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Freedom LiTE Battery Guarantee

Update Released – August 2022

Version Notice: This warranty update was issued in August 2022 and is applicable to all LiTE products purchased from Freedom Won from 1 September 2022 onwards. For products sold by Freedom Won prior to 1 September 2022 but after 1 September 2019 please refer to the previous version of the Freedom Won LiTE warranty dated March 2020. For Products purchased before 1 September 2019 please refer to the Freedom Won LiTE warranty dated January 2018.

The range of Freedom LiTE lithium iron phosphate batteries is supported by an extensive product guarantee, which is backed by Freedom Won Pty Ltd or its parent company or companies where applicable.

This warranty covers the following battery ranges:

- Freedom LiTE Home (5kWh to 30kWh)
- Freedom LiTE Business (40kWh to 80kWh)
- Freedom LiTE Commercial (100kWh to 700kWh)
- Freedom LiTE Industrial (800kWh)
- Freedom LiTE Marine (5kWh to 30kWh)

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Freedom Won guarantees that the service life of the Freedom LiTE battery will achieve at least a **10 year** service life or deliver an equivalent in kWh of at least **4 000 charge-discharge cycles**, whichever event should first occur.

The battery is defined as satisfactorily achieving this service duration or duty if it is still able to produce 60% or more of the model's stated new capacity in kWh from a complete discharge. The discharge test shall be done at a current equal to or less than 20% of the Ah rating, i.e.

- Amperes during discharge test = $0.20 \times \text{Freedom LiTE Ah rating}$

Example for Freedom LiTE Home 10/8

- Amperes during discharge test = $0.20 \times 200 = 40 \text{ Amps}$

The integrated battery management system (BMS) calculates and records the pro rata number of cycles that have been completed by the battery, where one complete cycle in terms of this warranty is a discharge from 100% State of Charge (SoC) to 20% SoC – which is equivalent to 80% Depth of Discharge (DoD) – followed by a charge again to 100% SoC. Discharge deeper than 80% DoD and less than 80% DoD is also counted into the total number of cycles on a pro rata basis. Near the end of the warranty period a LiTE may not be able to achieve an 80% DoD, and hence each cycle at the available capacity will count towards the guaranteed equivalent 4000 cycles on a pro rata basis.

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Each Freedom LiTE battery is preconfigured to prevent ordinary discharge below 90% DoD. 100% DoD is allowed when the discharge from 90% to 100% DoD is only for the purposes of supplying the standby power draw to the inverter when there is no AC input. It is the responsibility of the installer or designer to ensure that the battery and solar capacities are adequate to achieve an **average** daily DoD of 80% or less, or to ensure that the inverter reverts to grid consumption at or above 80% DoD (for grid connected systems). The additional margin (from 80% to 90% DoD) is only intended to be used for abnormal circumstances such as grid outages for grid connected systems and for cloudy weather or above expected demand for off grid systems. The LiTE should not spend more than 20% of its warranty life (equivalent to 2 years) below 20% SoC to maintain the warranty. This parameter is recorded by the BMS.

The Freedom LiTE should not be kept and/or operated in a location that regularly experiences extended periods of ambient temperatures above 35 degrees Celsius or below zero degrees Celsius. The extreme ambient operating range is -20 to +60 degrees Celsius. In terms of the warranty the battery may not be charged below 0°C, although discharge is allowed down to -20°C. The following temperature related operation will void the warranty:

- Internal battery temperatures below -20°C
- Internal battery temperatures above 60°C
- Internal battery temperatures experienced for more than **six hours per day on average** in the 10-year warranty period in the temperature region 30-35°C
- Internal battery temperatures experienced for more than **one hour per day on average** in the 10-year warranty period in the temperature region 35-45°C
- Internal battery temperatures experienced for more than **10 minutes per day on average** in the 10-year warranty period in the temperature region 45-60°C

The LiTE should also be installed indoors away from direct sunlight, precipitation, extreme moisture, and sea spray. Failure relating to water/moisture ingress or corrosion resulting from the presence of environmental corrosion agents is not covered by the warranty.

If the LiTE is installed in a small room with inverters and charge controllers it is necessary to install an extraction fan or air conditioner to extract the heat from the inverters and charge controllers. Similarly, if the system is installed in a container the container must be out of direct sunlight and fitted with insulation cladding and ventilation fans or air conditioners. In hot environments (with ambient temperatures regularly exceeding 30°C) the battery room **must** be fitted with air conditioning to maintain a room temperature in the range **20-25°C**.

Note: Above temperature restrictions relate to battery longevity and do not pertain to safety concerns. The battery is designed to operate safely up to 60°C.

Should a LiTE be found unable to produce 60% or more of its 'as new capacity' in kWh prior to the 10-year service life, or 4 000 equivalent cycles being achieved, Freedom Won undertakes to service the battery to ensure that it thereafter again meets this performance objective.

The capacity of the battery will be confirmed using kWh readings taken from the BMS, which may be corroborated by any suitable DC meter. The discharge test shall be conducted at 0,2C from 100% SoC.

The LiTE is fitted with a high-performance DC breaker. This device has an operational cycle life limit that is reduced by high inrush currents into some types of connected battery inverters and must not be re-closed repeatedly if the breaker has been tripping because of an internal or external problem. This breaker may only

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be closed a maximum of 150 times in the warranty period (this is recorded by the BMS). If this number is exceeded the warranty will exclude any failures in the LiTE relating to the breaker. The breaker should not be re-closed after a trip without first contacting Freedom Won or an accredited representative for troubleshooting assistance. The DC Bus must be pre-charged before switching on the breaker (see operation and installation manual). Breaker failure relating to neglecting to pre-charge the DC bus is not covered by this warranty.

Damage relating to a lightning strike or other external causes is not covered by the warranty.

Freedom Won or one of its designated partners will perform necessary servicing on site, or alternatively (at Freedom Won's discretion) require shipping of the battery to Freedom Won or an accredited service centre. If a Freedom Won or partner technician be required to travel to a site to perform maintenance related to a warranty claim, commercial or standard travel costs will be covered by the warranty. Non-commercial travel (air charter etc.) and special fees (to enter parks etc.) are not covered by Freedom Won. Should Freedom Won, in relation to a warranty claim, request a LiTE to be transported to Freedom Won or a service centre, the cost of the preparation for transport, transport to and from the service centre, and re-installation, is not covered by this warranty.

A report on a suspected underperforming battery must be received by Freedom Won before the warranty period has elapsed or the cycles are exceeded. Freedom Won will require the owner or installer to adequately demonstrate the lack of performance or alternatively to facilitate remote internet access for Freedom Won to the battery in order to run the performance test.

Every Freedom LiTE is fitted with a tamper seal on the back cover. If this seal is damaged or compromised in any way or there is other evidence of tampering or abuse the guarantee becomes void.

Apart from the lithium cells themselves, the 10-year guarantee extends to the proper operation of the remainder of the devices in or on the LiTE provided that it has been operated strictly within the parameters described in the specification sheet and installation manual.

The exterior paint coating on the LiTE is only guaranteed so far as it has been properly applied and a claim must be supported by evidence of defective materials or application – damage to the coating caused by impact or scuffing is not covered in this guarantee.

The warranty is only valid and applicable if the LiTE was installed by an authorized Freedom LiTE installer or approved and commissioned by Freedom Won. Should the LiTE need to be relocated this must also be done by an authorized installer. The warranty is also only valid if the LiTE and all associated charges such as delivery costs is fully paid for by the installer or if necessary, directly by the owner within 60 days of the final amount becoming due.

The guarantee period begins at the date of the final invoice, which shall include reference to the serial number of the battery as depicted on the tamper seal.

LiTE batteries that are outside of the warranty period will still receive full support from Freedom Won for 15 years after the date of initial purchase from Freedom Won.

Note specifically pertaining to LiTE products sold in Australia:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or

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damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Warranty claims for LiTE products should be addressed as follows:

Warranty claims pertaining to products sold in Africa, Malaysia, the Philippines, Europe and the United Kingdom:

Attention: Service Manager

Email: support@freedomwon.co.za

Physical Address:

Kimbult Industrial Park
Unit C3 & C4
9 Zeiss Rd
Laser Park
Honeydew
2040
South Africa
www.freedomwon.co.za

Warranty claims pertaining to products sold in Australia, New Zealand and all other countries of the Oceania region:

Attention: Hennie Coleman

Email: sales@freedomwonaustralia.com

Contact Number: +61 422251938

Physical Address:

Stalwart Energy Australia Pty Ltd (ABN 17 132 808 694)
17/98 Thorn Street
Kangaroo Point
4169, QLD
www.freedomwonaustralia.com

Warranty thus confirmed by signature

A handwritten signature in black ink, appearing to read "Antony John English".

Antony John English

Director

Freedom Won Pty Ltd