SWITCHING AVO ELECTRO POWER LIMITED

LITHIUM IRON PHOSPHATE (LFP) BATTERY BANK | PRODUCT DATASHEET

AVO 12.8V – 12Ah LFP Battery Bank



A compact, maintenance-free lithium iron phosphate battery bank built from 8 cylindrical LFP cells in a 4S2P arrangement. Designed as a direct energy source for the AVO600 600VA Line Interactive UPS, it offers longer cycle life, lower weight and faster recharge than equivalent lead-acid batteries.

12.8V	12Ah	153.6Wh	15 min
Nominal Voltage	Rated Capacity	Total Energy	Backup @ Full Load

ELECTRICAL SPECIFICATIONS

Parameter	Specification
Applicable UPS Model	600VA Line Interactive UPS (AVO600)
Nominal Battery Voltage	12.8V DC
Rated Capacity	12Ah
Total Energy	153.6Wh
Battery Chemistry	Lithium Iron Phosphate ($LiFePO_4$)
Cell Type	3.2V – 6Ah LFP cylindrical cell
Total Number of Cells	8 Nos.
Cell Configuration	4S2P (4 series × 2 parallel)
Configuration Calculation	4 × 3.2V = 12.8V; 2 × 6Ah = 12Ah
Charge Voltage	14.6V (4 × 3.65V)*
Float Voltage	13.5V (4 × 3.375V)*
Discharge Cut-off Voltage	10.0V (4 × 2.5V)*

PERFORMANCE & LIFE

Parameter	Specification
Backup Time	15 minutes at full load (as per supplied battery calculation)
Cycle Life	≥ 2000 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	Insulated cell pack with PVC heat-shrink sleeve
Dimensions / Weight	Available on request

KEY FEATURES

- Drop-in energy pack matched to the AVO600 battery input
- Approx. 3–4× the cycle life of a comparable SMF lead-acid battery*
- Lightweight, compact and fully maintenance-free
- Flat discharge curve for stable UPS output till end of backup
- Thermally stable LFP chemistry, no free electrolyte

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

- Home and small-office PCs, routers and modems
- POS terminals, CCTV DVR/NVR and small electronics

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.