



MEDIUM VOLTAGE POWER STATION with SUNNY CENTRAL / SUNNY CENTRAL STORAGE

Project name:

Customer:

Address, location of the system:

Product serial number

Product production version

i **Content of the maintenance report**

In conjunction with the other product documentation, the maintenance report assures faultless operation of the product and peripheral devices from SMA Solar Technology AG. Maintenance work does not automatically guarantee electrical safety.

The maintenance report contains all necessary maintenance intervals of the product as well as the preventive replacement intervals of individual components.

i **Storage of the maintenance report**

- After maintenance work, keep the maintenance report at hand near the product.
- In addition, a copy is to be sent to maintenance.service@sma.de at the latest four weeks after completion of the maintenance work. Enter the serial number of the system on which maintenance was carried out in the subject line.

i **Maintenance instructions**

- All work must only be carried out in accordance with this product documentation. All safety information must be observed.

i **Regular data backup**

Back up and archive the product data at regular intervals. This can be done by remote query or during routine maintenance work.

No.	Appendix

Maintenance Work

General Maintenance Work

Maintenance work	Interval	Date completed
Maintain the key switches and seals.	12 months	
Perform visual inspection.	12 months	
Clean the interior.	12 months*	
Save the operating data of the inverter.	12 months**	
Check the surfaces for rust damage. If necessary, remove the rust and paint over with primer and the respective color.	12 months*	
Check the latches, door stops and hinges.	24 months	
Check the labels of the MV Power Station.	24 months*	
Check that the grounding connections are securely in place. Check the grounding connections for discoloration and corrosion. If necessary, repair any corrosion damage and grease.	24 months*	
Check the contact resistors of the grounding.	6 years	
Check all components of the product and ensure operational safety after environmental disturbances (e.g. earthquakes, storms or flooding).	Where necessary	
Contact the SMA Service Line after each short circuit.	After any short circuit	

* After exceptional environmental incidents (e.g. sand or snow storm, volcanic eruption, forest fire), maintenance must be carried out within 1 week.

** In order to reduce the data transmission time, the interval should be shortened.

Service work on the inverter

Maintenance work	Interval	Date completed
Clean the air duct and the ventilation grids.	12 months	
Check the inverter label.	24 months*	
Check the fuse of the DC surge arrester for continuity.	24 months	
Check the fans.	24 months	
Check the functioning of the indicator lights.	24 months	
Maintain the DC load-break switch.	24 months**	
Clean the AC disconnection unit.	24 months**	
Maintain the AC disconnection unit.	4 years / after short circuit***	
Replace the fuse of the DC surge arrester.	Once triggered	

Maintenance work	Interval	Date completed
Replace the DC fuses.	After a fault	

* After exceptional environmental incidents (e.g. sand or snow storm, volcanic eruption, forest fire), maintenance must be carried out within one week.

** In deviation to the maintenance interval of 12 months specified by ABB, the maintenance interval stated in this documentation applies.

*** Deviating from the 3-year maintenance interval specified by ABB, the maintenance interval required by this documentation applies.

The maintenance work must only be performed by SMA Service or qualified personnel. The qualification for maintenance work on the inverter can be acquired by attending the training "Preventative and Corrective Maintenance of Sunny Central Inverters" (formerly "First-Level-Support") at the SMA Solar Academy.

Maintenance work	Interval	Date completed
Replace the lithium-ion rechargeable battery.	10 years	
Replace the Industrial Compact Flash card.	10 years or after an error message	
Replace the interior fan.	14 years	
Replace the inverter bridge fan.	14 years	
DC Load-Break Switch	After error message	
AC disconnection unit	After error message	
Replace the three-phase short-circuiting device.	After a short circuit	
Replace the GFDI.	After 7000 cycles or 100 short circuits	
Replace the Remote GFDI.	After 7000 cycles or 100 short circuits	

Maintenance work at the low-voltage connection between inverter and medium-voltage transformer

Maintenance work	Interval	Date completed
Clean the busbar and feed-throughs.	12 months*	
Check whether the ventilation grids are free from pollution and deposits and clean if needed.	24 months*	

* If the product is subject to adverse ambient conditions, SMA Solar Technology AG recommends that the maintenance interval be reduced in accordance with the ambient conditions.

Maintenance work in the medium-voltage cabinet

Maintenance work	Interval	Date completed
Check function of the fans.*	12 months	
With the order option "Environment: Harsh": Clean the filter pad at the air inlets and outlets. For this, wash with clear water, dry and reinsert the filter pad. The filter pad must be replaced by a new one after 10 washes. Filter pads can be ordered from us (material number: 113059-00.01).	12 months**	

Maintenance work	Interval	Date completed
Check whether the ventilation grid function is given.	24 months**	
Clean the medium-voltage cabinet.	24 months**	
Clean the ventilation shaft of the fan* and the ventilation grids on the doors.	24 months**	
Ensure that the grounding contacts are securely in place and show no discoloration or corrosion.	24 months	
Check the function of the lighting.*	24 months	
Check the function of the doors and hinges and lubricate them.	24 months	
Replace the cascade control battery (material number: 109005-00.01).*	5 years**	

* depending on the order option

** If the product is subject to adverse ambient conditions, SMA Solar Technology AG recommends that the maintenance interval be reduced in accordance with the ambient conditions.

Maintenance work in the low-voltage cabinet

Maintenance work	Interval	Date completed
Check the surge arrester and, if necessary, remove it (material number: 62-951001).	12 months, after thunderstorms or noticeable voltage surges in the utility grid	
Clean the filter pad at the air inlets and outlets. For this, wash with clear water, dry and reinsert the filter pad. The filter pad must be replaced by a new one after 10 washes. Filter pads can be ordered from us (material number: 113059-00.01).	12 months*	
Check the residual-current device of the lighting and socket.**	12 months	
Check that the protective covers of the fuses are securely in place and correct, if necessary.	24 months	
Ensure that the grounding connections are securely in place and show no discoloration or corrosion.	24 months	
Check the function of the relay in the safety loop.	24 months	
Clean the inside of the enclosure.	24 months	

* If the product is subject to adverse ambient conditions, SMA Solar Technology AG recommends that the maintenance interval be reduced in accordance with the ambient conditions.

** Depending on the order option / special version

Maintenance work on the medium-voltage transformer

Maintenance work	Interval	Date completed
Check the oil temperature in the instantaneous value 6107 .	12 months	
Check low-voltage and medium-voltage cable entries for discolorations and damages.	24 months	
Check electrical connections for dirt and signs of electric arcs.	24 months	
Check the cooling surfaces for dirt and damages.	24 months	
Check maintenance seal and security seals for damage.	24 months	
Check the torques of grounding connections.	24 months	
Check function of the tap changer.	24 months	
Check the oil level.	24 months	
Check the medium-voltage transformer for paint damage and rust. Remove any rust patches and repaint (if necessary).	24 months	
Check all the seals on the medium-voltage transformer for leakages and retighten the screws with the relevant torque if necessary.	24 months	
Take an oil sample and have it tested.	Recommended after a failure when, for example, the hermetic protection device has tripped.	
Check the medium-voltage transformer for leakage.	Where necessary	

Maintenance work in the medium-voltage switchgear (optional)

Maintenance work	Interval	Date completed
Checking Gas Fill Level in Medium-Voltage Switchgear	Prior to each switching procedure:	
Carry out the visual inspection of the general condition (cleanliness, no corrosion, etc.). If required, clean the enclosure and repair corroded surfaces.	24 months*	
Check the lid of electric-arc opening.	24 months and prior to each switching operation.	
Check grounding connections.	24 months	
Check functionality of the circuit breaker.	24 months	
Check the motor-drive function.* *	24 months	

Maintenance work	Interval	Date completed
Check the locking of the cable cover in ungrounded condition.	24 months	
Check functionality of the over-current protection device. ^{***}	4 years	
Check electrical connections.	6 years	
Check the accessory for completeness and its current state.	6 years	
Check that switch position indicators are aligned.	6 years	
Replace the battery (Saft Type LS 17500, 3.6 V) of the overcurrent protection devices IKI 30E and IKI 35.	15 years	

* If the product is subject to adverse ambient conditions, SMA recommends that the maintenance interval be reduced in accordance with the ambient conditions.

** depending on the order option

*** This task must only be performed by qualified protection tester.

Maintenance Work on the Oil Spill Containment (optional)

Maintenance work	Interval	Date completed
Check the oil spill containment underneath the medium-voltage transformer and the inverter and clean it if necessary.	12 months*	
Check prefilter and oil filter and clean if necessary.	12 months*	
Check the oil spill containment underneath the medium-voltage transformer and the inverter regularly for leakages. If necessary, eliminate leakages.	24 months*	
Check the oil spill containment underneath the medium-voltage transformer and inverter regularly for water to prevent frost damage. Remove water, if necessary.	24 months*	
Remove pre-filter.	36 months	
Replace oil filter when, normally, clean and clear water flows through the filter.	5 years or if oil filter has come into contact with oil.	

* If the product is subject to adverse ambient conditions, SMA Solar Technology AG recommends that the maintenance interval be reduced in accordance with the ambient conditions.

Your signature confirms that the work listed above has been carried out.

Customer or contractor company*	Last name, first name*	Date	Signature
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* in block letters