



SMA Service Concept System Solutions with Sunny Central





SMA SERVICE

FOR TOP PERFORMANCE AND MAXIMUM YIELDS

In the scheduling, installation and management of a PV power plant, quality comes first. Equally important, however, is having the right partner – someone you can count on from the start. With more than 30 GW installed around the world, SMA offers more service experience than any other inverter manufacturer.

No matter what phase your project is in, our service team will always stand behind you, making sure that your plant remains profitable for the long term. With our comprehensive service, we guarantee safe and optimum plant performance – for 20 years or more.

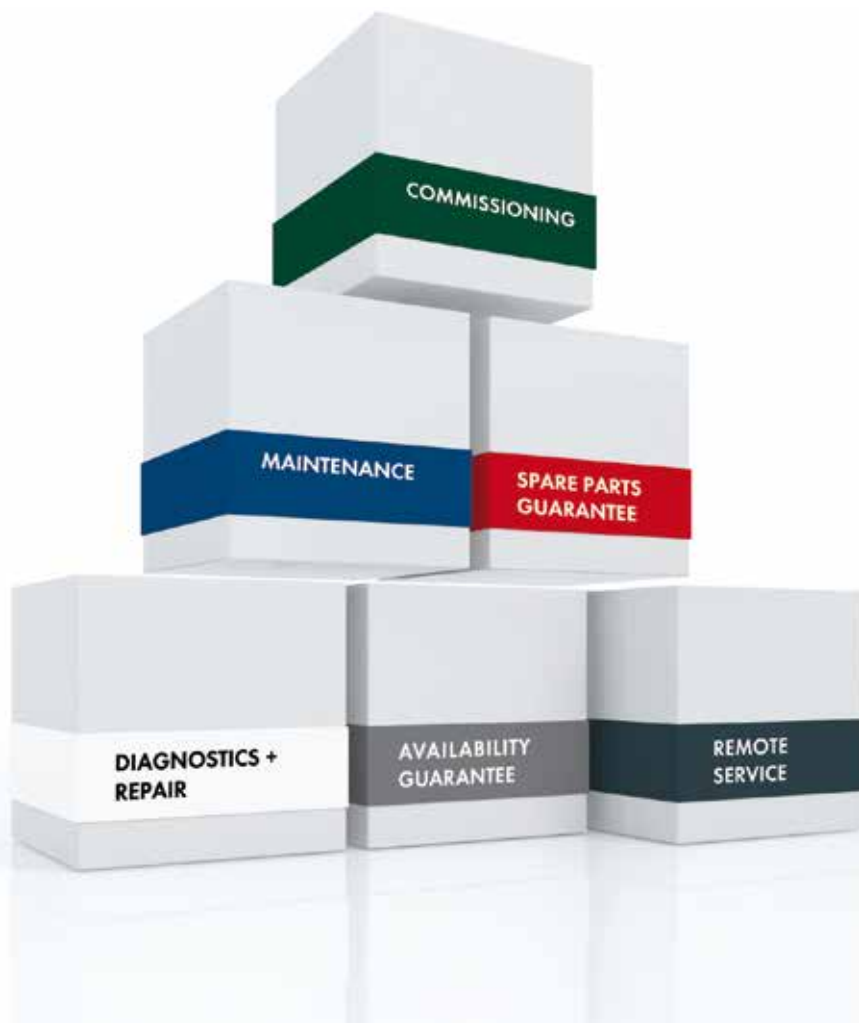


WHY WE ARE THE RIGHT SERVICE PARTNER

- ✓ Global and comprehensive service network – local contacts, fast response times
- ✓ Professional support backed by manufacturer's expertise means highly qualified technicians with extensive field experience
- ✓ Long-term availability of genuine parts and cost certainty with reliable spare parts management
- ✓ Proactive service with intelligent error detection and remote updates

FLEXIBLE AND CUSTOM-TAILORED

SERVICE PROVIDED FOR THE PLANT'S ENTIRE LIFE



Every PV plant is unique and has its own specific technology, and on top of that, the requirements placed on PV power plants change over the years. This is why SMA's service concept does not rely on rigid contracts but instead on flexible solutions.

Six modules for long-term success

Do you want to provide certain services on your own? Or would you rather rely on our specialists for the start-up work and any necessary repairs? With the SMA Service Concept, you can choose from six service

modules* to create your own service package. We offer you excellent and custom-tailored service for your central inverter and medium-voltage components.

* Please note that individual services may vary by region. You can find the current country list on our website at www.SMA.de/en/Service.

BENEFITS GIVING YOU HIGHER, RELIABLE RETURNS

- ✓ Optimized plant performance and maximum yields
- ✓ Long-term security with minimal downtime and substantial risk minimization

THAT IMPLIES FOR YOU

- ✓ Higher and safer yields

THE SMA MANUFACTURER 'S WARRANTY OFFERS INVESTMENT SECURITY



SMA inverters and medium-voltage components come with a standard five-year warranty, which includes two module options: the spare parts guarantee and diagnostics & repair services. This standard warranty guarantees you a high level of security. However, for investors in particular, it is well worthwhile to supplement the manufacturer's warranty with additional service packages from the very start. You can purchase additional modules at any time during the manufacturer's warranty period.

EXTENDING THE MANUFACTURER 'S WARRANTY

Would you like to extend your manufacturer's warranty? Then choose a contract that includes the spare parts guarantee and diagnostics & repair modules.

For detailed information about the SMA manufacturer's warranty, see our warranty terms and conditions on our website at www.SMA.de/en/Service.

COMMISSIONING

BEST PLANT PERFORMANCE RIGHT FROM THE START

Our experts check to be sure that your inverter and medium-voltage components are correctly installed and that all the requirements for connection to the grid are successfully met. Among other services, SMA provides support during inverter pa-

rameterization and performs a thorough function test. This ensures that the plant has a safe and stable connection to the grid and immediately performs as planned.

INCLUDED IN THE SERVICE PACKAGE

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- Inspecting central inverters and medium-voltage components such as cable connections, fusing and grounding equipment, and station buildings
- Taking measurements such as functional values, PV voltage and efficiency
- Configuring necessary plant-specific parameters
- Documenting the setup process in the SMA commissioning report

ADVANTAGES

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- Confirmation from SMA experts that your PV plant has been installed correctly
- Stable, optimized operation of your PV plant
- Prevention of consequential damages and fault-related downtime





REMOTE SERVICE

REMOTE MONITORING FOR MAXIMUM SECURITY

Major investments require a high degree of security. The Remote Service enables SMA to monitor data almost in real time* in order to keep an eye on inverter performance. This plan ensures that your PV plant runs smoothly while optimizing your energy production.

Speed is essential if your PV plant starts to malfunction. Since we have access to all relevant raw data, we can immediately respond and take the necessary steps to solve the problem. We will also call or email you within four hours** to discuss your options. Usually a problem can be corrected via remote access so that on-site service is unnecessary. This service component also includes monthly reports on regulations and service incidents.

The Remote Service module can be combined with any other modular component of the SMA Service Concept.

* data retrieval up to every ten seconds depending on data connection.
** only during SMA Service Line operating hours.

INCLUDED IN THE SERVICE PACKAGE

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- Continuous real-time monitoring of the inverters*
- Fast response time by telephone or email when a problem occurs**
- Priority support upon service request
- Monthly report on service incidents

ADVANTAGES

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- PV plant is guaranteed to run smoothly
- Faster troubleshooting due to our access to raw data
- Minimized potential downtime and resulting yield loss
- More secure energy production and lower costs over the long term





MAINTENANCE

THE BASIS FOR OUTSTANDING RELIABILITY

More power, more efficiency, more profitability: Regular maintenance by our SMA experts improves the performance of your PV system and at the same time minimizes the risk of a potential system shutdown. With this service, we carefully inspect your inverters and medium-voltage components,

perform necessary updates and clean important equipment components. Our service technicians also read out the error memory and ensure that everything runs optimally. In regular intervals we will perform all the tasks listed in your maintenance schedule, with all labor and material costs included.

INCLUDED IN THE SERVICE PACKAGE

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- Inspecting and checking the components for contamination and signs of wear
- Cleaning the device, especially the filter and ventilation equipment
- Checking that the inverter’s various components and power connections are functioning properly
- Performing necessary firmware updates and setting plant-specific parameters
- A detailed maintenance report

ADVANTAGES

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- No unexpected malfunctions and no hidden costs
- Prevent plant downtime by operating your plant in the ideal way
- Increase in inverter availability
- Security of regular maintenance intervals





SPARE PARTS GUARANTEE

ORIGINAL PARTS AVAILABLE IN THE FUTURE

SMA products not only come standard with high performance components, but also with a reliable supply of spare parts. If there are any plant malfunctions, you can rest assured that our Service will supply the right spare part – in the long-term and at a calculable price.

Whether an electronic or mechanical part, we will deliver it to you as soon as possible, guaranteed. This means that plant downtime will be kept to a minimum, thus safeguarding your high energy production.

This feature is included in the five-year manufacturer's warranty.

INCLUDED IN THE SERVICE PACKAGE

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- Spare parts availability over the entire contract period is guaranteed
- Accepting your report of an incident and providing telephone support
- In the event of irregularities: spare parts inclusive
- Shipping from SMA Service, usually within one business day

ADVANTAGES

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- Long-term security thanks to suitable replacement parts
- Plant operation is quickly restored by fast and safe delivery
- Prices remain stable over the entire service life of your equipment





DIAGNOSTICS + REPAIR

PROFESSIONAL ON-SITE SUPPORT

We will be there if something does end up going wrong. Our specialists are always up-to-date on the latest technology and will always know your plant inside and out. And thanks to remote access, our service technicians can obtain an accurate diagnostic report and plan repairs accordingly.

With the Diagnostics + Repair module, all your service requirements will be met. Just let SMA diagnose the problem and perform repairs for first and second level support. You can relax while the necessary adjustments are quickly and professionally handled by our expert technicians.

This service module is included in the five-year manufacturer's warranty.

Offering professional service together

You can also choose to self manage first level support for inverters.* After we help you diagnose the problem, you will have the ability to complete minor repairs on your own timeline, while SMA Service will take care of more complex second level repairs.

* The First Level Support as contribution is not available for medium-voltage components.

INCLUDED IN THE SERVICE PACKAGE

- Processing your report of a failure and providing telephone support
- Accessing your plant over a remote connection, evaluating collected data and diagnosing the issue
- First and second level support from SMA
- Repairing the plant by exchanging the affected components on-site (components not included)
- Service technician arrival on-site, generally within two business days of the initial report (if received during business hours) *
- Preparation of a service report for every repair job

ADVANTAGES

- With our competent support, the plant operation is quickly restored
- Fast response time through detailed diagnostic options
- Highly-qualified experts and manufacturer expertise





AVAILABILITY GUARANTEE

YIELD SECURITY IN THE EVENT OF FAILURE

The module Availability Guarantee provides you with financial security in the event of yield loss. You can choose an inverter and medium-voltage components uptime guarantee of 97, 98 or 99 percent. If your actual availability falls short of the guaranteed metric, SMA will compensate the loss with a specified amount.

We compensate you for the difference with €1.40 per kilowatt of nominal AC power during the day in the summer and €1.00 per kilowatt of nominal AC power in the winter.

As a matter of course, the remuneration can be individually adapted on request.

INCLUDED IN THE SERVICE PACKAGE

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- Compensation paid for losses due to a shortfall in the specified uptime
- Preferred status when requesting service jobs
- Calculation of the annual availability of inverters and medium-voltage components in the plant
- Annual availability report

ADVANTAGES

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- High PV plant availability
- Guaranteed energy production for plant operation
- Reliable long-term energy production





SMA SERVICE CONCEPT

SERVICE COMBINATIONS FOR LONG-TERM SUCCESS



The Investor

Your interests include ensuring the lowest possible financial risk and generating predictable, high energy production from your plant. The main focus of your business activity is commercial so you have no particular desire to deal with the technical side of the project. Our all-inclusive service package is the ideal choice for you.

For the perfect start:

- Commissioning by SMA experts

Your service package during the manufacturer's warranty:

- Standard warranty (free)
- Remote Service
- Maintenance
- Availability Guarantee

After the manufacturer's warranty expires:

- Remote Service
- Maintenance
- Spare Parts Guarantee
- Diagnostics + Repair
- Availability Guarantee

The Plant Operator

You operate a PV plant featuring Sunny Central inverters. Since you have trained electronics technicians at your disposal, you can carry out a portion of the necessary maintenance and service work yourself after attending an SMA training session. Thanks to your well-established service network, you also fulfill the requirements to guarantee, for the most part, the availability of your plant on your own.



The Project Developer

For the perfect start:

- Commissioning by SMA experts

Your service package during the manufacturer's warranty:

- Standard warranty (free)

After the manufacturer's warranty expires:

- Spare Parts Guarantee
- Diagnostics + Repair
(with self managed first-level support)

You planned and installed a PV plant featuring Sunny Central inverters. You now want to operate the plant for two years with our support, and then sell it to an investor. Your employees will be responsible for maintenance during this initial period. Since your client has a high need for security, we recommend extending the scope of the service agreements after two years.

For the perfect start:

- Commissioning by SMA experts

Your service package during the manufacturer's warranty (Project Developer):

- Standard warranty (free)

After two years (Investor):

- Standard warranty (free)
- Remote Service
- Maintenance
- Availability Guarantee

After the manufacturer's warranty (Investor):

- Remote Service
- Maintenance
- Spare Parts Guarantee
- Diagnostics + Repair
- Availability Guarantee

COMMISSIONING JAPAN'S LARGEST PV POWER PLANT

SERVICE TEAM MET EVERY CHALLENGE

Conditions at a PV power plant vary and are often difficult and unpredictable. The 70-megawatt plant in Kagoshima was no exception and offers a good example of how important it is to have the right service partner by your side – someone with broad experience and a swift and skillful response to unexpected events. Furthermore, as the inverter is the brain of any PV power plant, it pays to rely on SMA's expertise and its many years of experience.

Construction of the large-scale PV power plant was anything but ordinary. To start, the PV project was Japan's first large-scale plant, so there were no country-specific reference data regarding technology, installation or maintenance. Additionally, the plant is right by the sea, near an active volcano and in a region where typhoons are not a rare occurrence.

With an international service team hailing from Korea, Thailand, India and Germany, SMA provided substantial and active support during construction. The service techni-

cians met all sorts of challenges including a volcanic eruption and torrential rain with flooding and lightning strikes at the construction site.

However, after just 13 months of construction, the plant commenced operations without any problem. This no doubt helped SMA secure the plant maintenance contract for the next few years, which means the facility will receive support from an SMA Service team located right in Japan, so that the customer will have immediate access to help when needed.



What are the requirements for purchasing the Availability Guarantee?

The Availability Guarantee has to be selected in combination with the manufacturer's warranty or the Spare Parts Guarantee and Diagnostics + Repair modules.

In which period can I purchase the service modules?

The service modules Remote Service and Maintenance can be purchased at any time. All other services can be purchased during the whole manufacturer's warranty period, as long as maintenance has been carried out at the stipulated intervals prior to purchasing and the maintenance reports have been communicated to SMA.

Which time periods can I choose from?

For the Remote Service, Maintenance and Availability Guarantee: Either 5, 10, 15, or 20 years from the date of commissioning. For the Spare Parts Guarantee and Diagnostics + Repair modules: Either 10, 15, or 20 years from the date of commissioning.

Can I extend the period of my contract?

Yes, you have the one-time option to extend each service module to the maximum period of 20 years, within the first 10 years of commissioning.

SMA Service Line

Do you have technical questions or do you need professional support? Please do not hesitate to contact the SMA Service Line at any time. Our staff will be happy to assist you. The telephone numbers and operating hours of our expert team can be found on our website at www.SMA.de/en/Service and our country-specific websites.

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We are happy to assist you.

Do you have questions or need individual assistance? If so, please contact us.

We will be happy to help you select the right combination of services.

