Installation Manual

Replacement of SMA Devices in Systems with SMA Communication Products

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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

This document is intended for qualified persons. The activities described in this document must only be performed by qualified persons who have been trained in dealing with the dangers and risks associated with the installation of electrical systems and who have the necessary knowledge to avert danger.

1.3 Symbols

Symbol	Explanation
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
⚠ WARNING	Indicates a hazardous situation which, if not avoided, can result in death or serious injury
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, can result in minor or moderate injury
NOTICE	Indicates a situation which, if not avoided, can result in property damage
i	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	Explanation	Example
bold	• Display texts • Elements on a user interface • Terminals • Elements to be selected • Elements to be entered	• The value can be found in the field **Energy**. • Select **Settings**. • Enter the value **10** in the field **Minutes**.
>	• Connects several elements to be selected	• Select **Settings > Date**.
[**Button/Key**]	• Button or key to be selected or pressed	• Select [**Next**].

2 Safety

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	Section 5, page 8	• 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	Section 6, page 9	• System password for user role **Installer** • Login data of the Sunny Portal system and user role **Installer** or **Administrator**
Sunny Multigate System with micro inverters	Section 7, page 13	• 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**
Cluster Controller	Section 8, page 15	• Access to the 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	Section 9, page 19	• 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	Section 10, page 22	• Access to the Sunny WebBox • System password for user role **Installer** • Login data of the Sunny Portal system with user role **Installer** or **Administrator**
Sunny Explorer	Section 11, page 25	• 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	Section 12.2, page 27
2.	Replacing Inverters with Webconnect Communication in Sunny Portal	Section 5.3, page 8
3.	Replacing the Battery Pack Smart Energy	Section 12.3, page 28

5.2 Replacing the SMA Energy Meter by Means of Sunny Explorer

See Section 12.2, page 27.

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 Section 12.3, page 28.

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	Section 6.2, page 9
2. Replacing Inverters in the Sunny Home Manager	Section 6.3, page 10
3. Replacing the Battery Pack Smart Energy	Section 12.3, page 28
4. Replacing the Sunny Home Manager	Section 6.5, page 12

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	• Select **D0**.
Bidirectional meter with D0 interface	• Select **D0**. • Activate the field **Bidirectional meter (Supply and feed-in)**. ☑ The area **Meter input 2** is not available.
Energy meter with S0 Interface	• Select **S0**. • In the field **S0 pulses/kWh**, enter the pulse rate of the energy meter (see energy meter manual).
SMA Energy Meter*	• Select **SMA Energy Meter xxx**. The placeholder for the SMA Energy Meter serial number is **xxx**. 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 eight minutes. Page 2 of the configuration wizard opens.

   ✖ Page 2 of the configuration wizard does not open and 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 27).
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 27).

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 user manual of the Sunny Home Manager)
6. In the row for the new inverter, select ⇄.

   ☑ The Sunny Home Manager connects to the new inverter. This can take two to eight 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 27).
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 27).

6.4 Replacing the Battery Pack Smart Energy

See Section 12.3, page 28.

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 glows red, and then flashes red. After approximately two minutes, the status LED is intermittently 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 **PIC** field. Enter the registration ID of the new Sunny Home Manager in the **RID** field.
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?
    - 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	Section 7.2, page 13
2. Replacing a Sunny Multigate in Sunny Portal	Section 7.3, page 14

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 about one minute, the new inverter is displayed.
   - In the row of the new inverter select and follow the instructions of the configuration wizard.

7.3 Replacing the 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 Cluster Controller System

8.1 Procedure when Replacing Different Devices

Procedure		See
1.	Replacing the Inverter with Speedwire in Cluster Controller	Section 8.2, page 15
2.	Replacing the Cluster Controller	Section 8.3, page 17
3.	Replacing the Battery Pack Smart Energy	Section 12.3, page 28

8.2 Replacing the Inverter with Speedwire in Cluster Controller

Procedure:

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

Replacing an Inverter in 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 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 Cluster Controller to Sunny Portal prior to replacing the inverter.
   - Select the 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 that the data transmission between the Cluster Controller and Sunny Portal has been terminated.
   - Log into the user interface of the Cluster Controller and check whether the upload to Sunny Portal was successful. Select the 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 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 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 Cluster Controller changes the system passwords for all approved devices in the system.

10. Restart the 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 [**Submit**].

    ☑ The 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 Cluster Controller.
    - Log into the user interface of the 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 Cluster Controller on the user interface of the 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 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 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 Cluster Controller memory to Sunny Portal:

- Select the 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 that the data transmission between Cluster Controller and Sunny Portal has been terminated.
- Check whether the upload to Sunny Portal was successful on the user interface of the Cluster Controller. Select the 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 Cluster Controller

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

In a Sunny Portal system, the Cluster Controller may 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 Cluster Controller, you must delete the Sunny WebBox from the Sunny Portal system before registering the new Cluster Controller (see user manual of the Cluster Controller in Sunny Portal). 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 Cluster Controller as described in this section.

Restoring the device configuration of the 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 Cluster Controller can be used to restore the device configuration of the Cluster Controller.

Procedure:

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

Replacing the Cluster Controller

1. If the Cluster Controller to be replaced still allows it, safe the device configuration of the Cluster Controller:
   - Log into the user interface of the Cluster Controller.
   - Select the 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 Cluster Controller (see the 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** of the Cluster Controller.
   - Disassemble the Cluster Controller to be replaced (see the Cluster Controller installation manual).
4. In case you have saved the device configuration of the Cluster Controller to be replaced, transfer the device configuration to the new Cluster Controller:
   - Log into the user interface of the Cluster Controller.
   - Select the 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 **Restore device configuration (*.bak)**.
   - Select [**Submit**].

   ☑ The configuration file is uploaded and the device configuration is restored. The Cluster Controller restarts.

Replacing the 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 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 Cluster Controller:
   - Log into the user interface of the Cluster Controller.
   - Select the 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. Register the new Cluster Controller in Sunny Portal:
   - In the **Status and actions** area select [**Execute**] in the field **Register**.

   ☑ The Cluster Controller synchronizes the system time with the 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.

   ✖ Has the registration failed?
   - Rectify the error (see the Cluster Controller user manual).
4. Log into Sunny Portal and call up the Sunny Portal system.
5. The Sunny Portal recognizes the new 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 Cluster Controller and follow the configuration wizard instructions.

8.4 Replacing the Battery Pack Smart Energy

See Section 12.3, page 28.

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	Section 9.2, page 19
2. Replacing the Sunny WebBox with BLUETOOTH	Section 9.3, page 21

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 new inverter in Sunny Portal for replacement.
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 >** [**Next**].
    - 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 Replacement Procedure when Replacing Different Devices

Procedure	See
1. Replacing an Inverter with RS485 in the Sunny WebBox	Section 10.2, page 22
2. Replacing the Sunny WebBox	Section 10.3, page 23

10.2 Replacing an Inverter with RS485 in the Sunny WebBox

Procedure:

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

Replacing an Inverter 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 to the Sunny WebBox 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 are retrofitting your new inverter with RS485 communication, install the RS485 interface in the inverter and commission it (see 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 > Detection**.
   - 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. Transfer the noted energy yield of the inverter to be replaced to 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%**.

   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.
10. 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 new inverter in Sunny Portal for replacement.
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:

- 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%**.

5. Decommission the Sunny WebBox to be replaced (see Sunny WebBox installation manual).
6. 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).
7. Select [**Next**].
   ☑ The Sunny WebBox search is starting. The new Sunny WebBox is displayed.
8. Select the new Sunny WebBox and select [**Configure the WebBox**].

9. Log in with the user group Installer and the associated password.
10. Select [**Next**].
11. Activate the option **Replace Sunny WebBox**.
12. Select [**Next**] and follow the Sunny WebBox Assistant instructions.
13. 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.
14. 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**.
15. 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.

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	Section 12.2, page 27
2.	Replacing an Inverter with Speedwire in Sunny Explorer	Section 11.1.3, page 25
3.	Replacing the Battery Pack Smart Energy	Section 12.3, page 28

11.1.2 Replacing the SMA Energy Meter

See Section 12.2, page 27.

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 Section 12.3, page 28.

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 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

The sections in the appendix must only be observed if they are referenced in the other sections.

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 > PV 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 all voltage sources (see the inverter manual at www.SMA-Solar.com).
5. Hold the defective 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 defective 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 of the Battery Pack.
9. The plug snaps audibly 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 brackets 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

The Battery Pack is considered to be dangerous goods. 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.

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 SMA Service Line.

13 Contact

Australia	SMA Australia Pty Ltd. Sydney	Toll free for Australia: International:	1800 SMA AUS (1800 762 287) +61 2 9491 4200
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