

BMS 2S 5A 18650 7.4V

Description

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is a Battery Management System protection board designed for a two-cell (2S) lithium-ion (Li-ion) battery pack, typically using 18650 cells. Its primary function is to ensure the safety and longevity of the battery pack by protecting it from potential damage during charging and discharging cycles.

Key Specifications

- **Battery Configuration:** 2 series (2S) configuration.
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- **Battery Type:** Suitable for 3.7V nominal voltage lithium-ion or lithium polymer cells (like the 18650 type).
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- **Nominal Voltage:** 7.4V (3.7V per cell).
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- **Full Charge Voltage:** The battery pack is fully charged at approximately 8.4V, so the BMS charging voltage input is typically **8.4V to 9V**.
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- **Maximum Continuous Discharge Current:** **5A** (Amperes).
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- **Upper Limit Instantaneous/Peak Current:** Typically around 7A (Amperes).
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- **Overcharge Detection Voltage:** 4.25V–4.35V per cell.
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- **Over-discharge Detection Voltage:** 2.5V–3.0V per cell.
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- **Protections:** Includes built-in safeguards for overcharge, over-discharge, overcurrent, and short circuits.
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- **Quiescent Current:** Very low, typically less than 10μA.

• Function and Use

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- The BMS board acts as a protective circuit module (PCM) for safe operation. It is a crucial component for DIY battery pack builds, portable electronics, robotics projects, and other applications requiring a stable and safe 7.4V power source from lithium cells.
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- **Note:** This type of BMS is generally not suitable for high-current applications like hand drills or electric bicycles, which require higher current ratings (e.g., 20A or more). It also should not be used with lithium iron phosphate batteries.