| Item | Specification | Description/Remark |
|---|---|---|
| Model | AT-LFP-24-200-BT-M-AV10 | BluEdge Series – 24V 200Ah / 100A Continuous Discharge Lithium LiFePO4 battery + Bluetooth + RS485 – CANbus |
| Size | L-640mm x W-245mm x H-220mm | |
| Weight | 39kg | |
| Connection Terminals | M8 | |
| Connection Terminal Torque Limit | 6Nm | |
| Outer Casing Material | ABS | |
| Casing material for single cell | Aluminium | |
| IP Rating | IP65 | |
| Chemistry | Lithium iron Phosphate (LiFePO4) | Working voltage per cell: 3.2V \| Max. charge voltage per cell: 3.65V |
| Cell Type | Prismatic | |
| Rated Capacity | 200Ah / 5120WH (at 0.2C) | |
| Battery packs in series | Not Supported | |
| Battery packs in parallel | Supported | |
| Battery cycle life | 6000 times (0.2C standard charge & discharge) | Batteries can be discharged to 100% of the rated capacity |
| Rated voltage / nominal voltage | 25.6V | |
| Operating voltage range | 20V-29.2V | |
| Shipping voltage | 24-26V | |
| Recommended charge voltage | 28.8V | |
| Max charge voltage | 29.2V (3.65V per cell) | |
| Cut-off voltage | 20V / When lowest cell reaches 2.5V | |
| Depth of discharge (DoD) | 100% Recommended DoD 80% | |
| **Standard** (Recommended charge current) | 40A | |
| Charging time at recommended charge current | 4-5 Hours | |
| Maximum charge current | 100A | |
| Max continuous discharge current | 100A | |
| Peak discharge current (2 seconds) | 200A | |
| Internal resistance | ≤ 20mΩ | |
| Operating power consumption | ≤ 25mA | |
| Operating temperature | Charge: -5°C〜55°C (Ambient)<br>Discharge: -20°C〜55°C (Ambient) | |
| Storage temperature range | Within 2 months -20°C〜40°C<br>Within 6 months -10°C〜35°C | |
| Recommended storage temperature | 35°C+-15°C | |
| Storage humidity range | 10%-90% | |
| Recommended storage duration | Charge to 26.6V or 40-60% SOC every 6 months | |
| Cell over charge protection | 3.65V±0.05V | |
| Cell over discharge protection | 2.5V±0.1V | |
| Charging over current protection | 105A (8s) | |
| High temp discharge / charge protection | 60°C±5°C | |
| Low temp discharge / charge protection | -10°C±5°C | |

**Ultra Safe**
The advanced Battery Management Safety System provides comprehensive protection to the battery with high precision configurable protection and monitoring features, that protect the battery and carefully manages the safe long-term performance of each individual cell and the battery pack (or a bank of inter-connected batteries).

THE BMS PROTECTION FEATURES INCLUDE:

- Low Voltage Protection Switch – Automatically disconnects the discharge circuit to prevent damage to the cells if the battery drains below a pre-set voltage.
- Over Voltage Protection Switch – Automatically disconnects the charging circuit to prevent damage to the cells if the battery is being charged above a pre-set voltage.
- Short Circuit and Over Current Protection Switch – Automatically disconnects the discharge circuit if the discharge current exceeds pre-set limits.
- Reverse Polarity Protection Switch – Automatically disconnects the charge and discharge circuits if a reverse polarity condition is detected.
- Thermal protection – Built-in thermal sensors will automatically disconnect the charge and discharge circuits when excessive temperatures are detected.


The system will also report any alarm and protection statuses through its communication interfaces to allow the user to trouble shoot and identify any issues.

The batteries are independently tested to comply with the *IEC62619* safety standard, is *3* certified, and also comply with the requirements of the *AS/NZS 3001.2:2022 Connectable electrical installations and supply arrangements* standard. giving you peace of mind for the safe, reliable, and compliant performance of the batteries.

**Really Smart Communication**
The sophisticated Battery Management System (BMS) not only takes care of the safe performance of the batteries, it also gathers detailed information on the battery, such as the Running State, State of Charge (SOC), Voltage, Current, Temperature, individual cell voltages, Alarm / Protection statuses etc. This information can then be accessed externally via Bluetooth with the Android or iOS app, or via the CANBUS and RS485 communication ports for integrated systems. In addition, several models can also consolidate the information of a bank of batteries through inter-connected links, allowing a single “host” battery to act as the communication gateway to the entire bank.

The CANBUS interface is compatible with various inverters, chargers and communication gateways, such as the Victron Multiplus and GX devices to provide enhanced integration. Dry contact relay outputs are also available on some models, which can trigger an external signal in the event of an alarm condition in the batteries. For professional installers requiring more advanced integration, the batteries can be connected to a PC via an RS485 communication port, allowing monitoring from PC based software with the ability to make certain advanced adjustments to the BMS parameters, or to develop customised integration via the RS485 communications protocol. The software and communication adapters are available from Amptron to qualified customers.

**Long Life and Warranty**
The cell cycle life has been enhanced by newer prismatic cell designs and improved cell management by the new BMS to maximise battery life. Depending on the model, these batteries offer a very long cycle life of between 4000 to 6000 cycles at 100% Depth of Discharge. The BluEdge series is backed by an Australian based 5-year warranty.

**Uncompromised Waterproofing**
Amptron has designed a unique triple-layered moisture protection on all models with ABS cases. The triple-layered design provides three barriers against potential moisture ingress:

1. A method to inject the sealing adhesives in all seams to minimise the probability of small gaps/air pockets that may allow some moisture or moist air entering the battery case.
2. A second sealed layer is installed inside the battery case above the cells and electronics. Should any moisture find a way to penetrate the seams of the outer casing, then this sealed layer provides a second barrier to prevent moisture reaching the cells and electronics.
3. Additionally, the whole cell pack and electronics are wrapped in a sealed membrane. Even if any moisture finds a way to penetrate the above two barriers, or if any condensation should form internally in the battery case, then the membrane would protect moisture getting in contact with the cells or electronics.