

Installation Manual

Replacement of SMA Devices in Systems with SMA Communication Products



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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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Table of Contents

1	Information on this Document	5
1.1	Validity	5
1.2	Target Group	5
1.3	Symbols.....	5
1.4	Typographies	5
2	Safety	7
3	General Information	8
4	Which Section Applies to my System?	9
5	Webconnect System in Sunny Portal	10
5.1	Procedure when Replacing Different Devices.....	10
5.2	Replacement of SMA Energy Meter by Means of Sunny Explorer	10
5.3	Replacing Inverters with Webconnect Communication in Sunny Portal	10
5.4	Replacing the Battery Pack Smart Energy.....	10
6	Sunny Home Manager System	11
6.1	Procedure when Replacing Different Devices.....	11
6.2	Replacing the SMA Energy Meter or Other Energy Meters in a Sunny Home Manager System.....	11
6.3	Replacing an Inverter in the Sunny Home Manager System.....	12
6.3.1	Replacing an Inverter with Speedwire.....	12
6.3.2	Replacing an Inverter with BLUETOOTH.....	13
6.4	Replacing the Battery Pack Smart Energy.....	14
6.5	Replacing the Sunny Home Manager.....	14
7	System with Micro Inverters and Sunny Multigate	16
7.1	Procedure when Replacing Different Devices.....	16
7.2	Replacing a Micro Inverter in Sunny Multigate.....	16
7.3	Replacing a Sunny Multigate in Sunny Portal	17
8	SMA Cluster Controller System	18
8.1	Procedure when Replacing Different Devices.....	18
8.2	Replacing the Inverter with Speedwire in SMA Cluster Controller.....	18
8.3	Replacing the SMA Cluster Controller	20
8.4	Replacing the Battery Pack Smart Energy.....	22
9	System with Sunny WebBox with BLUETOOTH	23
9.1	Procedure when Replacing Different Devices.....	23
9.2	Replacing an Inverter with BLUETOOTH in the Sunny WebBox with BLUETOOTH.....	23
9.3	Replacing the Sunny WebBox with BLUETOOTH.....	24
10	System with Sunny WebBox	26
10.1	Procedure when Replacing Different Devices.....	26
10.2	Replacing an Inverter with RS485 in the Sunny WebBox	26
10.3	Replacing the Sunny WebBox.....	27
10.4	Replacing the SMA Cluster Controller with a Sunny WebBox	28
11	System with Sunny Explorer	30
11.1	Speedwire System with Sunny Explorer.....	30
11.1.1	Procedure when Replacing Different Devices	30

11.1.2	Replacement of SMA Energy Meter by Means of Sunny Explorer	30
11.1.3	Replacing an Inverter with Speedwire in Sunny Explorer	30
11.1.4	Replacing the Battery Pack Smart Energy	31
11.2	BLUETOOTH System with Sunny Explorer	31
11.2.1	Replacing an Inverter with BLUETOOTH in Sunny Explorer	31
12	Appendix	32
12.1	Changing the System Password in a Sunny Home Manager System in Sunny Portal.....	32
12.2	Replacing the SMA Energy Meter by Means of Sunny Explorer.....	32
12.3	Replacing the Battery Pack Smart Energy	33
13	Contact	36

1 Information on this Document

1.1 Validity

This document is valid for the replacement of SMA products in PV systems with SMA communication products. SMA communication products are devices and software products that receive, store and display data of SMA inverters, e.g. Sunny Home Manager, Sunny WebBox, SMA Cluster Controller, Sunny Explorer.

This document describes the settings you must make in the devices so that the values of your PV system will be displayed properly even after replacing a device.

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 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].

2 Safety

i Observe the safety information in the manuals

Observe all safety information in this document and in the manuals of the products described.

3 General Information

Only inverters of the same device type and with the same type of communication are replaceable

In the communication products, you can only replace inverters of the same device type which are additionally equipped with the same type of communication (BLUETOOTH, Speedwire, RS485). The device type (model) is indicated on the type label of the inverter (e.g. model: SB 3000TL-21).

Do NOT delete inverters in Sunny Portal

To retain the data of the inverter to be replaced in Sunny Portal, do not delete the inverter to be replaced from Sunny Portal.

Observe the sequence of the action steps

Some of the action steps described in this document must already be performed before decommissioning the device to be replaced and before commissioning the new device. Observe the sequence of the action steps.

Log in at the communication products and Sunny Portal with the user role "Installer"

Log in at the communication products with the user role **Installer** for replacing devices. You will need the password for the user role **Installer** of the communication product used in the PV system.

4 Which Section Applies to my System?

The replacement of all SMA devices in your PV system is described in the section of the SMA communication product:

SMA communication product	See	Required for replacement
Webconnect System in Sunny Portal Inverter with activated Webconnect function	(see Section 5 "Webconnect System in Sunny Portal", page 10)	<ul style="list-style-type: none"> • Computer with Sunny Explorer and connection to the router in the system • System password for user role Installer • Login data of the Sunny Portal system with user role Installer or Administrator
Sunny Home Manager	(see Section 6 "Sunny Home Manager System", page 11)	<ul style="list-style-type: none"> • System password for user role Installer • Login data of the Sunny Portal system with user role Installer or Administrator
Sunny Multigate System with micro inverters	(see Section 7 "System with Micro Inverters and Sunny Multigate", page 16)	<ul style="list-style-type: none"> • Computer with Sunny Explorer and connection to the router in the system • System password for user role Installer • Login data of the Sunny Portal system with user role Installer or Administrator
SMA Cluster Controller	(see Section 8 "SMA Cluster Controller System", page 18)	<ul style="list-style-type: none"> • Access to the SMA Cluster Controller • System password for user role Installer • Login data of the Sunny Portal system with user role Installer or Administrator
Sunny WebBox with BLUETOOTH	(see Section 9 "System with Sunny WebBox with BLUETOOTH", page 23)	<ul style="list-style-type: none"> • Access to the Sunny WebBox with BLUETOOTH • System password for user role Installer • Login data of the Sunny Portal system with user role Installer or Administrator
Sunny WebBox	(see Section 10 "System with Sunny WebBox", page 26)	<ul style="list-style-type: none"> • Access to the Sunny WebBox • System password for user role Installer • Login data of the Sunny Portal system with user role Installer or Administrator • Access to the SMA Cluster Controller (only possible in exchange for a SMA Cluster Controller)
Sunny Explorer	(see Section 11 "System with Sunny Explorer", page 30)	<ul style="list-style-type: none"> • Computer with Sunny Explorer and connection to the router in the system • System password for user role Installer

5 Webconnect System in Sunny Portal

5.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing the SMA Energy Meter by Means of Sunny Explorer	(see Section 12.2, page 32)
2. Replacing Inverters with Webconnect Communication in Sunny Portal	(see Section 5.3, page 10)
3. Replacing the Battery Pack Smart Energy	(see Section 12.3, page 33)

5.2 Replacement of SMA Energy Meter by Means of Sunny Explorer

See (see Section 12.2 "Replacing the SMA Energy Meter by Means of Sunny Explorer", page 32)

5.3 Replacing Inverters with Webconnect Communication in Sunny Portal

This section describes the replacement of an inverter with Webconnect communication in Sunny Portal in your Sunny Portal system. Thus, the new inverter replaces the previous inverter and the data are properly displayed in your Sunny Portal system even after the replacement.

Procedure:

1. Decommission the inverter to be replaced (see the inverter manual).
2. If you retrofit the new inverter with Speedwire/Webconnect communication, install the Speedwire/Webconnect interface in the inverter and commission (see the Speedwire/Webconnect interface manual).
3. If BLUETOOTH is integrated in the new inverter, turn the rotary switch for the NetID with a screwdriver (blade width 2.5 mm) to **0** (see the inverter manual). This deactivates the BLUETOOTH function.
4. Commission the new inverter (see inverter manual).
5. Add the new inverter to the Sunny Portal system:
 - Go to **www.SunnyPortal.com/Register**.
 - The PV System Setup Assistant opens.
 - Select **[Next]** and then the option **I am already registered in Sunny Portal**.
 - Enter the login data of the Sunny Portal system and select **[Next]**.
 - Select the option **Add or replace devices**.
 - In the row for the Sunny Portal system select .
 - Enter the PIC and RID of the new inverter.
 - Select **[Identify]**.
 - Select **[Next]** and follow the instructions of the PV System Setup Assistant.

5.4 Replacing the Battery Pack Smart Energy

See (see Section 12.3 "Replacing the Battery Pack Smart Energy", page 33)

6 Sunny Home Manager System

6.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing the SMA Energy Meter or Other Energy Meters in a Sunny Home Manager System	(see Section 6.2, page 11)
2. Replacing Inverters in the Sunny Home Manager	(see Section 6.3, page 12)
3. Replacing the Battery Pack Smart Energy	(see Section 12.3, page 33)
4. Replace Sunny Home Manager	(see Section 6.5, page 14)

6.2 Replacing the SMA Energy Meter or Other Energy Meters in a Sunny Home Manager System

During time periods when no energy meter is connected, a gap occurs in the diagrams with performance data in Sunny Portal on the "**Name of my system**" > **Energy Balance** page.

Procedure:

1. If you need to replace an SMA Energy Meter and there is more than one SMA Energy Meter in your system, write down the serial number of the new SMA Energy Meter indicated on the type label. This way you can identify the SMA Energy Meter in Sunny Portal later on during configuration.
2. Remove the energy meter to be replaced (see energy meter manual).
3. Mount the new energy meter and commission it (see energy meter manual).
4. Configure the energy meter in Sunny Portal.
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Select **Configuration > Device Overview**.
 - In the Sunny Home Manager row select in the **Properties** column.
 - Select [**Edit**] and the type of the new energy meter in the **Meter Configuration** area in the drop-down lists:

Connected energy meter type	Drop-down list
Energy meter with D0 interface	<ul style="list-style-type: none"> • Select D0.
Bidirectional meter with D0 interface	<ul style="list-style-type: none"> • Select D0. • Activate the field Bidirectional meter (Supply and feed-in). <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The area Meter input 2 is not available.

Connected energy meter type	Drop-down list
Energy meter with S0 interface	<ul style="list-style-type: none"> • Select S0. • In the field S0 pulses/kWh, specify the pulse rate of the energy meter (see energy meter manual).
SMA Energy Meter*	<ul style="list-style-type: none"> • Select SMA Energy Meter xxx. Here, xxx is the placeholder for the SMA Energy Meter serial number. If there is more than one SMA Energy Meter in the system, identify and select the requested SMA Energy Meter by its serial number. • Activate the checkbox Bidirectional meter (Supply and feed-in).

* Only displayed if there is an SMA Energy Meter in the PV system.

- Select [**Save**].

6.3 Replacing an Inverter in the Sunny Home Manager System

The communication between the Sunny Home Manager and an SMA inverter is possible either via BLUETOOTH or via Speedwire. Depending on the type of communication used between the Sunny Home Manager and the SMA inverter, read the relevant section.

Requirement:

- The data retrieval interval must be set to **automatic** in the Sunny Home Manager (see the Sunny Home Manager user manual). The data retrieval interval of the Sunny Home Manager is factory-set to **automatic**.

6.3.1 Replacing an Inverter with Speedwire

1. Decommission the inverter to be replaced (see the inverter manual).
2. If you retrofit the new inverter with Speedwire/Webconnect communication, install the Speedwire/Webconnect interface in the inverter and commission (see the Speedwire/Webconnect interface manual).
3. If BLUETOOTH communication is integrated in the new inverter, turn the rotary switch on the inverter for the NetID with a screwdriver (blade width 2.5 mm) to **0** (see the inverter manual). This deactivates the BLUETOOTH function.
4. Commission the new inverter (see inverter manual).
5. Add the new inverter to the Sunny Portal system in Sunny Portal:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Select **Configuration > Device Overview > Overview of New Devices**.
 - Select [**Refresh devices**]. Your system is then searched for new devices.
 - After a maximum of one minute, the new inverter is displayed.
 - The new inverter is not displayed?
 - An error has occurred.
 - Rectify the error (see the Sunny Home Manager user manual).

6. In the row for the new inverter, select .
 - The Sunny Home Manager connects to the new inverter. This can take two to five minutes. Page 2 of the configuration wizard opens.
 - Page 2 of the configuration wizard does not open but the error message **Connection Failed** is displayed?

A password other than **1111** or other than the system password of the existing system is set for the new inverter.

 - Temporarily change the system password of the existing system to the password of the new inverter (see Section 12.1 "Changing the System Password in a Sunny Home Manager System in Sunny Portal", page 32).
7. Follow the instructions of the configuration wizard.
 - The new inverter is displayed at **Configuration > Device Overview**.
8. If you previously changed the system password to the password of the new inverter, reset the old system password (see Section 12.1 "Changing the System Password in a Sunny Home Manager System in Sunny Portal", page 32).

6.3.2 Replacing an Inverter with BLUETOOTH

1. Decommission the inverter to be replaced (see the inverter manual).
2. If you retrofit the new inverter with BLUETOOTH communication, install the BLUETOOTH interface in the inverter and commission (see the BLUETOOTH interface manual).
3. For a new inverter, set the NetID of the system:
 - For inverters with integrated BLUETOOTH, turn the rotary switch **NetID** on the inverter using a screwdriver (blade width 2.5 mm) to the NetID of the system (see the inverter manual). Tip: Check which **NetID** has been set on the NetID rotary switch in the connection area.
 - For inverters with retrofitted BLUETOOTH interface, turn the rotary switch **NetID** on the inverter using a screwdriver (blade width 2.5 mm) to the NetID of the system (see the interface manual). Tip: Check which **NetID** has been set on the NetID rotary switch in the connection area.
4. Commission the new inverter (see inverter manual).
5. In Sunny Portal, add the new inverter to the Sunny Home Manager system:
 - Log into Sunny Portal and call up the Sunny Home Manager system.
 - Select **Configuration > Device Overview > Overview of New Devices**.
 - Select [**Refresh devices**]. Your system is then searched for new devices.
 - After a maximum of one minute, the new inverter is displayed.
 - The new inverter is not displayed?

An error has occurred.

 - Rectify the error (see the Sunny Home Manager user manual).
6. In the row for the new inverter, select .
 - The Sunny Home Manager connects to the new inverter. This can take two to five minutes. Page 2 of the configuration wizard opens.
 - Page 2 of the configuration wizard does not open but the error message **Connection Failed** is displayed?

A password other than **1111** or other than the system password of the existing system is set for the new inverter.

 - Temporarily change the system password of the existing system to the password of the new inverter (see Section 12.1 "Changing the System Password in a Sunny Home Manager System in Sunny Portal", page 32).

7. Follow the instructions of the configuration wizard.

The new inverter is displayed at **Configuration > Device Overview**.

8. If you previously changed the system password to the password of the new inverter, reset the old system password (see Section 12.1 "Changing the System Password in a Sunny Home Manager System in Sunny Portal", page 32).

6.4 Replacing the Battery Pack Smart Energy

See (see Section 12.3 "Replacing the Battery Pack Smart Energy", page 33)

6.5 Replacing the Sunny Home Manager

1. Decommission the Sunny Home Manager to be replaced (see the Sunny Home Manager installation manual).

Tip: Label the plugs or cables of the energy meters with the respective name of the connection of the Sunny Home Manager (e.g. meter 1/D0).

2. Commission the new Sunny Home Manager:

- Turn the **NetID** rotary switch to the NetID of the system using a screwdriver (blade width: 2.5 mm). Tip: Check which NetID has been set on the SMA radio-controlled sockets of the system.
- Connect the connector plugs of the energy meters to the Sunny Home Manager (see the installation manual of the Sunny Home Manager).
- Plug the network cable in the network terminal of the Sunny Home Manager (see the installation manual of the Sunny Home Manager).
- Connect the voltage supply to the Sunny Home Manager (see the installation manual of the Sunny Home Manager).

The status LED () of the Sunny Home Manager first is glowing red, and then is flashing red. After approximately two minutes, the status LED intermittently is flashing green and orange. The Sunny Home Manager is connected to Sunny Portal.

The status LED is not intermittently flashing green and orange?

It is possible that the Sunny Home Manager is not correctly connected to the router.

- Ensure that the Sunny Home Manager is connected to the router correctly (see the installation manual of the Sunny Home Manager).

3. Keep the serial number and the registration ID of the new Sunny Home Manager ready. The data are indicated on the type label on the back of the Sunny Home Manager or on the cover of the CD supplied.

4. Go to **www.SunnyPortal.com/Register**.

The PV System Setup Assistant opens.

5. Select [**Next**] and activate the option **I am already registered in Sunny Portal**.

6. Enter the login data of the Sunny Portal system and select [**Next**].

7. Select the option **Add or replace devices**.

8. Select  in the row of the system whose Sunny Home Manager you want to replace.

9. Enter the serial number of the new Sunny Home Manager in the field **PIC**. Enter the registration ID of the new Sunny Home Manager in the field **RID**.

10. Select [**Identify**].

- Sunny Portal checks whether the serial number and registration ID correspond to the connected Sunny Home Manager.
- The PV System Setup Assistant cannot find any Sunny Home Manager with the serial number and registration ID?

An error has occurred.

- Rectify the error (see the Sunny Home Manager user manual).

11. Select [**Next**].

12. Select [**Finish**].

7 System with Micro Inverters and Sunny Multigate

7.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing a Micro Inverter in Sunny Multigate	(see Section 7.2, page 16)
2. Replacing a Sunny Multigate in Sunny Portal	(see Section 7.3, page 17)

7.2 Replacing a Micro Inverter in Sunny Multigate

1. Decommission the inverter to be replaced (see the inverter manual).
2. Read off the serial number of the new inverter off the type label and write it down.
3. Install the new inverter and get it ready for operation, but do not let it feed in yet (see the inverter manual). Make sure that the new inverter does NOT feed into the utility grid until you have completed the device replacement process in Sunny Explorer.
4. If the system has not been captured with Sunny Explorer yet, create a new Speedwire system in Sunny Explorer (see the Sunny Explorer help).
5. Log into Sunny Explorer at the Speedwire system.
 - The new inverter is displayed without a padlock symbol in the system tree.
 - The new inverter is displayed with a padlock symbol in the system tree?

A password other than **1111** or other than the system password of the existing system is set for the new inverter.

 - Set the system password of the existing system for the new inverter (see Sunny Explorer help on the subject of system password).
6. In order to transfer the data of the inverter to be replaced to the new inverter:
 - In Sunny Explorer select the inverter to be replaced in the system tree.
 - Select .
 - The dialog box **Device Replacement** opens.
 - Select the new inverter in the **Replaceable devices** list and select **[Replace]**.
 - The removed inverter is deleted in the Sunny Multigate and the inverter data is transferred to the new inverter.
7. In order to NOT transfer the data of the inverter to be replaced to the new inverter, select the inverter to be deleted in the Sunny Explorer system tree and then select  and confirm the security prompt.
8. Replace the micro inverter in the Sunny Portal system:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Select **Configuration > Device Overview > Overview of New Devices**.
 - Select **[Refresh devices]**. Your system is then searched for new devices.
 - After around one minute, the new inverter is displayed.
 - Select  in the row of the new inverter and follow the configuration wizard instructions.

7.3 Replacing a Sunny Multigate in Sunny Portal

Requirement:

- The PIC and RID of the new Sunny Multigate must be available (see type label or label supplied with the Sunny Multigate).

Procedure:

1. Decommission the Sunny Multigate to be replaced (see the Sunny Multigate installation manual).
2. Commission the new Sunny Multigate (see the Sunny Multigate installation manual).
3. Connect the new Sunny Multigate to the router/network switch with Internet connection (see the Sunny Multigate installation manual).
4. Go to **www.SunnyPortal.com/Register**.
 - The PV System Setup Assistant opens.
5. Select [**Next**] and activate the option **I am already registered in Sunny Portal**.
6. Enter the login data of the Sunny Portal system and select [**Next**].
7. Select the option **Add or replace devices**.
8. Select in the system row in which you wish to replace the Sunny Multigate.
9. Enter the PIC and RID of the new Sunny Multigate in the **PIC** and **RID** fields.
10. Select [**Identify**].
11. Select [**Next**].
 - The page **Replace devices** opens.
12. In the row for the Sunny Multigate to be replaced, select the new Sunny Multigate in the drop-down list **Replace with**.
13. Select [**Next**].
 - A summary is displayed.
14. Select [**Finish**].

8 SMA Cluster Controller System

8.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing the Inverter with Speedwire in SMA Cluster Controller	(see Section 8.2, page 18)
2. Replacing the SMA Cluster Controller	(see Section 8.3, page 20)
3. Replacing the Battery Pack Smart Energy	(see Section 12.3, page 33)

8.2 Replacing the Inverter with Speedwire in SMA Cluster Controller

Procedure:

- Replacing an Inverter in SMA Cluster Controller
- Replacing an Inverter in the Sunny Portal System

Replacing an Inverter in SMA Cluster Controller

1. Read the serial number of the inverter to be replaced off the type label and write it down.
2. Determine the energy yield of the inverter to be replaced:
 - Log into the user interface of the SMA Cluster Controller.
 - Select the inverter to be replaced in the system tree.
 - Select **Overview** and read off and write down the value in the **Total yield** row.
3. If you are using Sunny Portal, you must send all data saved to the inverter and to the SMA Cluster Controller to Sunny Portal prior to replacing the inverter.
 - Select the SMA Cluster Controller in the system tree.
 - Select **Settings > Sunny Portal > Basic settings > [Edit]**.
 - Select **Every 15 minutes** in the drop-down list **Upload frequency**.
 - Select **[Save]**. The saving process may take a few minutes.
 - Select **[Logout]** and wait 20 minutes. This will ensure that the data transmission between the SMA Cluster Controller and Sunny Portal has been terminated.
 - Log into the user interface of the SMA Cluster Controller and check whether the upload to Sunny Portal was successful. Select the SMA Cluster Controller in the system tree and select **Settings > Sunny Portal > Last successful upload**.
4. Decommission the inverter to be replaced (see the inverter manual).
5. If you retrofit the new inverter with Speedwire/Webconnect communication, install the Speedwire/Webconnect interface in the inverter and commission (see the Speedwire/Webconnect interface manual).
6. If BLUETOOTH communication is integrated in the new inverter, turn the rotary switch on the inverter for the NetID with a screwdriver (blade width 2.5 mm) to **0** (see the inverter manual). This deactivates the BLUETOOTH function.
7. Commission the new inverter (see inverter manual).
8. Log into the user interface of the SMA Cluster Controller.
 - The new inverter is displayed with a padlock symbol in the system tree.

9. Adapt the system password to the device password of the new inverter so that you can access the new inverter:
 - Select the SMA Cluster Controller in the system tree.
 - Select **Settings > User rights > Access control > [Edit]**.
 - Enter the password of the user group **Installer** (standard password: **1111**) set up in the new inverter in the fields **Set installer password** and **Confirm the password**.
 - Enter the password of the user group **User** (standard password: **0000**) set up in the new inverter in the fields **Set user password** and **Confirm the password**.
 - Select **[Save]**.

The SMA Cluster Controller changes the system passwords for all approved devices in the system.
10. Restart the SMA Cluster Controller via the user interface .
 - Select the Cluster Controller in the system tree.
 - Select **Settings > Device > System**.
 - In the field **Initiate device restart**, select **[Execute]**.

The SMA Cluster Controller is restarted. The start-up procedure can take up to two minutes.
11. Check whether the new inverter is displayed without a padlock symbol in the SMA Cluster Controller.
 - Log into the user interface of the SMA Cluster Controller.

The new inverter is displayed without a padlock symbol in the system tree.
12. Set the previous system password in all devices:
 - Select the SMA Cluster Controller on the user interface of the SMA Cluster Controller in the system tree.
 - Select **Settings > User rights > Access control > [Edit]**.
 - Enter the previous system password of the user group **User** in the fields **Set user password** and **Confirm the password**.
 - Enter the previous system password of the user group **Installer** in the fields **Set installer password** and **Confirm the password**.
 - Select **[Save]**.

The SMA Cluster Controller changes the system passwords for all approved devices in the system.
13. Set the the noted energy yield of the inverter to be replaced in the new inverter:
 - Select the new inverter on the user interface of the SMA Cluster Controller in the system tree.
 - Select **Settings > AC side > [Edit]**.
 - Enter the noted energy yield of the inverter to be replaced in the field **Set total yield** and then select **[Save]**.
The saving process may take a few minutes.

Replacing an Inverter in the Sunny Portal System

Carry out the following steps only if you are using Sunny Portal.

Procedure:

1. Read off the serial number of the new inverter off the type label and write it down. This way you can identify the inverter for replacement in Sunny Portal.
2. Send the data of the new inverter saved to the SMA Cluster Controller memory to Sunny Portal:
 - Select the SMA Cluster Controller in the system tree.
 - Select **Settings > Sunny Portal > Basic settings > [Edit]**.
 - Select **Every 15 minutes** in the drop-down list **Upload frequency**.
 - Select **[Save]**.

- Select [**Logout**] and wait 20 minutes. This will ensure that the data transmission between the SMA Cluster Controller and Sunny Portal has been terminated.
 - Log into the user interface of the SMA Cluster Controller and check whether the upload to Sunny Portal was successful. Select the SMA Cluster Controller in the system tree and select **Settings > Sunny Portal > Last successful upload**.
3. Replace the new inverter in the Sunny Portal system:
- Log into Sunny Portal and call up the Sunny Portal system.
 - Sunny Portal recognizes the new inverter and opens the configuration wizard automatically. To open the configuration wizard manually, select "**Name of your system**" > **System monitoring > Set up device now**.
 - Select  in the row of the new inverter and follow the configuration wizard instructions.

8.3 Replacing the SMA Cluster Controller

No combination of SMA Cluster Controller and Sunny WebBox in one Sunny Portal system possible

In a Sunny Portal system, the SMA Cluster Controller must not be used in combination with the Sunny WebBox.

- If there is already a Sunny WebBox in the Sunny Portal system where you want to integrate the new SMA Cluster Controller, delete the Sunny WebBox from the Sunny Portal system before registering the new SMA Cluster Controller (see user manual of the SMA Cluster Controller). The PV system identifier of the Sunny Portal system can be read off in Sunny Portal under **Configuration > PV System Data** and then be inserted in the SMA Cluster Controller as described in this section.

Restoring the device configuration of the SMA Cluster Controller: observe the firmware version

Only configuration files with a firmware version that is the same as or older than that of the new SMA Cluster Controller can be used to restore the device configuration of the SMA Cluster Controller.

Procedure:

- Replacing the SMA Cluster Controller
- Replacing the SMA Cluster Controller in the Sunny Portal System

Replacing the SMA Cluster Controller

1. If the SMA Cluster Controller to be replaced still allows it, save the device configuration of the SMA Cluster Controller:
 - Log into the user interface of the SMA Cluster Controller.
 - Select the SMA Cluster Controller in the system tree.
 - Select **Update and save > Device Configuration** and [**Save device configuration**].
 - If required, change the save location and the file name for the save file and select [**Save**].
 - The device configuration is downloaded and saved.
2. Commission the new SMA Cluster Controller (see the SMA Cluster Controller installation manual).
3.  **DANGER**
Danger to life due to electric shock
 Lethal voltages are present at the connection point of the utility grid.
 - Disconnect the connection point from the utility grid using the separator (e.g. circuit breaker).
 - Remove the three-pole plug of the top-hat rail power supply unit from terminal **X1** on the Cluster Controller.
 - Disassemble the SMA Cluster Controller to be replaced (see the SMA Cluster Controller installation manual).
4. In case you have saved the device configuration of the SMA Cluster Controller to be replaced, transfer the device configuration to the new SMA Cluster Controller:

- Log into the user interface of the SMA Cluster Controller.
- Select the SMA Cluster Controller in the system tree.
- Select **Update and save > Device Configuration** and then select [**Browse**] in the field **Restore device configuration (*.bak)**.
 - The file selection window opens.
- Select the desired configuration file and select [**Open**].
- The file name of the selected configuration file is displayed in the field **Restore device configuration (*.bak)**.
- Select [**Execute**].
 - The configuration file is uploaded and the device configuration is restored. The Cluster Controller restarts.

Replacing the SMA Cluster Controller in the Sunny Portal System

Carry out the following steps only if you are using Sunny Portal.

Procedure:

1. Determine the PV system identifier of the existing Sunny Portal system of the SMA Cluster Controller:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Select **Configuration > PV System Properties > PV System Data**.
 - Copy the PV system identifier from the field **PV System Identifier** into the clipboard.
2. Adjust the Sunny Portal settings in the new SMA Cluster Controller:
 - Log into the user interface of the SMA Cluster Controller.
 - Select the SMA Cluster Controller in the system tree.
 - Select **Settings > Sunny Portal**.
 - Select [**Edit**].
 - In the **User settings** area paste the PV system identifier from the clipboard into the field **ID of PV system**.
 - In the **User settings** area enter the e-mail address in the **E-mail** field that was used for registering the existing Sunny Portal system in Sunny Portal.
 - In the **User settings** area enter the name of the existing Sunny Portal system in the field **Name of PV system**.
 - In the **Basic settings** area select **Yes** in the drop-down list **Use Sunny Portal**.
 - Select [**Save**].
3. Registering the new SMA Cluster Controller in Sunny Portal
 - In the **Status and Actions** area select [**Execute**] in the field **Register**.
 - The SMA Cluster Controller synchronizes the system time with Sunny Portal and carries out the registration. **OK** is displayed in the field **Result of the last registration** and Sunny Portal sends the access data to the specified e-mail address.
 - The registration has failed?
 - An error has occurred.
 - Rectify the error (see the SMA Cluster Controller user manual).
4. Log into Sunny Portal and call up the Sunny Portal system.

5. The Sunny Portal recognizes the new SMA Cluster Controller and opens the configuration wizard automatically. To open the configuration wizard manually, select **"Name of your system" > System monitoring > Set up device now**.
6. Select  in the row of the new SMA Cluster Controller and follow the configuration wizard instructions.

8.4 Replacing the Battery Pack Smart Energy

See (see Section 12.3 "Replacing the Battery Pack Smart Energy", page 33)

9 System with Sunny WebBox with BLUETOOTH

9.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing an Inverter with BLUETOOTH in the Sunny WebBox with BLUETOOTH	(see Section 9.2, page 23)
2. Replacing the Sunny WebBox with BLUETOOTH	(see Section 9.3, page 24)

9.2 Replacing an Inverter with BLUETOOTH in the Sunny WebBox with BLUETOOTH

Procedure:

- Replacing an Inverter in the Sunny WebBox with BLUETOOTH
- Replacing an Inverter in the Sunny Portal System

Replacing an Inverter in the Sunny WebBox with BLUETOOTH

1. Read the serial number of the inverter to be replaced off the type label and write it down.
2. Determine the energy yield of the inverter to be replaced:
 - Log into the user interface of the Sunny WebBox with BLUETOOTH.
 - Select the inverter to be replaced in the system tree.
 - Select **Overview** and read off and write down the value in the row **Total**.
3. If you are using Sunny Portal, you must transfer all data saved to the inverter and saved to the Sunny WebBox with BLUETOOTH to Sunny Portal before replacing the inverter:
 - In the Sunny WebBox with BLUETOOTH user interface select the Sunny WebBox with BLUETOOTH in the system tree.
 - Select **Settings > Sunny Portal > [Edit]**.
 - In the **Basic settings** area select **Every 15 minutes** in the drop-down list **Upload frequency**.
 - Select **[Save]**.
 - Select **[Logout]** in the toolbar and wait 20 minutes. This will ensure that the data transmission between Sunny WebBox with BLUETOOTH and Sunny Portal has been terminated.
4. Decommission the inverter to be replaced (see the inverter manual).
5. If you retrofit the new inverter with BLUETOOTH communication, install the BLUETOOTH interface in the inverter and commission (see the BLUETOOTH interface manual).
6. For a new inverter, set the NetID of the system:
 - For inverters with integrated BLUETOOTH, turn the rotary switch **NetID** on the inverter using a screwdriver (blade width 2.5 mm) to the NetID of the system (see the inverter manual).
 - For inverters with retrofitted BLUETOOTH interface, turn the rotary switch **NetID** on the inverter using a screwdriver (blade width 2.5 mm) to the NetID of the system (see the interface manual).
7. Commission the new inverter (see inverter manual).
8. Log into the user interface of the Sunny WebBox with BLUETOOTH.
 - The Sunny WebBox with BLUETOOTH automatically detects the new inverter. The new inverter is displayed with a padlock symbol in the system tree.

9. Adapt the system password to the device password of the new inverter so that you can access the new inverter:
 - In the Sunny WebBox with BLUETOOTH user interface select the Sunny WebBox with BLUETOOTH in the system tree.
 - Select **Settings > User rights > [Edit]**.
 - In the **Access control** area enter the passwords set up in the inverter for the respective user group (standard password for **User: 0000**; standard password for **Installer: 1111**).
 - Select **[Save]**. The saving process may take a few minutes.
 - Restart the Sunny WebBox with BLUETOOTH via the user interface:
 - Select the Sunny WebBox with BLUETOOTH in the system tree.
 - Select **Settings > Device > [Edit]**.
 - In the **System** area select **[Execute]** in the drop-down list **Initiate device restart**.
 - Select **[Save]**.
 - The Sunny WebBox with BLUETOOTH is restarted. The restart was successful if the LED **SYSTEM** and the LED **POWER** are glowing green again. The start-up procedure can take up to 90 seconds.
10. Log into the user interface of the Sunny WebBox with BLUETOOTH.
 - The password of the new inverter is adapted to the PV system password. The new inverter is displayed without a padlock symbol in the system tree.
11. Set the the noted energy yield of the inverter to be replaced in the new inverter:
 - In the Sunny WebBox with BLUETOOTH user interface select the new inverter in the system tree.
 - Select **Settings > AC side > [Edit]**.
 - Enter the noted energy yield of the inverter to be replaced in the field **Set total yield** in the **Measured values** area.
 - Select **[Save]**. The saving process may take a few minutes.

Replacing an Inverter in the Sunny Portal System

Carry out the following steps only if you are using Sunny Portal.

Procedure:

1. Read off the serial number of the new inverter off the type label and write it down. This way you can identify the inverter for replacement in Sunny Portal.
2. Replace the new inverter in the Sunny Portal system:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Sunny Portal recognizes the new inverter and opens the configuration wizard automatically. To open the configuration wizard manually, select **System monitoring > Set up device now**.
 - Select  in the row of the new inverter and follow the configuration wizard instructions.

9.3 Replacing the Sunny WebBox with BLUETOOTH

Requirement:

- The software "Sunny WebBox Assistant" must be installed on the computer (available free of charge at www.SMA-Solar.com).

Procedure:

1. If you are using Sunny Portal and if the Sunny WebBox with BLUETOOTH to be replaced still allows it, transfer the data saved to the Sunny WebBox with BLUETOOTH to Sunny Portal before replacing the Sunny WebBox with BLUETOOTH:
 - Log into the user interface of the Sunny WebBox with BLUETOOTH.
 - Select the Sunny WebBox with BLUETOOTH in the system tree.
 - Select **Settings > Sunny Portal > [Edit]**.
 - In the **Basic settings** area select **Every 15 minutes** in the drop-down list **Upload frequency**.
 - Select **[Save]**. The saving process may take a few minutes.
 - Select **[Logout]** in the toolbar and wait 20 minutes. This will ensure that the data transmission between Sunny WebBox with BLUETOOTH and Sunny Portal has been terminated.
2. Decommission the Sunny WebBox with BLUETOOTH to be replaced (see the Sunny WebBox with BLUETOOTH installation manual).
3. Start the Sunny WebBox Assistant on the computer and connect the Sunny WebBox with BLUETOOTH (see help of the Sunny WebBox Assistant or quick reference guide on the commissioning of the Sunny WebBox with BLUETOOTH).
4. Select **[Next]**.
 - The Sunny WebBox search is starting. The new Sunny WebBox with BLUETOOTH is displayed.
5. Select the new Sunny WebBox with BLUETOOTH and select **[Configure the WebBox]**.
6. Log in with the user group **Installer** and the associated password.
7. Select **[Next]**.
8. Activate the option **Replace Sunny WebBox**.
9. Select **[Next]** and follow the Sunny WebBox Assistant instructions.
10. Determine the PV system identifier of the existing Sunny Portal system with Sunny WebBox with BLUETOOTH:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Select **Configuration > PV System Properties > PV System Data**.
 - Copy the PV system identifier from the field **PV System Identifier** into the clipboard.
11. Configure the Sunny Portal settings in the new Sunny WebBox with BLUETOOTH:
 - Log into the user interface of the Sunny WebBox with BLUETOOTH.
 - Select **Settings > Sunny Portal > [Edit]**.
 - Paste the PV system identifier from the clipboard into the field **PV System Identifier**.
 - Select the entry **Yes** in the drop-down list **Use Sunny Portal**.
 - Select **[Save]**.
 - Select **[Logout]** in the toolbar.
12. In Sunny Portal replace the Sunny WebBox with BLUETOOTH in the Sunny Portal system:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - The Sunny Portal recognizes the new Sunny WebBox with BLUETOOTH and opens the configuration wizard automatically. To open the configuration wizard manually, select **"Name of your system" > System monitoring > Set up device now**.
 - Select  in the row of the new Sunny WebBox with BLUETOOTH and follow the configuration wizard instructions.

10 System with Sunny WebBox

10.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing an Inverter with RS485 in the Sunny WebBox	(see Section 10.2, page 26)
2. Replacing the Sunny WebBox	(see Section 10.3, page 27)
3. Replacing the SMA Cluster Controller with a Sunny WebBox	(see Section 10.4, page 28)

10.2 Replacing an Inverter with RS485 in the Sunny WebBox

Procedure:

- Replacing an Inverter with RS485 in the Sunny WebBox
- Replacing an Inverter in the Sunny Portal System

Replacing an Inverter with RS485 in the Sunny WebBox

1. Read the serial number of the inverter to be replaced off the type label and write it down.
2. Determine the energy yield of the inverter to be replaced:
 - Log into the user interface of the Sunny WebBox.
 - Select **PV System > Devices** and select the inverter to be replaced.
 - Select the tab **Overview** and read off and write down the value in the **Energy total** row.
3. If you are using Sunny Portal, you must transfer all data saved to the inverter and saved to the Sunny WebBox with BLUETOOTH to Sunny Portal before replacing the inverter:
 - Select **WebBox > Info** in the Sunny WebBox user interface.
 - Select **[Upload]** in the **Last portal upload** row.
 - The value **Sunny Portal buffer load** is **0%**.
4. Decommission the inverter to be replaced (see the inverter manual).
5. If you retrofit the new inverter with RS485 communication, install the RS485 interface in the inverter and commission (see the RS485 interface manual).
6. Commission the new inverter (see inverter manual).
7. Detect the new inverter with the Sunny WebBox:
 - Log into the user interface of the Sunny WebBox.
 - Select **PV system > Detect**.
 - Enter the number of newly connected inverters in the field **Total number of devices to be detected** and select **[Start detection]**.
 - When the detection of the connected inverters is completed, select **[OK]**.
8. Set the the noted energy yield of the inverter to be replaced in the new inverter: Be aware that the parameter displayed is dependent on the inverter device type:
 - In the Sunny WebBox user interface select the inverter in the system tree.
 - Select the tab **Parameters**.

- Call up the parameter for the energy yield of the new inverter. In the list of parameters, search for the parameter with the **kWh** unit in the **Unit** column.
 - In the column **Value**, enter the noted energy yield of the inverter to be replaced in the field.
 - Select [**Save**].
9. Select **WebBox > Info** and select [**Delete**] in the **Sunny Portal buffer load** row.
- The value **Sunny Portal buffer load** is **0%**.
10. **i Delete the Sunny WebBox buffer**
- Non-deleted data in the buffer can lead to serious and irreversible distortion of the yield data in Sunny Portal. By deleting the buffer, you will ensure that no data which has been temporarily stored in the buffer is sent to Sunny Portal.
11. Select **WebBox > Info** and select [**Delete device descriptions**]. This will ensure that there is no distortion of instantaneous values and parameters on the Sunny WebBox user interface.
- The device descriptions in the Sunny WebBox will be deleted and then detected automatically when the Sunny WebBox is restarted.

Replacing an Inverter in the Sunny Portal System

Carry out the following steps only if you are using Sunny Portal.

Procedure:

1. Read off the serial number of the new inverter off the type label and write it down. This way you can identify the inverter for replacement in Sunny Portal.
2. Activate the data transmission between Sunny WebBox and Sunny Portal again:
 - Select **WebBox > Settings > Data trans.** in the Sunny WebBox user interface.
 - In the **Portal settings** area activate the option **Yes** in the field **Use Sunny Portal**.
3. Select [**Save**]. The saving process may take a few minutes.
4. Replace the new inverter in the Sunny Portal system:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Sunny Portal recognizes the new inverter and opens the configuration wizard automatically. To open the configuration wizard manually, select "**Name of your system**" > **System monitoring > Set up device now**.
 - Select  in the row of the new inverter and follow the configuration wizard instructions.

10.3 Replacing the Sunny WebBox

Requirement:

- The software "Sunny WebBox Assistant" must be installed on the computer (available free of charge at www.SMA-Solar.com).

Procedure:

1. If you are using Sunny Portal and if the Sunny WebBox to be replaced still allows it, transfer the data saved to the Sunny WebBox to Sunny Portal before replacing the Sunny WebBox:
 - Log into the user interface of the Sunny WebBox.
 - Select **WebBox > Info**.
 - Select [**Upload**] in the **Last portal upload** row.
 - The value **Sunny Portal buffer load** is **0%**.
2. Decommission the Sunny WebBox to be replaced (see Sunny WebBox installation manual).

3. Start the Sunny WebBox Assistant on the computer and connect the Sunny WebBox as described (if necessary, see help of the Sunny WebBox Assistant or quick reference guide on commissioning the Sunny WebBox).
4. Select [**Next**].
 - The Sunny WebBox search is starting. The new Sunny WebBox is displayed.
5. Select the new Sunny WebBox and select [**Configure the WebBox**].
6. Log in with the user group Installer and the associated password.
7. Select [**Next**].
8. Activate the option **Replace Sunny WebBox**.
9. Select [**Next**] and follow the Sunny WebBox Assistant instructions.
10. Determine the PV system identifier of the existing Sunny Portal system of the Sunny WebBox:
 - Log into Sunny Portal and call up the existing Sunny Portal system.
 - Select **Configuration > PV System Properties > PV System Data**.
 - Copy the PV system identifier from the field **PV System Identifier** into the clipboard.
11. Make Sunny Portal settings in the new Sunny WebBox:
 - Log into the user interface of the Sunny WebBox.
 - Select **WebBox > Settings > Data transmission**.
 - Paste the PV system identifier from the clipboard into the field **PV System Identifier**.
 - Activate **Yes** in the field **Use Sunny Portal**.
 - Select [**Save**].
 - Select **Logout**.
12. In Sunny Portal replace the Sunny WebBox in the Sunny Portal system:
 - Log into Sunny Portal and call up the Sunny Portal system.
 - Sunny Portal recognizes the new Sunny WebBox and opens the configuration wizard automatically. To open the configuration wizard manually, select "**Name of your system**" > **System monitoring > Set up device now**.
 - Select in the row of the new Sunny WebBox and follow the configuration wizard instructions.

10.4 Replacing the SMA Cluster Controller with a Sunny WebBox

1. Decommission the Sunny WebBox to be replaced (see Sunny WebBox installation manual).
2. Determine the PV system identifier of the existing Sunny Portal system of the Sunny WebBox:
 - Log into Sunny Portal and call up the existing Sunny Portal system.
 - Select **Configuration > PV System Properties > PV System Data**.
 - Copy or record the PV system identifier from the field **PV System Identifier** into the clipboard.
3. Remove the Sunny WebBox to be replaced from the Sunny Portal system:
 - Select **Configuration > Device Overview**.
 - In the Sunny WebBox row select in the **Properties** column.
 - Select [**Edit**].
 - The menu for setting the device properties opens.
 - In the **Data collection** area, deactivate the checkbox **Active**.
 - Select [**Save**].
4. Adjust the Sunny Portal settings in the SMA Cluster Controller:
 - Log into the user interface of the SMA Cluster Controller.

- Select the SMA Cluster Controller in the system tree and select the menu **Settings** in the device menu.
 - Select the parameter group **Sunny Portal**.
 - Select **[Edit]**.
 - In the **Basic settings** area, activate option **Yes** in the drop-down list **Use Sunny Portal**.
 - Make the user settings in the **User settings** area:
 - In the field **E-mail**, enter the e-mail address to which Sunny Portal is to send the access data.
 - Enter the PV system identifier or paste it from the clipboard into the field **PV System Identifier**.
 - In the field **PV system name**, enter the name under which the system is to be displayed in Sunny Portal.
 - Select **[Save]**.
 - Select **[Logout]**.
5. Perform the registration in Sunny Portal. Select **[Execute]** in the field **Register** in the **Status and Actions** area.
6. Replacing the SMA Cluster Controller in the Sunny Portal System in Sunny Portal:
- Log into Sunny Portal and call up the Sunny Portal system.
 - The Sunny Portal recognizes the SMA Cluster Controller and opens the configuration wizard automatically. To open the configuration wizard manually, select **"Name of your system" > System monitoring > Set up device now**.
 - Select  in the row of the SMA Cluster Controller and follow the configuration wizard instructions.

11 System with Sunny Explorer

11.1 Speedwire System with Sunny Explorer

11.1.1 Procedure when Replacing Different Devices

Procedure	See
1. Replacing the SMA Energy Meter by Means of Sunny Explorer	(see Section 12.2, page 32)
2. Replacing an Inverter with Speedwire in Sunny Explorer	(see Section 11.1.3, page 30)
3. Replacing the Battery Pack Smart Energy	(see Section 12.3, page 33)

11.1.2 Replacement of SMA Energy Meter by Means of Sunny Explorer

See (see Section 12.2 "Replacing the SMA Energy Meter by Means of Sunny Explorer", page 32)

11.1.3 Replacing an Inverter with Speedwire in Sunny Explorer

1. Read the serial number of the inverter to be replaced off the type label and write it down.
2. Determine the energy yield of the inverter to be replaced:
 - Log into Sunny Explorer at the Speedwire system.
 - Select the inverter to be replaced in the system tree.
 - Select **Overview** and read off and write down the value in the **Total yield** row.
3. Decommission the inverter to be replaced (see the inverter manual).
4. If you retrofit the new inverter with Speedwire/Webconnect communication, install the Speedwire/Webconnect interface in the inverter and commission (see the Speedwire/Webconnect interface manual).
5. If BLUETOOTH communication is integrated in the new inverter, turn the rotary switch on the inverter for the NetID with a screwdriver (blade width 2.5 mm) to **0** (see the inverter manual). This deactivates the BLUETOOTH function.
6. Commission the new inverter (see inverter manual).
7. Log into Sunny Explorer at the Speedwire system.
 - Sunny Explorer automatically detects the new inverter. The new inverter is displayed with a padlock symbol in the system tree.
8. Set the system passwords of the existing Speedwire system for the new inverter:
 - Set up a new Speedwire system in Sunny Explorer and log in as **Installer** using the new password for the user group **Installer** that has been set up in the new inverter.
 - Select the Speedwire system in the system tree.
 - Select **Settings > User rights (All devices) > [Edit]**.
 - Enter the system password for the respective user group that has been set up for the Speedwire system to which you wish to add the new inverter.
 - Select **[Save]**. The saving process may take a few minutes.
9. Log into Sunny Explorer at the Speedwire system to which you wish to add the new inverter.
 - The new inverter is displayed without a padlock symbol in the system tree.
10. Set the the noted energy yield of the inverter to be replaced in the new inverter:
 - In Sunny Explorer, select the new inverter in the system tree.
 - Select **Settings > AC side > [Edit]**.

- Enter the noted energy yield of the inverter to be replaced in the field **Set total yield** and then select [**Save**]. The saving process may take a few minutes.

11.1.4 Replacing the Battery Pack Smart Energy

See (see Section 12.3 "Replacing the Battery Pack Smart Energy", page 33)

11.2 BLUETOOTH System with Sunny Explorer

11.2.1 Replacing an Inverter with BLUETOOTH in Sunny Explorer

1. Read the serial number of the inverter to be replaced off the type label and write it down.
2. Determine the energy yield of the inverter to be replaced:
 - Log into Sunny Explorer at the BLUETOOTH system.
 - Select the inverter to be replaced in the system tree.
 - Select **Overview** and read off and write down the value in the **Total yield** row.
3. Decommission the inverter to be replaced (see the inverter manual).
4. If you retrofit the new inverter with BLUETOOTH communication, install the BLUETOOTH interface in the inverter and commission (see the BLUETOOTH interface manual).
5. For a new inverter, set the NetID of the system:
 - For inverters with integrated BLUETOOTH, turn the rotary switch **NetID** on the inverter using a screwdriver (blade width 2.5 mm) to the NetID of the system (see the inverter manual).
 - For inverters with retrofitted BLUETOOTH interface, turn the rotary switch **NetID** on the inverter using a screwdriver (blade width 2.5 mm) to the NetID of the system (see the interface manual).
6. Commission the new inverter (see inverter manual).
7. Log into Sunny Explorer at the BLUETOOTH system.
 - Sunny Explorer automatically detects the new inverter. The new inverter is displayed with a padlock symbol in the system tree.
8. Adjust the system passwords of the existing BLUETOOTH system for the new inverter:
 - Set up a new BLUETOOTH system in Sunny Explorer and log in as **Installer** using the new password for the user group **Installer** that has been set up in the new inverter.
 - Select the BLUETOOTH system in the system tree.
 - Select **Settings > User rights (All devices) > [Edit]**.
 - Enter the system password for the respective user group that has been set up for the BLUETOOTH system to which you wish to add the new inverter.
 - Select [**Save**]. The saving process may take a few minutes.
9. Log into Sunny Explorer at the BLUETOOTH system to which you wish to add the new inverter.
 - The new inverter is displayed without a padlock symbol in the system tree.
10. Set the the noted energy yield of the inverter to be replaced in the new inverter:
 - In Sunny Explorer, select the new inverter in the system tree.
 - Select **Settings > AC side > [Edit]**.
11. Enter the noted energy yield of the inverter to be replaced in the field **Set total yield** and then select [**Save**]. The saving process may take a few minutes.

12 Appendix

12.1 Changing the System Password in a Sunny Home Manager System in Sunny Portal

This section describes how the system password for a Sunny Home Manager system in Sunny Portal can be changed:

Requirement:

- You must have the user role **Installer** or **Administrator** for the Sunny Portal system.

Procedure:

1. Log into Sunny Portal and call up the Sunny Home Manager system.
2. Select **Configuration > Device Overview**.
3. In the Sunny Home Manager row select  in the **Properties** column.
4. Select **[Edit]**.
 - The menu for setting the device properties opens.
5. Enter the requested password in the text field **PV System Password**.
6. Enter the new password again in the text field **Repeat password**.
7. Select **[Save]**.
 - The Sunny Home Manager changes the password for all devices.

12.2 Replacing the SMA Energy Meter by Means of Sunny Explorer

Procedure:

- Replacing an SMA Energy Meter in a System with a Sunny Boy Smart Energy Inverter
or
- Replacing an SMA Energy Meter in a System with a Sunny Island Inverter

Replacing an SMA Energy Meter in a System with a Sunny Boy Smart Energy Inverter

1. Write down the serial number indicated on the type label of the new SMA Energy Meter.
2. Disassemble the SMA Energy Meter to be replaced (see the SMA Energy Meter manual).
3. Mount the new SMA Energy Meter and commission it (see the SMA Energy Meter manual).
4. Transfer the serial number of the new SMA Energy Meter to the inverter using Sunny Explorer:
 - Log into the Speedwire system in Sunny Explorer and select the system in the system tree.
 - Select the tab **Settings > System communication > Meter on Speedwire > [Edit]**.
 - In the field **Serial number**, enter the serial number of the new SMA Energy Meter which is used as purchased electricity meter and feed-in meter.
 - Select **[Save]**. The saving process may take a few minutes.
5. Ensure that the inverters receive the data of the new SMA Energy Meter:
 - Select the tab **Realtime values > PV system communication > Measured values > Meter on Speedwire**.
 - Check whether the value **OK** is entered in the field **Status**.
6. To call up the data of the SMA Energy Meter, select the tab **Realtime values > AC side > Grid measurements**.

Replacing an SMA Energy Meter in a System with a Sunny Island Inverter

1. Write down the serial number indicated on the type label of the new SMA Energy Meter.
2. Disassemble the SMA Energy Meter to be replaced (see the SMA Energy Meter manual).
3. Mount the new SMA Energy Meter and commission it (see the SMA Energy Meter manual).
4. Transfer the serial number of the new SMA Energy Meter to the inverter using Sunny Explorer:
 - Log into the Speedwire system in Sunny Explorer and select the system in the system tree.
 - If you are using the SMA Energy Meter as purchased electricity meter and feed-in meter, proceed as follows:
 - Select **Settings > AC side > [Edit]**.
 - Enter the serial number of the new SMA Energy Meter in the **Measuring interface 1** area in the field **Serial number** and then select **[Save]**. The saving process may take a few minutes.
 - If you are using the SMA Energy Meter as PV production meter, proceed as follows:
 - Select **Settings > AC side > [Edit]**.
 - Enter the serial number of the new SMA Energy Meter in the **Measuring interface 2** area in the field **Serial number** and then select **[Save]**. The saving process may take a few minutes.

12.3 Replacing the Battery Pack Smart Energy

DANGER

Danger to life due to high voltages on the Battery Pack

Lethal voltage is present at the pin connector for the power cable. Reaching into the pin connector for the power cable can result in lethal electric shock.

- Prior to performing any work on the inverter and on the Battery Pack, always disconnect the inverter from all voltage sources (see the inverter operating manual at www.SMA-Solar.com).
- The Battery Pack may only be mounted and installed by qualified persons with appropriate qualifications (for information on the qualifications of the qualified persons, see the operating manual at www.SMA-Solar.com).
- Do not open the Battery Pack and leave the protective caps on the pin connectors of the new Battery Pack until the inverter cables are connected to the new Battery Pack.

Procedure on Receipt of a New Battery Pack

- Disassembling the Defective Battery Pack
- Mounting the New Battery Pack and Connecting It to the Inverter
- Packing the Defective Battery Pack and Organizing Its Return

Disassembling the Defective Battery Pack

1. Open the packaging of the new Battery Pack and remove the delivery documents and the return note. Be careful when handling the packaging as you will need it later for packing the defective Battery Pack.
2. Compare the serial number on the return note with the serial number of the defective Battery Pack. The serial numbers must be identical.
3. Keep the delivery documents of the new Battery Pack and the return note for the defective Battery Pack in a safe place. You will need the return note later to prepare the defective Battery Pack for collection.
4. Disconnect the inverter from voltage sources (at www.SMA-Solar.com).
5. Hold the defect Battery Pack by the side handles, and slide it to the left of the wall mounting bracket up to the stop. This deactivates the lift-off protection of the Battery Pack and gives you more room to pull out the cables.
6. Remove the data cable from the defective Battery Pack. Press the lateral brackets in and pull the plug out of the pin connector.

7. Remove the power cable from the defective Battery Pack. Turn the plug lock to the left until the plug releases and then pull the plug out of the pin connector.
8. If the protective caps of the pin connectors for the data cable and the power cable are available, use them to cover the corresponding pin connectors of the defect Battery Pack.
9. Insert the data cable and power cable into the bracket on the left-hand side of the inverter.
10. Remove the defective Battery Pack in an upright position from the wall mounting bracket.

Mounting the New Battery Pack and Connecting It to the Inverter

1. Remove the new Battery Pack from the packaging and put the packaging aside. Be careful when handling the packaging as you will need it later for packing the defective Battery Pack.
2. Hang the new Battery Pack to the left of the inverter in the wall mounting bracket. The right-hand side of the Battery Pack must be flush with the hook-in position marked on the wall mounting bracket.
3. Remove the protective caps from the pin connectors for the data cable and power cable and retain them for possible decommissioning.
4. If the protective caps of the defective Battery Pack are no longer available, place the protective caps of the new Battery Pack onto the pin connectors of the defective Battery Pack.
5. Release the data cable and the power cable from the bracket on the inverter.
6. Insert the power cable plug in the pin connector for the power cable. Insert the plug into the pin connector and turn the lock to the right until the plug snaps into place.
7. Ensure that the plug is securely in place.
8. Connect the data cable for communication between the inverter and the Battery Pack to the D-sub plug on the Battery Pack.
9. The plug snaps into place.
10. **⚠ CAUTION**
Danger of crushing if the Battery Pack is jolted
Grip the Battery Pack by the handles and carefully push it to the right as far as it will go.
11. Position the protective cover over the Battery Pack. The tabs on the right-hand side of the protective cover must engage with the guides on the left of the inverter enclosure. Then press the left side of the protective cover down onto the Battery Pack until it snaps into place.

Packing the Defective Battery Pack and Organizing Its Return

⚠ DANGER

Danger to life due to incorrect packaging and transport of the Battery Pack

The Battery Pack is classed as hazardous material. Special regulations must be complied with regarding packaging and transport.

- Packaging and transport of the Battery Pack may only be carried out by persons who have been trained in accordance with Section 1.3 ADR and whose training has been documented.



UN3480
Lithium Ion Batteries

1. Place the supplied foil bag in the packaging in which the new Battery Pack was delivered. The open side of the foil bag must face upwards.
2. Place the defective Battery Pack in the foil bag.
3. Place the moisture absorber next to the defective Battery Pack in the foil bag.
4. Close the foil bag.
5. Seal the packaging with suitable adhesive tape.
6. Organize the return of the package. Contact the Service (see Section 13, page 36).

13 Contact

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: +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 SMA Online Service Center : www.SMA-Service.com	Ελλάδα	SMA Service Partner AKTOR FM.
		Κύπρος	Αθήνα +30 210 8184550 SMA Online Service Center: www.SMA-Service.com
España Portugal	SMA Ibérica Tecnología Solar, S.L.U. Barcelona +34 935 63 50 99 SMA Online Service Center: www.SMA-Service.com	United Kingdom	SMA Solar UK Ltd. Milton Keynes +44 1908 304899 SMA Online Service Center: www.SMA-Service.com
Italia	SMA Italia S.r.l. Milano +39 02 8934-7299 SMA Online Service Center: www.SMA-Service.com	Bulgaria	SMA Service Partner Renovatio Solar +40 372 756 599
		România	
		Slovenija	SMA Online Service Center: www.SMA-Service.com
		Hrvatska	
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)
United States/ Estados Unidos	SMA Solar Technology America LLC Rocklin, CA	Toll free for USA, Canada and Puerto Rico / Llamada gratuita en EE. UU., Canadá y Puerto Rico: +1 877-MY-SMATech (+1 877-697-6283) International / Internacional: +1 916 625-0870	
Canada/ Canadá	SMA Solar Technology Canada Inc. Mississauga	Toll free for Canada / gratuit pour le Canada: +1 877-MY-SMATech (+1 877-697-6283)	

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