

ZYKEVO

High Voltage LiFePO4 Battery Systems for UPS

192V / 384V / 512V Platforms

Project-based lithium battery solutions for server rooms,
small data centers and critical backup power.



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HIGH VOLTAGE LiFePO4 BATTERY SYSTEMS FOR UPS

1. Product Range Overview

High-rate and energy-type high-voltage battery platforms for UPS applications

ZYKEVO provides project-based high-voltage LiFePO4 battery configurations for three-phase and modular UPS systems. The product range is divided into high-rate short-time platforms and energy-type extended-runtime platforms.

Family	Typical capacity	Published continuous rate	Application focus	Available platforms
High-rate / short-time	25Ah-100Ah	2C-6C	High-power UPS backup, data center, generator bridging	192V / 384V / 512V
Energy-type / long-runtime	200Ah-314Ah	Approx. 0.48C-1C	Extended runtime, weak-grid backup, lower load-to-energy ratio	192V / 384V / 512V



Common architecture and interfaces

- High-rate systems typically use 64V battery modules connected in series.
- Energy-type systems typically use 48V or 51.2V high-capacity modules.
- Common interfaces: CAN, RS485 and dry contacts; selected configurations may support TCP/IP and SNMP.
- Final UPS compatibility requires confirmation of the DC voltage window, charging settings, topology and communication protocol.
- Available certifications and reports must be confirmed for the exact quoted model.

Sizing Note

Reference runtime must not be calculated from nominal energy alone. Final sizing must use the UPS minimum DC voltage, actual load, UPS efficiency, BMS cut-off, temperature, SOC and project design margin.

2. 192V Platform Specifications

Compact UPS, server room, network room and battery replacement applications

Electrical and system data

Proposed model	Capacity	Energy	Operating voltage	Max charge	Max continuous discharge	Approx. rate	Module configuration
ZY-HV192-25H	25Ah	4.8kWh	168-207V	25A	100A	4C	192V 25Ah x 1
ZY-HV192-50H	50Ah	9.6kWh	168-207V	50A	200A	4C	64V 50Ah x 3
ZY-HV192-100H	100Ah	19.2kWh	168-207V	100A	400A	4C	64V 100Ah x 3
ZY-HV192-200E	200Ah	38.4kWh	168-207V	200A	200A	1C	48V 200Ah x 4
ZY-HV192-314E	314Ah	60.2kWh	168-207V	150A	150A	0.48C	48V 314Ah x 4

Common 192V platform values

Maximum charge voltage	207V
Cut-off reference range	168-174V
Communication	CAN / RS485 / dry contacts
Battery chemistry	LiFePO4
Recommended project input	UPS model, DC range, load in kW, runtime and topology

Preliminary

The model codes shown are preliminary ZYKEVO catalogue codes. Final dimensions, weight, BMS current level, constant-power discharge data and certificates require OEM confirmation before quotation.

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3. 384V Platform Specifications

Three-phase UPS, small data center and critical IT backup applications

Proposed model	Capacity	Energy	Voltage range	Max charge	Max discharge	Rate	Module config.	Cabinet mm	Weight kg
ZY-HV384-50H	50Ah	19.2kWh	336-414V	50A	200A	4C	64V 50Ah x 6	600 x 800 x 1600	550 +/- 50
ZY-HV384-100H	100Ah	38.4kWh	336-414V	100A	400A	4C	64V 100Ah x 6	600 x 1000 x 1600	700 +/- 50
ZY-HV384-200E	200Ah	76.8kWh	336-414V	200A	200A	1C	48V 200Ah x 8	1200 x 800 x 1600	1050 +/- 50
ZY-HV384-280E	280Ah	107.5kWh	336-414V	140A	140A	0.5C	48V 280Ah x 8	1200 x 1000 x 1600	TBC
ZY-HV384-314E	314Ah	120.5kWh	336-414V	150A	150A	0.48C	48V 314Ah x 8	1200 x 1000 x 1600	1280 +/- 120

Common 384V platform values

Maximum charge voltage	414V
Cut-off reference range	336-348V
Communication	CAN / RS485 / dry contacts
Architecture	64V modules for high-rate; 48V modules for energy-type systems
Project note	Cabinet quantity and arrangement depend on current level, redundancy and installation conditions

Data Control	The published 384V 280Ah weight is inconsistent in the public source and is therefore shown as TBC. Do not use a final cabinet weight until the model-specific OEM datasheet is approved.
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4. 512V High-Rate Platform

Short-time, high-power configurations for modular UPS and critical-load backup

Proposed model	Capacity	Energy	Voltage range	Max charge	Max continuous discharge	Approx. rate	Module configuration
ZY-HV512-25H	25Ah	12.8kWh	448-552V	25A	100A	4C	64V 25Ah x 8
ZY-HV512-50H-100A	50Ah	25.6kWh	448-552V	50A	100A	2C	64V 50Ah x 8
ZY-HV512-50H-150A	50Ah	25.6kWh	448-552V	50A	150A	3C	64V 50Ah x 8
ZY-HV512-50H-200A	50Ah	25.6kWh	448-552V	50A	200A	4C	64V 50Ah x 8
ZY-HV512-100H-400A	100Ah	51.2kWh	448-552V	100A	400A	4C	64V 100Ah x 8
ZY-HV512-100H-600A	100Ah	51.2kWh	448-552V	100A	600A	6C	64V 100Ah x 8

Common 512V high-rate values

Maximum charge voltage	552V
Cut-off reference range	448-464V
Standard communication	CAN / RS485 / dry contacts
Module architecture	Eight 64V modules in series
UPS sizing basis	Use power available at minimum battery voltage, not nominal voltage
Required technical document	Constant-power discharge tables at defined end voltage and temperature

Runtime	Do not advertise a fixed 10-, 15- or 30-minute runtime without the approved constant-power discharge curve for the exact model and current level.
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5. 512V Energy-Type Platform

Extended-runtime and larger-capacity UPS battery configurations

Proposed model	Capacity	Energy	Voltage range	Max charge	Max discharge	Rate	Module configuration	Communication
ZY-HV512-200E	200Ah	102.4kWh	448-552V	100A	200A	1C	51.2V 200Ah x 10	CAN / RS485 / Dry / TCP-IP / SNMP
ZY-HV512-280E	280Ah	143.3kWh	448-552V	140A	140A	0.5C	51.2V 280Ah x 10	CAN / RS485 / Dry / TCP-IP / SNMP
ZY-HV512-314E	314Ah	160.7kWh	448-552V	150A	150A	0.48C	51.2V 314Ah x 10	CAN / RS485 / Dry

General environmental and protection specifications

Battery chemistry	Lithium iron phosphate (LiFePO4)
Charge temperature	0 to 45 deg C
Discharge temperature	-20 to 60 deg C
Protection functions	Over-voltage, under-voltage, over-current, short-circuit, over-temperature, over-charge and over-discharge
Fire protection	Module-level and/or cabinet-level, depending on the final configuration
Parallel operation	Selected configurations may support parallel clusters; control and isolation strategy must be confirmed
Communication options	CAN, RS485, dry contacts; selected 512V configurations may support TCP/IP and SNMP

Cycle Life	Cycle-life values depend on the exact cell model, depth of discharge, temperature and current profile. Final cycle-life claims must be supported by the approved cell and system datasheet.
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6. BMS, UPS Integration and Project Selection

Information required before a high-voltage lithium battery can be matched to a UPS

UPS integration checklist

Item	Required confirmation
UPS model and topology	Confirm the UPS brand, model, nominal DC bus and whether the system requires a midpoint / center-tap or a two-wire full bus.
DC voltage window	Confirm normal charging voltage, maximum charging voltage, minimum DC operating voltage and low-battery shutdown threshold.
Actual load	Use the real operating load in kW, not only the UPS kVA rating.
Backup time	Define the required runtime at the actual load and the required design margin.
Charging control	Confirm charge-current limit and disable unsuitable lead-acid float/equalize functions where required.
Communication	Confirm the actual UPS protocol. A physical CAN or RS485 port does not guarantee protocol compatibility.
Redundancy and parallel operation	Confirm N+1 requirements, parallel cluster count, isolation, fuse and contactor strategy.
Site conditions	Confirm ambient temperature, room ventilation, floor loading, cable route, installation access and fire requirements.

Minimum RFQ information

- UPS brand and exact model
- DC bus voltage or existing lead-acid battery quantity and arrangement
- Actual critical load in kW
- Required backup time
- Quantity and installation location
- Communication requirement and preferred operating mode
- Existing or required cabinet arrangement
- Destination country and required certificates

7. Technical Notice and Document Status

Important controls before customer quotation or project commitment

Document status

This document is a preliminary ZYKEVO product-range specification prepared from current OEM reference information. It is intended for product planning, website presentation and initial project discussion. It is not a model-specific approval document, tender compliance statement or final compatibility commitment.

Items requiring final confirmation

- Model-specific English datasheet for the exact voltage, capacity and current level.
- Constant-power discharge tables for the required runtime and end-of-discharge voltage.
- Cell manufacturer, cell model, continuous and peak current limits, and cycle-life test conditions.
- Single-line diagram covering BMU, BCU, contactors, pre-charge, fuses, insulation monitoring, midpoint and emergency shutdown.
- UPS protocol and compatibility list, including tested charging settings.
- Certificates and reports covering the exact battery model, including UN38.3, CE and any requested IEC or UL claim.
- Final cabinet dimensions, weight, cable interface, packaging, warranty and commissioning support.

Final Approval	All electrical limits, model availability, appearance, dimensions, weight, communication functions and certification scope are subject to final OEM confirmation and the approved project quotation.
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Model nomenclature

H = high-rate / short-time platform. E = energy-type / extended-runtime platform. The ZYKEVO model codes in this document are preliminary catalogue codes and may be adjusted after final OEM confirmation.

Contact

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