Rechargeable Lithium-Ion battery pack specification

Type: CL-18650-MH1/1S4P

Date of issue	Date of change	Change numer	Remarks
07.02.2023	-	-	-

1. SCOPE

This specification describes the technical parameters and requirements of the rechargeable Li-Ion battery pack powered by Cellevia Batteries.

2. BATTERY PACK BASIC SPECIFICATION

NO	ITEM	SPECIFICATION	REMARK
1	Type	CL-18650-MH1/1S4P	
2	Nominal Voltage	3,63V	
3	Rated Capacity	12800mAh	2,48A to 2,5V discharge
4	Rated Energy	46,5Wh	
5	Internal Resistance	10mΩ	At 1kHz, typical
6	Cell type	INR18650 MH1	4 pcs
7	Cell configuration	1S4P	
8	Dimension	Drawing (see point no. 5)	
9	Weight	200g±2g	
10	Thermistor NTC	-	
11	Leads	Wires, LgY/H05V-K 0,5mm^2	Length: 175±5mm with plug
12	Plug	CVILUX CP-01102010	

3. BATTERY PACK STANDARD TESTING CONDITIONS

NO	ITEM	SPECIFICATION		REMARK
1	Charging Voltage	4,2V±0,05V		
2	Discharge Cut-off Voltage	2,5V		
3	Charging Current	Standard	6000mA to 4,2V end current 50mA	CC/CV method
		Fast	6000mA to 4,2V end current 50mA	not for cycle life
4	Charging Time	Standard charge	3,5 hours	or 0,015C end current
		Fast charge	2,5 hours	or 0,015C end current
5	Discharging Current	Standard	2480mA	
		Maximum	6000mA	Limited by PCM
5	Temperature Range (pack surface temp.)	Charge	0 ~ +45^{0}C	
		Discharge	-20 ~ +60^{0}C	
		Storage	-20 ~ +20^{0}C	1 year

4. BATTERY SAFETY UNIT SPECIFICATION

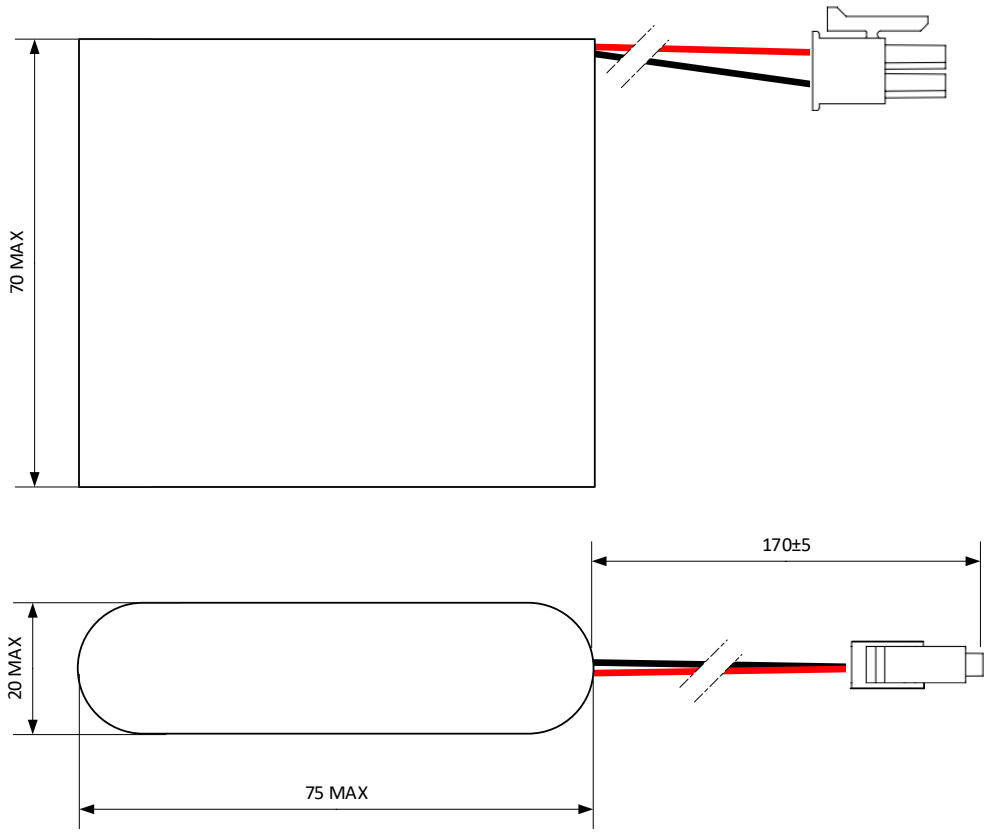
4.1. BASIC PARAMETERS

NO	ITEM		MIN	TYPICAL	MAX	UNIT	REMARKS
1	Over charge detection voltage	Cut off	4,20	4,25	4,30	V/cell	0,5 – 2s
		Release	3,95	4,05	4,15	V/cell	
2	Over discharge detection voltage	Cut off	2,45	2,50	2,55	V/cell	
		Release	2,90	3,00	3,10	V/cell	
3	Discharge over current detection current	Cut off	8,00	11,00	14,00	A	5 – 20ms
		Release	-			-	Cut load, Auto recovery
4	Short-circuit protection	Delay time	200	400	600	μs	
		Release	-			-	Cut load
5	Temperature range	Operating	-40		85	^{0}C	
		Storage	-40		125	^{0}C	
6	Resistance		8	10	15	mΩ	
7	Consumption current				7	μA	

4.2. ADDITIONAL PARAMETERS

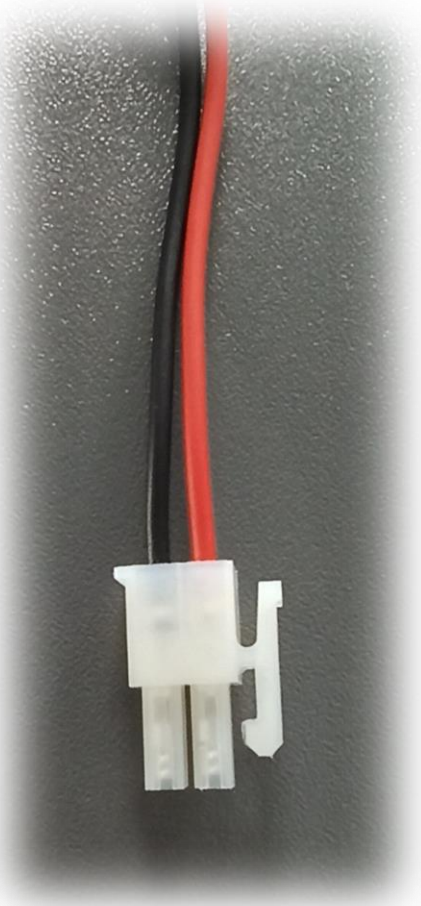
NO	ITEM	PARAMETER	REMARK
1	Max. continuous current	6A	charge
2	Max. continuous current	6A	discharge

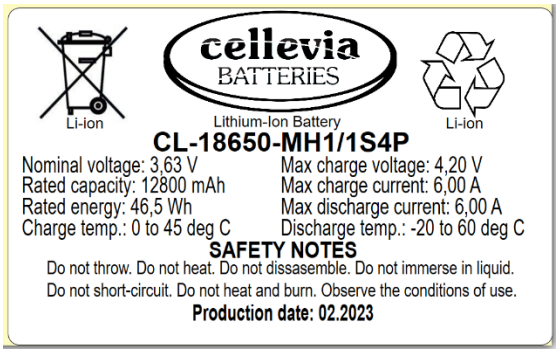
5. OUTLINE DRAWING



6. PICTURE


cellevia
BATTERIES
Li-ion
Lithium-Ion Battery
Li-ion
CL-18650-MH1/1S4P
Nominal voltage: 3,63 V
Rated capacity: 12800 mAh
Rated energy: 46,5 Wh
Charge temp.: 0 to 45 deg C
Max charge voltage: 4,20 V
Max charge current: 6,00 A
Max discharge current: 6,00 A
Discharge temp.: -20 to 60 deg C
SAFETY NOTES
Do not throw. Do not heat. Do not dissasemble. Do not immerse in liquid.
Do not short-circuit. Do not heat and burn. Observe the conditions of use.
Production date: 02.2023

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7. CAUTION IN USE

To ensure proper use of the battery please read the manual carefully before using it.

7.1. HAZARD WARNINGS

- Do not expose to, dispose of the battery in fire,
- Do not put the battery in a charger or equipment with wrong terminals connected,
- Avoid shorting the battery,
- Avoid excessive physical shock or vibration,
- Do not disassemble or deform the battery,
- Do not immerse in water.
- Do not use the battery mixed with other different make, type or model batteries,
- Keep out of the reach of children.

7.2. CHARGE AND DISCHARGE

- Battery must be charged in appropriate charger only,
- Never use a modified or damaged charger,
- Do not leave battery in charger over 24 hours.

7.3. STORAGE

- Store the battery in a cool, dry and well-ventilated area,
- Store the battery in a 30% - 50% SOC,
- The batteries shall be charged every 6 months during storage

7.4. DISPOSAL

Regulations vary for different countries. Dispose of in accordance with local Regulation.