

# EGbatt Energy Storage

www.egbatt.com | Innovation in Lithium Battery Systems

## Hbrick-HV50A

High-Voltage LiFePO<sub>4</sub> Battery | 16kWh / 314Ah

**16 kWh**

NOMINAL  
ENERGY

**314 Ah**

CELL CAPACITY

**330-450V ≥6000**

OUTPUT VOLTAGE

CYCLES @90%  
DOD

**140 kg**

WEIGHT (308.6  
LBS)

### System Overview

The EGbatt Hbrick-HV50A is a high-voltage lithium iron phosphate battery system optimized for residential & light commercial storage. With an internal boost converter (51.2V → 330-450V DC), it directly pairs with modern HV hybrid inverters, delivering ~95% round-trip efficiency.

- ✓ Built-in BMS with multi-layer protection (over-voltage, over-current, temperature, short circuit)
- ✓ Parallel ready: up to 16 units → 256 kWh total capacity
- ✓ Active cell balancing & real-time SOC monitoring
- ✓ CAN & RS485 communication (compatible with Sol-Ark, Deye, GoodWe, Growatt, Sungrow)
- ✓ Wall-mount or floor-mount, natural cooling, no fans
- ✓ Minimum order quantity: **4 pieces per system (MOQ 4)**

### Technical Specifications

Battery Chemistry	LiFePO <sub>4</sub> (LFP)
Nominal Energy	16.08 kWh (≈16 kWh)
Usable Energy (90% DoD)	14.47 kWh
Nominal Capacity (Cell)	314 Ah
Internal Battery Voltage	51.2 V (46.4 – 57.9 V)
Boosted Output Voltage	330 – 450 V DC
Max. Parallel Units	16 pcs (256 kWh max)
Nominal DC Power	4.8 kW

Max. Charge / Discharge Power	5.0 kW
Recommended Current	12.5 A
Max. Charge/Discharge Current	16 A
Round-Trip Efficiency	≥95%
Depth of Discharge (recommended)	90%
Cycle Life	≥6000 cycles @ 25°C, 0.5C, 90% DoD

## General & Environmental

Dimensions (H × W × D)	45 × 33 × 17.7 inches 114.3 × 83.8 × 45 cm
Weight	140 kg (308.6 lbs)
Ingress Protection	IP54
Working Temperature	0°C ~ +60°C
Storage Temperature	0°C ~ +35°C
Humidity	5% – 95% (non-condensing)
Altitude	≤2000 m
Cooling	Natural convection
Mounting	Wall-mounted / floor-standing
Communication	CAN 2.0B, RS485 (Modbus)
Warranty	5+5 years (10 years total)
Certifications	CE, UN38.3, MSDS, RoHS

## Interfaces & Ports

PC / PAR (RJ45)	RS485 / PC monitoring / parallel
PCS (RJ45)	CAN to inverter
LINK1 (4-pin)	48V backup charger input (wake-up)
LINK2 / LINK3	Parallel control & addressing
Master Link-up	Master battery configuration

 **Minimum Order Quantity (MOQ):** 4 pieces per system. Each system requires 4 Hbrick-HV50A units to achieve full nominal configuration (4 × 16 kWh = 64 kWh system energy) as per EGbatt base system design.

## Deep Dive: BMS, Parallel Expansion & Compatibility

**Intelligent BMS** Monitors cell voltage ( $\pm 20\text{mV}$  balance), current, 4× temperature sensors.

Provides protection against over-voltage ( $> 57.9\text{V}$ ), under-voltage ( $< 46.4\text{V}$ ), over-current ( $> 16\text{A}$ ), short circuit, and extreme temperature. Automatically opens internal relay and alerts inverter via CAN.

**Parallel Scalability** Connect up to 16 Hbrick-HV50A units. Before paralleling, ensure each unit voltage within 1V. Master unit auto-negotiates with slaves using LINK2/3 ports. Total energy up to 256 kWh, total power up to 80 kW (5 kW × 16). Daisy-chain communication cables and power cables in parallel.

**Inverter Compatibility** Output 330-450V DC works with most high-voltage hybrid inverters: Sol-Ark (HV series), Deye (SUN-SG04LP3-EU), GoodWe (EH/BH/HT), Growatt (MIN/MOD), Sungrow (SH), Sofar, LuxPower, Victron (with HV interface). CAN protocol can be customized via EGbatt support.

## Installation & Safety Highlights

- ✓ Indoor/sheltered location (IP54)
- ✓ Clearance  $\geq 200$  mm around unit
- ✓ Fire-resistant mounting wall
- ✓ Supplied hardware: wall/back hang, base steel, expansion screws
- ✓ Cables: 2× 6AWG (1.5m) red/black, communication & parallel cables included
- ✓ Do NOT disassemble – risk of 400V DC shock
- ✓ Use only dry powder extinguisher in case of fire
- ✓ If electrolyte leaks: rinse eyes/skin & seek medical aid
- ✓ Dispose via e-waste recycling; not household waste

## Ordering Information & Accessories

### Hbrick-HV50A (MOQ 4 pcs)

Single unit: 16 kWh, 314Ah, includes full accessories (cabinet, wall/floor mounts, cables, manual). Minimum 4 units required per system order.

### Parallel Kit (2-16)

Additional daisy-chain cables and busbars – order separately for expansion beyond 4 units.

### Monitoring Dongle

RS485 to Wi-Fi/4G cloud (optional).

EGbatt Energy Technology – [www.egbatt.com](http://www.egbatt.com) – Specifications subject to change without notice. For latest firmware and inverter compatibility list, contact EGbatt support.

© EGbatt – Hbrick-HV50A Datasheet v2.0 | All data measured at 25°C, 0.5C rate. Weight & dimensions include standard mounting brackets.