Battery Limited Product Warranty

Applicable Area: The Republic of South Africa [RSA]
Applicable to sales from: 10th Mar, 2023
Product type: IES-BATT-114R | 129R | 143R | 157R | 172R | 186R | 200R | 215R | 229R

Lithium-Ion Storage Battery
This limited warranty [hereinafter "Warranty"] specified below applies to Infinite Energy Storage [Pty] Ltd [IES] lithium-ion battery and the Accessory Components [hereinafter "Products"] supplied by Infinite Energy Storage [Pty] Ltd [IES] through Authorized Reseller.

1. Purpose
The primary purpose of this Warranty is to clearly define the matters related to Warranty Policy of Products.

2. Warranty Period
IES warrants that the product will be free of defects caused by poor workmanship or defective materials, and the product has 8000 cycles lifetime 10 years warranty at 80% DOD / 25 degrees centigrade / 0.5C/70% EOL, whichever comes first.

Capacity performance warranty for increasing battery capacity by adding additional battery modules later:
IES warrants that the additional battery modules shall retain seventy percent [70%] of Nominal Energy for 8000 cycles or ten [10] years [whichever comes first] after the warranty commences thereon.

The warranty commences for the period of ten [10] years from the earlier of:

A. Invoice provided by customer: standard warranty of 120 months [10 years] from invoice date.
B. Customer fails to provide invoice: three [3] months after the date the Product was manufactured.

3. Limitation of Warranty Scope
In the case of defective products, IES will repair or replace the product if the product is returned during the Warranty Period, in its original packaging with the necessary documentation required. It remains the prerogative of IES to decide at its sole discretion whether it will repair or replace the defective products. This Warranty does not include any accessories or tool kits provided with the Products.

4. Warranty Conditions

The warranties in respect of the Product only apply if the Product:

A. It is purchased from IES or an authorized reseller in the territory.

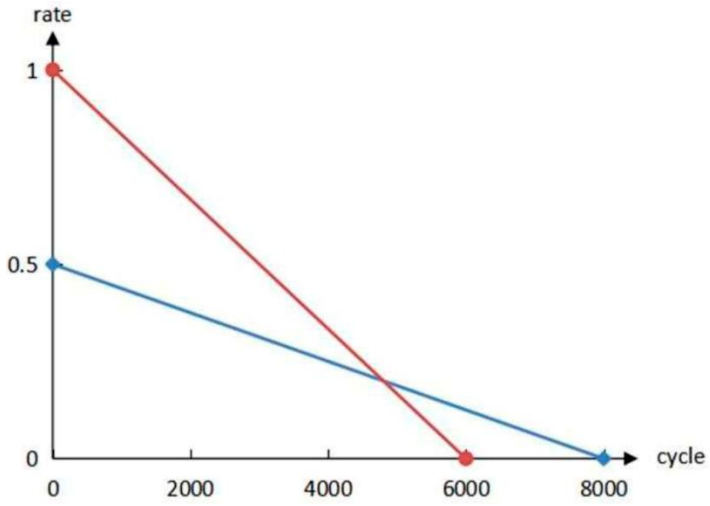
B. Has the official IES serial number.

C. Is installed in a battery module in the Territory.

D. Is installed, operated, and maintained in accordance with the Product Instructions and manuals.

E. Charging/Discharging rate and cycle

The standard warranty cycle [8000] should be based on the charging/discharging rate 0.5C. If the charging/discharging rate is 0.5C. If the charging/discharging rate is 1C, the warranty cycle is 6000. Check the following charging/discharging rate and cycle curve.



The warranty would be invalid if the defect in or failure of the Product's performance is attributable to your misuse, abuse, accident, or non-observance of the product installation and operation instructions.

5. Preferred Operating Conditions

A. Temperature:

Operating Temperature Range: 5°C to 45°C Charge/Discharge derating occurs when operating outside these temperatures, and the BMS/BMU communication errors might occur

-Optimal Temperature Range: 20°C to 30°C

-Storage Temperature Range: -20°C to 60°C

B. Humidity:

-Operating Humidity Range: 15% to 85% RH [non-condensing]

-Optimal Humidity Range: 45% to 75% RH [non-condensing]

-When using air conditioning to control temperature, do not go below 20°C to avoid condensing on electrical connections.

C. Moisture:
As the battery has an IP20 rating, it is not protected against water ingress. Therefore, it should be kept in a dry environment, away from any sources of liquid or high moisture. Ensure the storage and operating areas are free from condensation and potential water exposure.

Additional Recommendations:
Avoid exposure to direct sunlight or heat sources.
Avoid installing batteries and inverters in the same room.
Avoid storing/standby lithium iron phosphate [LiFePO4] batteries at 100% charge for extended periods, can lead to accelerated degradation and reduced performance over time.

Here are key recommendations to ensure optimal battery lifespan and performance:

A. Partial Charge Storage:
Store LiFePO4 batteries at a partial charge, ideally around 50% of their capacity. This minimizes stress on the battery chemistry and helps to maintain long-term performance.

B. Avoid Full Charge for Long Periods: Avoid Standby of LiFePO4 batteries at 100% charge for extended periods. High voltage storage can lead to an increased risk of degradation, capacity loss, and potential safety hazards such as overcharging.

C. Mandatory Weekly Balancing Cycle: Regularly cycle the batteries between 100% and 80% State of Charge to ensure proper cell balancing and accurate SOC calibration. Charging to 100% enables the BMS to equalize individual cell voltages, which prevents capacity drift and premature degradation. This full charge also provides a known reference point for the BMS to recalibrate SOC calculations. To prevent imbalance and SOC drift, this cycle shall be performed at least once every 7 days.

By following these recommendations, you can maximize the lifespan and reliability of LiFePO4 batteries, ensuring they perform optimally throughout their service life.

6. Exclusions of Warranty
To the extent permitted by law, IES excludes all liability for the product to the extent that any damage or defect has been caused or contributed to by the following:

A. The warranty period or cycles specified above have already expired.

B. Inverter or charger failure.

C. The product is being installed with inverters or chargers that have not been certified by IES.

D. The treatment or operation of the product is improper, negligent, or in any other way inappropriate, including using the product outside the recommended ambient temperature condition as specified in the product instructions.

E. Transportation, including but not limited to incorrect packaging, dropping, trampling, deforming, impacting, or spearing with a sharp item.

F. Storage, installation, commissioning, modification, or repair of the Product that has been performed by a person other than IES or an IES' certified installer or repair center.

G. Abuse, misuse, negligence, accidents, or force major events, including but not limited to lightning, power surge, short-circuits, liquid spillage, flood, fire, extreme cold weather, or other events outside the reasonable control of IES.

H. Any attempt to extend or reduce the life of the product without written confirmation from IES, whether by physical means, programming or others.

I. Removal and re-installation at another place from the original installation without the written confirmation from IES.

J. Water, liquids, conductive dust, or corrosive gas.

K. The product has been connected with different types of battery modules.

L. The battery has been connected to a battery not from IES.

M. Product damage and defect caused by the End User's improper use, misuse, or abuse, which are non-conforming with the User Manual and product specifications.

N. Normal wear and tear or deterioration, or superficial defects, dents, or marks that impact the performance of the Product.

O. Theft or vandalism of the Product or any of its components.

P. End User fails to provide the correct product serial number, or the product serial number is undecipherable or has been modified without permission by IES.

Q. The product is not suitable for supplying life-sustaining medical devices and automotive applications.

R. Product damage caused by external force, force major [causes of natural disasters such as unforeseeable, unavoidable and insurmountable objective events, including but not limited to war, civil war, strike, riot or other activities intervened by government, terrorism, war, riots, strikes, unavailability of suitable

and sufficient labor or materials and other events which are out of control of IES] or other third parties.

S. Failure to report the product fault and return the suspect product to an IES service center within two weeks of the alleged problem having appeared.

7. Claim Payment

Claims can be made by an Authorized Reseller from whom the Product was purchased. To process the Warranty Claim, the following items must be provided:

A. Invoice for the procurement of the Product.

B. Product serial number and initial installation date.

C. Provide the log data recorded by the Product as input to IES's assessment of the warranty claim.

D. Confirmation if the battery was a single installation or parallel installation - if parallel, provide the serial numbers of the other batteries and the installation date for each.

E. Acceptance of the Warranty Terms and Conditions and commercial conditions in case it is not a valid warranty claim.

IES may contact the buyer for further information regarding the defect.
IES may require the buyer to complete root analysis testing of the product to provide evidence supporting the claim.
Final verification of the claim will be made by IES.
IES reserves the right to refuse exchange requests where adequate information is not provided.

To request the replacement of a battery, you must contact the IES service center.
Email: support@ies.co.za

If there is a dispute regarding IES's verification of the claim, the Product must be evaluated by an internationally certified testing lab or an IES certified 3rd party testing company. The customer [You] will bear the cost of any 3rd party evaluation service charge [unless the claim is proven to be valid, in which case IES will be responsible for the testing costs].

If any testing of the Product's capacity is required, the testing must occur under the following conditions:

A. The test is based on a single IES-BATT-Series battery module.

B. The ambient temperature of the product must be 25°C ± 2°C.

C. The initial temperature of the battery pods must be 25°C ± 1°C.

D. Charge IES-BATT-Series Battery Module ----- Constant voltage [55.2V] and current [56A] to charge till all the cell voltage above 3.50Vdc or till the charge current is less than 1Amp.

E. Discharge IES-BATT-Series Battery Module ----- Constant current [56A] discharge till battery to low voltage [45.6V] protection.

If the product is no longer available, IES may, at its discretion, replace the product with a refurbished product or a different product or parts with equivalent functions and performance according to the latest technical information available. Replacement of battery, components, or products may not be brand new, but with quality and specification compliant with the product specifications.

8. General Provisions

This warranty is subject to the laws of RSA.
If any provision in this document is unenforceable, illegal, or void, or makes this document or any part of it unenforceable, illegal, or void, then that provision is severed, and the rest of this document remains in force.
If any provision in this document is unenforceable, illegal or void in 1 jurisdiction but not in another jurisdiction or makes this document or any part of it unenforceable, illegal or void in 1 jurisdiction but not in another jurisdiction, then that provision is severed only in respect of the operation of this document in the jurisdiction where it is unenforceable, illegal or void.

9. Definitions of Terms

In this document:

A. Authorized Reseller means an approved IES retailer or distributor in the Territory.

B. Consumer Law means: ZA Consumer Law.

C. Minium Capacity means at least 70% of the Nominal Energy during the Warranty Period.

D. Nominal Energy means the initially rated capacity of the Product as printed on the label of the Product.

E. Product means IES-BATT-Series Battery Module manufactured by IES.

F. Product Instructions means the instructions and manuals issued by IES with the Product that set out how the Product should be installed and operated.

G. IES means Infinite Energy Storage.

H. Territory means all the regions of ZA, depending on where the Product was purchased.

I. You mean the natural person who acquired the Product.

10. Applicable Law

This warranty is subject to the law of ZA. Products come with guarantees that cannot be excluded under the ZA Consumer Law. The Buyer is entitled to a replacement for a major failure for any other reasonably foreseeable damage. The Buyer is also entitled to have the goods repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure, but it will affect the normal use of the product. The benefits provided by the warranty are in addition to any other rights and remedies of the consumer under a law in relation to the goods or services to which the warranty relates.

Terms and conditions are limited to IES.