

EV-BATTERY CHARGER

Lithium Ion Battery Charger 2.4kW



BMS 2.4kW EV Battery Charger models BMS4840 and BMS 8330 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 200AH 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 -4840 | BMS -8330 |
| Battery Pack Type | Li-Ion LiFePO4 or NCM 13 to 16 Cell Series Lead Acid –3/4 Series Flooded or VRLA | Li-Ion LiFePO4 or NCM 19 to 23 Cell Series Lead Acid –5 Series Flooded or VRLA |
| CHARGING VOLTAGE | 48V to 65V \pm 0.5V (Configurable in 0.5V steps) | 68V to 84V \pm 0.5V (Configurable in 0.5V steps) |
| CHARGING CURRENT | 15A - 40A \pm 1A (Configurable in 1A steps) | 10A - 30A \pm 1A (Configurable in 1A steps) |
| CHARGE PROFILE | Li-Ion: Three Stages –CC, CV, Charge Termination with Current Threshold and Timer. Lead Acid: Four Stage –Bulk CC, Absorption CC, Absorption CV and Float charge | |
| MAINS OPERATING RANGE | 120VAC \pm 10V -280VAC \pm 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 –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 Battery Charge Completion –Interminant beeps upto 20minutes. 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 | 6.5 kgs | |