

APEX

B12K BATTERY

Limited Warranty

Version 1.0

Applicable to Product
sold after May 2023



WARRANTY

APEX Inverters (hereinafter referred to as APEX) warrants that, subject to the exclusions and limitations set out below, the B-12K battery module comes with:

1. 10 years performance warranty: APEX warrants that it shall retain not less than seventy percent (70%) of its original Total Capacity either (i) for ten (10) years from the Warranty Start Date; or (ii) reaches 6000 cycles, whichever comes first, on the condition that the Product is operated according to the instructions and usage conditions in the manual provided by APEX and Warranty Conditions stipulated below.
2. 5 years of product warranty: APEX warrants that the electronics and enclosure (including battery cover and internal PCB assemblies) will be free of defects caused by improper workmanship or defective materials for a period of 5 years, starting from the original purchase date, up to 3 months after production and, if the customer is unable to provide adequate documentation of the original purchase, the warranty start date shall be 3 months after the product was manufactured.

WARRANTY CONDITIONS

1. The defect of the battery module shall occur within the battery module warranty period as determined above.
2. This warranty is provided on a Return to Base basis (as defined in Appendix B) and APEX assumes no liability for any costs or arrangements relating to logistics and transport, removal or reinstallation of equipment for the purposes of assessment, service or repair, under warranty or otherwise.
3. Any battery module failure, fault or warning which leads to the system not working or working abnormally, must be reported within two weeks of occurrence.
4. The battery module shall be installed by a qualified electrical installer.
5. An electrical Certificate Of Compliance (COC) shall be provided for the installation, dated at the time of installation.
6. The End User shall correctly operate and use the battery module according to the User Manual.
7. The End User shall retain and, if necessary, produce the proof of the original purchase of the battery module.
8. The installation of the Battery module shall be completed within a maximum of 3 months from the production date.
9. Handling and storage: please ensure that the handling and storage process meets the following requirements:
 - a) The battery module and its components shall be protected from damage during transportation and handling
 - b) The weight of the battery module shall be considered during transportation and the battery module shall only be transported on the pallet supplied, with the rest of the packaging correctly installed.
 - c) Do not impact, pull, drag, or step on the battery modules, or insert objects into any part of the battery module.
 - d) The battery module shall be kept away from fire, water or chemicals
 - e) The battery module shall not be stored outside of the allowable storage temperature range of 0°C to 35°C or stored in direct sun, or in high humidity environments.
 - f) The battery module shall be stored within the recommended state of charge (SoC) range of 30 – 50% and shall be periodically charged at a maximum interval of 6 months or less if needed, to ensure that this level is maintained.
 - g) The battery module shall not be used if defective, appears cracked or otherwise damaged.
 - h) Do not attempt to open, disassemble, repair, tamper with, or modify the battery module.
10. The permissible operating temperature range of the battery module is 0°C - 45°C and it shall not be installed in an area exposed to direct sunlight, rain or other sources of water. The Battery module installation location must be ventilated in accordance with the requirements of the User Manual.
11. The product may only be used at or below the maximum allowable charge and discharge current ratings, as documented in the manual.
12. The maximum allowable discharge is 90% of the current total capacity.
13. The battery module is not suitable for supplying life-sustaining medical devices.
14. Damage caused during transport, incorrect product installation, removal or improper use.
15. Use of the product outside of the permissible temperature range of 0°C to +45°C.

16. End User fails to provide the correct product serial number, or the product serial number is undecipherable or has been modified without permission from APEX.
17. Water, conductive dust, salty mist or corrosive gas.
18. The product has, in any way, been connected to other battery modules or systems not of the same brand.
19. Product faults or failures not reported to APEX within three weeks of occurrence.

OUT-OF WARRANTY CASES

Any defects that occur after the expiry of the warranty period, or which occur within the warranty period but which fall into the warranty exception conditions above, are considered by APEX to be out-of-warranty cases. For all out-of-warranty cases, APEX may charge its costs to the customer, including any / all of:

1. On-site service fee: where relevant, the cost of travel and time for the technician to deliver on-site service and labor cost for the technician, who is repairing, performing maintenance on, installing (hardware or software) and debugging the faulty battery system.
2. Parts / materials fee: cost of replacement parts / materials (including any shipping / admin fee that may apply).

GEOGRAPHICAL SCOPE

The APEX Limited warranty terms and conditions only apply to devices which are originally purchased from channels authorized by APEX and installed in expressly approved territories. Unless APEX provides written approval prior to installation, product intended for sale for one country / region but sold and installed in another country / region shall have its warranty invalidated.

LIMITATION OF APEX'S LIABILITY

This limited warranty applies to battery modules which are sold and installed after May 2023. It is the end user's sole and exclusive remedy against APEX and APEX's sole and exclusive liability in respect of defects within the battery system. This limited warranty replaces all other APEX warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise, including, without limitation and, where permitted by applicable law, any implied conditions, warranties or other terms as regards satisfactory quality or fitness for purpose. To the extent permitted by applicable law(s), APEX does not assume any liability for any loss of, damage to or corruption of data, for any loss of profit, loss of use of battery systems or functionality, loss of business, loss of contracts, loss of revenue or loss of anticipated savings, increased costs or expenses or for any indirect loss or damage, consequential loss or damage or special loss or damage, or punitive loss or damage. To the extent permitted by applicable law, APEX's liability shall be limited to the purchase value of the battery system.

HOW TO MAKE A CLAIM UNDER THE APEX LIMITED WARRANTY

If a claimant wishes to make a warranty claim, they shall contact their supplier where they purchased the battery system, or the installer who installed the battery. They shall make the claim within two weeks of the failure date, otherwise APEX shall assume they have abandoned the right to make a warranty claim.

Please note that to deliver a timeous service, APEX cooperates with its distributors and installers all over the world. As such, they shall be treated as the default service and warranty channel for APEX products.

Please have the following information to hand as it may be required in the processing of a claim:

1. Contact information of claimant, including name, name of the company, phone number, email address and shipment address.
2. Information regarding all defective batteries in the system, including model number, serial number, installation date and failure date.
3. Installation information, including brand, model, and number of chargers and inverters.
4. Description of the events prior to failure.
5. Electrical diagram of the installation, including all equipment connected to the B-12K battery bank.
6. Electrical Certificate of Compliance for the installation.to do so.

To action the claim case, the claimant or distributor must gather the necessary information and create an RMA ticket here: <https://shop.rubiconsa.com/pages/support>

APEX or its appointed distributor shall assess the case and contact the claimant to further process it.

APEX may choose to arrange, at its sole discretion, an on-site inspection to find out the root cause of a fault. The claimant is responsible for granting access, making time, and ensuring the safety of the inspection by a technician from APEX or its appointed third-party company. APEX reserves the right not to enter the site should the technician consider it unsafe to do so.

Appendix A: Procedure for determining Battery Module State of Health (SoH)

Usable Energy (kWh) shall be measured by following the testing conditions and methods described below:

Test conditions:

Product Type	Ambient Temperature	End Of Discharge Voltage	Constant Charge Voltage	Constant Current
B-12K	25°C	40V	56V	20A

Charge / Discharge method:

1. Discharge the battery with constant current until it reaches the end of discharge voltage or the battery's automatic over-discharge protection mechanism is triggered.
2. Rest the battery for 10 minutes.
3. Charge the battery with constant current and constant charge voltage until the over-charge protection activates automatically.
4. Rest the battery for 10 minutes.
5. Starting a timer, discharge the battery with constant current until it reaches the end of discharge voltage, or the battery protection activates automatically. Note the total time taken.
6. Calculate the discharged capacity from the formula:
$$\text{Measured Capacity (AH)} = \text{Discharge time (H)} \times \text{Constant current (A)}.$$
7. Calculate the State of Health (SoH) from the formula:
$$\text{SoH \%} = (\text{Measured Capacity (AH)} / \text{Original Capacity (AH)}) \times 100$$
8. Re-charge the battery with Constant current and constant charge voltage until battery protection activates.

Appendix B: Return to Base Address

All warranty and non-warranty service of APEX products shall be carried out at APEX inverters' appointed service partner. Once an RMA number has been issued via the ticketing system, equipment shall either be delivered to this address:

Rubicon
Att: Service Administrator
1B Hansen Close
Richmond Park
Cape Town
Western Cape
South Africa
7441

Or equipment may also be returned to any other Rubicon Branch.

APEX reserves the right, and at its sole discretion, to appoint a 3rd party service provider closer to the location of any faulty goods than those listed here.
