

1. Product Name: 2 string 8.4V 20A lithium battery protection board (balanced version)
2. Product model: HW-391
3. Charging voltage: DC 8.4~9V
4. Continuous discharge current: up to 20A (if the heat dissipation environment is not good, please reduce the load current)
5. Continuous charging current: up to 10A
6. Product size: 48*20mm
7. Applicable choice: Suitable for lithium battery with nominal voltage of 3.7V and full charge of 4.2V (including 18650, 26650, polymer lithium battery), with starting current 25A, power less than 50W electric drill, or 168W resistive load

Note 1:

Successfully starting the drill requires 2 10C-20C power batteries, or 4 5C-10C Power battery (recommended power battery model: SONY VTC4, VTC4A, VTC5A, VTC6) For 0V and 84V cables, use copper wire of 2 square millimeters or more (nickel sheets cannot be used!!!).

Note 2:

When welding the battery for the first time, it needs to be charged before outputting; strictly according to the diagram wiring 0V, 4.2V, 8.4V, do not touch any components on the board when soldering the wire, do not intentionally short circuit.

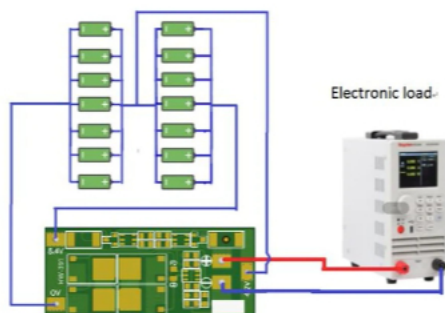
Note 3:

When soldering the battery for the first time or while charging, as long as the single battery exceeds 4.2V The 430 resistor will heat up and discharge (discharge to about 419V to stop heating). If "430 resistor Severe fever (hot to hand can not touch), please check if the wrong line.

Introduction (2)

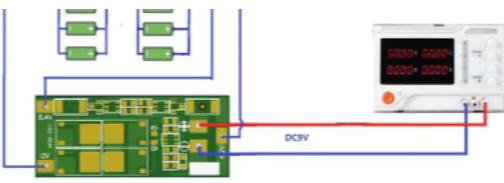
Electrical parameters					
project	Minimum value	Typical value	Maximum	unit	Remarks
Consuming current	12	18	24	uA	
Overcharge protection voltage	4.2	4.25	4.3	V	
Balanced starting voltage	4.17	4.2	4.23	V	Balanced version
Equilibrium current	95	100	105	mA	Balanced version
Balanced heating power	0.78	0.86	0.95	W	Balanced version
Overcharge recovery voltage	4.1	4.15	4.2	V	
Over-discharge protection voltage	2.4	2.5	2.6	V	
Overvoltage protection after over-discharge protection	2.8	3	3.2	V	1C discharge
	3.2	3.5	3.8	V	2C discharge
Over-discharge recovery voltage	2.5	2.6	2.7	V	
Conduction internal resistance	5	6	7	mΩ	
Overcurrent protection current	19	22	25	A	
Overcurrent delay time	50	100	150	ms	
Continuous operating current	0	20	20	A	Resistive load
Continuous output power	0	168	168	W	Resistive load
Ambient temperature	-40	25	85	°C	

The figure below shows the module discharge diagram. The battery is 2 strings. The connected battery needs to meet the 20A discharge current. It can be realized by paralleling the battery or purchasing a battery with a large discharge current. For example, the battery 2000mAH, the discharge multiple is 10C, then only 2 strings 2 are needed, the maximum current can reach the discharge current 40A, the stable discharge needs 2 strings 4 and only need to pay attention to heat dissipation, and the discharge battery power will drop rapidly. The



The figure below is the battery charging diagram, 2 strings of batteries, fully charged 8.4V. Charging power supply voltage DC8.4~9V, charging current depends on the current value set by the charging power supply and battery power, the maximum does not exceed 10A.





Packing List:

1pc * 7.4V 2S 20A Li-ion Battery BMS With Protection