6. After the battery production test is completed, at least 30% SOC should be replenished before storage.

Expired storage criteria

In principle, it is not recommended to store batteries for a long period of time. Dispose the stored batteries as follows.

Table 7-3 Battery recharge period description table

Storage temperature requirements	Actual storage temperature	Recharge period	Remarks
10℃~55℃	≤ 10℃	Not allowed	Recharge period: No need to handle, use as soon as possible. Supplementary power times: The total storage time of supplementary power processing should not exceed the maintenance period
	10℃~20℃	12 months	
	20℃~30℃	9 months	
	30℃~35℃	6 months	
	>35℃	Not allowed	

1. Battery deformation, damage, leakage, directly scrapped, regardless of storage time.
2. The storage time is calculated from the last charge time marked on the supplementary charge label on the battery package. After the battery is properly charged, the latest charge time and next charge time are updated on the supplementary label (next charge time = latest charge time + supplementary charge period).
3. The maximum allowable period and times of storing supplementary power is 3 years or 3 times. For example, once every 6 months, the maximum allowable time is 3 times. Recharge once every 12 months,

maximum allowed 3 times; it is recommended that the battery be discarded if the maximum allowed period and times are exceeded.

4. Long term storage of lithium battery will cause capacity loss. After storage at the recommended storage temperature for 12 months, the irreversible capacity loss of lithium battery is generally 3% to 20%. If you perform a discharge test according to the specifications, the battery may fail the test if its capacity is less than 100% of the rated capacity after storage.

Check the battery before recharge

1. Before replenishing batteries, the batteries need to be inspected for appearance. Only qualified batteries can be replenished for the next step. Unqualified batteries can be scrapped.
2. If the battery does not appear as listed below, it is judged to be qualified for appearance inspection.

   Battery deformation

   Battery case damaged

   Battery leakage

Battery recharge operation

Because the battery module cannot be charged and discharged independently, it is necessary to combine the BCU and the pack together to charge and discharge normally. Therefore, the battery charging system needs to be assembled first, and then the charging and discharging equipment can be connected to recharge the battery.

1. Assembly of battery system: refer to Chapter 4"System installation";
2. After the battery system is assembled, refer to Chapter 5

"Electrical Connection" for Electrical connection.

3. Battery system storage and power supply Description For details, see the Lithium Battery Storage and Power Supply Guide.

7.5 Battery system disposal

The disposal of the battery system must comply with local regulations on waste e-waste and used batteries.

- Do not discard the waste battery system with your household waste;
- Avoid exposing waste batteries to high temperature or direct sunlight;
- Avoid exposing waste batteries to high humidity or corrosive environments;
- For more information, please contact Tecloman.

Français

Élimination du système de batterie

L'élimination du système de batteries doit être conforme à la réglementation locale sur les déchets électroniques et les piles usagées.

- Ne jetez pas le système de batterie aux déchets avec vos déchets ménagers ;
- Évitez d'exposer les piles usagées à des températures élevées ou à la lumière directe du soleil ;
- Évitez d'exposer les batteries usagées à l'humidité élevée ou à l'environnement corrosif ;
- Pour plus d'informations, veuillez contacter Tecloman.

8 Technical Data

Table 8-1 Battery system parameters

Item	Parameter					
System model	Firefly 10-H3	Firefly 10-H4	Firefly 10-H5	Firefly Pro-H6	Firefly 10-H7	Firefly 10-H8
Battery system	BP-2.5 (51.2V/2.5kWh/[illegible]kg/LiFePO4)					
	3pcs	4pcs	5pcs	6pcs	7pcs	8pcs
Rated capacity	[illegible]kWh	10.[illegible]kWh	13.[illegible]kWh	15.[illegible]kWh	17.[illegible]kWh	20.[illegible]kWh
Available electricity[1]	[illegible]kWh	10.[illegible]kWh	13.[illegible]kWh	15.[illegible]kWh	17.[illegible]kWh	20.[illegible]kWh
DOD	Maximum 100% (recommended 90%) adjustable					
Maximum working voltage	17[illegible]Vdc	228.[illegible]Vdc	282.4Vdc	351.[illegible]Vdc	[illegible]Vdc	[illegible]Vdc
Nominal voltage / Operating voltage range	153.6Vdc 134.4–1[illegible]2.2Vdc	20[illegible].8Vdc 179.2–2[illegible]3.6Vdc	256.0Vdc 224.0–2[illegible]2.4Vdc	30[illegible].2Vdc 268.8–3[illegible]1.2Vdc	358.4Vdc 313.6–40[illegible]0.6Vdc	[illegible]09.6Vdc 358.4–46[illegible]0.2Vdc
Nominal charge and discharge current	25A					
Maximum continuous charge and discharge current	50A					
Maximum charging and discharging power	[illegible]kW	10.[illegible]kW	13.[illegible]kW	15.[illegible]kW	17.[illegible]kW	20.[illegible]kW
Charge and discharge mode	CC/CV/CP					
Overvoltage category	OVC II					
External communication	CAN/RS485/Ethernet/Wi-Fi					
Self-consuming	≤14W	≤14W	≤15W	≤15W	≤16W	≤16W
Short-circuit current						

Operating ambient temperature[1]	Charge 0~50℃, discharge -20~50℃					
Storage ambient temperature	-10~50℃					
Ambient humidity	5~90%(RH) without condensation					
Heat dissipating method	Natural heat dissipation					
Protection level	IP55 indoor & outdoor (Ground installation, no rain, no snow, no direct sunlight)					
Dimensions (W*D*H±2mm)	650×52[illegible]×[illegible] mm	650×52[illegible]×942 mm	650×52[illegible]×[illegible] mm	650×52[illegible]×1278 mm	650×52[illegible]×[illegible] mm	650×52[illegible]×[illegible] mm
Weight (±0.5kg)	1[illegible]0kg	148kg	17[illegible]kg	20[illegible]kg	2[illegible]0kg	27[illegible]kg
Certification & Standard	CE/IEC62619/UN38.3/RoHS & IEC62040/[illegible]					
Warranty[2]	10 Years					

1. Test conditions: ambient temperature 25±2℃, relative humidity 65%±25%RH, atmospheric pressure 86kPa~106kPa, 100%DOD, 0.5C charging and discharging mode CC-CV/CC. The actual available power of the system is affected by the system connection and the efficiency of the inverter.
2. Under extreme ambient temperature, module charging and discharging will derate. The corresponding relationship between charging and discharging current value and temperature range is shown in the following table.

	Battery temperature range	Maximum continuous operating current(A)
Charge	T<0	0
	0≤T<5	0.[illegible]C/5
	5≤T<10	0.2C/10
	10≤T<15	0.1C/20
	15≤T<20	0.6C/30
	20≤T<35	1C/50
	35≤T<[illegible]	0.5C/10

	35℃<T≤45	0.5C/25
	45℃<T≤50	0.3C/15
	50℃<T≤54	0.2C/10
	T>54	0
Discharge	-20℃	0
	-20℃<T≤-10	0.2C/10
	-10℃<T≤-5	0.3C/15
	-5℃<T≤0	0.4C/20
	0℃<T≤5	0.5C/25
	5℃<T≤10	0.6C/30
	10℃<T≤15	0.8C/40
	15℃<T≤35	1C/50
	35℃<T≤45	0.8C/40
	45℃<T≤50	0.5C/25
	50℃<T≤54	0.3C/15
	T>54	0.2C/10

3. For details about the battery warranty, see Firefly Pro battery system warranty manual

9 FAQs