BMS ELECTRONICS
All Circuit Solution EV-BATTERY CHARGER

MICRO, SMALL & MEDIUM ENTERPRISES
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# Lithium Ion Battery Charger 2kW

**BMS 2kW EV Battery Charger models BMS4835 and BMS 8325** are SMPS type battery charger optimized for charging Lithium Ion chemistry (LiFePO4, NCM) or Lead Acid battery packs for EV application. These chargers are suitable for charging 13-Cell to 23-Cell-Series, 20AH to 120AH capacity LFP or NCM type Li Battery packs or 3/4/5 Series, upto 150AH Lead Acid Batteries.

## Salient Features:

- Selectable Charging Current and Voltage profile optimized for Lithium Ion LFP/LiFePO4 or NMC/NCM or Lead Acid chemistry battery packs for E-Rickshaw or E-Scooter or similar EV application.
- High Charging Current ensures very fast charging –upto 35A on ES4835 and upto 25A on ES8325 models. More than 80% charging in 2Hours for 16Cell 80AH Packs.
- Intelligent Charging algorithm ensures maximum charge return for both Lithium and Lead Acid type batteries, results in longer mileage per charge.
- High Efficiency Charger with Active PFC to reduce power consumption.
- High charging current even at low mains voltages for faster charging.
- Informative user interface shows various current and voltage parameters on LCD Display along with LED Indications and audio alarms.
- Configurable battery type, current and voltage settings to suit a wide range of battery packs
- Electronic Reverse Battery Protection to avoid inconvenient fuse replacement in case of accidental reverse connection.
- Easy replaceable Battery Connection lead due to regular use wear and tear.
- Optional Communication port for auto identifying Battery Packs.

## Specifications

| Parameter | Range | |
|---|---|---|
| **Model** | **BMS -4835** | **BMS -8325** |
| **Battery Pack Type** | Li-Ion LiFePO4 or NCM 13 to 16 Cell Series<br>Lead Acid –3/4 Series Flooded or VRLA | Li-Ion LiFePO4 or NCM 19 to 23 Cell Series<br>Lead Acid –5 Series Flooded or VRLA |
| **CHARGING VOLTAGE** | 48V to 65V ± 0.5V<br>( Configurable in 0.5V steps ) | 68V to 84V ± 0.5V<br>( Configurable in 0.5V steps ) |
| **CHARGING CURRENT** | 15A - 35A ± 1A ( Configurable in 1A steps ) | 10A - 25A ± 1A ( Configurable in 1A steps ) |
| **CHARGE PROFILE** | Li-Ion: Three Stages –CC, CV, Charge Termination with Current Threshold and Timer.<br>Lead Acid: Four Stage –Bulk CC, Absorption CC, Absorption CV and Float charge | |
| **MAINS OPREATING RANGE** | 120VAC±10V -280VAC±10V, 40 Hz TO 60 Hz | |
| **INPUT POWER FACTOR** | Active PF correction, >0.95 | |
| **EFFICIENCY** | 89% Typical at nominal input | 90% Typical at nominal input |
| **LCD Display Parameters** | SCREEN1 –Charger Bar Graph, Elapsed Time<br>–Instantaneous Charging Current and Battery Voltage | |
| | SCREEN2 –Selected Battery Type, Set CC Current, Set CV Voltage | |
| | SCREEN3 –Mains Voltage and Frequency, Ambient Temperature (optional) | |
| **LED INDICATIONS** | 3 LEDs –Green –Charging On, Yellow –Charging Stopped, Red - Fault | |
| **AUDIO INDICATIONS (Buzzer)** | Power On, Charging Start or Stop –Short Beeps<br>Battery Charge Completion –Interminent beeps upto 20minutes.<br>Mains Failure or any Faults - Long Beeps | |
| **REVERSE BATTERY PROTECTION** | Electronically Protected –Charger will not start unless battery is connected in correct polarity. | |
| **MAINS VOLTAGE PROTECTION** | Withstand up to 320V AC RMS with Surge Protection. | |
| **MAINS OVER CURRENT PROTECTION** | By FUSE, in case of abnormal condition | |
| **COOLING SYSTEM** | Forced Air Cooled | |
| **THERMAL PROTECTION** | Electronically protected with internal temperature sensor. | |
| **CHARGER OPERATING TEMPRATURE** | 0°C TO 45°C | |
| **Battery Cable** | 3mts 6sqmm with Anderson Type 50A Connector. 50A Terminal Block. | |
| **Mains Cable** | 1.8mts 1.5sqmm 3Core Cable with 16A molded Plug. | |
| **HUMIDITY** | 95% RH Non-Condensing | |
| **ENCLOSURE** | Powder coated sheet metal cabinet | |
| **NET WEIGHT** | 6.0 kgs | |