

# Protection Circuit Module

## PCM / BMS / PCB

For 37V 10S Li-ion/Li-Polymer Battery Packs

Item		Contents	Criteria(Adjustable)
1	Model	HCX-D596LI10S90A-05 / 214AF	10S-90A working current
2	Voltage	Charging voltage	42V
3	Current	Maximal continuous charging current	50A
		Maximal continuous discharging current	90A
		Current consumption	≤50μA
4	Overcharge Protection	Over charge detection voltage	4.25V±0.025V
		Over charge detection delay time	700mS-1300mS
		Over charge release voltage	4.05V±0.05V
5	Over Discharge Protection	Over discharge detection voltage	2.80V±0.07V
		Over discharge detection delay time	80mS-170mS
		Over discharge release voltage	3.0V±0.1V
6	Over Current Protection (1st Protection)	Over current detection current	160A±20A
		Detection delay time	174mS-406mS
		Release condition	Cut load, automatically recover
7	Over Current Protection (2nd Protection)	Over current detection current	260A±30A
		Detection delay time	10mS-25mS
		Release condition	Cut load, automatically recover
8	Short Circuit Protection	Short circuit detection current	≥630A
		Detection delay time	150uS-500uS
		Release condition	Cut load, automatically recover
9	Balance	Balance voltage for single cell	4.20V±0.025V
		Balance current for single cell	126mA±15mA
10	Resistance	Inner resistance	≤20mΩ
11	Temperature	Operating temperature range	0 ~ +85°C
		Storage temperature range	0 ~ +85°C
12	Size (L*W*H)	L120mm*W80mm*H20mm	

Note: Characteristics subject to change without notice

LiTech Power Co., Ltd

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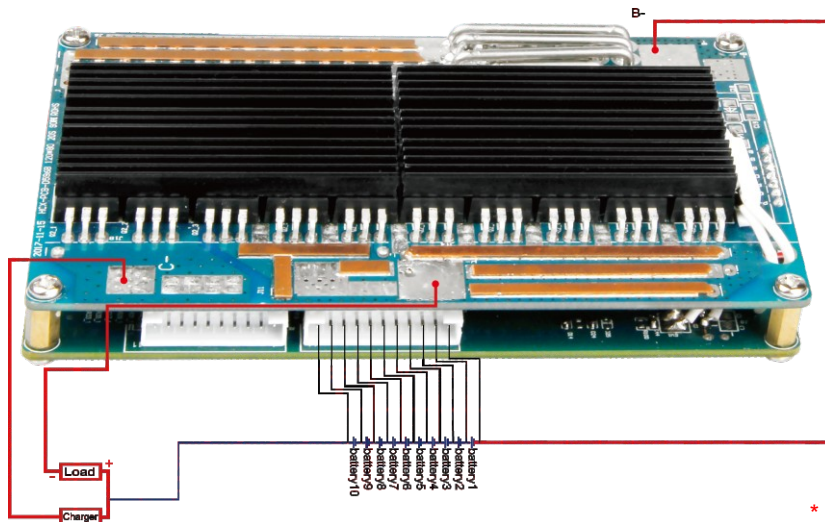
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## Connection Diagram:



### Remarks:

Charge, Discharge at different Port

P+=B+=Charge+/Discharge+

Ch-=Charge-

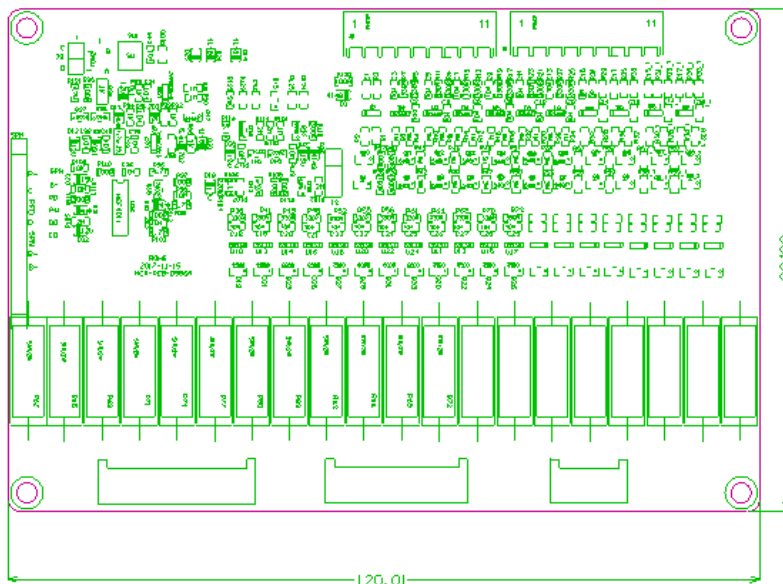
P-=Discharge-

\* BMS with E-Switch//ON-OFF Switch (optional)

During charging and discharging,  
The Switch should be on(connected)

\* Note: The switch is not included, BMS has the E-Switch function. When the switch is off, the output will be shut down completely!

## PCB Layout:



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