SWITCHING AVO ELECTRO POWER LIMITED

LITHIUM IRON PHOSPHATE (LFP) BATTERY BANK | PRODUCT DATASHEET

AVO 25.6V – 18Ah LFP Battery Bank



A 24-cell lithium iron phosphate battery bank in an 8S3P arrangement, engineered for the AVO1000 1KVA Line Interactive UPS. Three parallel strings deliver higher capacity and current sharing for dependable 30-minute full-load backup with long service life and zero maintenance.

25.6V	18Ah	460.8Wh	30 min
Nominal Voltage	Rated Capacity	Total Energy	Backup @ Full Load

ELECTRICAL SPECIFICATIONS

Parameter	Specification
Applicable UPS Model	1KVA Line Interactive UPS (AVO1000)
Nominal Battery Voltage	25.6V DC
Rated Capacity	18Ah
Total Energy	460.8Wh
Battery Chemistry	Lithium Iron Phosphate ($LiFePO_4$)
Cell Type	3.2V – 6Ah LFP cylindrical cell
Total Number of Cells	24 Nos.
Cell Configuration	8S3P (8 series × 3 parallel)
Configuration Calculation	8 × 3.2V = 25.6V; 3 × 6Ah = 18Ah
Charge Voltage	29.2V (8 × 3.65V)*
Float Voltage	27.0V (8 × 3.375V)*
Discharge Cut-off Voltage	20.0V (8 × 2.5V)*

PERFORMANCE & LIFE

Parameter	Specification
Backup Time	30 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

- Energy pack matched to the AVO1000 24V-class battery input
- 3P cell grouping for better current sharing and capacity
- Approx. 60–70% lighter than an equivalent lead-acid bank*
- Flat discharge curve for stable UPS output till end of backup
- Thermally stable LFP chemistry, maintenance-free

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 offices, desktop workstations and networking racks
- Retail billing systems, small servers and security systems

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.