



TECHNICAL BROCHURE



freedom
WON

The ENVA 60 HV

A modular high-voltage battery solution built for commercial energy storage and operational continuity.

Designed for scalability and performance, it supports demanding environments with intelligent management and commercial-grade reliability.

ENVA Naming Convention:

The ENVA 60 HV follow the pattern: [Category] + [Capacity] = Model



ENVA 60HV

61.4 kWh

614 V high-voltage, 12 modules
Stackable high-voltage

614 V

Up to 5 banks



The USPs



Built-in fire suppression

Thermally activated aerosol canister inside every enclosure



Bluetooth & WiFi

Local connectivity for UI access
WAN connectivity for remote access



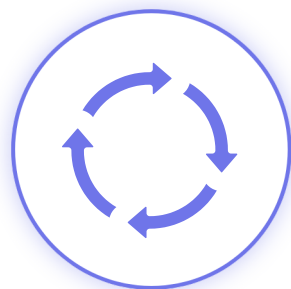
Scalable

Modular capacity that grows in steps as demand rises



Android & iOS app

Real-time monitoring
Direct access to tech support



High cycle life

5 Years (or 6 000 warranty cycles)
>15 years (>6 000 cycles) expected life



Local expert support

Reliable local support backed by trusted energy storage expertise

ENVA

Safety & Protection

ENVA is engineered around inherently stable chemistry and layered protection - so the system stays safe through every charge and discharge.

Certified & Tested

UN38.3

IEC62619

LiFePO₄ chemistry

Inherently stable lithium iron phosphate cells – the safest mainstream lithium chemistry.

Electronic protection

Over-current, cell over/under-voltage, temperature, weak-cell detection and minimum-SoC control.

Intelligent monitoring & control

The ENVA range allows users to remotely monitor battery performance, system health and energy usage through a user-friendly mobile application and remote connectivity platform.



Real-Time Battery Monitoring



Remote Diagnostics



Battery Analytics



State of Charge Indication



Mobile Connectivity



Remote System Access

Intelligent Connectivity

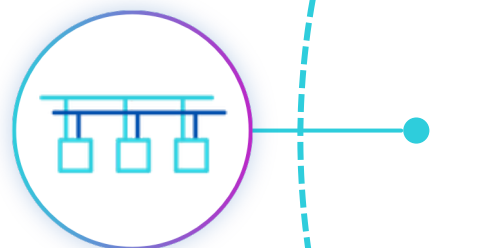
CAN Bus (RJ45)

For interfacing with compatible inverters and system controllers



RS485 PORT (RJ45)

For communication with RS485 compatible inverters e.g., Voltronic



RS232 (RJ11)

For connection to PC (Freedom Won authorized technicians only)



Parallel Communication (RJ45 x 2)

For interfacing with compatible inverters and system controllers



Bluetooth

Local wireless connection to Android or iOS app for monitoring and configuration



Wi-Fi

Connect to your home network for remote monitoring via the Android or iOS app



State of Charge Display



Status LED (LED display indication)



Main Power Breaker



BMS On/Off Switch



child-safe power connectors

Compact commercial storage

The ENVA 60HV is a modular, stackable high-voltage battery solution engineered for commercial energy storage, operational continuity and advanced backup applications.

Designed for scalability and performance, the ENVA 60HV supports demanding energy environments with intelligent management, long cycle life and dependable commercial-grade reliability.

Key Features

- 61.44kWh energy capacity
- High-voltage architecture
- Modular stackable system
- Commercial scalability
- Advanced LiFePO₄ chemistry
- Integrated fire suppression
- Smart monitoring and diagnostics
- Long cycle life and reliability



ELECTRICAL PARAMETERS

Cell Chemistry	Lithium Iron Phosphate (LiFePO ₄)
Cell Capacity [Ah]	100
Battery Module Cell Configuration	1P16S
Battery Module Rated Energy [kWh]	5.12
Ideal Charge/Discharge Current [A]	≤25/≤50
Max. Charge/Discharge Current [A]	50/100

SYSTEM PARAMETERS

Rated Energy [kWh]	61.44 (12 modules)
Nominal Voltage [V]	614.4
Voltage Range [V]	518.4 ~ 691.2
Cycle Life	≥6000 cycles @ 90% DoD @ 25°C
Max. DoD - Off-grid / Back-up	95%
Max. Parallel Battery Banks	5
Installation Method	Stackable with brackets
Ingress Protection	IP20
Inverter Communication Interface	CAN

ENVIRONMENTAL PARAMETERS

Charge Temperature Range [°C]	0 ~ 50
Discharge Temperature Range [°C]	-20 ~ 55
Optimal Temperature Range [°C]	15 ~ 30
Relative Humidity [%]	5 ~ 95 (no condensation)
Max. Operating Altitude [m]	≤4000

PHYSICAL PARAMETERS

Dimensions - H x W x D [mm]	1960x550x596
Weight [kg]	720
Battery PACK Modules	12 (1P16S each)

GENERAL DATA

Standards & Certifications	IEC62619, IEC62040, IEC61000, UN38.3
Warranty	5 years or 6000 cycles
Service Life	>15 years (>6000 cycles) expected life



Let's Connect

We're here to power your energy future.



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