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SMA Warranty

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SMA Solar Technology AG

Sonnenallee 1

34266 Niestetal

Germany

Tel. +49 561 9522-0

Fax +49 561 9522-100

www.SMA.de

Email: info@SMA.de

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1 Information on this Document

1.1 Validity

This document is valid for the Antenna Extension Kit (Product "EXTANT-40").

You can find the latest version of this document at www.SMA-Solar.com.

1.2 Target Group

The tasks described in this document must only be performed by qualified persons. Qualified persons must have the following skills:

- Training in how to deal with the dangers and risks associated with installing and using electrical devices and installations
- Training in the installation and commissioning of electrical devices and installations
- Knowledge of how an inverter works and is operated
- Knowledge of the applicable standards and directives
- Knowledge of and compliance with this document and all safety information

1.3 Symbols

Symbol	Explanation
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
	Indicates a hazardous situation which, if not avoided, can result in death or serious injury
	Indicates a hazardous situation which, if not avoided, can result in minor or moderate injury
	Indicates a situation which, if not avoided, can result in property damage
	Information that is important for a specific topic or goal, but is not safety-relevant
	Indicates a requirement for meeting a specific goal
	Desired result
	A problem that might occur

1.4 Typographies

Typography	Use	Example
bold	<ul style="list-style-type: none"> • Display texts • Elements on a user interface • Terminals • Elements to be selected • Elements to be entered 	<ul style="list-style-type: none"> • The value can be found in the field Energy. • Select Settings. • Enter 10 in the field Minutes.

Typography	Use	Example
>	<ul style="list-style-type: none"> Connects several elements to be selected 	<ul style="list-style-type: none"> Select Settings > Date.
[Button] [Key]	<ul style="list-style-type: none"> Button or key to be selected or pressed 	<ul style="list-style-type: none"> Select [Next].

1.5 Nomenclature

Complete designation	Designation in this document
Antenna Extension Kit	Antenna, product
PV system	PV system

2 Safety

2.1 Intended Use

The Antenna Extension Kit is an accessory set for SMA inverters: By installing the Antenna Extension Kit in an SMA inverter with WLAN interface, the inverter's radio range can be optimized within the WLAN network.

The Antenna Extension Kit must only be installed in the following SMA inverters:

- STP 50-40 (Sunny Tripower CORE1)

The inverter still complies with the standard after the product has been installed.

The product must only be used in countries for which it is approved or released by SMA Solar Technology AG and the grid operator.

The product is suitable for indoor and outdoor use.

Use this product only in accordance with the information provided in the enclosed documentation and with the locally applicable standards and directives. Any other application may cause personal injury or property damage.

Alterations to the product, e.g. changes or modifications, are only permitted with the express written permission of SMA Solar Technology AG. Unauthorized alterations will void guarantee and warranty claims and in most cases terminate the operating license. SMA Solar Technology AG shall not be held liable for any damage caused by such changes.

Any use of the product other than that described in the Intended Use section does not qualify as the intended use.

The enclosed documentation is an integral part of this product. Keep the documentation in a convenient place for future reference and observe all instructions contained therein.

2.2 Safety Information

This section contains safety information that must be observed at all times when working on or with the product.

To prevent personal injury and property damage and to ensure long-term operation of the product, read this section carefully and observe all safety information at all times.

DANGER

Danger to life due to high voltages of the PV array

When exposed to sunlight, the PV array generates dangerous DC voltage, which is present in the DC conductors and the live components of the inverter. Touching the DC conductors or the live components can lead to lethal electric shocks.

- Prior to performing any work on the inverter, always disconnect the inverter from voltage sources on the AC and DC sides as described in the inverter manual. When doing so, note that even if the DC load-break is switched off, there will be dangerous direct voltage present in the DC conductors of the inverter.

DANGER

Danger to life due to electric shock from touching an ungrounded product

Touching an ungrounded product can cause a lethal electric shock.

- Ensure that the product is integrated in the existing overvoltage protection.

⚠ CAUTION**Increased electromagnetic radiation through the antenna**

During operation, the antenna produces an electromagnetic field and can interfere with other devices (e.g., pacemakers) due to electromagnetic interference.

- Persons must not remain closer than 20 cm to the antenna for long periods of time.

NOTICE**Damage to the inverter or product due to electrostatic discharge**

Touching electronic components can cause damage to or destroy the inverter or the product through electrostatic discharge.

- Ground yourself before touching any component.

3 Scope of Delivery

Check the scope of delivery for completeness and any externally visible damage. Contact your distributor if the scope of delivery is incomplete or damaged.

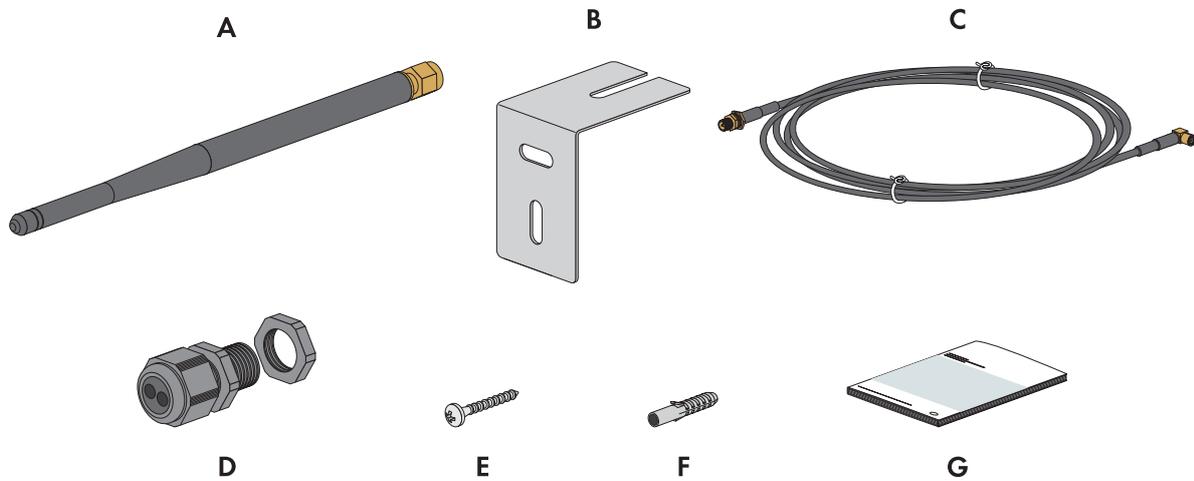


Figure 1: Components included in the scope of delivery

Position	Quantity	Designation
A	1	Antenna
B	1	Antenna bracket
C	1	Antenna cable (3 m (9.8 ft))
D	1	Cable gland with multi-hole seal
E	2	Bolt
F	2	Screw anchors
G	1	Quick reference guide for commissioning

4 Mounting

4.1 Mounting position

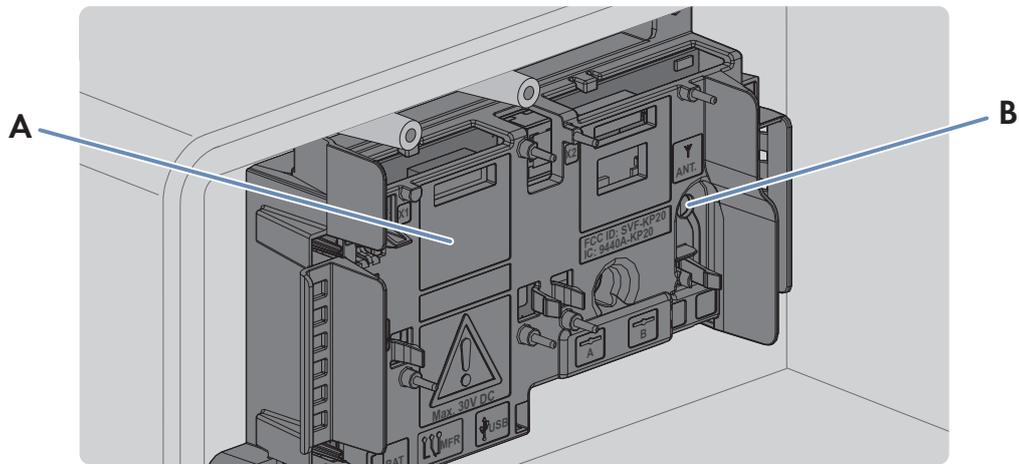


Figure 2: Communication assembly in the inverter with mounting position for the antenna

Position	Designation
A	Communication assembly
B	Pin connector ANT. √ for connecting the antenna cable

Mounting location

⚠ CAUTION

Increased electromagnetic radiation through the antenna

During operation, the antenna produces an electromagnetic field and can interfere with other devices (e.g., pacemakers) due to electromagnetic interference.

- Persons must not remain closer than 20 cm to the antenna for long periods of time.

The mounting location of the antenna is crucial for the quality of the wireless connection. Radio waves are emitted in circles from the longitudinal side of the antenna. A circular dead spot begins at the tip of the antenna. If you place the receiver in this dead spot, the receiver cannot receive any radio waves from the antenna.

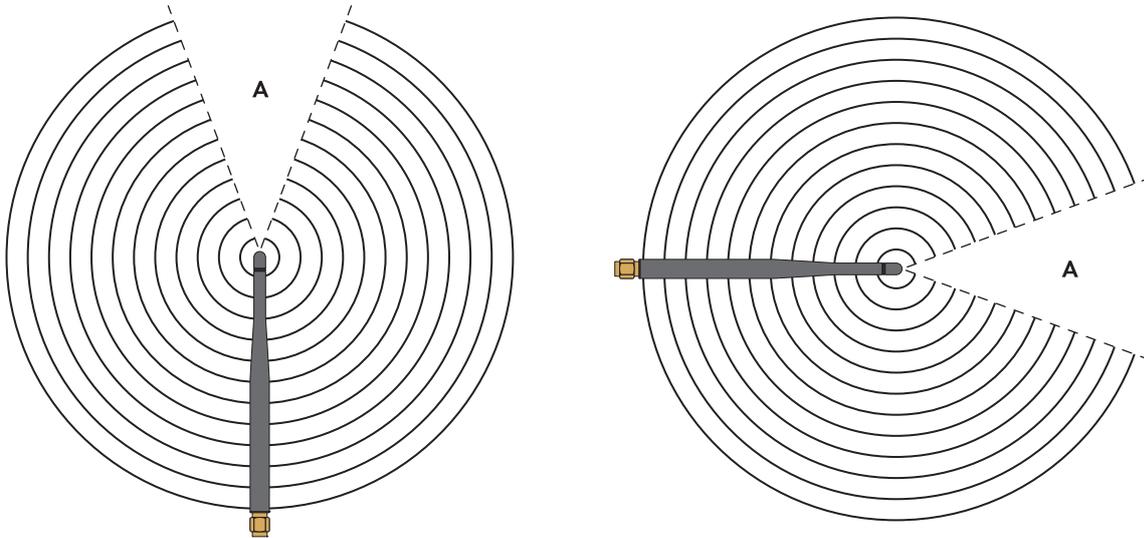


Figure 3: Radio waves emitting from the antenna

Position	Explanation
A	Dead spot

Requirements for the mounting location:

- An antenna cable length of 3 m (9.8 ft) must be observed. The antenna cable must not be extended.
- The antenna cable must be placed in such a way that the minimum bending radius of 35 mm (1.38 in) is maintained.
- The receiver must not be in the dead spot of the antenna.

4.2 Mounting the Antenna

Procedure:

1. **⚠ DANGER**

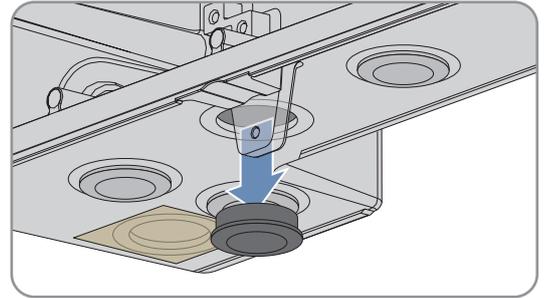
Danger to life due to high voltages of the PV array

When exposed to sunlight, the PV array generates dangerous DC voltage, which is present in the DC conductors and the live components of the inverter. Touching the DC conductors or the live components can lead to lethal electric shocks.

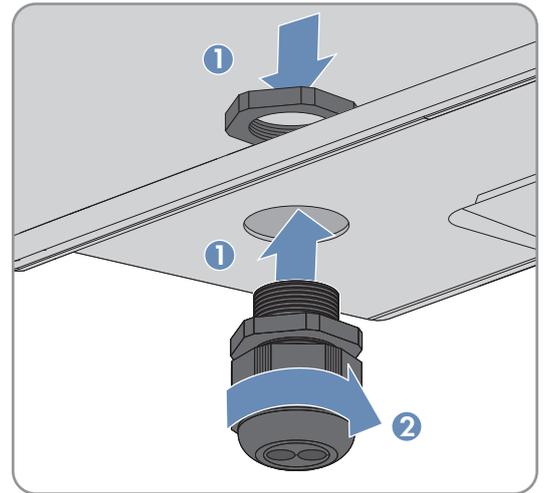
- Prior to performing any work on the inverter, always disconnect the inverter from voltage sources on the AC and DC sides as described in the inverter manual. When doing so, note that even if the DC load-break is switched off, there will be dangerous direct voltage present in the DC conductors of the inverter.

2. If necessary, attach the cable gland to the inverter:

- Push the sealing plug from the inside out of the enclosure opening and retain it for later decommissioning.

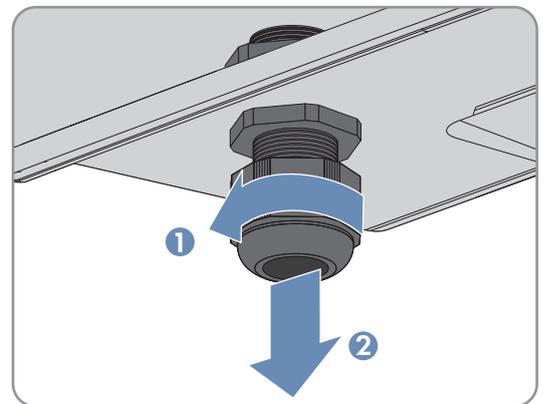


- Unscrew the counter nut from the supplied cable gland.
- Tighten the cable gland with the counter nut on the inverter enclosure opening.

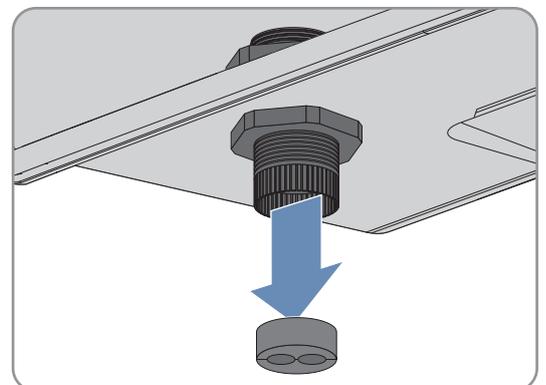


3. Connecting the antenna cable plug:

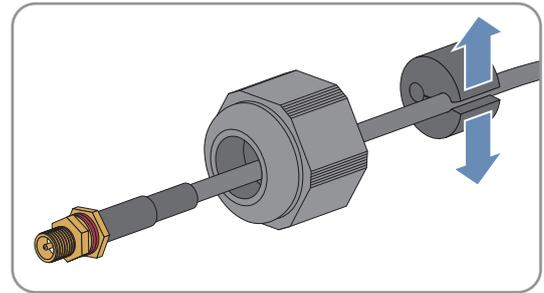
- Unscrew the swivel nut from the cable gland.



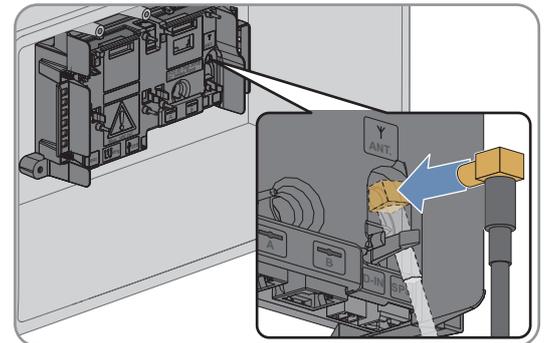
- Remove the two-hole cable support sleeve from the cable gland.



- Route the antenna cable with the cable end with the plug through the swivel nut and the desired hole of the two-hole cable support sleeve.



- Push the two-cable support sleeve along with the antenna cable back into the cable gland. Ensure that any unused openings of the two-hole cable support sleeve are sealed with sealing plugs.
- Screw the swivel nut of the cable gland on loosely.
- Remove the protective cover of pin connector **ANT. Y** on the communication assembly (if present).
- Insert the plug of the antenna cable into the pin connector **ANT. Y** on the communication assembly until it snaps into place. Observe the prescribed cable route (see Section 4.1, page 9).



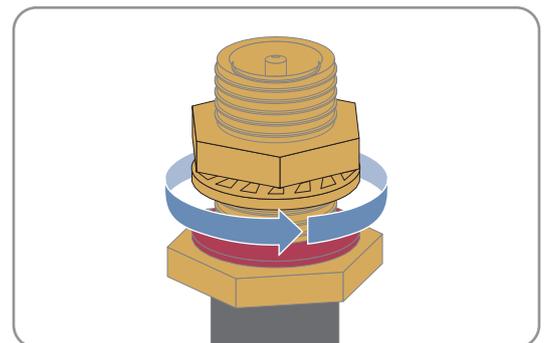
- Fasten the swivel nut on the cable gland hand-tight. This will secure the antenna cable.

4. Installing the antenna bracket:

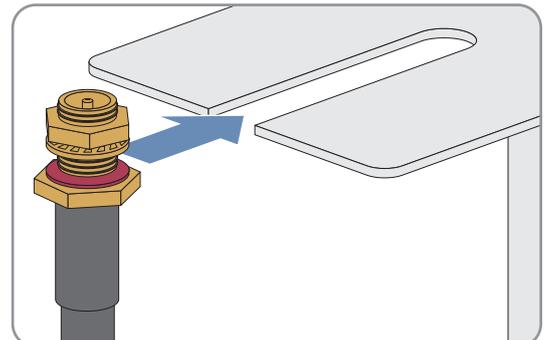
- Considering the dead spot of the antenna, move the antenna bracket to the desired position on the wall and hold it firmly.
- Mark positions of drill holes if necessary and drill two holes with 6 mm (0.24 in) diameter each at the marked points and insert screw anchors.
- Attach the antenna bracket to the wall with the screws.

5. Attaching the antenna cable and the antenna to the antenna bracket:

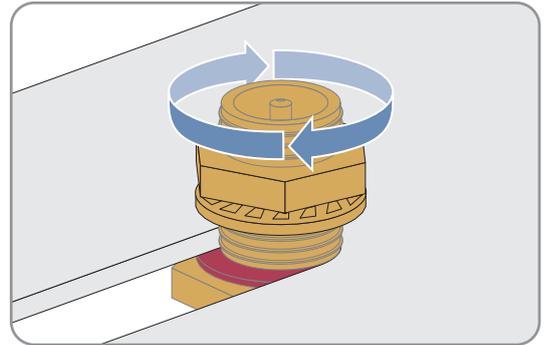
- On the antenna cable, unscrew the counter nut approx. 5 mm (0.2 in) from the plug.



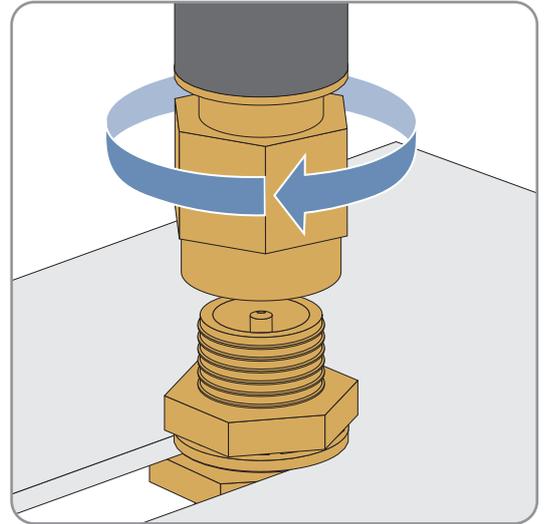
- Lead the antenna cable plug from the antenna bracket's slot. In doing so, make sure that the washer and the counter nut are on the outside of the antenna bracket and that the antenna cable is not kinked or twisted.



- Tighten the counter nut.



- Hand-tighten the antenna on the antenna extension cable plug.



6. **⚠ DANGER**

Danger to life due to electric shock from touching an ungrounded product

Touching an ungrounded product can cause a lethal electric shock.

- Ensure that the product is integrated in the existing overvoltage protection.

7. Close the inverter and recommission it (see inverter manual).

- The antenna is automatically recognized and activated by the inverter.

5 Troubleshooting

Problem	Cause and corrective measures
The radio range has not improved despite the antenna.	<p>The problem can be caused by one of the following:</p> <ul style="list-style-type: none">• The inverter has not recognized the antenna automatically.• The antenna is not installed correctly or an unapproved antenna has been used.• The receiver is placed in the dead spot. <p>Corrective measures:</p> <ul style="list-style-type: none">• Ensure that the antenna has been recognized by the inverter:<ul style="list-style-type: none">- Log in to the user interface of the inverter as Installer (see the inverter manual).- Instantaneous values > Plant communication > WLAN.- Check whether the parameter Antenna Type is set on External Antenna. If the value External Antenna is not set, set the antenna type (see inverter manual).• Ensure that the antenna of type "EXTANT-40" is installed correctly and that only the supplied antenna cable was used.• Ensure that the receiver is not placed in the dead spot .

6 Decommissioning

6.1 Removing the Antenna

Required tools:

- Long-nosed pliers

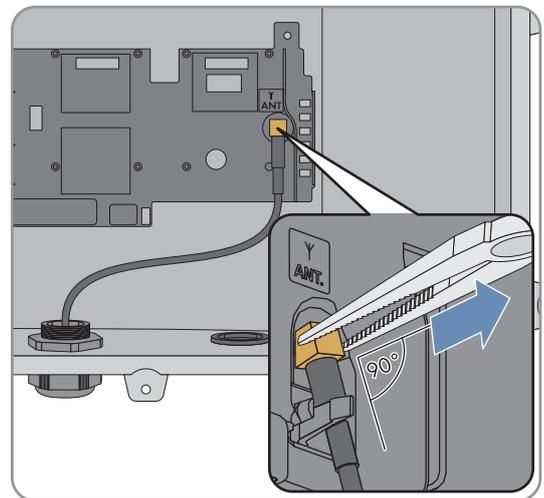
Procedure:

1. **DANGER**

Danger to life due to high voltages of the PV array

When exposed to sunlight, the PV array generates dangerous DC voltage, which is present in the DC conductors and the live components of the inverter. Touching the DC conductors or the live components can lead to lethal electric shocks.

- Prior to performing any work on the inverter, always disconnect the inverter from voltage sources on the AC and DC sides as described in the inverter manual. When doing so, note that even if the DC load-break is switched off, there will be dangerous direct voltage present in the DC conductors of the inverter.
2. Pull the antenna cable plug out of pin connector **ANT. Y** of the communication assembly using long-nosed pliers. Ensure that the antenna cable is pulled out at 90° to the communication assembly so that the plug does not get caught.



3. Unscrew the swivel nut from the cable gland.
4. Unscrew and remove the counter nut of the cable gland.
5. If necessary, remove the cable gland and antenna cable from the inverter.
6. If necessary, seal the enclosure opening of the inverter with the corresponding sealing plug.
7. Close the inverter and recommission it (see inverter manual).
8. At the antenna bracket, unscrew the antenna from the antenna cable plug.
9. Unscrew the counter nut from the plug of the antenna cable.
10. Remove the antenna cable from the antenna bracket.
11. Remove the screws of the antenna bracket.
12. Unscrew and remove the antenna bracket.

6.2 Disposing of the Product

- Dispose of the product in accordance with the locally applicable disposal regulations for electronic waste.

7 Contact

If you have technical problems with our products, please contact the SMA Service Line. We require the following information in order to provide you with the necessary assistance:

- Inverters:
 - Serial number
 - Firmware version
 - Special country-specific settings (if applicable)
- Detailed description of the problem

Danmark	SMA Solar Technology AG	Belgien	SMA Benelux BVBA/SPRL
Deutschland	Niestetal	Belgique	Mechelen
Österreich	Sunny Boy, Sunny Mini Central, Sunny Tripower: +49 561 9522-1499	België	+32 15 286 730
Schweiz	Monitoring Systems (Kommunikationsprodukte): +49 561 9522-2499	Luxemburg	SMA Online Service Center: www.SMA-Service.com
	Fuel Save Controller (PV-Diesel-Hybridsysteme): +49 561 9522-3199	Luxembourg	
	Sunny Island, Sunny Boy Storage, Sunny Backup, Hydro Boy: +49 561 9522-399	Nederland	
	Sunny Central, Sunny Central Storage: +49 561 9522-299	Česko	SMA Service Partner TERMS a.s.
	SMA Online Service Center: www.SMA-Service.com	Magyarország	+420 387 6 85 111
		Slovensko	SMA Online Service Center: www.SMA-Service.com
		Türkiye	SMA Service Partner DEKOM Ltd. Şti. +90 24 22430605
			SMA Online Service Center: www.SMA-Service.com
France	SMA France S.A.S. Lyon +33 472 22 97 00	Ελλάδα	SMA Service Partner AKTOR FM.
	SMA Online Service Center : www.SMA-Service.com	Κύπρος	Αθήνα +30 210 8184550
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España	SMA Ibérica Tecnología Solar, S.L.U.	United Kingdom	SMA Solar UK Ltd. Milton Keynes +44 1908 304899
Portugal	Barcelona +34 935 63 50 99		SMA Online Service Center: www.SMA-Service.com
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Italia	SMA Italia S.r.l. Milano +39 02 8934-7299	Bulgaria	SMA Service Partner Renovatio Solar +40 372 756 599
	SMA Online Service Center: www.SMA-Service.com	România	
		Slovenija	
		Hrvatska	SMA Online Service Center: www.SMA-Service.com

United Arab Emirates	SMA Middle East LLC Abu Dhabi +971 2234 6177 SMA Online Service Center: www.SMA-Service.com	India	SMA Solar India Pvt. Ltd. Mumbai +91 22 61713888
ไทย	SMA Solar (Thailand) Co., Ltd. กรุงเทพฯ +66 2 670 6999	대한민국	SMA Technology Korea Co., Ltd. 서울 +82-2-520-2666
South Africa	SMA Solar Technology South Africa Pty Ltd. Cape Town 08600SUNNY (08600 78669) International: +27 (0)21 826 0600 SMA Online Service Center: www.SMA-Service.com	Argentina Brasil Chile Perú	SMA South America SPA Santiago de Chile +562 2820 2101
Australia	SMA Australia Pty Ltd. Sydney Toll free for Australia: 1 800 SMA AUS (1 800 762 287) International: +61 2 9491 4200	Other countries	International SMA Service Line Niestetal 00800 SMA SERVICE (+800 762 7378423)

ENERGY
THAT
CHANGES

