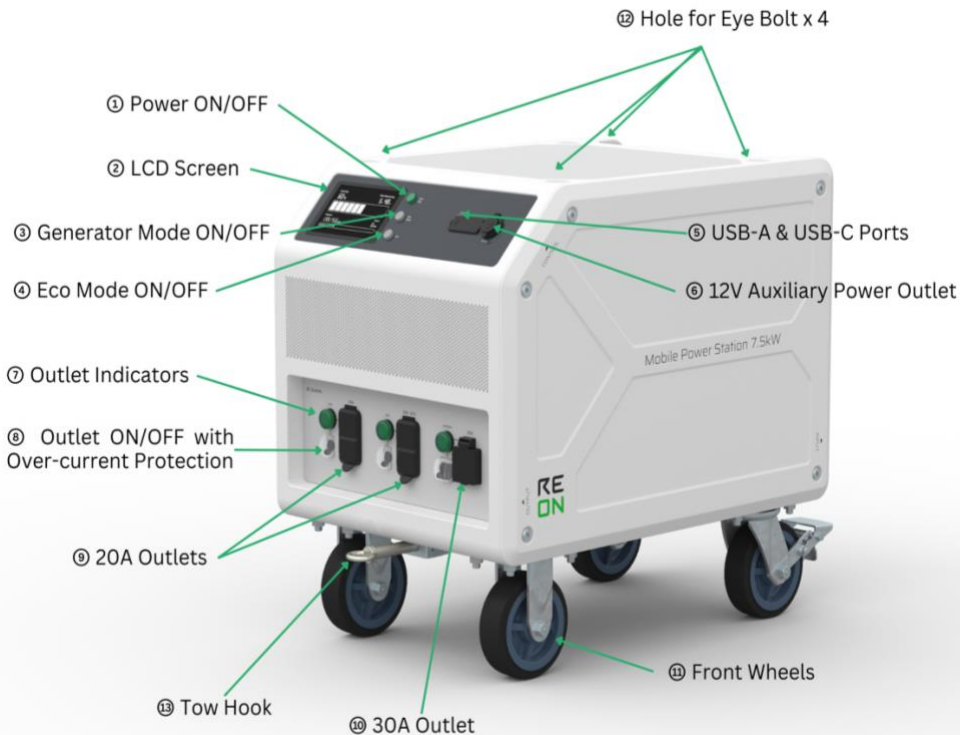
Tow Hook x1

Eye Bolt x 4

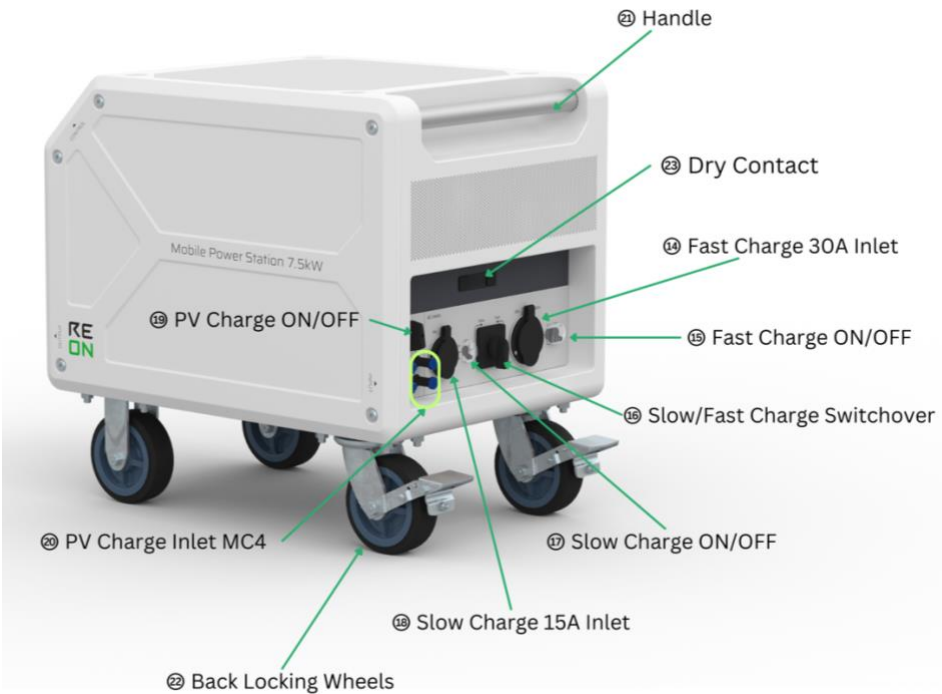
Portable Solar Panels

Product Diagram

Front View

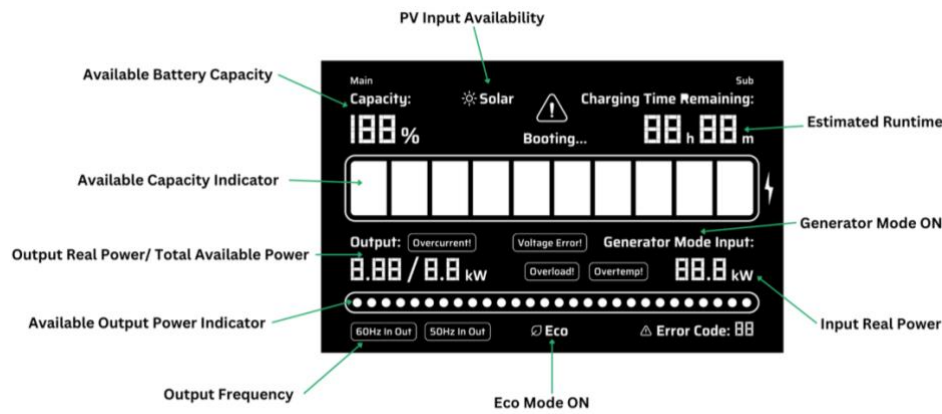


Back View




LCD Screen

The LCD Screen displays the product operation status, modes, and error notices.



Notes:

- 1) “” will only appear when short-circuit, overload, or over voltage occurs.
- 2) “Input Real Power” includes both AC and PV input.
- 3) “Estimated Runtime” is based on real-time output power.
- 4) “Voltage Error!” will appear when the AC input voltage falls outside the nominal voltage or frequency range.

Before Operation

- 1) Carefully remove the package and keep all the accessories.
- 2) Inspect the product for any visible damage to its appearance and LCD interface. Discontinue using the product if you find any cracks, dents, or malfunctions.
- 3) Press the (1) Power ON/OFF button and hold it for more than **3 seconds**. If the green light comes on, it shows that the product is ready for use.

* Please promptly contact REON Customer Service at support@reoncorp.com if you find any visible damage or the product cannot power on.

Operation

Power ON/OFF

Powering On

Press the (1) Power ON/OFF button and hold it for **3 seconds**. The button will illuminate green. After powering on, the product requires a **30-second booting time** to fully prepare the battery and electronic equipment for both DC and AC power output.

Automatic Power On During Charging

When either an AC or PV charging inlet is connected and switched ON, the product will automatically power on, the (2) LCD Screen will light up, and the battery charging will start. The power output will become available simultaneously.

Powering Off

Press the (1) Power ON/OFF button and hold it for **3 seconds**. The button light will turn off, and all output ports will become unavailable.

Power Off During Charging

The product cannot be powered off while AC or PV charging progresses. It can only be shut down via the (1) Power ON/OFF button when the charging process is stopped.

AC Output and DC Output

AC Output

The front panel is equipped with three groups of AC outlets for different loads: two groups of (9) 20A Outlets and one (10) 30A Outlet. Each outlet group is equipped with an (7) Outlet Indicator and an (8) Outlet ON/OFF with Over-current Protection. The indicator lights up when the corresponding outlet group is switched ON, indicating that the output voltage is available. The (8) Outlet ON/OFF with Over-current Protection trips off automatically whenever the current through the outlet exceeds the specified limit.

DC Output

The front panel also features various DC outputs: two (5) USB-A & USB-C Ports and one (6) 12V Auxiliary Power Outlet. Whenever the product is turned ON, these ports will provide DC power.

AC Input

The product supports fast charging via a 30A inlet and slow charging via a 15A inlet. The choice of charging method depends on various factors such as utility grid ratings, wall outlet compatibility, and the charging cable used. Here's how to select and initiate charging:

- 1) Switch to the desired charging inlet using (16) Slow/Fast Charge Switchover.
- 2) Plug the chosen charging cable (15A or 30A) into the product, then connect it securely to a compatible wall outlet or the home panel grid.
- 3) Ensure all connections are secure, then activate the inlet by turning on the corresponding Charge ON/OFF button (15) or (17).

*** Please make sure the product is turned off before charging to prevent warnings.**

Charging Specifications

Without output and only connected for SLOW charging with the 15A inlet and cable, the product can receive a maximum AC input of **1800W** (@120V). Charging from an empty battery to more than 80% capacity may take approximately **5 hours**.

Without output and only connected for FAST charging with the 30A inlet and cable, the product can receive a maximum AC input of **7200W** (@240V). Charging from an empty battery to more than 80% capacity may take approximately **2 hours**.

* If you switch between charging methods **while the product is charging**, it will warn. Please remove the current inlet cable, turn off the product, and then recharge it.

Output Power while Charging

If you use the AC output while the product is charging, the output will be powered directly by the AC input. Please note that in this scenario, the available output power will be limited by the selected AC inlet: When the SLOW charge is selected and AC input is provided, the maximum total output power is limited up to **1800W**; with the FAST charge selected and the AC input provided, the maximum total output power is up to **7200W**.

* If you switch between charging methods **while the product is loaded**, it will warn. Please remove the current inlet cable, turn off the product, and then recharge it.

UPS Functionality

In the event of an AC input dropout, the output will automatically receive continuous support from the battery. In this mode, the product acts as a UPS (Uninterruptible Power Supply), providing continuous power to critical loads. The transition period from AC input to battery power is typically 10ms. The output power rating still follows the rating of the last-selected inlet. Rebooting the product can release the power limitation caused by inlet selection.

PV Input

The product incorporates MPPT functionality and accepts PV input through two channels of standard MC4 connectors. Please ensure that the solar panels connected adhere to the following specifications:

- Open Circuit Voltage (OCV): 125Vdc – 485Vdc
- Maximum PV Input Current: 16A x 2
- Maximum PV Input Power: 5.6kW x2

Matching the Right Number of PV Panels

The product supports charging from either roof PV panels or portable PV panels. However, it's crucial to connect the appropriate number of panels based on the voltage range the product supports:

- If the input voltage from the PV panels is insufficient, the product will fail to charge.



If the input voltage from the PV panels exceeds the specified range, the product could be damaged. Therefore, customers must strictly verify the output voltage range of their connected PV panels.

The product will automatically power on after correctly connecting the PV cables and turning ON the (19) PV Charge ON/OFF switch. The product cannot be turned off while charging.

Charging Specifications

The product can be purely charged by solar panels, but the charging power is limited to **5000W**. With continuous supply at this rate, it may take approximately **2 hours** to charge the empty battery to more than 80% capacity. Additionally, the product can accept PV and AC charging simultaneously, and the charging power is also limited to **5000W**.

When the product is loaded and PV charging happens simultaneously, PV input power is allowed up to 5.6kW x 2 (11.2kW).

If the product is loaded during PV charging, the PV input power is prioritized to meet the load requirements. The battery will also assist by discharging to power the load if needed. However, the product will disable the output and begin charging the battery when both the battery capacity falls below 5% and the PV power is insufficient to meet the load. Once the battery is recharged above 10%, the output will resume.

Generator Mode

The product features a unique Generator Mode, allowing a generator set to charge the product through the AC inlet. In this mode, the voltage range of the product supports 90Vac~140Vac and the frequency range expands to 40Hz~70Hz, ensuring adaptability to the uncertain power provided by generators.

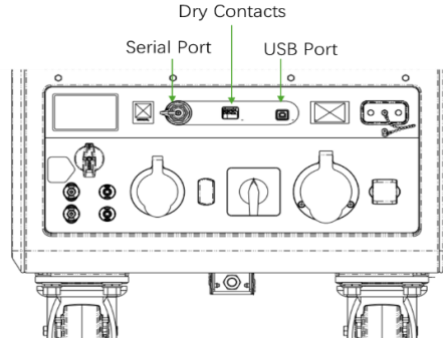
To start or end this mode, press and hold the ③ Generator Mode ON/OFF button next to the LCD Screen for more than **3 seconds**. The Generator Mode indicator on the screen will appear when the mode is activated and disappear when deactivated.

The product provides a couple of dry contacts that will switch over once the battery capacity decreases to less than 10%.

Eco Mode

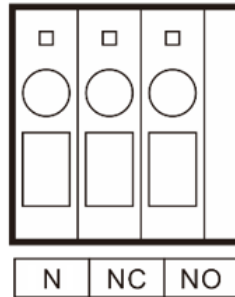
The Eco Mode feature is designed to prevent unnecessary battery drainage when the product is left running without a load or charging power. To activate Eco Mode, press the ④ Eco Mode ON/OFF button next to the LCD screen until the Eco Mode Indicator lights up on the screen. While in Eco Mode, the product will automatically shut down if the output power does not exceed **25 watts** for **4 hours**.

Communication



On the back panel there exist the communication ports for different usages.

- 1) Serial port. Connecting REON wireless communication module (optional) to this serial port, the product can be monitored and controlled remotely. Please contact REON technical support for detailed information.
- 2) Dry contact. This dry contact can be used to control the start and stop of a fuel generator to charge the battery.



- a) Under normal circumstances, the NC-N terminal is closed, and the NO-N terminal is open.
 - b) When the battery state of charge reaches the low threshold (10% by default), the internal relay coil is energized, and then NO-N terminal closes while the NC-N terminal opens. NO-N terminal can drive resistive loads of 125VAC/1A, 230VAC/1A, and 30VDC/1A.
- 3) USB port. Firmware updates according to REON guidance could be executed via this port.

Storage and Maintenance

Shelf Life

The product can be stored for varying periods without becoming unfit for use based on the temperature. Refer to the table below for specific shelf-life guidelines.

Temperature Range and Relative Humidity	Shelf Life
-4°F~77°F / -20°C~25°C, Max 80% RH	< 10months
77°F~113°F / 25°C~45°C, Max 80% RH	< 3months
113°F~140°F / 45°C~60°C, Max 80% RH	< 1months
59°F~77°F / 15°C~25°C is the recommended storage temperature	

Charging Instruction

However, to maintain optimal battery health, please follow the instructions and recharge the stored product within the specified shelf-life period for its storage temperature:

- For an unpacked product, charge the battery capacity to 60% regardless of the charging method (slow or fast).
- For a sealed product, charge the product using the charging window on the wooden box. Charge for **2 hours** for SLOW charging and **1 hour** for FAST charging.

Please power off the product after charging for your safety if continue to store it.

Transporting

Moving

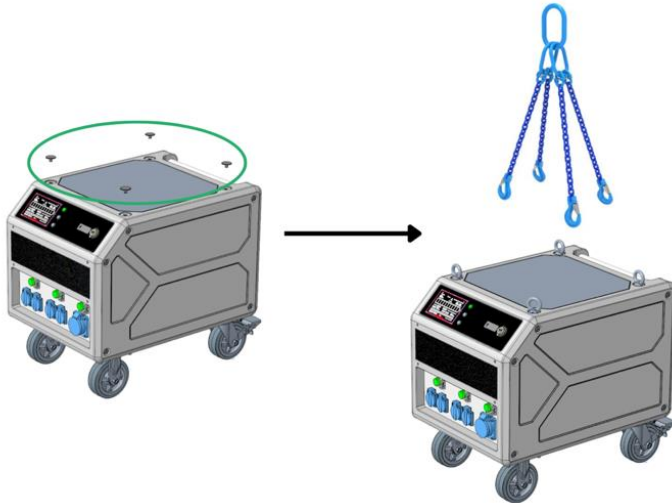
- Disconnect all power cables and release the ⑫ Back Locking Wheels before moving the product. Lock the wheels after moving to prevent the product from sliding.
- Due to the product's weight, ensure a firm grip when moving it on inclined or unstable surfaces.

Loading

The product is equipped with four ⑫ Holes for Eye Bolts and a ⑬ Tow Hook, offering two methods for loading:

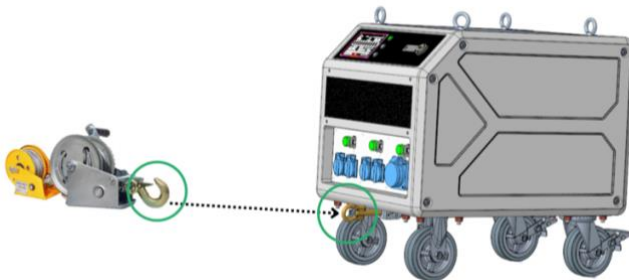
Method 1: Crane

Remove the caps from the four ⑫ Holes for Eye Bolts and screw in Eye Bolts (Optional Kits) on the top of the product. Securely attach the lifting slings to the eye bolts.



Method 2: Winch

Locate a secure anchor point for the winch and properly connect the winch cable to the ⑬ Tow Hook on the product.



Warnings and Errors

Beeping Cases

The product will beep when the product is overload, or the battery capacity is lower than 15%. A corresponding notification will also appear on the LCD screen for your reference.

Warning Cases

The table below summarizes the cases when the product alarms for warnings.

Error Code

Error Code	Beeping	Turn Off MPS	Content	Method to Remove
【01】	Yes	No	Low Battery Alarm	Charge the machine
【02】	Yes	Yes	Low Battery Protect	Charge the machine
【03】	Yes	Yes	Battery Overcurrent Protect	Reduce load
【04】	Yes	Yes	Battery Instant Overcurrent Protect	Reduce load
【05】	Yes	Yes	Battery Connection Issue	Ask for Service
【06】	Yes	Yes	Battery Overload Issue	Ask for Service
【07】	Yes	No	Low Battery SOH Alarm	Expire the machine or Ask for Service
【08】	Yes	Yes	Low Battery SOH Protection	Expire the machine or Ask for Service
【09】	Yes	Yes	AC Overload	Reduce load
【10】	Yes	Yes	Battery Mode Overload	Reduce load
【11】	Yes	Yes	Output SC in Battery Mode	Check Output Circuit. If no clue, ask for service
【12】	Yes	Yes	Battery Mode Overload	Reduce load. If unresolved, check loading power factor (high inductive or capacitive load may cause issues)
【13】	Yes	Yes	Inverter Abnormal DC	Ask for Service
【14】	Yes	Yes	Busbar FW Protection	Ask for Service

Error Code	Beeping	Turn Off MPS	Content	Method to Remove
【15】	Yes	Yes	Busbar HW Protection	Ask for Service
【16】	Yes	Yes	Busbar LV Protection	Ask for Service
【17】	Yes	Yes	Busbar SC Protection	Ask for Service
【18】	Yes	Yes	PV Over Voltage Protection	Switch Off PV. Reduce PV voltage to allowed range
【20】	Yes	Turn off PV Input	PV Over Current Protection	Switch Off PV. 1) Reduce PV current rating to allowed range; 2) Check the circuit of PV system.
【22】	Yes	Turn off PV Input	PV Over Temperature Protection	Check the airflow around the machine; Check the environment temperature;
【23】	Yes	Yes	Heatsink Over-temperature	Check the airflow around the machine; Check the environment temperature;
【24】	Yes	Yes	Transformer Over-temperature	Check the airflow around the machine; Check the environment temperature;
【25】	Yes	Yes	Input Relay SC Protection	Ask for Service
【27】	Yes	Yes	Fan Failure	Ask for Service
【30】	Yes	Yes	Model Recognition Failure	Ask for Service
【33】	Yes	Yes	Parallel Communication Issue	Ask for Service
【35】	Yes	Yes	Parallel Setup Issue	Check Parallel Setup
【36】	Yes	Yes	Parallel Current Issue	Check Parallel Wire Connection
【37】	Yes	Yes	Parallel ID Setup Issue	Check through Parallel Setup; Or reset
【38】	Yes	Yes	Battery Gap In Parallel Mode	To balance SOC of Batteries to be paralleled. Charge the low one or discharge the high one.
【39】	Yes	Yes	Parallel Input Circuit Issue	Per parallel connection guide, check input circuit.

Error Code	Beeping	Turn Off MPS	Content	Method to Remove
【40】	Yes	Yes	Parallel Synchronize Issue	Replace Communication Wire
【41】	Yes	Yes	Parallel FW Version Misalignment	Update Firmware according to Service Guide
【42】	Yes	Yes	Parallel Connection Issue	Check Wire Connection
【43】	Yes	Yes	Serial Number Error	Ask for Service
【49】	Yes	No	BMS Communication Alarm	Ask for Service
【50】	Yes	No	BMS Other Alarm	Ask for Service
【51】	Yes	No	BMS Over-Temperature Alarm	Check the airflow around the machine; Check the environment temperature;
【52】	Yes	No	BMS Over-Current Alarm	Reduce load
【53】	Yes	No	BMS Over-Voltage Alarm	Ask for Service
【54】	Yes	No	BMS Low Battery Alarm	Charge the machine
【55】	Yes	No	BMS Low-Temperature Alarm	Check the airflow around the machine; Check the environment temperature;
【56】	Yes	No	PD Communication Abnormal	Ask for Service
【57】	Yes	No	PD Overload or SC Alarm	Ask for Service
【58】	Yes	No	Battery PK No. Abnormal Alarm	Ask for Service

For further Beeping and Warning cases, please contact Customer Service for assistance.

Warranty Terms

This warranty in no way affects a potential statutory warranty provided by law. The listed warranty period is only valid for purchases directly from REON or REON's authorized resellers. By using REON products, you agree to be bound by REON warranty terms.

To Qualify for This Warranty

To be entitled to the benefits of this warranty, the product must (i) be purchased directly from REON or REON's authorized resellers and must have a valid proof of purchase, and (ii) be operated and stored following the instructions in the product user manual provided by REON.

Notice:

- Warranty on the product is void after having been fully refunded.
- Warranty on the product is void if products don't have valid proof of purchase.

Warranty Period

The warranty period starts on the date when the product is delivered. The warranty period for the product is **three** years.

How To Process

To activate the warranty during the applicable warranty period, the buyer shall send an email to support@reoncorp.com with the following information:

- (i) a short description with photos of the defect,
- (ii) a copy of the proof of purchase, and
- (iii) the product's S/N (serial number).

Or the buyer may mail the above information to either of the following addresses:

REON Technology, Inc.
200 Turnpike Road, Suite 10
Chelmsford, MA 01824, USA

REON Technology, Inc.
108 Juli Road, Pudong
Shanghai, China

* The product's S/N (serial number) must be legible and properly attached to the product to be eligible for warranty coverage.

If REON determines that the reported defect is not eligible for coverage under the warranty, REON will notify the buyer and explain the reason why such coverage is not available.

If REON determines that the reported defect is eligible for coverage under the warranty, REON will start the warranty procedure. REON shall, in its sole discretion, take any of the following actions: (i) request for your address and send only replacement components for the product, or (ii) request for your address and provide on-site maintenance service, or (iii) start the return procedure and instruct buyers to pack and ship the product or part(s) to the designated location.

Notice:

- REON reserves the right to decide whether to use new or refurbished parts for warranty repairs.
- If the original spare part model is no longer available, REON should provide a replaceable spare part model.
- REON shall provide the latest software version to customers.
- All parts replaced under warranty will be considered part of the original product and follow the same warranty timeframe as the original defective item.

Warranty Exclusions

* REON requires buyers to inspect the product for any visible damage to its appearance and LCD interface upon FIRST USE (or unboxing). Please contact REON Customer Service promptly after such discovery. Otherwise, the warranty does not include any defects in appearance that do not materially affect energy production or reduce the form, fit, or function of the covered product after a period of use. The warranty also does not include any defects or parts that need to be replaced due to ordinary wear and tear, corrosion, or rust.

The warranty does not include:

- costs related to dismantling, installation, or troubleshooting;
- costs related to the original buyer refusing to update firmware provided by REON;
- costs related to cleaning, adjustment, and regular periodic maintenance work;
- any product that has ever been declared a total loss or sold for salvage by a financial institution or insurer.

This warranty will not apply if the product or any part thereof is:

- damaged as a result of negligence or failure to follow the safety instructions, installation, and operation instructions in the product user manual provided by REON;
- damaged as a result of modifications, alterations, disassemble, or attachments thereto which were not pre-authorized in writing by REON;
- damaged by using loading methods other than those in the product user manual;
- damaged as a result of failure to follow the storage and shelf-life guidance that caused any permanent battery damage;
- damaged by using software, interfacing, parts, supplies, or other third-party components not provided by REON;
- used in combination with equipment, items, or materials not permitted by the documentation or in violation of local codes and standards;
- damaged or rendered non-functional as a result of natural disasters or other abnormal environmental conditions like war or car accidents, action of third parties, direct exposure to seawater, or other events beyond REON's reasonable control or not arising from normal operating conditions;
- damaged during or in connection with shipping or transport to or from the buyer where the buyer arranged such shipping or transport.

RE ON



Customer Service: support@reoncorp.com

US Address: 200 Turnpike Road, Suite 10, Chelmsford, MA 01824, USA

China Address: 108 Juli Road, Pudong, Shanghai, China