

BMS battery management system for lithium rechargeable battery pack
Model: NOVA 4S
Electrical Characteristics

No.	Test item		Criterion
1	Type of cells	Type	All rechargeable lithium
		Number of cells	2÷4
		Range voltage for single cell	1,5÷4,5 VDC
		Cells in series	yes 2÷4
		Cells in parallels	yes
2	Voltage	Range min/max	5,5÷18 VDC
		Minimum voltage measured	1 mV
3	Current	Low Current consumption for single cell with auxiliary charger	≤50 µA
		Maximal continuous charging current	10Ah
		Maximal continuous discharging current	10Ah
		Minimum measured current	10 mA
4	Charge/Discharge	Indipendent discharge channel	yes
		Indipendent charge channel	yes
		Contemporaney charge/discharge channel	yes
		Double anti series protection mosfet for charge channel	yes
5	Balance	Type of Balance	Passive
		Number of balance	three type (A,B,C)
		Minimun balance voltage for single cell	1 mV
		Balance current for single cell	50 mA
6	Over charge Protection	Over charge detection voltage	settable ±1mV
		Over charge release voltage	settable ±1mV
7	Over discharge protection	Over discharge detection voltage	settable ±1mV
		Over discharge release voltage	settable ±1mV
8	Over current protection	Over discharge detection current	settable ±1A
		Detection delay time	settable ±1s
9	Temperature	Battery temperature misure	settable ±1°C
		PCB temperature misure	settable ±1°C
10	Time	Real time clock with back-up battery	yes
		auto power off	settable ≥1min
11	Comunication	Buzzer	no
		USB	yes
		PWM opto isolated	no
		CAN opto isolated	no
		RS485 opto isolated	no
		TX opto isolated	yes
		Bluetooth	yes
		Led command output	4
12	Software of comunication	windows support	yes
		Settable by PC	yes
13	Comunication with smartphone	Application Android	yes
14	Comunication with smartphone	Application Ios	yes

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Memory internal of the BMS

No.	Test item		Criterion
1	Time	Day last charge	yes
		Data of last charge	yes
		Charge cycles	yes
2	Current	Register of Amper/hours	yes
3	Operation data	Internal register	10 parameters
4	Production data	Internal register	4 parameters
5	Historical log data	Register fifo	64 events
6	Historical day register (optional)	Register fifo	400 day

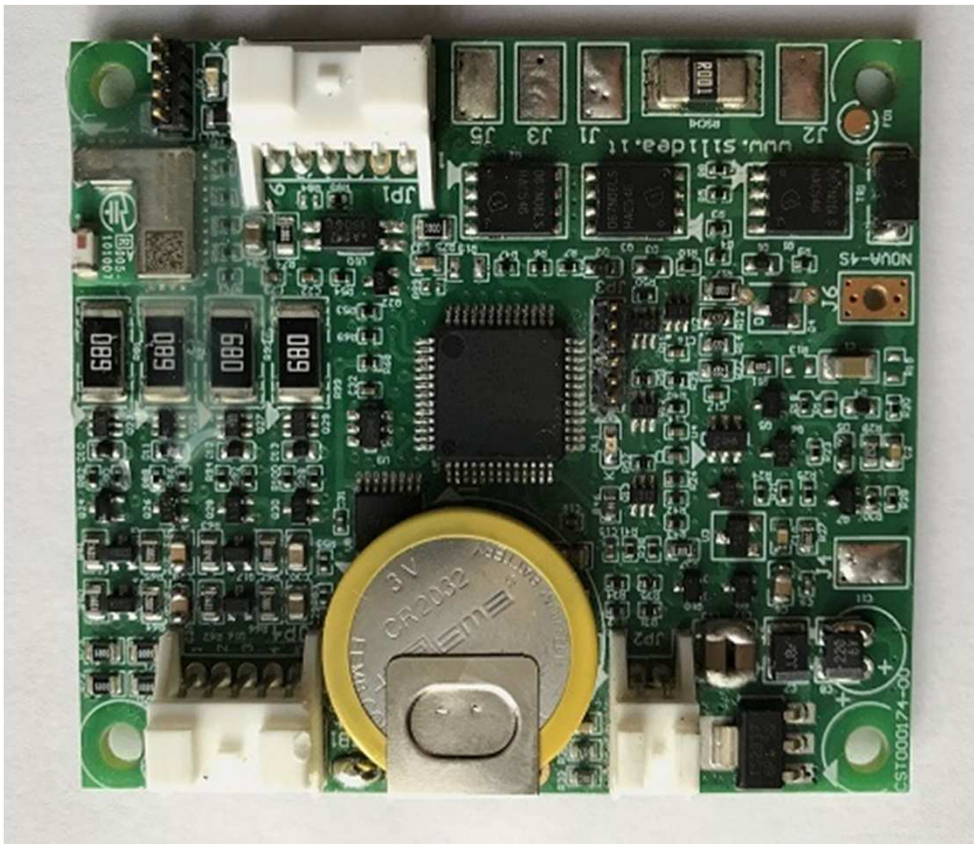
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Electrical and Mechanical Characteristics

No.	Test item		Criterion
1	Type of core	Micro Controller	16 bit
2	Misure current	Analog-to-Digital Converters	16 bit
3	Misure Voltage	Analog-to-Digital Converters	16 bit
4	Power regulator	Switching Regulators	high efficiency
5	ON/OFF	Double push button	yes
6	Efficiency	At maximum power	99,98%
7	Led	State views	discharge/charge
8	Power consumption	Stand By State	≤100 nA
9	Power consumption	ON State, without bluetooth	≤30 mA
10		ON State, with bluetooth	≤40 mA
11	PCB	Command	FR4
12	Weight	Measure	22 gr.
13	Dimension	Measure	65*55*10mm
14	Temperature	Operating Temperature Range	-20, +70 °C
		Storage Temperature Range	-20, +85 °C

Photo of the product:



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