Revision History

N.O	Revision	Description	Check	Date	Note
1	A/00			20231010	

The specification describes the requirements for the Lithium-Ion rechargeable battery supplied by Shenzhen Chaowei Renewable Energy Co.,Ltd.

2、Normal performance

NO.	Item	General Parameter		Remark
1	Rated voltage	12.8V		
2	Model capacity	50.0Ah		charge and 0.5C discharge at room temperature and 25 ℃
3	Minimum Capacity	48.5Ah		
4	Max Charge voltage	14.6V		
5	Cut-off voltage	10.0V		
6	Standard charge current	10.0A		
7	Standard discharge current	25.0A		
8	Max.charge current	25.0A		
9	Max.discharge current	50.0A		
10	Factory Voltage	13.0±1V		60% About 60% of the shipped electricity
11	Battery weight	7.0±0.2KG		
12	Battery Resistance	＜20mΩ		
13	Shell color	Black		
14	External Dimension of battery	229*138*208±2mm		
15	Protection level	IP54		
16	Storing Conditions	30 天	-5℃～45℃	
		90 天	0℃～30℃	
17	Cell	LiFePO4		
18	Series-parallel connection	4S1P		
19	Human Interface Specification	LCD,Bluetooth APP		
20	Terminal type			M8

3、Product sketch

4、Absolute maximum rating

Parameter		Rating	Unit
Operating temperature range	charge	0 ～ 45	℃
	discharge	-20～60	℃
Operating humidity range		5 ～ 85	%RH
Storage humidity range		60±25	%RH
store temperature range		-20～45	℃
store temperature for a long time		20～25	℃

5、Silk screen printing


150.00 mm
80.00 mm
超威
CHILWEE
Li-ion Battery Pack
Model No: CS12.850QDB
Voltage: 12.8V
Capacity: 50Ah
Energy: 0.64KWh
CAUTIONS
1 Lithium battery should be used within ambient temperature range -10°C~45°C.
2 Water, beverage and corrosive liquid entry may cause the battery leakage, heating, smoking, catching fire and explosion.
3 Keep away from heat source, fire, inflammable and explosive gas and liquid, it may lead to leakage, heat, smoking, fire and explosion.
4 Metallic foreign bodies entry may cause battery leakage, heating, smoking, catching fire and explosion.
5 Please charge battery within 0°C~35°C range before use. Before long term storage of battery, charge the battery pack to 40%~60% capacity (Charge it for 3~4 hrs with specified charger after discharge the battery), place it in a dry and ventilated place, charge it for 1~2 hours every month.
6 Do not store the battery in >40°C environment, it will lead to irreversible capacity degradation.
7 Only manufacturer identified charger is allowed to charge battery to ensure the performance and safety, no warranty is applicable in other case.
8 Charge the battery at an open and safe place, indoor charging is not recommended.
9 It is strictly prohibited to use more than 4 battery packs in series without permission, no warranty is applicable in case of misuse.
National Customer Service Line:4008892798

6、Protection parameters:DL-R05T-F4S50ATJ

Details		Min.	Typ.	Max	Error	Unit
Battery Gas			3.2V			
Battery Link			4S			
Loop capability			/			
Input Charging Voltage			14.6		±1%	V
Input Charging Current				⩽25		A
Continuous Output Discharging Curren				⩽50		A
Ambient Condition	Operating Temperature	-20	25	60		℃
	Humidity (No Water-Drop)	0%		90%		RH
Storage Condition	Temperature	-40		85		℃
	Humidity (No Water-Drop)	0%		90%		RH
Protection Parameters (for Individual Cell).						
Cell Over-Charge Voltage Protection (OVP)		3.70	3.75	3.80		V
Cell Over-Charge Voltage Protection Delay Time(OVPDT)		500	1000	1500		ms
Cell Over-Charge Voltage Protection Release (OVPR)		3.60	3.65	3.70		V
Overall voltage overcharge protection		14.8	15.0	15.2		V
Overall voltage overcharge protection delay		500	1000	1500		ms
Overall voltage overcharge protection release		14.4	14.6	14.8		V
Over-Current Charge Protection (OCCP)		70	75	80		A
Over-Current Charge Protection Delay Time (OCPDT)		500	1000	1500		ms
Over-Discharge Voltage Protection (UVP)		2.15	2.20	2.25		V
Over-Discharge Voltage Protection Delay Time(UVPDT)		500	1000	1500		ms
Over-Discharge Voltage Protection Release (UVPR)		2.25	2.30	2.35		V
Overall voltage over-discharge protection		8.6	8.8	9.0		V
Overall voltage over-discharge protection delay		500	1000	1500		ms
Overall voltage over-discharge protection release		9.0	9.2	9.4		V
Over-Current Discharge alarm (OCDP)		55	60	65		A
Over-Current alarm Delay Time (OCPDT)		500	1000	1500		mS
Over-Current Discharge Protection (OCDP)		70	75	80		A
Over-Current Protection Delay Time (OCPDT)		500	1000	1500		mS
Over-Discharge Protection Release		Charge to reach the recovery voltage				
Over-Current Discharge Protection Release		Release load				

Short circuit current protection	In theory, considering the short-circuit current of thousands of amperes, it is not recommended for customers to conduct short-circuit tests to avoid dange				
Short circuit current protection delay time	**10**	**250**	**500**		**uS**
Short circuit protection Release	**Release load**				
Discharging Temperature Protection	**-20**		**70**	**±5**	**℃**
Discharging Temperature Protection Release	**-10**		**65**	**±5**	**℃**
Charging Temperature Protection	**-10**		**65**	**±5**	**℃**
Charging Temperature Protection Release	**-5**		**60**	**±5**	**℃**
Discharging Protection Temperature			**/**	**±5**	**℃**
Discharging Temperature Protection Release			**/**	**±15**	**℃**
Cell balance					
Bleed StartPoint		**3.2**		**± 50mV**	**V**
Bleed Current		**30**		**± 10mA**	**mA**
Balance Mode					
Self-consumption current during operation			**⩽50**		**mA**
Self-consumption current in sleep mode			**⩽800**		**uA**
Main loop electrify resistance MOS-R_{DS}	**⩽20**				**mΩ**
Human Interface Specification	LCD, Bluetooth APP				
PCBA Size	128（±2）×66（±2）×<18				**mm**

7 Test conditions, methods and electrical properties

7.1 Test conditions

7.1.1。All the tests were carried out at temperatures of 25 +2 C, relative humidity of 60%+25% RH and atmospheric pressure of 86 kPa~106 kPa, except for special designation.

7.2 Standard charging of battery pack。

。The battery pack is charged with a DC regulated power supply or charger in a constant current and constant voltage mode with a maximum voltage of 14.6V and a maximum voltage of 0.2C until the current is reduced to 2A.

7.3 Standard discharging of battery pack。

（7.2）10.0V。After according to(7.2) methods charging,using 0.5C dischargeing battery over-discharging protection10.0V。

7.4 capacity test of battery pack

（7.2），（7.3）。After according to(7.2) methods charging,After according to (7.3) methods discharging,recording discharge capacity,capacity(AH)=current（0.5C）X time of discharge（hour）

7.5 electro chemistry performance

Test items	test methods	technical requirements
Normal temperature discharge capacity	。The battery pack is charged according to the standard of 7.2, then discharged according to 7.3 standard, and recording the discharge capacity of the battery.	≥97% nominal capacity
-10℃ Discharge capacity	The battery pack is charged according to the standard of 7.2. It is shelved for 8 hours at the temperature of -10±2℃, and then discharged at 7.3 at this temperature to record the discharge capacity of the battery	≥55% nominal capacity
40℃ Discharge capacity	The battery pack is charged according to the standard of 7.2. It is shelved for 8 hours at the temperature of 40±2℃, and then discharged at 7.3 at this temperature to record the discharge capacity of the battery	≥95% nominal capacity
charge retention	The battery pack is charged according to the standard of 7.2. It is shelved for 28 days at the Normal temperature or shelved 7 days at the temperature of 55℃ and then discharged at 7.3 at this temperature to record the discharge capacity of the battery	Charge retention rate ≥80%

cycle life	The battery pack is charged according to the standard of 7.2. It is shelved for 10 mins, then discharge according to the standard of 7.3, in this cycle. Battery capacity is tested once every 25 cycles according to standard charging and discharging, and the test is stopped when the capacity is less than 70% of the rated capacity.	≥3000times

8、包装说明 Packaging instructions

TBD

9、Instructions and Requirement

9.1.Please read the battery instructions and the label on its surface before use.

9.2、.When in use, the battery shall be kept out of heat、high voltage and avoided children’s touching. Do not drop the battery.

9.3.Do not contact contactor together. Do not demolish or disassembly the battery by yourself. Do not put the battery in the damp place to avoid danger.

9.4、.Well disposed the disused battery. Do not put it into fire or water.

9.5.The battery should be stored at room temperature, charged to about 40%-60% of capacity. In case of over-discharge, battery should be charged for one time every 3 months while storing.

9.6.Battery should be stored in conditions specified. For storage higher than one year, performance are not guaranteed.

9.7.Battery must meet the corresponding requirements during transport, such as packaging, documentation, labeling requirements

10 Free-responsibility declaration

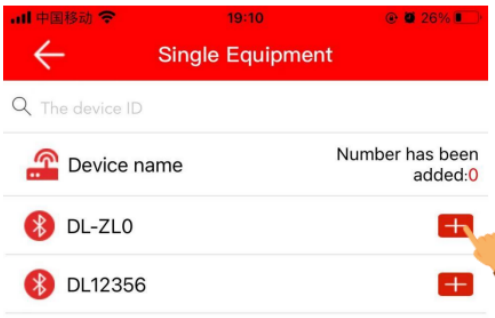
Before using the product, please read the product specifications, user manuals and precautions, understand the scope of usage and application of products; if the product usage errors, wrong or the input circuit is connected with the power supply, load function parameters and product specifications book mark the performance parameters such as inconsistent phenomenon is improper use and by the improper use of products, the load and the surrounding connecting parts are damaged, the company shall not bear any responsibility.

Any items not mentioned in this specification shall be decided by both parties.

The final explanation right belongs to Shenzhen Chaowei Renewable Energy Co.,Ltd..

11. Bluetooth APP download address

12. APP display interface


中国移动
19:10
26%
Single Equipment
The device ID
Device name
Number has been added:0
DL-ZL0
DL12356


中国移动
19:11
26%
Bluetooth connection >
DL-ZL0
Main interface >
50
25
75
0
100
SOC
77.3%
SumVolt
14.1V
Current
0.0A
remaining capacity
23.1Ah
Chg MOS
Dischg MOS
Balance
Max Voltage
Min Voltage
Average
Delta V
Cycles
power
3.551v
3.501v
3.525v
0.050v
0
0.0kw
Fault alarm :0
Device Status
Active balance
Preferences