



**ALPHA
OUTBACK
ENERGY**

AOESS48V-LFP4100

Lithium battery

Limited Warranty

Thank you for using Alpha and Outback Energy (AOE) residential lithium batteries. In order to let you experience the product swimmingly, Warranty time is provided which you can find the AOE product's lifetime, usage condition and other information. Before using this product, please read the Warranty carefully, so that you can use it correctly and prevent the infringement of consumer rights. As for the content change, we may not have prior notice.

Scope of limited warranty coverage

Following Warranty service is provided for the Lithium Ion Battery "AOESS48V-LFP4100" purchased after September 1st 2023 (hereinafter, "product") and sold by Alpha and Outback Energy GmbH (hereinafter, "AOE") to customers and is extended to the original end user purchaser, and when the Product remains at its original installed location, is transferable to any subsequent owner of the location, or subsequent title holder of the Product upon satisfactory proof of succession or assignment (all such persons hereinafter referred to as, "customer").

Applicable Region

The Warranty is only applicable for residential application Products sold in the territory of EMEA (Europe, Africa and Middle East).

Limited Product Warranty

AOE warrants the battery modules contained in the product to be free from defects in materials and product workmanship under normal application, installation, use, and service conditions for:

1. AOE grants a 7-years warranty, from the date of product purchase by the first customer, on battery capacity retention of maximum 70% from initial capacity if used properly.
2. Product Warranty Period: 7-years after the Date of the customer purchase invoice.
3. Product Capacity Warranty: First 7-years use and at least Seventy percent (70%) of battery's usable capacity (net capacity) after the seventh (7th) year of the date of invoice from vendor.

3.1. Capacity Test Standard:

Environment Temperature: 15~30°C

Working Temperature: 15~30°C

Charge/discharge method:

- i. Discharge the battery with constant 0.33C until the battery voltage is 43.2V or battery self-protection automatically.
- ii. Lay aside the battery for 30mins.
- iii. Charge the battery with constant 0.2C and constant 56.0V until the current is 0.05C or BMS trigger OV protect.
- iv. Lay aside the battery for 30mins.
- v. Discharge the battery with constant 0.33C until the battery voltage is 43.2V or battery self-protection automatically. Calculate discharged capacity. Monitor current timely. (If it's constant current, Calculate formula is: discharge time × constant current value=capacity).
- vi. Charge the battery with constant 0.2C and constant 56.0V until the current is 0.05C or BMS trigger OV protect.

- 3.2. If the battery is within capacity warranty period and the battery capacity is lower than warranted capacity which verified by personnel recognized or authorized by AOE, AOE will employ one of the following Limited Warranty Remedies as set forth in Section 3 below. This Limited Product Workmanship Warranty does not in any way address or relate to the Product's energy retention capacity. At end of lifetime the customer has to ship to the producer (AOE) the products from market. Producer (AOE) will store the product free of charge from Customer for recyclability. Cost of environmental taxation is bear by producer (AOE).

Limited Warranty Remedies

AOE In the event that any Product covered by the warranty in this Warranty Letter and confirmed by AOE to be defective or non-conformity, AOE, at its sole discretion will take one of the following remedies:

1. AOE will repair or replace the product with a new or refurbished product.
2. AOE will provide an additional new or refurbished product to restore deficient output.
3. AOE will refund the customer the original product purchase price. AOE, in its sole discretion, may pro-rate any refund by the number of months from the date of purchase by the first customer.

Limited Remedy Conditions

When one of the Limited Warranty Remedies is employed, the following conditions will apply:

1. The warranty remedy will extend only to claims received before the end of the warranty period.
2. The original warranty period remains in effect and will not be extended, nor will a new warranty period begin, upon repair, replacement, addition, or pro-rated refund of the defective product.
3. Any system failure, fault or warning information must be reported to Alpha and Outback Energy GmbH or authorized service partner within 2 weeks of appearance.
4. Product shall be installed by personnel recognized or authorized service partner.
5. Customer shall correctly operate and use the system according to user manual, installation manual and Integration Guide provided by AOE for Outback Power Inverters and Charge Controllers with no active communication.
6. Customers shall provide the proof of the original purchase of the product.
7. Provided that in any event the installation of the Subject of the Warranty for the Customer shall be completed within twelve (12) months from the date of manufacturing date of the Subject of the Warranty.
8. The ambient temperature during the operation of the product must not exceed 0 °C~45°C temperature range and the product shall not be exposed to or to be stored in a temperature higher than 50°C. The battery room must be ventilated in accordance with the requirements of the battery manufacturer.
9. The product can only be installed and operated in household energy storage applications with an average of one full cycle per day. The AOESS48V-LFP4100 battery is not suitable for supplying life-sustaining medical devices and automotive or others application. The warranty will be voided if usage exceeds household energy storage applications.

Product must be operated with a battery inverter approved by Alpha and Outback Energy GmbH as stated in the compatibility list of AOE from time to time.

Full cycle: Discharge the usable capacity of a fully charged battery and fully charge it afterwards. Micro cycles sum up to full cycles according to amount of energy charged and discharged

10. Remedy options may not be combined. Only one remedy option will be employed at AOE's sole discretion.
11. The warranty remedy is applicable to the product only and does not apply to any other system components or parts.
12. When product is the subject of third-party financing, any applicable refund will be paid to the title-holder of the product.
13. Product removal, packaging, transportation, reinstallation, and related costs and fees are excluded from these limited warranties.
14. Product that is replaced by AOE shall become the property of AOE.

Limited Warranty Exclusions

The warranties above in Sections 2 and 3 are void and do not apply under the following:

1. Products not sold by AOE.
2. Expiration of warranty, no evidence of purchase, or no proof of installation by a qualified technician.
3. Altered, removed, or illegible product serial number(s).
4. Any Product repaired by anyone other than AOE.
5. Cosmetic variations, stains or scratches that do not affect energy retention.
6. Damage due to lack of compliance with the manual and Integration Guide provided by AOE.
7. Charging, using and storing battery system near a heat source such as fire and heater. If the battery leaks or releases strange odour, please remove it from place near fire place immediately.
8. Using battery pack in a very hot environment, such as under direct sunlight or in car on hot day. The battery pack will overheat which will affect battery performance and shorten battery life!
9. Damage or corrosion resulting from environmental pollution such as soot, chemical vapors, acid rain, immersion in water, whether caused by flooding or otherwise, and any type of mold.
10. Damage caused by inadequate or improper usage, alteration, installation, wiring, handling, removal, maintenance, storage, packaging, or transportation.
11. Damage caused by abuse, neglect, vandalism, accident, animals or insects, or external stress, such as, but not limited to, wet conditions, any impact or force or shock greater than set forth in the specifications.
12. Damage from non-compatibility with, or defects in, system-related parts and components not otherwise supplied by AOE or its agents or representatives.
13. Damage to the surface exterior such as, but not limited to, cuts, scrapes, scratches, punctures, penetrations, or wear and tear, from objects.

If there are above phenomenon (including but not only limited), please contact the manufacturer, do not disassemble by yourself. We assume no responsibility for the accident of maloperation in accordance with the warranty letter. The changes of contents are subject to the AOE.

Obtaining Warranty Performance

Customers who believe they have a justified claim covered by this Limited Warranty must immediately notify an authorized AOE representative, or contact AOE directly by writing to: Alpha and Outback Energy GmbH Hansastraße 8, 91126 Schwabach, Germany re.support@alphatechnologies.de Claims must accompany evidence of the product purchase date by the customer. The return of any product will not be accepted by AOE unless accompanied by a valid return material authorization and prior written authorization issued by AOE.

Force Majeure

AOE shall not be held responsible or liable to the customer or any third-party arising out of any non-performance or delay in performance of any terms and conditions of sale, including this Limited Warranty, due to acts of God, war, riots, strikes, unavailability of suitable and sufficient labor, material, die, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitations, any technological or physical event or conditions which is not reasonably known or understood at the time of the sale of the product or the claim.

Warranty Claim

Warranty claim shall be reported to Alpha and Outback Energy GmbH Partner in below format:

1	Product type	
2	AOESS48V-LFP4100 configuration	
3	SN of Battery	
4	Installation date	
5	Installation Location	
6	Abnormal description	

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For more information, please visit www.alpha-outback-energy.com