

ALLIANCE INTELLIGENT BATTERY SERIES™

LITHIUM ION LIMITED WARRANTY

American Battery Solutions, Inc. (“Manufacturer”) warrants to the original purchaser from Manufacturer or from a dealer or distributor authorized by Manufacturer (“Customer”) that its Alliance Intelligent Battery Series, Lithium Ion (“Battery(ies)”) listed in the table below, if used in an approved application, will be free from defects in material and/or workmanship under normal use and service during the period commencing on the earlier of the date on which the Battery is purchased or six (6) months after the date of manufacture and continuing for the duration stated in the table below (the “Warranty Period”). If the Battery becomes unusable (not merely discharged) due to defect in material and/or workmanship within the Warranty Period, subject to the exclusions listed below, Manufacturer will credit, replace, or repair, if serviceable, the Battery. **This warranty is extended only to a Customer and is non-transferable.**



Subject to the terms and conditions outlined herein, Manufacturer warrants to Customer that the Battery(ies) will deliver 60% or more of rated Amp-hour capacity when tested at 70-85°F (21-29°C) for the application-specific Warranty Period as per Table 1 below.

Manufacturer warrants the Battery Management System (as defined below) for 4 years from the initial purchase date, regardless of Customer’s application.

Table 1 – Warranty Period

Product	Free Replacement or Repair Period (months)	Pro-Rated Credit Period (months)	Total Warranty Period (Years)
MOTIVE APPLICATIONS			
E48-2.0	60	24	7
E24-2.0	60	24	7
STATIONARY APPLICATIONS			
E48-2.0	60	24	7
E24-2.0	60	24	7

DEFINITIONS

Battery Management System (“BMS”) - means the printed circuit board together with the communications, firmware, and software found in the BMS.

Motive Application - means product applications where the Battery is routinely exposed to vibration, lateral and/or vertical forces as a result of installation on or inside moving equipment. Examples include, but are not limited to, golf cars, floor cleaning machines, aerial work platforms, utility vehicles, and personal electric vehicles.

Stationary Application - means product applications where the Battery is operated in a fixed and stationary position and is NOT a Motive Application.

WARRANTY EXCLUSIONS

This Limited Warranty does not cover Batteries sold by Manufacturer to third-party Original Equipment Manufacturers (“OEMs”). Please contact the OEM for warranty information.

Without the involvement of the Manufacturer in system design and Manufacturer’s express written authorization, Batteries shall not be used as a primary or backup power source for life support systems or other medical equipment, or any use where product failure could lead to injury to persons or loss of life or catastrophic property damage. Use in this manner is at purchaser’s or end users own risk. To the extent permitted by law, Manufacturer disclaims any and all liability arising out of any such use. By purchasing the Batteries, Customer agrees that it will not use the Batteries for such uses or market or re-sell the Batteries for such uses, and Customer agrees to indemnify and hold Manufacturer harmless from and against any claims asserted against, and any liabilities incurred by, Manufacturer as a result of Customer’s violation of this provision. Further, Manufacturer reserves the right to refuse to service any Battery used for these purposes and disclaims any and all liability arising out of Manufacturer’s refusal to service.

This warranty does not cover defects that are caused by normal wear and tear, normal capacity degradation over battery lifetime, inadequate maintenance, insufficient ventilation, transportation, storage or faulty repair, misuse, neglect, accident or abuse, modification to the Battery, failure to observe operating instructions and parameters or improper installation. This warranty does not cover defects caused by external influences while in the Customer’s possession, including unusual physical or electrical stress such as power surges, uncontrolled voltages and currents, system harmonics, lightning, flood, fire, exposure to excessive hot or cold temperatures, or accidents. This warranty does not cover any damage that may occur as a result of improper connection, incorporation, charging (undercharging, overcharging, over-discharging), or installation.

For further clarity, this warranty is also void if the data logger is destroyed or altered or if the Battery:

1. is damaged due to shipping or mishandling,
2. operates (charge or discharge) below or above its authorized temperature range (as measured and logged by the Battery internal data logger which can be read by any CAN-capable diagnostic tool with ABS CAN database. See ABS for CAN database),
3. operates at an average temperature exceeding 80°F (27°C) over the life of the Battery (as measured and logged by the Battery internal data logger),
4. is not maintained in accordance with the parameters as set forth in the English language version of the User’s Guide,
5. is charged with a battery charger, charging algorithm or unregulated charge source that does not comply with the Manufacturer’s recommendation as set forth in the English language version of the User’s Guide,
6. is subjected to excess vibration as might be caused by out of balance or improperly operated pads in floor burnishing machines,
7. manufacturing date codes, safety certification numbers or serial and tracking numbers are destroyed or altered,
8. is disassembled, altered, or repaired by someone other than an authorized Manufacturer’s agent.
9. is not installed with adequate balance of system components,
10. is directly connected to DC motors without proper safety protection, motor controllers, and external motor voltage clamping systems, as recommended below,
11. is not properly protected from inrush currents, as recommended below,
12. is installed with other makes and/or models in the same string,
13. improper connection or usage of the CAN bus interface on the Battery as set forth in the English language version of the User Guide,
14. is cycled by a regenerative cyler that can cause voltage spikes above recommended thresholds, which can damage the internal components of the battery,
15. is used in application other than that for which it was designed and intended,
16. is misapplied or improperly sized for the application (including current requirements exceeding battery capability at different temperatures and states of charge including normal lifetime degradation in battery capacity and current capability as defined in the User’s Guide),

17. is subjected to breakage, freezing, wreckage, impact or collision, fire, water damage, melted and broken terminal including over torquing the terminals,
18. is damaged due to improper installation, loose terminal connections, under-sized cabling, incorrect connections (series or parallel) (cannot be used in series) for desired voltage and Amp-hour requirements, installed in reverse polarity,
19. is subjected to environmental damage, inappropriate storage conditions as defined by the User's Guide or is exposed to extreme hot or cold temperatures as defined in the User's Guide,
20. in need of repair due to actions or omissions by anyone other than Manufacturer,
21. is charged below freezing temperatures,
22. is opened, modified, or tempered with,
23. is discharged/tested with machines designed for lead batteries, or
24. is re-sold through any online e-commerce marketplace.

This Limited Warranty does not cover a Battery that has reached its normal end of life due to usage, which may occur prior to the Warranty Period. A battery can deliver only a fixed amount of energy over its life which will occur over different periods of time depending on the application and usage. The Manufacturer reserves the right to deny a warranty claim if the Product is determined, upon inspection, to be at its normal end of life even if within the Warranty Period.

EXCLUSION FOR FAILURE TO PROVIDE DATA ACCESS

In order to provide this Limited Warranty, Manufacturer may require the ability to update and upgrade the Battery's Firmware and Software. Any failure to install system updates or upgrades when provided or to provide data logged information upon request will void this Limited Warranty.

DISCLAIMER

EXCEPT FOR THE LIMITED WARRANTY SET FORTH ABOVE, SELLER MAKES NO WARRANTY WHATSOEVER, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THE BATTERIES, INCLUDING ANY (A) WARRANTY OF MERCHANTABILITY; OR (B) WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; (C) WARRANTY IMPLIED BY OR ARISING OUT OF ANY COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE, ALL OF WHICH ARE HEREBY DISCLAIMED AND WAIVED BY CUSTOMER.

BREACH OF WARRANTY REMEDY

MANUFACTURER SHALL HAVE NO LIABILITY FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES. IN NO EVENT SHALL THE LIABILITY OF MANUFACTURER UNDER ANY WARRANTY CLAIM EXCEED THE PURCHASE PRICE FOR THE APPLICABLE BATTERIES. Manufacturer will not be responsible for any expenses for transportation, installation, freight, recharging, electrical system tests, loss of time, loss of use of equipment, service calls, labor, use of rentals, or other expenses which would be considered as incidental or consequential damages. The only remedy available under this warranty is Battery replacement.

HOW TO MAKE A WARRANTY CLAIM

To process a claim under this Limited Warranty, please contact your place of purchase. Proof of purchase will be required. Claims of defective material and/or workmanship must be submitted in writing within ten (10) days of discovery and prior to the expiration of the applicable Warranty Period. If the Battery needs to be returned for inspection, the Manufacturer will issue a Return Materials Authorization ("RMA"). Return the Battery, at your expense in accordance with the UNDOT 3480 shipping requirements for Class 9 Hazardous Goods, to your authorized Manufacturer distributor or dealer. Acceptance of the Battery for inspection does not mean the Manufacturer will accept the warranty claim. Please refer to the Manufacturer's website for a list of distributors and dealers or call the Manufacturer's customer service department at 248-462-6364.

NON-MANUFACTURER WARRANTIES:

Your authorized Alliance distributor or dealer may offer its own warranty in addition to this Warranty, which warranty may vary in warranty period, scope of coverage, or exclusions. Manufacturer is not responsible for any such additional distributor or dealer-provided warranties.

WARNINGS

PROPERLY PROTECT THE BATTERY WITHIN THE OVERALL INSTALLATION

Proper grounding, isolation, fusing, breakers and disconnects must be correctly used throughout the balance of systems to effectively isolate and protect all components of the system against faults, short circuits, reverse polarity, or component failure. The sizing of all system components should be determined using established electrical codes and standards and evaluated by certified engineers, electricians, and licensed installers. Although every Battery has system protection and fuses to protect the Battery from operation outside of its pre-set limits, additional balance of system protections must always be included (such as charge controllers) to protect the Battery from high voltage sources such as open PV voltage. The internal circuitry, protection and fusing will not protect the Battery from extreme electrical phenomena.

DC MOTOR VOLTAGE SPIKES

In operation, DC motors represent an inductive load. If the Battery's BMS disconnects from a DC motor while it is operating, a voltage transient will result unless there is proper protection included in the system. Direct connection to DC motors without proper protection, motor controllers, and/or external motor voltage clamping systems (such as high power anti-parallel diodes or braking resistor systems) may result in damage to the internal Battery protection system, creating potentially damaging conditions, and will void the warranty.

DC MOTOR INRUSH CURRENT

When typical DC motors become energized, a much larger amount of current than normal rushes into the motor until it reaches its steady-state speed. Initial inrush currents can significantly exceed the steady state levels. Inrush current limiters must be used when connecting the Battery to DC motors to protect the Battery's BMS and electronics. Failure to do so will void the warranty.