SWITCHING AVO ELECTRO POWER LIMITED

LITHIUM IRON PHOSPHATE (LFP) BATTERY BANK | PRODUCT DATASHEET

AVO 73.6V – 100Ah LFP Battery Bank



A high-capacity 7.36kWh lithium iron phosphate battery bank built from 23 large-format 100Ah prismatic cells connected in series (23S1P). Housed in a rugged cabinet for the HP302 2KVA Online UPS, it delivers extended 3-hour full-load backup for critical loads with long life and minimal upkeep.

73.6V	100Ah	7.36kWh	180 min
Nominal Voltage	Rated Capacity	Total Energy	Backup @ Full Load

ELECTRICAL SPECIFICATIONS

Parameter	Specification
Applicable UPS Model	2KVA Online UPS (HP302)
Nominal Battery Voltage	73.6V DC
Rated Capacity	100Ah
Total Energy	7,360Wh (7.36kWh)
Battery Chemistry	Lithium Iron Phosphate ($LiFePO_4$)
Cell Type	3.2V – 100Ah LFP prismatic cell
Total Number of Cells	23 Nos.
Cell Configuration	23S1P (23 series × 1 parallel)
Configuration Calculation	23 × 3.2V = 73.6V; capacity remains 100Ah
Charge Voltage	84.0V (23 × 3.65V)*
Float Voltage	77.6V (23 × 3.375V)*
Discharge Cut-off Voltage	57.5V (23 × 2.5V)*

PERFORMANCE & LIFE

Parameter	Specification
Backup Time	180 minutes at full load (as per supplied battery calculation)
Cycle Life	≥ 2500 cycles @ 80% DoD, 25°C*
Self-discharge	< 3% per month at 25°C*
Recharge	Supports fast charge vs. lead-acid; no memory effect

ENVIRONMENTAL & MECHANICAL

Parameter	Specification
Operating Temp. (Charge)	0°C to +45°C*
Operating Temp. (Discharge)	−20°C to +60°C*
Storage Temperature	−10°C to +45°C*
Relative Humidity	5% to 95% (non-condensing)
Enclosure	Powder-coated metal cabinet with lid and carry handles
Front Panel	Digital display, DC breaker, high-current DC connector
Dimensions / Weight	Available on request

KEY FEATURES

- Single-string 23S design using large-format prismatic cells
- 7.36kWh energy for extended 3-hour backup on HP302
- Rugged metal cabinet with lift handles for easy installation
- Front-panel display for at-a-glance battery monitoring
- Integrated DC breaker for safe isolation during service

BMS PROTECTIONS

- Cell over-charge & over-voltage protection
- Cell over-discharge & under-voltage protection
- Charge / discharge over-current protection
- Short-circuit protection
- Over-temperature protection
- Passive cell balancing for uniform cell ageing

TYPICAL APPLICATIONS

- Servers, data racks and telecom equipment
- Medical, laboratory and industrial control loads
- Banks, ATMs and critical office infrastructure

SAFETY & HANDLING

- Use only with the specified AVO UPS model and an LFP-compatible charge profile
- Do not short-circuit, puncture, crush or expose to fire
- Store at 40–60% SoC; recharge every 3–6 months if idle
- Install in a dry, ventilated area away from direct heat sources

Values marked * are standard LFP chemistry ratings (3.65V/cell charge, 3.375V/cell float, 2.5V/cell cut-off) and typical cell data; confirm against final cell supplier data. All specifications are subject to change without prior notice due to continuous R&D.