



## PCM for 10.8/11.1V Lilon Battery Pack

### SPECIFICATIONS

#### Characteristics

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1	Electrical Characteristics	Charging Voltage (P+, P-)		12.6V
		Continuous Charging Current (P+, P-)		4A
		Continuous Discharging Current (P+, P-)		4A
		Input Voltage for Terminals		5V (B1, B2, B3, B+)
		Impedance (B-, P-)		≤5mΩ
		Current Consumption (+25°C)	Working	≤600μA
			Communicating	≤2000μA
			Sleeping average	≤350μA
			Bluetooth	≤50μA
		Temperature	Operating	-40~+85°C
Storage	-40~+125°C			
Humidity	Operating	<75%RH		
	Storage	<85%RH		

#### Criterion

**Test Item** \*Test at normal temperature 25±2°C and relative humidity ≤90%.

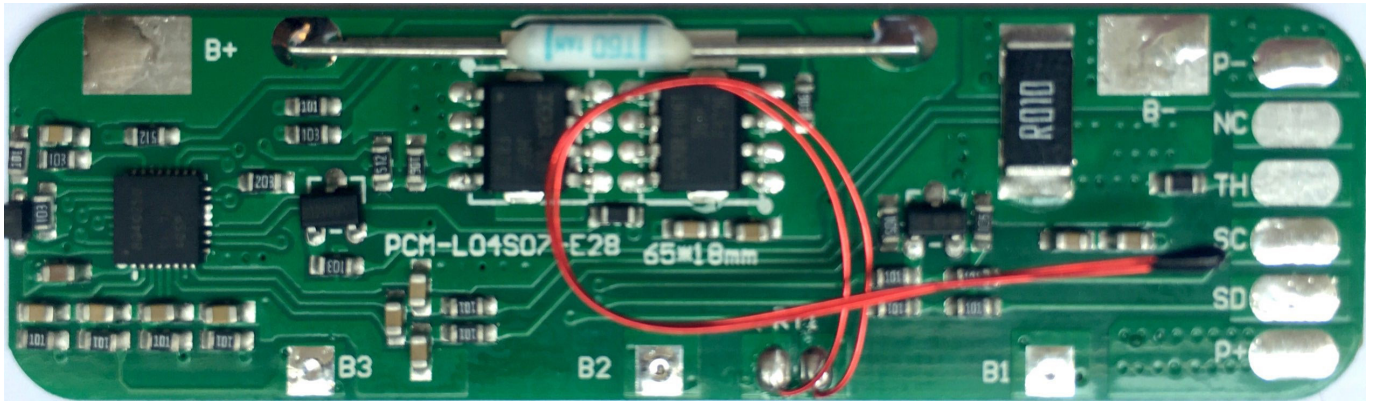
			Parameter	Delay Time	Mode	
2	Over Voltage Protection	Activate	4250mV	2s	Turn OFF charging FET	
		Release	4050mV	0s	Turn ON charging FET	
3	Under Voltage Protection	Activate	2500mV	2s	Turn OFF discharging FET	
		Release	3000mV	0s	Turn ON discharging FET	
4	Charge	Activate (1 <sup>st</sup> Level)	15A	2s	Turn OFF charging FET	
		Release (1 <sup>st</sup> Level)	0A	10s	Turn ON charging FET	
		Activate (2 <sup>nd</sup> Level)	20A	1s	Turn OFF charging FET	
		Release (2 <sup>nd</sup> Level)	0A	10s	Turn ON charging FET	
	Discharge	Activate (1 <sup>st</sup> Level)	15A	2s	Turn OFF discharging FET	
		Release (1 <sup>st</sup> Level)	0A	10s	Cut load, auto release	
		Activate (2 <sup>nd</sup> Level)	20A	2s	Turn OFF discharging FET	
		Release (2 <sup>nd</sup> Level)	0A	10s	Cut load, auto release	
		Activate (3 <sup>rd</sup> Level)	25A	31s	Turn OFF discharging FET	
		Release (3 <sup>rd</sup> Level)	0A	15s	Cut load, auto release	
5	Short Circuit Protection	Activate (1 <sup>st</sup> Level)	15A	≤500μs	Turn OFF discharging FET	
		Release (1 <sup>st</sup> Level)	0A	≤15s	Short circuit release, auto recovery	
		Activate (2 <sup>nd</sup> Level)	20A	≤250μs	Turn OFF discharging FET	
		Release (2 <sup>nd</sup> Level)	0A	≤15s	Short circuit release, auto recovery	
6	Over Temperature Protection - CHARGING	Battery	Activate	55°C	2.0s	Turn OFF charging FET
			Release	45°C	0	Turn ON charging FET
		FET	Activate	80°C	2.0s	Turn OFF charging FET
			Release	65°C	0	Turn ON charging FET
7	Under Temperature Protection - CHARGING		Activate	-20°C	2.0s	Turn OFF discharging FET
			Release	-5°C	0	Turn ON charging FET
8	Over Temperature Protection - DISCHARGING	Battery	Activate	65°C	2.0s	Turn OFF discharging FET
			Release	55°C	0	Turn ON discharging FET
		FET	Activate	80°C	2.0s	Turn OFF discharging FET
			Release	65°C	0	Turn ON discharging FET
9	Under Temperature Protection - DISCHARGING		Activate	-20°C	2.0s	Turn OFF discharging FET
			Release	-5°C	5.0s	Turn ON charging FET
10	Cell Balancing				Voltage ≥ 3600mV	
11	Dimensions				L 65mm x W 18mm	



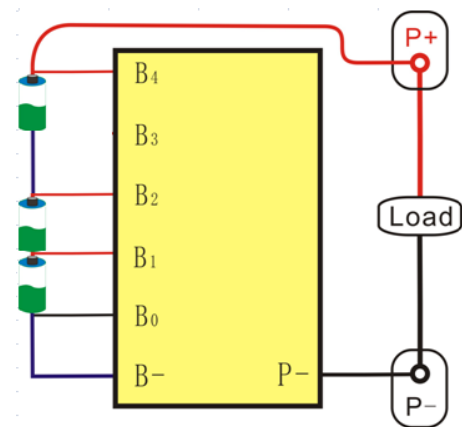
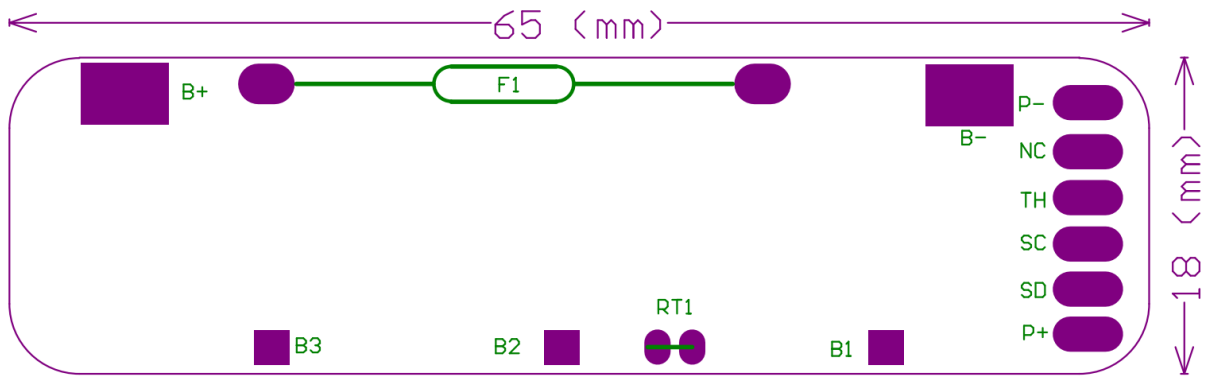


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### IMAGE



### CONNECTION DIAGRAM



Terminal	Description
B-	Negative pole for main circuit to be connected with negative pole of Cell 1
B-	Negative terminal for Cell 1
B1	Positive terminal for Cell 1 and negative terminal for Cell 2
B2	Positive terminal for Cell 2 and negative terminal for Cell 3
B3	Positive terminal for Cell 3 and negative terminal for Cell 4
B+	Output positive terminal
P+	Output positive terminal
P-	Negative terminals for charge/discharge and I2C communication
SCL	Terminal for clock of I2C communication
SDA	Terminal for data of I2C communication
RT1	Terminal for temperature detection of NTC

Note: the connection between cells and PCB should be followed this order: B- → B1 → B2 → B+, or it will cause potential damage to the BMS if not followed in this connection order.

