

Poly-Quest PQ-PCM-Guard™

PQ-PCM-2S,3S,4S

October 10, 2004 - revised



About PQ-PCM-Guard™

Lithium Polymer(LiPo) cells and packs can be destroyed during charging by applying a voltage that's too high.

PQ-PCM-Guard™ is a voltage-limiting device that prevents over-voltage during LiPo pack charging. **PQ-PCM-Guard™** will prevent packs from swelling and explosion when charging Lithium Polymer pack, with a current-regulated Li-Po charger.

Connected between charger and battery pack, **PQ-PCM-Guard™** limits charge voltage to 4.2V per cell.

When **PQ-PCM-Guard™**'s output voltage exceeds this amount of each cells in the pack, **PQ-PCM-Guard™** disconnects the pack from the charger and LED will light to alarm users –It will minimize the chance of cell damage and dangerous conditions.

PQ-PCM-Guard™ is available in three configurations ;

Model No.	For Pack Type	Nominal Pack Voltage	Max voltage Limit
PQ-PCM-Guard™ 2S	2S	7.4V	8.4V
PQ-PCM-Guard™ 3S	3S	11.1V	12.6V
PQ-PCM-Guard™ 4S	4S	14.8V	16.8V

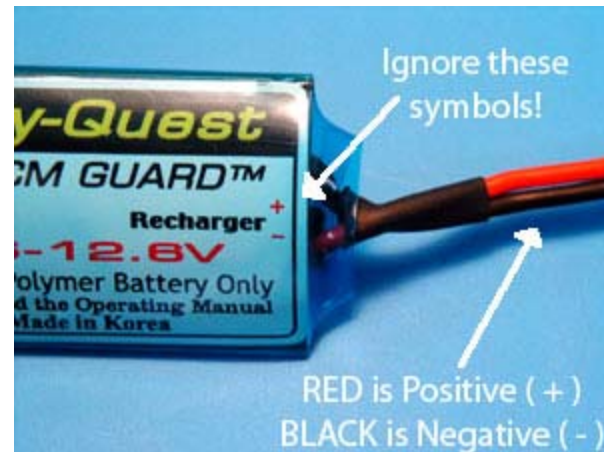
Polyquest Safety Guard use warnings

- ⚡ Connect PCM Guard to Charger Output

WARNING! Ignore the charger polarity symbols on the PCM Guard label.

Red Wire = POSITIVE (+)

Black Wire = NEGATIVE (-)

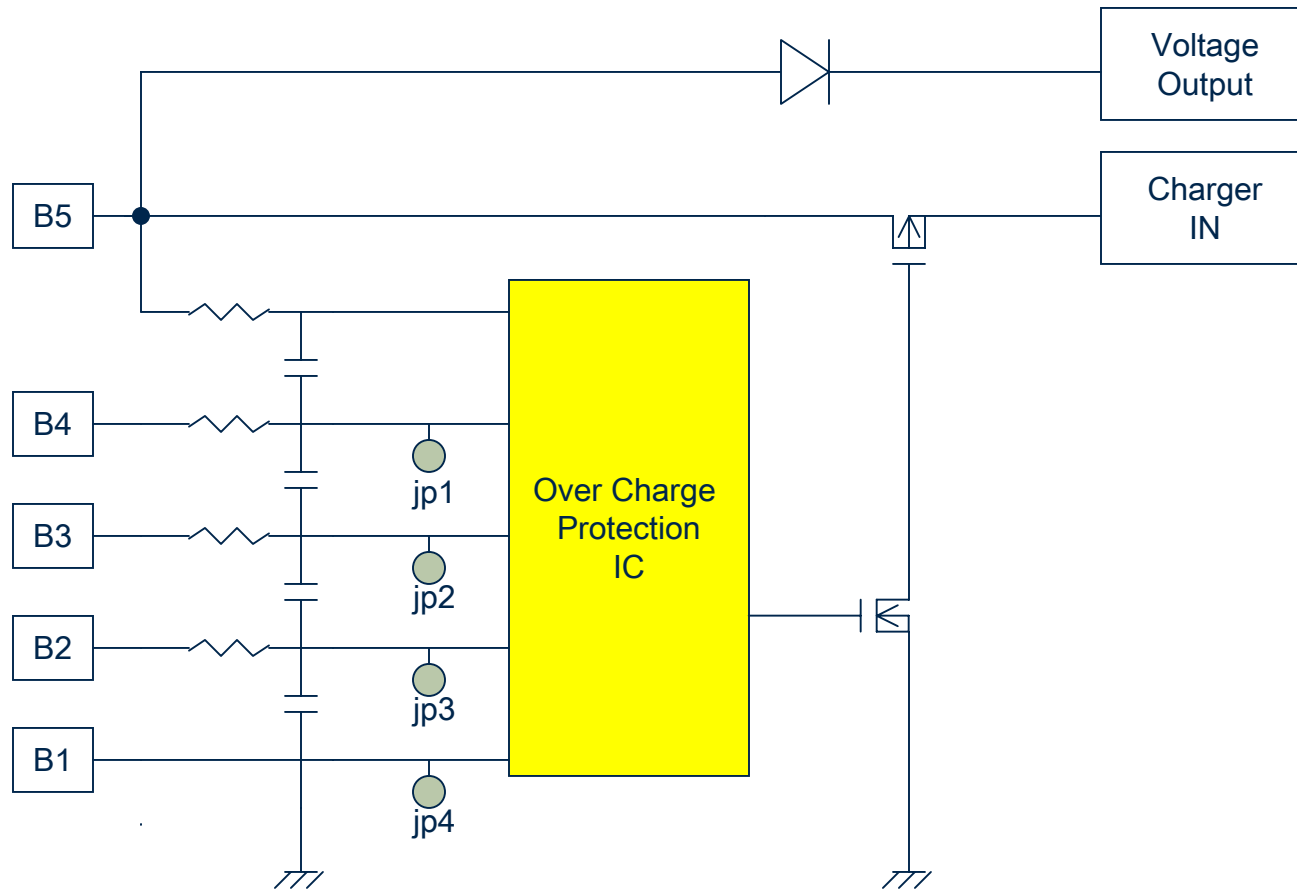


- ⚡ Never disconnect the battery from the PCM during charging. Power down charger first.
- ⚡ Some chargers can hurt PCM guard seriously by imposing over 18V and 5A if only PCM guard is connected when battery is disconnected.

Specifications

1. Maximum Input Voltage : 18V
2. Maximum Charge Current : 5A
3. Overcharge Protection Voltage : $4.35V \pm 0.025V$
4. Overcharge Protection Release Voltage : $4.15 \pm 0.060V$
5. Dimensions : 58.0mm X 28.0mm X 0.8mm(W*H*D)

Circuit Diagram



Battery Connection Examples

1) Jumpers settings for each serial configuration

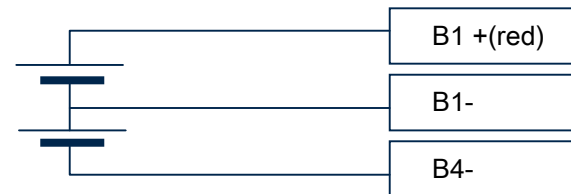
	JP1	JP2	JP3
1CELL(1S)	Short	Short	Short
2CELL(2S)	Open	Short	Short
3CELL(3S)	Open	Open	Short
4CELL(4S)	Open	Open	Open

2) Connection diagram of each cells in the pack

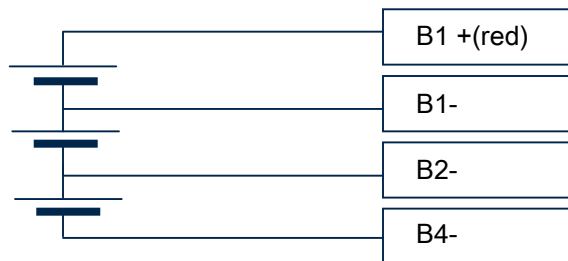
(1) 1 Cell Connection



(2) 2 Cell Connection



(3) 3 Cell Cell Connection



(4) 4 Cell Cell Connection

