SUNGROW

Storage Requirements

PowerStack Series Energy Storage System

V1

Abbreviations

The abbreviations and their definitions used in this document are listed in the table below.

Tab.-1 Abbreviations

Abbreviation	Definition
ESS	Energy Storage System
SOC	State of Charge
SOH	State of Health
UPS	Uninterruptible Power Supply

1 Storage Requirements

Product storage must comply with the specified storage requirements. Damage resulting from failure to meet these requirements will not be covered by the warranty. The storage requirements are as follows:

- During storage, properly archive all documentation demonstrating compliance with product storage requirements, including ambient temperature and humidity logs, photos, and inspection reports.
- The base of the ESS must be elevated off the ground to a certain height, to avoid internal condensation and also to prevent the ESS bottom from getting soaked by rain water in rainy seasons. The height shall be decided according to the on-site geological and meteorological conditions, etc.
- Store the ESS on a dry, flat, solid, and hard ground surface that is not covered by any vegetation. Requirements for the surface are as follows:
  - The surface must have sufficient load-bearing capacity to support the equipment.
  - The surface must be level, with a levelness deviation of 0–10 mm, and the slope must be less than 5°.
  - The surface must provide good drainage to prevent water accumulation or submersion of the ESS.
- Before storage, ensure that the doors of the ESS and all internal equipment are locked. During storage, avoid opening the doors, unless it is necessary.
- Ambient temperature for storage: -30°C to 50°C. Since battery degradation (SOC and SOH) is related to temperature, the optimal storage temperature is -30°C to 25°C.
- Relative humidity for storage: 0% to 95%, non-condensing.
- The UPS that is not put into operation shall be charged every six months.
- Use effective protections for the air inlets and outlets of the ESS. During storage, make sure the protective films on the air inlets and outlets are intact. Meanwhile, take effective measures to prevent the ingress of rainwater, dust, and sand.

- It is recommended to replace the desiccant every six months. Use montmorillonite desiccant, 200 g per bag. Place eight bags of desiccant inside each ESS. Remove all desiccant from the cabinet before operation.
- Perform regular inspections at least every half a month. Check for signs of damage caused by pests or animals, and inspect the ESS and its packaging, wiring terminals, cables, and internal components for damage or aging. Promptly address any issues found or replace the affected parts as necessary.
- Before installing an ESS that has been stored for more than six months, open its doors and perform a visual inspection. Ensure that the ESS and all internal components are intact and free of damage. Additionally, conduct inspections after powering on and startup. If necessary, request qualified personnel to test it before installation.
- Avoid storing the ESS in areas containing flammable or explosive materials. Ensure there is no fire hazard.
- Avoid storing the ESS in dusty environments with a large amount of dust, smoke, or floc. These particles may cling to the air outlets or heat sink of the equipment, thus impairing its heat dissipation performance or even getting it damaged.
- Avoid storing the ESS in places where corrosive gas or dust may be produced or accumulated, or in places within 30 km of saline-alkaline land or pollution-generating industrial complex such as chemical plants and power plants (chemical gas class: 1C1, solid particle level: 1S2).
- Do not store the ESS in environments contaminated with halogen or sulfur pollutants.
- Do not store the ESS in places with vibration or a magnetic field strength of over 30 A/m.
- When storing Packs separately, in addition to the ESS storage requirements, observe the following:
  - Store Packs indoors in a clean and dry place, avoiding direct sunlight or rain.

- Keep the storage area free of hazardous gases, flammable and explosive materials, and corrosive chemicals. Avoid mechanical shock, heavy pressure, and strong magnetic fields.
- Protect Packs from harsh environmental conditions, such as sudden temperature changes or collisions, to avoid damage.
- Do not tilt the packing case or turn it upside down.

If the ESS has been stored for over six months (from the date it is delivered from SUNGROW) under the required conditions mentioned above, perform charging-discharging once until the ESS SOC reaches 30%–40%. The SOC of all Racks must be consistent after recharging.

Note: Refer to the product manual for the latest storage requirements.