

EBS-B2K5-B High Voltage Battery

EBS-S5K1/7K5/10K/12K/15K/17K/20K/23K/25K-B

2.56kWh

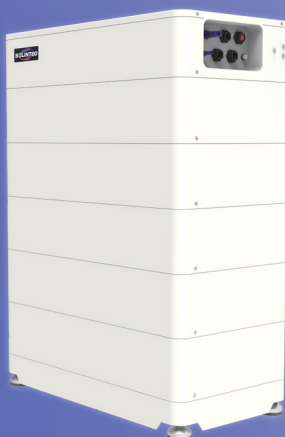
Modular Design

50Ah

Nominal Capacity

50A

Max. Charge/Discharge Current



Performance & Capacity

- Rapid charge/discharge at 50A
- Parallel connection up to 3 clusters for 76.8 kWh max storage



Connectivity & Management

- Integrated Wi-Fi for robust, dual-channel data communication
- Simplified interacting based on independent database and multiple strategies



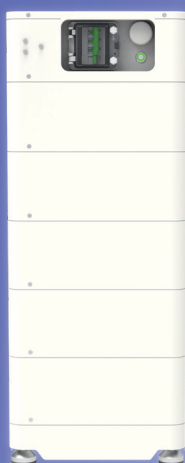
Design & Installation

- Sleek design with a hidden handle for easy and stylish handling
- Effortless snap-fit installation for quick setup



Reliability & Safety

- Convenient remote system updates and maintenance
- Dependable with a comprehensive 10-year warranty



Integ E Series

The Power Extender

Storage System		EBS-S5K1-B	EBS-S7K1-B	EBS-S10K-B	EBS-S12K-B	EBS-S15K-B	EBS-S17K-B	EBS-S20K-B	EBS-S23K-B	EBS-S25K-B
Module Number		2	3	4	5	6	7	8	9	10
Nominal Energy	[kWh]	5.12	7.68	10.24	12.80	15.36	17.92	20.48	23.04	25.60
Usable Energy	[kWh]	4.61	6.91	9.22	11.52	13.82	16.13	18.43	20.74	23.04
Nominal Capacity	[Ah]	50								
Nominal Voltage	[V]	102.4	153.6	204.8	256.0	307.2	358.4	409.6	460.8	512.0
Voltage Range	[V]	89.6-116.8	134.4-175.2	179.2-233.6	224.0-292.0	268.8-350.4	313.6-408.8	358.4-467.2	403.2-525.6	448.0-584.0
Recommend Charge/Discharge Current	[A]	25 / 25								
Max. Charge/Discharge Current	[A]	50 / 50								
Weight	[KG]	90	122	154	186	218	250	282	314	346
Dimensions	[W×D×H mm]	650x350x487	650x350x621	650x350x755	650x350x889	650x350x1023	650x350x1157	650x350x1291	650x350x1425	650x350x1559
Protection Degree		IP54								
Warranty		10 years (Performance warranty)*								
Operation Temperature	[°C]	0~55 (Charge) / -10~55 (Discharge)								
Relative Humidity	[%]	5~95 (No condensation)								
Altitude	[m]	2000								
Cell Type		LiFePO4								
Module Connection		Series / Hard Connection with Positioner								
Installation Method		Stackable & Max. 3 Clusters in Parallel								
Communication		CAN with RJ45 Connector								
Certification		CE/IEC62619/UN38.3								

EBS-S20K-B, S23K-B & S25K-B only suitable to MHT inverters and others for all hybrid inverters;

Capable of parallel connection for more capacity.

* Please refer to Solinteg Battery warranty for details.

** Please strictly follow the installation instruction for safety.

*** Please fix the batteries with wall bracket for toppling prevention.

**** Please refer to User Manual for more detailed data.

Solinteg Limited Factory Warranty and Service Conditions

Wuxi Solinteg Power Co., Ltd (hereinafter referred to as Solinteg) offers the following warranty to purchasers of products:

EBS-B and EBR-A series energy storage system.

1. Warranty Eligibility

Warranty Claimant: This "Limited Factory Warranty" is extended to the original purchaser and is transferable to any subsequent holder of the devices when devices remain at their original installed location for the first time (first installation) upon satisfactory proof of succession or assignment. The persons eligible under this Solinteg Limited Factory Warranty are herein referred to as "warranty claimant". Other persons are not authorized to assert claims against Solinteg under this Solinteg Limited Factory Warranty. Assigning and/or transferring these rights to persons other than a warranty claimant is not permitted. However, the warranty claimant may appoint a third party to raise its claims under this Solinteg Limited Factory Warranty.

Scope of application: This 'Limited Factory Warranty' apply to the devices and accessories purchased from Solinteg. These warranty conditions are applicable to all purchases made after their issue, or from the date indicated at the bottom of this document, and will cease to be effective for products sold after the entry into force of any other ones that Solinteg may decide to draw up in the future.

Unless Solinteg has issued a specific written declaration in addition to or modifying the provisions herein, the Seller is not subject to any type of obligation or liability other or additional than those indicated above and/or provided for by mandatory laws with regard to the product sold.

Geographical scope: This 'Limited Factory Warranty' only applies to for the devices which are originally purchased from channels authorized by Solinteg unless there are specially stipulated warranty terms and conditions between Solinteg and the direct purchaser. For any units sold for one country/region but installed in another country/region, the warranty will become invalid if Solinteg does not provide written confirmation/approval prior to the installation.

2. Warranty Period

The standard warranty starts from the installation date or 60th day after the date of shipment from Solinteg factory, whichever date comes first.

Product		Model	Standard Warranty
EBS Series	Battery Module	EBS-B2K5-B	10 years
	Controller	EBS-C	
	Base	EBS-A	
EBR Series	Battery Module	EBR-B5K3-A	10 years
	Controller	EBR-C-A	
	Rack	EBR-R-A6/AT6/A8/AT8	
Accessories	Paraller	EBS-P, EBR-P-A1, EBR-P-A	5 years

When the aforementioned warranty period differs from the one provided by sales order, warranty period is subject to the signed sales order.

Lithium batteries are safe and reliable products, if used and maintained as prescribed. However, if used in a manner that

does not comply with the requirements contained in the use and maintenance manual provided and if subjected to stress or external agents, they may lose the minimum safety characteristic and therefore may no longer be able to protect themselves, function correctly and maintain design performance.

It is necessary to register with the monitoring platform to obtain all the benefits of the performance warranty.

Performance Warranty that the battery retains at least 80% of its initial nominal capacity, or reaches at least an aggregate energy throughput.

	Single cluster	Multi-clusters
Throughput/MWh	Energy of system (kWh) * 3.2	Energy of system (kWh) * 3.2 * 0.98

In order to activate the Performance warranty above, the performance of the battery cells must be measured according to the procedure specified below, to be carried out at Solinteg or a laboratory accredited by both parties in China or Europe at Solinteg description:

1. Place the battery in the climatic chamber for no less than 30min: before starting the test phase, the temperature of the cells measured by the BMS must be 25°C +/-1°C.
2. Connect directly to the negative and positive terminals of the battery module and discharge with a constant current of 0.5C until the array reaches 41 VDC.
3. Connect directly to the negative and positive terminals of the cell array and charge with constant current of 0.2C until the array reaches the BMS protection limit.
4. Wait 30 minutes, then restart the charging process at constant voltage with 0.05C until the BMS reaches 100% or the limit of over-voltage level 1 again.
5. Repeat the above discharge/charge cycle until the voltage difference between the cells is less than 0.05V.
6. Allow the battery module to rest until the cell temperature, as measured by the BMS, is 25°C +/-1°C.
7. When the cells reach 25°C +/-1°C, connect directly to the negative and positive terminals of the battery module and discharge it with a constant current of 0.5C until the array reaches 41V, and measure the capacitance at the negative and positive terminals of the cell array using a certified DC meter with 1 second datalogger frequency.
8. The capacity test is performed at single battery module and not at cluster level. The battery module shall be tested according with the Specific Voltage limits displayed by the PC software, such as over-voltage and under-voltage level 1.

3. Warranty Coverage

3.1. Geographic Scope of Application

The scope of obligations of this Solinteg Limited Factory Warranty is provided in the European countries and regions, however excluding their associated islands and overseas territories:

3.2. Limitations and Liability

Solinteg liability under this warranty is limited, in Solinteg's sole discretion:

Replacement (battery, controller, base or paraller), with a product equivalent to the remaining capacity or age of the products at the date of the request, repair, compensation calculated on the basis of residual capacity/expected life.

In the event of a credit claim, the battery sent to Solinteg for capacity testing will be retained by Solinteg.

The compensation will be calculated by multiplying the current average price by the lower value between the one deriving from the number of months of actual use of the products and that deriving from the charging cycles of the same in relation to the performance guarantee provided by Solinteg pursuant based on the following formula: Price multiply by Remained Factor.

Wherein c

Price: Average current price based on purchase contract

Remained Factor 1: 1- Operation time after installation in month/120

Remained factor 2: (Warranted Minimum Throughput Energy - output energy of the Product recorded in the control module of the Product)/ warranted Minimum Throughput Energy

Replaced or repaired Products will be warranted for the remainder of the warranty life of the replaced battery. Substitution will not, without exception, renew the original duration of the warranty.

The Seller is not responsible for any direct or indirect damages related to the failure to achieve performance unlisted in corresponding technical files, unproductive shutdown of the system, or any other damage resulting from any malfunction, loss of battery use, loss of profit and interruption of any type of service or supply; likewise, Solinteg shall not be liable for any consequential, incidental, indirect, special, exemplary, or punitive damages arising out of or related to this warranty, regardless of the form of the action and whether Solinteg has been advised or potentially anticipated by the other party of the possibility of such damages.

Solinteg's liability under this Article shall in no event exceed the amount paid by Claimant.

4. Warranty Exclusions

The warranties referred to in points 1 and 2 above do NOT cover damage to the Products caused, even concurrently, by one or more of the following activities or omissions, which automatically entail the forfeiture of both the legal warranty for manufacturing defects and the ancillary performance warranty:

1. Transport and/or storage not in accordance with the manual.
2. Private expansion of battery capacity without Solinteg written consent.
3. Opening of the lid by non-Solinteg approved technicians, or otherwise without specific written authorization, including the removal or damage of the warranty seal.
4. Removal or damage to the product label/nameplate or inability to read the serial number.
5. Failure to comply with the installation and use specifications as well as the instructions contained in the respective Product manuals.
6. Presence of activated Log warrants (e.g. Extreme Under Voltage, Over current etc.) in BMS memory, viewable via APP or BMS software that can be downloaded free of charge.
7. Incorrect wiring of incompatible batteries and controllers or of different power and/or type and/or brand, use of cables of non-compliant section and quality.
8. Reverse polarity and/or short circuit, damage to connector or BMS fuses
9. Moving the battery from its home position without performing a new commissioning test and certification of the system by a licensed and qualified electrician, as per local regulations.
10. Failure to timely disconnect the battery from the system in the presence of inverter or battery alarms.
11. Failure to connect the BMS via CAN to the inverter (The battery must not be used without the BMS/CAN connected and recognized by the inverter).
12. External influences, including mechanical or electrical stresses (overvoltage, high inrush current, lightning, floods, fires, falls, accidental breakage, opening the lid and manually operating the contactor, etc.)
13. Installation in unventilated spaces /or not used and maintained as prescribed; presence of oxidation, condensation damage or pollution from salts, vapors of acidic solvents, etc., which may cause damage to circuits and protections.

14. Use of inverters, rectifier, chargers, BMS, etc., that are incompatible, even if used temporarily.
15. Failure to protect against liquids, including atomized liquids, gases or vapors of any nature, from direct or indirect impacts of water or other liquids which, in addition to causing immediate loss of warranty, may be dangerous to users.
16. Installation in an environment that is not suitable for use. An indoor room, closed and thermoregulated, away from heat sources and sunlight, is considered suitable, as the glass surfaces contribute to the rise in the temperature of the cells, causing them to decay prematurely.
17. Damages caused by unpredictable factors or force majeure such as earthquake, stormy weather, flood, overvoltage, lightning, fire and pests etc.

Mandatory additional conditions for installation and operation for the purposes of the operation of the performance guarantee referred to in Articles 3.2

The ancillary performance guarantee referred to in Articles 2 above is recognized only and only on condition that all the following further, more restrictive requirements have also been complied with, of which Claimant must provide proof:

The battery is to be used for the integration of renewable energy storage systems, site preparation and/or maintenance and installation were carried out in accordance with the requirements of the manual.

Especially:

1. The battery must be installed indoors in a dry, ventilated room capable of maintaining the prescribed operating conditions.
2. The operating battery temperature detected by the BMS must not have fallen below -10°C and exceeded $+50^{\circ}\text{C}$
3. DOD 90% and Charge and discharge current not exceeding 0.5C
4. The battery must not be installed in a humid or unhealthy environment and must not be in any way contaminated by liquids, vapors, condensation or dust that can pollute the connections and functionality of the control electronics and/or communication with the inverter
5. The battery must always be connected via CAN BUS communication with an approved inverter.
6. The battery must be kept in perfect condition to prevent dirt build-up and oxidation build-up on surfaces and ventilation grilles.
7. The maximum altitude must not exceed 2000 meters above sea level.
8. The battery should be installed in a vibration-free environment.

It should be noted that, in order to maintain the performance guarantee, it is necessary to comply with both the conditions set out in Articles 3.2 and the additional ones referred to in this Articles 4. For both types of warranty (legal and ancillary), it is in any case mandatory to comply with the instructions contained in the installation and use manuals.

5. Special Exclusions

This 'Limited Factory Warranty' will not apply if the 'Buyer' violates any of the following provisions:

The 'Products' shall not be used in facilities with radiation control, nuclear reactors, and facilities related to nuclear safety or nuclear power uses, as well as facilities that may have direct contact with patients.

The 'Products' shall not be used to power medical devices or life-support equipment.

The 'Products' shall not be used or installed in a location where vibrations may occur. For example, aircraft, ship (vessel, boat, yacht), car or train are not allowed.

The 'Products' shall not be used or installed near fuels, flammable materials in general, gas storage or gas boilers.

The 'Products' shall be used for stationary storage applications.

6. Natural decay

Energy decay is not linear and may be greater in the first 5 years or 1500 cycles than the decadal weighted average.

The battery, due to its chemistry, is subject to natural capacity degradation that can be greater during the first 1000 cycles and/or 12-18 months than during the remaining cycles. The battery degrades even when not in use and even during storage in the warehouse.

These circumstances cannot in any way be considered a defect in the quality and/or performance of the product.

7. Statutory Warranty Rights

The statutory warranty obligation of the device seller and the corresponding statutory warranty rights of the buyer which may not lawfully be excluded or limited are not affected by this Solinteg Limited Factory Warranty. Furthermore, should this Solinteg Limited Factory Warranty violate any national statutory rights which may not lawfully be excluded or limited, and which grant the warranty claimant any rights in addition to the Solinteg Limited Factory Warranty, then such national statutory rights shall not be affected by the provisions of this Solinteg Limited Factory Warranty.

If any provision of this Warranty shall be declared void or unenforceable by any court and administrative body of competent jurisdiction, such provision shall be deemed to be amended to achieve as nearly as possible the same economic effect as the original provisions of this Warranty and the amended provisions and other provisions of this Warranty shall continue in full force and effect.

8. Product Applicability

These warranty conditions are applicable to all purchases made after their issue, or from the date indicated at the bottom of this document, and will cease to be effective for products sold after the entry into force of any other ones that Solinteg may decide to draw up in the future.

Unless Solinteg has issued a specific written declaration in addition to or modifying the provisions herein, the Seller is not subject to any type of obligation or liability other or additional than those indicated above and/or provided for by mandatory laws with regard to the product sold.

9. Claim Procedures Warranty and/or Repair/Replacement

Solinteg provides solutions for technical enquiries or problems relating to the devices under warranty by telephone (+86 510-6822-2550) or e-mail (service@solinteg.com).

If, during the warranty period, Claimant discovers any manufacturing defect or suspects that the battery does not conform to the performance warranty, Claimant shall immediately report the defect by providing the following information:

1. A brief description of the defect, including the date when the problem occurred.
2. The serial number of the battery
3. The type of inverter connected to it
4. A copy of the purchase invoice
5. The date of installation
6. Installation images (minimum 5 images from different angles)
7. Permission to access the battery monitoring account, if any.

Claimant shall also provide Solinteg with access to the battery, either in person or remotely via a laptop provided by the customer for the installation of Solinteg software for analysis operations.

If it is determined from the information received that the reported defect is not covered under the Limited Warranty, Solinteg will inform Claimant explaining the reasons for the non-coverage or non-applicability.

If, on the other hand, Solinteg detects the need to analyze the battery in order to verify its current condition, it will require the customer to send the battery to Solinteg's headquarters or to a laboratory indicated by Solinteg. The battery must be shipped within 10 days from the date of Solinteg's request and must be made in accordance with UN38.3 regulations.

During the execution of the tests, complete charging and discharging phases will be necessary, these in the case of batteries not correctly used by the customer, could lead to the destruction of the same, as a consequence of the tests. In this case, Solinteg will inform the customer that the warranty is not applicable.

If, as a result of the tests carried out, and within 30 days of receipt of the battery, it is determined that the battery is eligible for coverage under the Limited Warranty, Solinteg will notify Claimant by proposing the description of Article 1 of this Limited factory Warranty.

The product sent by Claimant, in case of compensation or replacement, will be retained by Solinteg for recycling or disposal.

If the device is replaced in the warranty period, the remaining warranty period shall be transferred to the substitution product.

10. Out of Warranty

In case a warranty claim is reported which shows not to be valid, the costs incurred by Solinteg due to this non-applicability of warranty claim shall be covered by User unless this non-applicability was not visible for User according to given circumstances and User has evidence to prove warranty claim.

As for the service for the Products out of warranty, Solinteg can provide certain after sales service to User upon the written request addressed to Solinteg Authorized Service Partner, and all the costs and expenses which include but not limited to the materials, parts or labor costs, shall be borne by User. In case that User gives written notice to request the service out of warranty, User shall provide detailed description of defects so that Solinteg Authorized Service Partner is able to detect whether such defect can be cured or not. For the avoidance of doubt, in no event will Solinteg be liable for the service out of warranty, and this Clause will not constitute the promise of Solinteg to provide such service out of warranty.

11. Final Validity

Unless otherwise specified herein, to the extent permitted by applicable law, the Warranty Letter and above remedies shall be exclusive and replace all other guarantees and remedies, oral or in writing, expressed or implied. To the extent permitted by applicable law, Solinteg expressly rejects any and all legal or implied warranty, including but not limited to warranties of merchantability, fitness for a particular purpose and hidden or potential defects. If Solinteg cannot abandon implied warranty as prescribed by applicable law or the guarantee specified by applicable laws, all of such guarantees and warranties shall limit to implied warranties as prescribed by applicable law or the scope within applicable laws and shall be under mandatory application according to applicable law. No distributor, agent or staff of Solinteg and/or Solinteg Authorized Service Partner is authorized to make any revision, extension or addition to the quality warranty. The legality and enforceability of remaining clauses herein shall not be affected or damaged if any of clauses herein is adjudged to be illegal or unenforceable.

The rights mentioned in this Solinteg Limited Factory Warranty reflect the exclusive rights of the warranty claimant in accordance with this Solinteg Limited Factory Warranty. No other claims — including, but not limited to, claims for compensation for direct or indirect damage caused by the defective device, claims for compensation for costs arising from disassembly or installation, and/or loss of power production or profits — are covered by the Solinteg Limited Factory Warranty. If the warranty claimant requests unnecessary or unjustified service work and/or Solinteg replacements under this Solinteg Limited Factory warranty, Solinteg shall be entitled to invoice the warranty claimant for the costs incurred as a result.