



Warranty conditions for commercial SMA battery-storage systems (STORAGE-30-20 and STORAGE-50-20)

1. General information

Information: The following description of the warranty conditions (hereinafter "warranty") of SMA Solar Technology AG (hereinafter "SMA") applies to all purchases of the product type specified below made after **March 28, 2024** and installed and commissioned by SMA or a third party authorized and qualified by SMA, and replaces all previous warranties relating to these products. The following warranty is not a warranty of durability and does not include a warranty of availability. It applies exclusively to new devices of the following product type:

Storage-30-20, Storage-50-20 (hereinafter "product").

2. No restriction of statutory warranty rights or other national statutory 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 voluntary warranty. Furthermore, should this warranty violate any national statutory rights which may not be lawfully excluded or limited and which grant the warranty claimant any rights in addition to this warranty, then such national statutory rights shall not be affected by the provisions of this warranty.

3. Warrantor and warranty claimant

The warrantor is SMA. SMA reserves the right to have the services specified in this warranty provided by partners authorized by SMA.

The persons who are eligible to raise claims under this warranty are only: (i) buyers (end customers) who have purchased the devices themselves and have commissioned them for the first time (hereinafter "commissioning engineer"). The persons eligible under this warranty are hereinafter referred to as "warranty claimant". Other persons are not authorized to make claims against SMA under this warranty. However, the warranty claimant may appoint a third party to assert its claims under this warranty. Assigning and/or transferring these rights to persons other than a warranty claimant is not permitted.

4. Geographical scope of the warranty

The warranty applies to the following countries, provided the products were also installed in these countries: Germany, Austria, Switzerland, Czechia, Italy, France, Belgium, Netherlands, Luxembourg, Poland and Spain.

5. Warranty period

5.1. The warranty period of the capacity warranty for the battery modules of the product in accordance with Section 6 is two (2) years. It starts with commissioning of the product for the first time, which shall be carried out within two (2) months after the date of delivery by SMA (ex works).

If the warranty claimant registers the product in the Online Service Center and on the Sunny Portal powered by ennexOS of SMA within 30 days after commissioning, the warranty period for the capacity warranty is automatically extended by a further eight (8) years. In this case, the overall warranty period for the capacity warranty is ten (10) years.

Another precondition for the extension of the warranty period of the capacity warranty to ten (10) years is that the warranty claimant enables automatic software updates for software updates classified as critical in the reasonable discretion of SMA for the product as well as for the SMA inverters connected to the products and that a regular internet connection (at least 10 consecutive hours per week) is established. In addition, the commissioning report must be fully completed and signed after commissioning, within a period of no more than thirty (30) calendar days, and safely stored. The commissioning report must be made available to SMA on request, but in any case in the event of a warranty claim.

5.2. The warranty period of the system warranty in accordance with Section 7 is two (2) years. It also starts with commissioning of the product for the first time, which shall be carried out within two (2) months after the date of delivery by SMA (ex works).

If the warranty claimant registers the product in the Online Service Center and on the Sunny Portal powered by ennexOS of SMA within 30 days after commissioning, the warranty period for the system warranty is automatically extended by a further eight (8) years. In this case, the overall warranty period for the system warranty is ten (10) years.

A further precondition for the extension of the warranty period of the system warranty to ten (10) years is that the warranty claimant enables automatic software updates for software updates classified as critical in the reasonable discretion of SMA for the product as well as for the SMA inverters connected to the products and that a regular internet connection (at least 10 consecutive hours per week) is established. In addition, the commissioning report must be fully completed and signed after commissioning, within a period of no more than thirty (30) calendar days, and safely stored. The commissioning report must be made available to SMA on request, but in any case in the event of a warranty claim.

5.3. The warranty also applies to any replacement product for a product covered by the warranty or a replaced component of a product covered by the warranty, which is replaced by SMA or a third party commissioned by SMA due to a warranty claim in compliance with the warranty claims in accordance with Section 9. However, in this case, the warranty period also remains limited to the warranty period for the first product delivered that is covered by the warranty and is not extended.

6. Capacity warranty

6.1. SMA guarantees that the capacity of the battery modules in the battery-storage system of the product is at least 70 percent of the nominal capacity until the minimum number of full charge cycles guaranteed in accordance with the following provisions is reached, but at most until the warranty period with Section 5.1. has expired in accordance.

6.2. The service life of the battery modules of the product depends on the C rate and the ambient temperature of the battery-storage system of the product. Against this background, SMA guarantees a specific minimum number of full charge cycles in accordance with Sections 6.3. to 6.6., depending on the C rate and the ambient temperature.

6.3. The following requirements apply:

6.3.1. The ambient temperature is the temperature of the environment of the battery-storage system of the product measured by a temperature sensor in an external temperature measuring device and stored continuously (at least with a resolution of 3 minutes) for a period of at least one year.

6.3.2. The C rate is equivalent to the level of the charge and discharge current in relation to the nominal capacity of the battery-storage system of the product. The charge and discharge current is continuously registered in the logging file. The highest C rate determined in the period from when the battery-storage system of the product is commissioned for the first time until the occurrence of the warranty claim ("operating period") is required for the classification of the product covered by the warranty in the table in Section 6.4.

6.3.3. A full charge cycle is equivalent to charging and discharging the entire capacity of the battery modules of the product with a depth of discharge (DoD) of 100 percent. Partial cycles are taken into account proportionately.

6.4 In the event of continuous operation of the battery-storage system of the product at an ambient temperature in accordance with the second column of the following table, SMA guarantees the number of full charge cycles given in the third column, depending on the C rate given in the first column:

C rate (max.)	Ambient temperature	Guaranteed minimum number of full charge cycles
up to 0.50	below 10.0°C	Capacity limit expires
up to 0.50	from 10.0°C to 17.9°C	6,500
up to 0.50	from 18.0°C to 35.0°C	6,000
up to 0.50	from 35.1°C to 45.0°C	Reduction of the guaranteed cycles in accordance with Section 6.5.
up to 0.50	above 45.0°C	Capacity limit expires
from 0.51 to 1.00	below 10.0°C	Capacity limit expires
from 0.51 to 1.00	from 10.0°C to 17.9°C	5,000
from 0.51 to 1.00	from 18.0°C to 35.0°C	4,500
from 0.51 to 1.00	from 35.1°C to 45.0°C	Reduction of the guaranteed cycles in accordance with Section 6.5.
from 0.51 to 1.00	above 45.0°C	Capacity limit expires

Table 1: Guaranteed minimum number of full charge cycles

6.5. If a battery-storage system of the product is temporarily operated in a temperature range of 35.1°C to 45°C during the operating period, the number of guaranteed full charge cycles is reduced as follows: for each day on which the ambient temperature reaches the temperature range of 35.1°C to 45°C, even if only briefly, a specific number of cycles is deducted from the guaranteed number of full charge cycles depending on the C rate and the ambient temperature in accordance with the following table (cycle reduction):

Ambient temperature	C rate (max.) up to 0.50	C rate (max.) up to 1.00
35.1°C to 40.0°C	20 cycles	15 cycles
40.1°C to 45.0°C	29 cycles	22 cycles

Table 2: Reduction of cycles when the optimum ambient temperature is exceeded

6.6. If a battery-storage system of the product is temporarily operated in a different temperature range during the operating period, the operating hours in the corresponding temperature range are multiplied by the minimum number of full charge cycles guaranteed for the corresponding temperature range. For the range from 35.1°C to 45.0°C, the corresponding valid minimum number from the range from 18.0°C to 35.0°C is to be applied. Then, the sum of the determined hourly values is divided by the sum of the operating hours in these temperature ranges. If an SMA battery-storage system is operated in the temperature range from 35.1°C to 45.0°C, the corresponding cycles are then deducted in accordance with Section 6.5. SMA guarantees the resulting value for the number of full charge cycles.

Example of a battery-storage system of the product with a (max.) C rate of up to 0.50:

Operating hours/or days	Ambient temperature	Guaranteed minimum number of full charge cycles
61,212 h	from 10.0°C to 17.9°C	6,500
23,967 h	from 18.0°C to 35.0°C	6,000
27 d = 648 h	from 35.1°C to 45.0°C	Reduction of the guaranteed cycles in accordance with Section 6.5.

Table 3: Calculation example of the guaranteed cycles

Guaranteed number of full charge cycles in this example:

$$(61,212 \text{ h} \times 6,500 + 23,967 \text{ h} \times 6,000 + 648 \text{ h} \times 6,000) \div (61,212 \text{ h} + 23,967 \text{ h} + 648 \text{ h}) - 27 \text{ d} \times 20 = 5,816 \text{ (rounded)}$$

6.7. If a battery-storage system of the product is operated at an ambient temperature of less than 10.0°C or more than 45.0°C at any time, even for a short period, the capacity warranty shall become void.

7. System warranty

7.1. SMA guarantees that the battery-storage system of the product is free of defects in material and processing during the warranty period in accordance with Section 5.2. which would impair the functionality of the battery-storage system of the product to a more than insignificant extent.

7.2. Claims under the system warranty are only valid if and as long as the ambient temperature remains between 10.0°C and 45.0°C during the entire operating period. It is the responsibility of the warranty claimant to prove compliance with this requirement using the external temperature measuring device provided with the battery-storage system of the product.

7.3. Deviations of the capacity of the battery modules from the nominal capacity are to be assessed exclusively in accordance with the requirements of Section 6 (capacity warranty) and do not constitute a warranty case under Section 7 (system warranty).

8. Occurrence and proof of a warranty case

8.1. The warranty case in accordance with Section 6 (capacity warranty) applies if the capacity of the corresponding battery module falls below 70 percent of the nominal capacity (end-of-life) within the corresponding warranty period before the guaranteed number of full charge cycles in accordance with Section 6 is reached. SMA will determine whether a warranty case applies in accordance with Section 6 by testing the capacity of the battery module under the following standard test conditions:

8.1.1. Ambient temperature during the test: 23.0°C

8.1.2. The battery module is charged to a state of charge (SoC) of more than 80 percent (3.908 V x 22 = 86.0 V) and cell balancing is carried out.

8.1.3. The battery module is discharged to the final discharge voltage or to a state of charge (SoC) of 0 percent ($3.2 \text{ V} \times 22 = 70.4 \text{ V}$) at a C rate of 0.2. A waiting time of 30 minutes follows.

8.1.4. The battery module is then charged using the constant current charging method at a C rate of 0.2 up to the maximum charging voltage. When this is reached, the constant voltage charging method is used to charge to 100 percent state of charge (SoC) ($4.15 \text{ V} \times 22 = 91.3 \text{ V}$). A waiting time of 30 minutes follows.

8.1.5. Then, the battery module is discharged at a C rate of 0.2 to the final discharge voltage or to a state of charge (SoC) of 0 percent ($3.2 \text{ V} \times 22 = 70.4 \text{ V}$).

8.1.6. Steps 8.1.3. to 8.1.5. are repeated again.

8.1.7. The capacity is defined as the capacity measured on the DC side of the battery during the second discharge process.

8.2. The warranty case in accordance with Section 7 (system warranty) applies in the event of a material or processing defect in the battery-storage system that significantly impairs the functionality of the battery-storage system.

9. SMA warranty services

9.1. If there is a warranty case, SMA will, at its own discretion:

9.1.1. repair the product covered by the warranty or the relevant component of the product covered by the warranty at the location of the product covered by the warranty,

9.1.2. repair the product covered by the warranty or the relevant component of the product covered by the warranty at SMA or at a third party authorized and qualified by SMA, or

9.1.3. supply and install an equivalent replacement product or an equivalent replacement component (in all cases, the warranty claimant shall accept a replacement product even if it has cosmetic defects that do not affect the functionality or safety conformity. SMA will, at its sole discretion, use new and/or equivalent to new devices or parts in the original or an improved design. SMA will retain ownership until it receives the defective device), or

9.1.4. replace the present value of the product covered by the warranty. The parties assume that the present value of the product is equivalent to the purchase price in the first year of the warranty period and decreases in a linear manner by 10 percent of the original purchase price from the second year of the warranty period (e.g. the current value would be 90 percent of the original purchase price in the second warranty year and 60 percent of the original purchase price in the fifth year of the warranty period).

9.2. If a warranty service by SMA fails, SMA is entitled to provide the same or another form of warranty service repeatedly, unless this is unreasonable for the warranty claimant.

9.3. If the original product or the original component is no longer available or can only be procured or produced at disproportionately high cost, SMA reserves the right to supply a functionally equivalent replacement product or a functionally equivalent replacement component.

9.4. The original product or the original component becomes the property of SMA after the installation of the replacement product or replacement component at the location of the warranty claimant. Components replaced during repairs shall also become the property of SMA.

9.5. SMA may commission a third party authorized and qualified by SMA to provide the warranty services.

10. Obligations to cooperate of the warranty claimant

10.1. The assertion of claims under the warranty shall be disclosed to SMA in writing during the warranty period and shall be made within a maximum of ten (10) working days after the warranty claimant has become aware of the warranty claim or should have become aware of it without gross negligence.

10.2. The warranty claimant shall provide SMA with the following data and documents in the disclosed information:

10.2.1. Product serial number,

10.2.2. Original invoice,

10.2.3. Proof of the date of commissioning of the battery storage system by sending SMA a fully completed and signed commissioning report that was completed and signed within a period of no more than thirty (30) calendar days after commissioning.

10.2.4. Completed complaint order in accordance with the SMA template

10.3. The warranty claimant shall provide SMA with more information necessary for the assessment as soon as possible on request.

10.4. The warranty claimant is obliged to provide SMA or a third party authorized and qualified by SMA with access to the logging file of the battery-storage system of the product, to the data of the external temperature measuring device, and to the necessary data of the connected inverter and energy management system within seven (7) working days after disclosure of the warranty claim in accordance with Section 10.2. above. The warranty claimant is obliged to follow the instructions of SMA or a qualified third party authorized by SMA.

10.5. The warranty claimant is obliged to provide SMA or a third party authorized and qualified by SMA with remote access to the monitoring software included in the battery-storage system of the product. SMA or the third party authorized and qualified by SMA shall instruct the warranty claimant accordingly.

10.6. The warranty claimant is obliged to provide SMA or a third party authorized and qualified by SMA with information on repair, care, and maintenance measures performed on the battery-storage system of the product, such as maintenance reports, on request.

10.7. The warranty claimant shall grant SMA or a third party authorized and qualified by SMA unhindered access to the product covered by the warranty for the purpose of checking whether a warranty case applies and for the purpose of providing warranty services.

11. Assumption of costs by the warranty claimant

If, during the assessment of the product covered by the warranty by SMA or a third party commissioned by SMA, no warranty claim is determined or it is determined that the warranty claim is excluded in accordance with Section 12, SMA may demand reimbursement of the resulting costs for the assessment from the warranty claimant. The required working hours are charged at an hourly rate of 95.00 euros, with a maximum rate per day of 760.00 euros in the case of an assessment in Germany and 920.00 euros in the case of an assessment in another country. 0.30 euros per km are charged for traveling to and from the location. In all other respects, the resulting travel expenses are calculated in accordance with the provisions of the German Federal Travel Expenses Act ("Bundesreisekostengesetz"). All amounts given are subject to the applicable value-added tax.

12. Exclusion of the warranty

12.1. The warranty is excluded if the product (battery-storage system) or components of the product:

12.1.1. were not stored, transported, set up, or installed properly and professionally, or not in accordance with the relevant installation and operating manual for the battery-storage system or in accordance with the technical specifications of SMA or the recognized engineering rules,

12.1.2. were removed from the location of commissioning for the first time or transferred to a different location, reinstalled, or disassembled, unless SMA gave its express written approval in advance,

12.1.3. were resold, recycled, or otherwise reused after they were commissioned for the first time, unless SMA gave its express written approval in advance,

12.1.4. were operated contrary to their intended use or contrary to the operating instructions in the corresponding installation and operating manual of the battery-storage system (including, in particular, improper forced disconnection or incorrect DC ratio),

12.1.5. were operated in combination with inverters or rectifiers or other power electronics that are not planned in the respective installation and operating manual of the battery-storage system, unless their use was exempted for the warranty claimant prior to commissioning with regard to this warranty,

12.1.6. have not been operated (not been commissioned) for a period of more than two (2) months after the date of delivery by SMA (ex works),

12.1.7. have been out of operation continuously for a period of more than six (6) months after commissioning,

12.1.8. were not serviced properly and professionally or in accordance with the standards, in particular in accordance with the maintenance instructions in the corresponding installation and operating manual for the battery-storage system,

12.1.9. were exposed - even only temporarily - to one or more of the following states:

12.1.9.1. a power of more than 1C,

12.1.9.2. a cell voltage of below 2.7 V or above 4.23 V

12.1.9.3. an operating temperature of above 50°C or below 0°C,

12.1.9.4. vibrations that exceed the normal level for transport and installation by more than an insignificant amount, or

12.1.9.5. a humidity of more than 80 percent or condensation water within the battery room,

12.1.10. were not updated or upgraded with updates provided and recommended by SMA,

12.1.11. were modified (in terms of the structure or in any other way) by the warranty claimant or third parties or were subject to other interventions,

12.1.12. overvoltage occurred in the utility grid to which they are connected,

12.1.13. the legal statutory regulations applicable at the location of the battery-storage system were not permanently complied with, or

12.1.14. were exposed to force majeure (in particular lightning, fire, earthquakes, natural disasters) or harmful environmental conditions such as air pollution, smoke, salt water, or sulphur corrosion or accidents and external influences,

12.1.15. were not subjected to interventions, changes, or attempted repairs not approved by SMA,

12.1.16. were insufficiently ventilated, resulting in thermal damage,

12.1.17. are corroded due to exposure to aggressive atmospheres or ambient conditions outside the specifications,

12.1.18. relevant safety regulations (UL, CSA, VDE, IEC, etc.) were not observed.

12.2. In the cases referred to in Section 12.1., it is sufficient if the relevant circumstance is (was) also the cause of the impairment, damage, or destruction of the product covered by the warranty. A (contributory) cause is assumed if one of the circumstances listed in 12.1 applies. The warranty claimant is entitled to provide proof of the lack of causality.

12.3. Services from this warranty are also excluded,

12.3.1. if the commissioning report, which was completed and signed within a period of no more than thirty (30) calendar days after commissioning, is not sent to SMA when the warranty case is disclosed,

12.3.2. if the disclosure of the warranty case in accordance with Sections 10.2. and 10.3. is not made within the relevant warranty period in accordance with Section 5,

12.3.3. if the disclosure of the warranty claim in accordance with Sections 10.2 and 10.3 is not made within ten (10) working days after the warranty claimant has become aware of the warranty claim or should have become aware of it without gross negligence,

12.3.4. if the disclosure of the warranty case is not made using the complaint order,

12.3.5. if the warranty claimant denies access by SMA or a third party authorized by SMA to the logging file of the battery-storage system, the data of the external temperature measuring device, or the monitoring software or has tampered with or deleted the logging file, the data of the external temperature measuring device, the monitoring software, or data that is relevant for the assessment of the warranty claim, or is unable to provide SMA with such data for other reasons, or

12.3.6. if the serial number on the battery-storage system can no longer be identified or has been modified, or

12.3.7. if the warranty case was caused or contributed to by the fault of the warranty claimant, its employees, agents, or other vicarious agents.

12.3.8. in the event of cosmetic or finish defects which do not directly impair energy production, or form, fit, or function.

13. Procedure for asserting rights under this warranty

The warranty claimant shall notify SMA of a fault or defect in a device within the specified warranty period and no later than ten (10) working days after the warranty claimant has become aware of the warranty claim or should have become aware of it without gross negligence. To determine whether the device is covered by the SMA manufacturer's warranty, the warranty claimant shall – in addition to the requirements given below – submit a copy of the commissioning report, which shall include the serial number of the defective device. SMA reserves the right to request a copy of other documents including the purchasing invoice and the serial number of the device. SMA will only accept documents in the following languages: Czech, Dutch, English, French, German, Italian, Spanish, and Polish. Certified translations into one of the mentioned languages will also be accepted. The type label on the device shall be completely undamaged and legible. If the aforementioned requirements are not fully complied with, SMA is not obliged to fulfill any of the obligations from this warranty.

The warranty service is also available by accessing SMA Online Support at www.SMA-Solar.com under the heading SERVICE & SUPPORT. The warranty claimant or their representative with electrical engineering training shall report any fault to their local SMA Service Center using the procedure as described below.

- Professional fault diagnosis may require a qualified service technician to be at the SMA device location and equipped with a high-quality digital AC/DC voltmeter and the required tools as specified in the SMA device manual.
- The qualified service technician on site may be requested to take voltage measurements and state event numbers (fault codes) of the inverter.
- Additional information may be required, in particular including:
 - Type designation
 - Installation site
 - Date of commissioning
 - Battery manufacturer and battery type
 - Description of all modifications performed on the inverter
- Carefully remove any optional interface modules from the product to be returned, and keep them with the replacement device for reuse.
- SMA will provide instructions for the proper return or disposal of the defective device.

- If no fault is found when the device is tested by the SMA Service repair department, the warranty claimant may be charged an inspection fee and transport costs.

If and to the extent services are to be provided by SMA free of charge in accordance with this warranty, they are only free of charge if and to the extent the procedure is agreed with and confirmed in writing by SMA in advance. Text form is sufficient to comply with the written form requirement, which also applies to electronic messages (e-mail). All costs incurred by the warranty claimant to assert its rights under this warranty shall be borne by the warranty claimant.

14. Final validity

The rights mentioned in this warranty reflect the exclusive rights of the warranty claimant in accordance with this warranty. No other claims, in particular for compensation for direct or indirect damage caused by the defective device, the costs resulting from disassembly or installation, and/or claims for compensation for loss of power production or profits, are covered by this warranty. If the warranty claimant requests unnecessary or unjustified service work and/or SMA replacements under this warranty, SMA is entitled to invoice the warranty claimant for the resulting costs.

15. Firmware disclaimer

SMA periodically provides firmware updates at its sole discretion for products purchased from SMA. Such firmware updates will be made available to the warranty claimant "as is" and normally at no additional cost. SMA does not assume any obligation for the reimbursement of expenses and provision of any maintenance, support, further updates, or configuration changes resulting from or in the context of the SMA firmware update. Unless there is proof of willful or grossly negligent fault on the part of SMA, SMA does not assume any liability for direct, indirect, incidental, or consequential damages, including loss of production, loss of profits, or any additional expenses resulting from or in the context of the SMA firmware update, regardless of whether it is carried out remotely or manually, even if the user was informed of the possibility of such damage.

The statutory warranty obligation of the device seller and the corresponding statutory warranty rights of the buyer which may not be lawfully excluded or limited are not affected by this firmware disclaimer.

16. Limitation period

Claims under the warranty shall expire twelve (12) months after SMA has finally refused to meet the claims asserted against the warranty claimant.

17. Applicable law and place of jurisdiction

1. All claims resulting from or in the context of this SMA manufacturer's warranty are subject to German law, with the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG). However, if the warranty claimant is a consumer as defined in Art. 6 of Regulation (EC) No 593/2008 and SMA has (i) either pursued its commercial or professional activities in the country where the consumer has their habitual residence, or (ii) by any means, directed such activities to that country or to several countries including that country, and (iii) this SMA manufacturer's warranty falls within the scope of such activities, then the choice of German law as stated in this paragraph does not have the result of depriving the consumer of the protection afforded to him by provisions that cannot be derogated from by agreement by virtue of the law of the country where the consumer has his habitual residence.

2. Kassel (Germany) is the exclusive place of jurisdiction for all disputes arising from or in the context of this SMA manufacturer's warranty provided the warranty claimant is a merchant, a legal entity under public law, or special assets under public law.

3. In the event the claimant is a consumer, whose residence or habitual residence is in the European Union or in countries which are contracting parties to the Agreement on the European Economic Area, the following shall apply: SMA is willing to attend a dispute settlement procedure at the General Consumer Conciliation Body of the Centre for Conciliation in Germany: Allgemeine Verbraucherschlichtungsstelle des Zentrums für Schlichtung e. V., Strassburger Str. 8, 77694 Kehl, Germany.

For more information, please visit the "Service" section of our website at www.SMA-Solar.com