LIT SERIES - LIFEPO4 BATTERY

DEEP CYCLE LIFEPO4 BATTERY

MODELS:
LIT12.8-200(12.8V-200AH)

ŞARJ VE DEŞARJ
(8.1 - 8.4)

- **8.1** Şarj akımı, Teknik Özelliklerde belirtilen maksimum değerden yüksek olmamalıdır; yüksek akım bataryaya zarar verebilir.
- **8.2** Deşarj akımı, belirtilen maksimum değerden yüksek olmamalıdır; yüksek deşarj akımı bataryaya zarar verebilir.
- **8.3** Uzun süre kullanılmadığında aşırı deşarjı önlemek için hücre periyodik olarak şarj edilmelidir (13.2V - 13.6V arası).
- **8.4** Lütfen kullanımdan sonra bataryayı 12 saat içerisinde şarj edin.

GÜVENLİK VE ÇEVRE
(8.5 - 8.8)

- **8.5** Depolama ortamı standart atmosfer şartlarında; güçlü manyetik alanlardan, güç kaynaklarından ve statikten arındırılmış olmalıdır.
- **8.6** Batarya paketinin kutuplarını (polarite) hiçbir nedenle ters bağlamayın.
- **8.7** Batarya paketine kesinlikle kısa devre yaptırmayın.
- **8.8** Ters kutuplu (reverse polarity) şarj işlemi yapmayın.

KULLANIM VE KURULUM
(8.9 - 8.12)

- **8.9** Batarya paketleri, teknik özelliklere uygun olarak seri veya paralel bağlanabilir.
- **8.10** Batarya paketini suya veya deniz suyuna daldırmayın, ıslanmasına izin vermeyin.
- **8.11** Bataryayı parçalarına ayırmayın (sökmeyin).
- **8.12** Bataryayı aşırı ısıya veya doğrudan ateşe maruz bırakmayın.

1. Preface

This specification describes the type and size, performance, technical characteristics, warning and caution of the LIT12.8-200(12.8V200Ah) LiFePO4 rechargeable battery pack. The specification only applies to LIT12.8-200(12.8V200Ah) LiFePO4 rechargeable battery pack supplied by ENDESAN IC VE DIS TICARET

2. Product and Model

2.1 Product: LIT12.8-200(12.8V200Ah) LiFePO4 Battery Pack

2.2 System Configuration:

Standard Pack: LIT50300115-200Ah-3.2V-4S1P

Charge/Discharge	Positive	M8 Terminal
	Negative	M8 Terminal
Switch	Self-locking switch	
Display screen	LCD-03	

3. Battery Pack Specifications

Items	Standard	Comments
Nominal Voltage	12.8V	4S
Typical Capacity	200Ah	At 0.2C discharge rate
Continuous Discharge Current	≤200A	
Discharge Cut-off Voltage	About 10V	
Charge Input Voltage	14.6±0.2V	Charge Mode: CC/CV. Use a constant current, constant voltage(CC/CV)
Charge Current	≤100A	
Operation Temperature Range	Charge/Discharge	0℃~+45℃/-20℃~+60℃
	Discharge	When the environment temperature is higher than 45℃, please pay attention to ventilation and heat rejection.
Storage Temperature Range	0℃~40℃ (Capacity 80%)	Recommended long-term storage temperature is 15~25℃
Humidity	5%≤RH≤85%	
Cabinet Material	Metal Case	
Total Weight	Approx. 22.5kg±1kg	
Size	(382*260*165mm)±2mm	
Protection Function	Over charge protection, Over discharge protection, Over current protection, Short circuit protection, Temperature protection.	
Function	Bluetooth/Display screen	

4. Standard Test Conditions

All test in this specification should be in standard atmospheric conditions:

Temperature: 25± 5℃, Relative Humidity: 65±20%.

5. Characteristics

5.1 Standard Charge

Charge the battery with the battery special test cabinet, supply 14.6 voltage, constant-current 0.2C(A) current until current down to 0.02C(A).

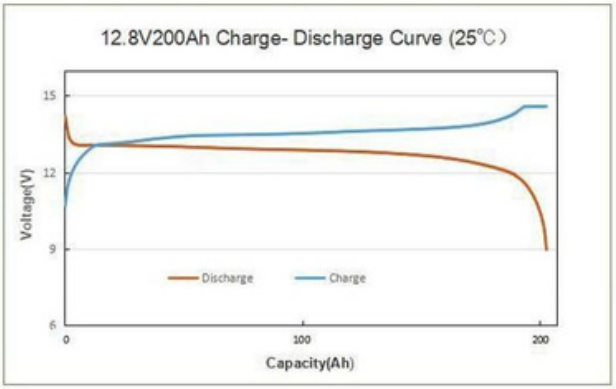
5.2 Standard Discharge

Discharge the battery at 0.2C(A) to 10V or battery cut off voltage.

5.3 Electrical Performance

Test Items	Test Methods	Test Standards
Capacity Retention Rate	After standard charge under 5.1 specified conditions, store the cells for 28 days, then discharge at 0.2C(A) to cut-off voltage.	Capacity retention rate≥80%
Cycle Life	1) Standard charge at 0.2C(A) 2) Rest 0.5~1 h 3) Discharge at 0.2C to cut off voltage 4) Capacity retention rate≥80%	>2000cycles @ 200% DOD; >3000cycles @ 90% DOD; >4000cycles @ 80% DOD;

6. Characteristics Curve



7. BMS Specification

Item	Parameter			Remark
Charging Voltage	14.6V			
Charging Model	CC-CV			
Maximum Charging Current	⩽200A			
Continuous Discharge Current	⩽200A			
The following is the core protection function for cell:				
	Minimum Value	Typical Value	Maximum	
Over charge detection voltage	3.65	3.70	3.75	V
Overcharge release voltage	3.35	3.40	3.45	V
Over discharge detection voltage	2.15	2.20	2.25	V
Over discharge release voltage	2.65	2.70	2.75	V
Over discharge current value	640	760	880	A
Overcharge detection delay time	1000	2000	3000	mS
Delay time of over voltage detection	1000	2000	3000	mS
Over current detection delay time	100	300	500	mS
Balance Voltage	3.27	3.3	3.33	V
Balance Current	150	200	250	mA
Self-Consumption	/	/	800	uA
Temperature Protection				
	Typical Value	Tolerance Value	Delay	Remark
Protect the Temperature (Charging)	55	±5		?
Recovery Temperature (Charging)	50	±5		?
Low Temperature Protection (Charging)	0	±5		?
Cryogenic Release	5	±5		?
Protect the Temperature (Discharge)	65	±5		?
Recovery Temperature (Discharge)	55	±5		?
Low Temperature Protection (Discharge)	-20	±5		?
Cryogenic Release (Discharge)	-15	±5		?