

外发文件
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受控文件

TECHNICAL SPECIFICATION

Lithium Thionyl Chloride Battery

Model: ER18505H+SPC1550

Established date: 1 March,2024

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Version Record

NO.	Reviser	Established Date	Version	Revise page	Revised reason
0	Zhang Peng	2022.02.17	A/0	all	Release
1	Liu Shaoping	2023.11.21	A1	all	Change the logo and add the word confidential to the footer
2	Liu Shaoping	2024.03.01	A2	P6	Modified 9.1 Important

1. Scope

The document applies to ER18505H+SPC1550(Li/SOCl₂) battery pack supplied by FANSO TECHNOLOGY CO.,LTD. Specify quality, test method, performance, quality assurance and matters need attention etc..

2. Battery type

Lithium Thionyl Chloride +Super Pulse Battery Capacitor

3. Battery system characteristics

(1) General characteristics

No.	Item	Characteristic	Remarks
1	Nominal Voltage	3.6V	
2	Nominal Capacity	4000mAh	23±3°C,3mA,2.0V cut off
3	Operate temperature	-40—85°C	Operation under higher temperature than ambient temperature may lead to reduced capacity and lower voltage reading at the beginning of pulses. If continuous high temperature over +40°C or low temperature down to -20°C usage conditions, please consult FANSO.
4	Dimension	/	See attached dimension image
5	Weight	About 55g	The weight of different battery accessories is different

(2) Typical electrical performances

Item	Test condition	Initial Values★	Typical values after store for one year at ≤30°C★★
3.1 Open Circuit Voltage			
Room temperature	20±5°C	3.60~3.70V	3.60~3.70V
Low temperature	-40±2°C	3.60~3.70V	3.59~3.69V

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High temperature	$70 \pm 2^{\circ}\text{C}$	3.60~3.71V	3.61~3.71V
3.2 Load voltage			
Room temperature	8.2Ω discharge 2s	3.30V	3.20V
3.3 Pulse discharge voltage			
Room temperature	$20 \pm 5^{\circ}\text{C}$	5.0A, discharge 1s	Min.: 2.8V

4. Appearance and structure

4.1 Appearance

ER18505H+SPC1550 Cell appearance, no scratch, swelling, deformation, corrosion, electrolyte leakage and other defects.

4.2 Structure

ER18505H+SPC1550 is "bobbin design" cell, whose cathode is cylindrical in shape.

Hermetic is ensured by a glass-to-metal sealing technology. (under a standard helium pressure, leakage rate $\leq 10^{-8}\text{Pa}\cdot\text{m}^3/\text{sec}$).

5. Incoming inspection

As for the customer's incoming inspection, FANSO recommended sampling according to GB2828.1-2012 standard.

Table 1 Acceptability quality level

No	Item	Check level	AQL
1	Dimension	S-2	0.65
2	Appearance	II	1.0

3	Open circuit voltage	II	0.4
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Table 2 Sampling amount

Lot size	sampling amount
≤ 3200	32
3200~10000	50
> 10000	80

6. Storage

Lithium batteries should be stored in a cool, clean, dry environment, the recommended temperature is 5~30°C, relative humidity $\leq 60\%$, should avoid contact with corrosive materials, away from fire and heat.

7. Safety terms

7.1 Before use, do not remove the battery from the original packaging.

7.2 Do not scattered placed the battery together in order to avoid accidental short circuit.

7.3 Do not heat the battery above 100 °C or incinerated.

7.4 Do not recharge the battery.

7.5 Do not mixed with different brand, model or type batteries.

7.6 Do not mix the new and used batteries.

7.7 Do not disassembly or open battery.

7.8 Do not short circuit the battery or reversely contact the positive and negative terminals.

7.9 Do not solder on the battery surface.

7.10 Do not test environment and safety under extrusion without any protection.

7.11 Do not use or store batteries under wet conditions without protection.

7.12 Batteries are not allowed to be used excessively in the equipment without setting the cut-off voltage. After reaching the cut-off voltage, it should be removed from the equipment immediately to stop working.

7.13 Stop using if the battery is found to have heat, odor, discoloration, deformation, or other abnormalities during using or storage.

7.14 Batteries used should be handled in accordance with local environmental regulations and buried deep underground or into brine.

7.15 If the liquid is splashed on the skin, eyes and clothes, rinse immediately with plenty of water, and then seek medical care immediately.

8.Transportation

8.1 Battery meets the tests and criteria requirements of UN Manual, Part III, subsection 38.3.

8.2 Batteries should be protected against sunlight, fire, rain, immersion, and corrosive substances in transportation.

8.3 Handling and loading should be with care.

8.4 The stacking height of the paper packing box shall not exceed 1.5 meters.

8.5 For long transportation, such as shipping, should be kept away from the engine. And in summer should not be prolonged in an airless environment.

9. Important tips

9.1 The batteries are warranted to conform to the description contained in this specification for a period of twelve [12] months from the ex-factory date, any claim by customer (apparatus manufacturer or distributor) must be pointed out within such period. During that warranty period, if

the batteries are proved to become defective under proper stored and handled, FANSO will replace the batteries for free.

9.2 In practical applications, customer should be responsible for the compatibility and reliability of the battery and the device.

9.3 In any of the following circumstances, FANSO will not take any responsibility: the client' s fails of appropriate treatment, operation, installation, testing, maintenance and inspection of the battery, or do not follow the instructions provided in the specification, notes, terms, and other FANSO instructions.

9.4 This specification is accepted after 6 months from the date of issues if not be refunded.

10. Statement

If you have any questions on the product specifications, please contact with Wuhan Fanso Technology Co.,ltd. Fanso reserves the right to amend the product specification.

11.Battery dimension

Please check the specific finished product drawing.