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POWER TRUST

Installation Manual 2025

Model: Power Trust ESS
Version: 1.0
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www.pleione-energy.com

Contents:

1. What is Power Trust?

Power Trust is an advanced Energy Storage System (ESS) developed by Pleione Energy, integrating:

- Inverter/charger
- Control device
- Battery bank

It efficiently stores energy, typically sourced from solar panels, reducing reliance on the grid while enabling export capabilities. Designed for applications such as self-consumption, backup power, and hybrid systems.

Note: Not suitable for full off-grid or marine setups.

Two sturdy metal handles ensure safe and efficient handling of the Power Trust device.

PV connections feature quick-plug connectors for rapid and straightforward installation.

Important

Nominal PV power, 48V 1a,b: 2000W (MPPT range 60V to 130V)

An industrial power connection is required to charge the system from the grid. An industrial socket is located on the left side of the Power Trust unit for this purpose.

Ensure the switch above the plug point is turned on to enable AC power charging.

The Power Trust unit includes essential safety features:

- DC switch
- PV input fuses
- AC output switch and fuse
- Surge protection devices (SPDs)
- Residual Current Circuit Breaker (RCCB)

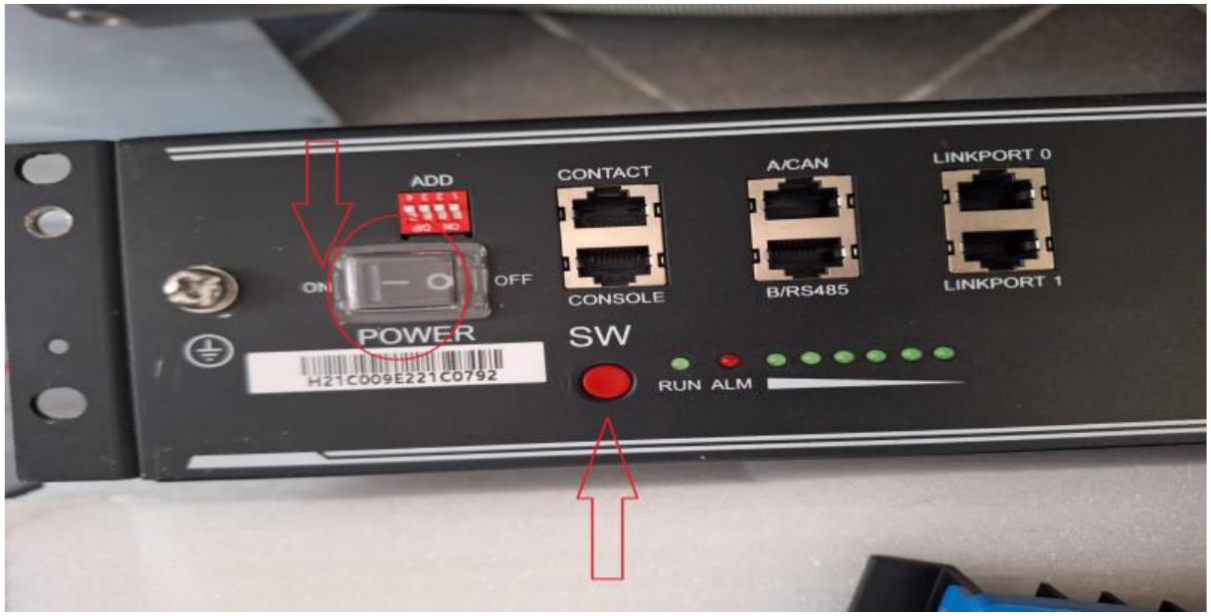
All components are compliant with HD 60364 standards for photovoltaic installations.

2. Installation Steps (Simplified)

1. Select the appropriate system layout (AC/DC coupled, backup configuration).
   PV MC4 connectors 3 to 6 mm2 are required for the connection
   3 × 16 mm2 industrial connector needed for the AC connection
2. Install and wire all components according to provided guidelines.
3. Configure settings using VEConfigure and VictronConnect for inverter and battery parameters.
4. Activate ESS Assistant on the Control device.
5. Commission the system, performing necessary tests with the grid or generator.

Power Trust Startup Procedure:

Activate the battery by switching it to the 'On' position. Press and hold the red button for 5 seconds until the LED indicator illuminates.



Battery LED Status Indicator

Normal Operation:	Alarm Condition:
The green LED flashes, indicating that the battery is functioning correctly and the system is operating normally.	The red LED flashes, indicating a battery alarm. This may mean the battery is under protection (e.g., due to overvoltage, undervoltage, or temperature issues).

Action Required if the red LED is flashing:

- Switch off the battery and wait for 1 minute.
- Switch it back on.
- If the red LED continues to flash, contact a qualified technician for assistance.

Turn the inverter switch to the "ON" position to activate power conversion and enable energy supply to connected loads.

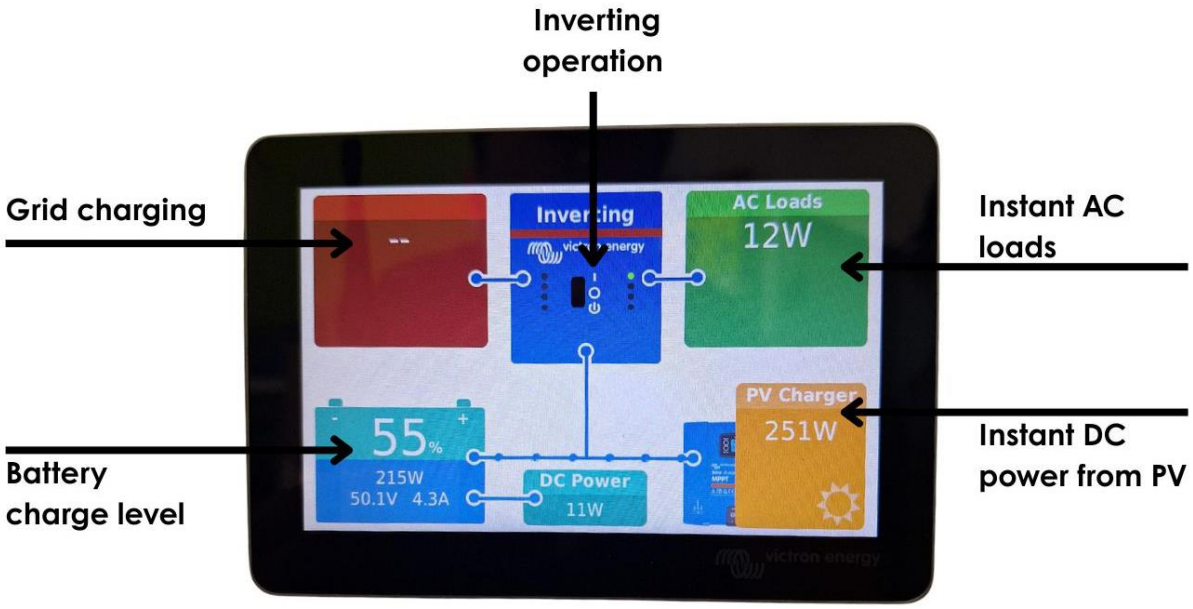
Connect and power up the desired loads.

Important Notes:

Ensure that the total power consumption of all connected loads remains within the device's rated capacity. Exceeding the system limits may trigger protective shutdown or damage internal components.

System Status via HMI:

When all components are properly connected and the system is operating normally, the HMI display should appear as shown below.



HMI Display Information

The HMI screen provides real-time system status. **Key indicators include:**

Inverting Operation:	Displays the power (in Watts) drawn from the grid or any connected AC source.
Battery Level:	Indicates the current state of charge (SoC) of the battery.
Inverting/Charging Status:	Shows whether the inverter is supplying power or charging the battery.
Instant AC Loads:	Displays the total power consumption (in Watts) of currently active AC loads.
Instant DC Power from PV:	Indicates the real-time power production from the connected photovoltaic (PV) system.

3. Operating Modes

The system includes three predefined operating modes. These modes are configured by default and do not require user modification:

1. Optimized:

Smart energy management for everyday use. The system automatically balances battery use and grid input, with optional activation of the BatteryLife feature to extend battery lifespan.

2. Keep Batteries Charged:

The system prioritizes grid power to maintain the battery at full charge. Ideal for backup applications where battery availability must be guaranteed.

3. External Control:

Enables external control from a third-party energy management system or a predefined operational schedule. Allows advanced configurations based on user-defined rules.

Note: These modes are pre-configured by the system. No action is required by the user unless instructed by a technician.

Battery Life is a smart feature preventing deep discharge cycles, extending battery lifespan for long-term reliability.

4. Commissioning & Troubleshooting

To ensure proper system operation, follow the steps below during initial commissioning and for basic troubleshooting:

Check Inverter Status:

Confirm that the inverter is functioning **without any red LED alarms**. A red LED indicates a system or battery fault that must be addressed.

Monitor Battery Performance:

Observe battery **charging behavior and State of Charge (SoC)** via the HMI screen. Verify that the battery charges and discharges normally during operation.

Review HMI Logs:

Use the HMI log history for deeper insights into operational events, error codes, and system behavior. This information is critical for diagnostics and resolving issues.

5. Maintenance Guidelines

The Power Trust system is designed to be low-maintenance. However, minimal user-level maintenance is recommended to ensure optimal airflow and long-term reliability.

Routine User Maintenance

- **Ventilation Filter Cleaning:**

Periodically clean the dust filters located at the air intake and exhaust points of the unit.

- **Fan Area Inspection:**

Check and clean both the general ventilation fan and the inverter cooling fan areas.

Suggested Maintenance Frequency

- Perform a **visual inspection once per month**.
- If dust buildup is visible, proceed with cleaning as described below.
- Maintenance frequency may vary depending on the cleanliness and conditions of the installation environment (e.g., outdoor exposure, dust-prone areas).

Cleaning Instructions

- **Filter Removal:**

Refer to *Photo 1* and *Photo 2* to see how to safely remove the filter cover and air filters located at the air inlet and outlet of the unit.

Photo 1

Photo 2

- **Filter Cleaning:**
  - **Do not use water** for cleaning.
  - Use compressed dry air or gently tap the filter to remove accumulated dust.
  - Reinstall the filter using the reverse steps.
- **Fan Area Cleaning:**
  - Refer to *Photo 3* and *Photo 4* for dust-sensitive fan locations.
  - If dust is observed, use dry air or a soft dry cloth to clean the area.

Photo 3

Photo 4

⚠ *Important Notes:*

- Do not attempt to access or modify any other internal part of the system.
- For all other maintenance tasks or technical issues, contact a qualified technic

6. Customer Support & Warranty Information

For any questions or issues during the installation or operation of the Power Trust system, please contact Pleione Energy's Customer Support Team. Our team is available to provide prompt assistance and guidance.

Customer Support Contact Details

- Support Phone: **2106564501**
- Support Email: **support@pleione-energy.com**
- Office Address: **42 Thrakis Str., 15341, Agia Paraskevi-Athens, Greece**
- Operating Hours: **Monday – Friday, 9:00 a.m. – 5:00 p.m.**

Product Warranty

The Power Trust system is covered by a warranty of 5 years from the date of purchase. The warranty includes:

- Replacement or repair of defective components caused by manufacturing or material faults.
- Repair of the system in the event of failures due to normal usage.

Warranty Exclusions

This warranty does not cover:

- Damage caused by misuse or improper installation.
- Damage from natural disasters or external conditions (e.g., floods, lightning).
- Modifications or repairs performed by unauthorized personnel.

For more information or to submit a warranty request, please contact our support team using the details above.