

## FAQs for Installers | ESS malfunction Sunny Tripower

- **What exactly is the problem?**

When the ESS handle is pulled during disconnection as described in the installation manual, in very rare cases the handle's contact element may loosen and remain in the device. The handle may only be pulled by trained, electrically skilled persons and exclusively during service or maintenance. There is no danger when the procedure described in the installation manual is followed. **FAILURE TO COMPLY** with this procedure can lead to the following, if the malfunction occurs:

- a) DC side disconnection is not correctly performed and voltage is present in the device,
- b) Solely during an attempt to remove the contact element from the inverter, live parts could be touched. In certain cases, this can lead to life-threatening injuries.

**If all disconnection measures are followed (disconnect AC side, pull ESS, disconnect DC plug connector, wait 10 minutes), the malfunction does not present any danger.** When all steps outlined in the manual for disconnection are fully complied with, the contact element in the device can be removed safely with **insulated pliers**.

- **How long has SMA been aware of this problem?**

Within the results of current quality tests performed in July 2011, the problem appeared once in an internal check on a replacement device manufactured before the end of October 2010. There have been no known cases of this in the field and tests on systems in the field were conducted immediately and did not reproduce the error. A comprehensive risk assessment found the risk to be "extremely low" and not representing any legally relevant danger. Nevertheless, SMA has decided to promptly inform all customers about the issue to ensure that even this low-level risk was eliminated, even if under the legally relevant level.

- **How did this come to light?**

We learned of the ESS handle's malfunction through our continued quality testing. However, the practical tests and a comprehensive risk assessment that immediately followed failed to reproduce the occurrence. As a result there is no danger. At the end of October 2010 there was a material change which led to an even greater adhesion between contact element and handle recess.

- **Which devices are affected?**

This exclusively affects Sunny Tripower devices STP 15000TL-10 and STP 17000TL-10 with serial numbers from 2100000001 to 2110025617, delivered up to October 31, 2010.

- **How do I identify the devices?**

Solar power professionals can identify the devices by the serial numbers; dealers can also identify them by the delivery date.

- **How can the affected handles be identified?**

The "new" ESS handles are marked with a white or yellow dot.

- **What measures has SMA taken?**

Practical tests were conducted immediately at SMA and in the field. The occurrence could not be reproduced. In addition, a comprehensive risk assessment was carried out which found the risk to be "extremely low" and not representing any legally relevant danger (see above).

- **What does that mean exactly for me? What do I have to look out for?**

When you are planning maintenance or service work with your customers, we request that you check beforehand whether there are inverters in the system from the above stated time period or serial number range. If this is the case please order new ESS handles via the SMA Service at 00800 7627378423 stating the inverter type and serial number. For easy recognition the ESS handle with the new construction has a yellow or white dot in the handle recess. In the second step replace the "old" handles with the "new" handles ordered from SMA.

During pulling of the affected inverters' ESS handle it is important to confirm that the AC side of the inverter has been disconnected – as described in the installation manual. Furthermore it is to be checked whether the contact element with the metal tongues is in the ESS handle and not in the inverter. (You will find an illustrated representation also in the installation manual, section 9.2). Should the unlikely event occur that the contact element of the ESS handle remains in the device it is to be ensured again that the AC side disconnection of the inverter has been carried out. Only then must all DC plug connectors be pulled. A waiting time of ten minutes after this action is required to allow the voltage within the touchable parts to fall to a non-dangerous value. Only then may the contact element that remained in the device be removed using an insulated tool. Recommissioning of the inverter may only take place with an ESS handle with the new construction.

**Notice:** As installer you must always comply with the standard safety regulations and follow the instructions in the installation manual. Since high voltages can be present at the device, non-compliance of these regulations can in certain circumstances lead to life-threatening injuries.

- **Where do I acquire replacement handles?**

Via the SMA Service number stating the serial number(s) of the inverter(s):  
00800 7627378423.

- **What should I do with the old handles?**

Please send the handles to the postage free return address for your country which the Service employee will inform you of during your call to 00800 7627378423. When doing this please specify the inverter type and serial number.

- **Why does SMA not replace the handles itself?**

There is no danger presented by the installed devices and so a separate action exclusively for the replacement of the handles is not necessary. However, SMA is also performing exchanges in the field during servicing. The additional measure of including you as installer in the process speeds up implementation and increases coverage.