

## AT-LFP-24-100AV01

AMPTRON® lithium batteries have a built-in Battery Protection System (BPS) designed to prevent damage to the cells from almost any external accidental occurrence that would normally cause damage. The internal BPS will automatically disconnect to prevent damage to the cells if the battery drains below 10 volts. It will automatically reconnect when the charger is turned on. This protects the battery from over-discharging and damaging the cells. This technology also protects the battery from overcharge, short circuit and reverse polarity.

### Internal Features:

- Low Voltage Protection Switch - Automatically disconnects around 20V
- Over Voltage Protection Switch - Automatically disconnects around 29.6V
- Short Circuit Protection Switch - Automatically disconnects
- Reverse Polarity Protection Switch - Automatically disconnects
- Internal cell balancing - Automatically balances cells
- Charge Balancing - Independent balancing for multiple batteries connected in parallel or in series.
- This Battery Protection System is designed to last throughout the life of the battery and provide reliable power for thousands of cycles.

### CELL BALANCING

The BPS balances the cells by sending more current through the length way circuit boards and into cells with a lower voltage. The BMS will also discharge cells that exceed 3.65V during charging.

### THERMAL FUSE

#### Internal Cell Safety Fuse

Our latest cell technology is manufactured with a internal thermal safety fuse between the anode and cathode that will break and disconnect in the unlikely event the cell would begin to overheat.

### SAFETY VENT

#### High pressure safety vent

Each cell has a high pressure safety vent that will flip open to release energy and prevent explosion.

### ELECTROLYTE

#### Flame Retardant Electrolyte

Our cells are manufactured with our patented flame retardant additive in our electrolyte.

### EXPLOSION PROOF

#### Explosion proof Nickel plated steel

Every AMPTRON® cell is manufactured in our Nickel plated steel case.



## SPECIFICATIONS

Item	Specification	Description/Remark
<b>Model</b>	AT-LFP-24-100AV01	24V 100Ah Lithium LiFePO4 battery
<b>Chemistry</b>	Lithium Iron Phosphate (LiFePO4)	
<b>Battery dimensions</b>	L-500mm x W-270mm x H-220mm	L x W x H
<b>Weight</b>	23kg	
<b>Cell type</b>	3.2V 100Ah Prismatic cells	
<b>Battery module</b>	8 pcs 3.2V 100Ah cells, 1 parallel strings of 8 cells in series	
<b>Casing material for single cell</b>	Nickel plated steel	
<b>Standard capacity (0.2C5A)</b>	24V 100Ah / 2560Wh	
<b>Cycle life</b>	> 2000 cycles at 100% Depth of Discharge (DoD)	Under normal usage where the DOD is <80%, cycle life is expected to be up to 5000 cycles
<b>Rated voltage</b>	25.6V	Working voltage per cell: 3.2V
<b>Charge voltage</b>	28.8 V	Max. charge voltage per cell: 3.60V
<b>Cut-off volate</b>	2.5V for lowest cell, Nominal 20V	Cut-off is triggered when the first cell reaches 2.50V
<b>Depth of discharge (DoD)</b>	100%	Batteries can be discharged to 100% of the rated capacity
<b>Optimum charge current</b>	20A (0.2C5A)	Cell max voltage < 3.9V
<b>Charging time</b>	Approximately 5 hours	When charging from low voltage cut-off point
<b>Charge current range</b>	20A (0.2C5A) to 100A (1C3A)	Cell max voltage < 3.9V
<b>Rapid charging</b>	Max. charge current 100A (1C3A)	Temperature increase falling within 15°C is normal. Over 15°C will affect the service life of the cells.
<b>Max continuous discharge current</b>	100A	1C
<b>Peak discharge current</b>	200A	2C (10 seconds)
<b>Discharge performance in normal temperature</b>	20A (0.2C3A) ≥ 100% 1C3A ≥90%	
<b>Operating temperatures</b>	Standard 0°C~45°C Discharge -20°C~65°C Storage -20°C~45°C	
<b>Impedance (Max, at 1000Hz.)</b>	≤ 20mΩ	
<b>Storage performance</b>	Capacity can be kept ≥ 80% in storage for 12months	Battery should be kept at -20°C ~ 45°C where it's dry, clean and well-ventilated.
<b>Connecting Terminals Pos (+) &amp; Neg (-)</b>	M8	