


## **Instructions for connecting the AC•THOR to SMA Sunny Island**

Combining the AC•THOR with an SMA Sunny Island inverter allows the use of excess photovoltaic power, which cannot be stored in the battery, to generate hot water. When the battery is fully charged, the SMA Sunny Island inverter increases the AC output frequency. The AC•THOR detects the rise in frequency and increases the heating power accordingly.

 my-PV cannot be relied on to prevent battery damage at all times, since although the AC•THOR acts as a "dump load", it is still not always possible to guarantee overcharge protection (e.g. when the target hot water temperature is reached). The overload protection must be guaranteed by the charge controller or the PV inverter! Deep discharge protection via the inverter is similarly imperative.


### **1. Basic settings on the AC•THOR**

Please read the installation and operating instructions supplied with the device before starting it up.

 The AC•THOR must always be taken into account when planning loads!

The factory setting of the AC•THOR is suitable for operation with Sunny Island, Sunny Boy and Sunny Tripower SMA inverters (control range of the battery inverter from 49-52 Hz and the grid feeding inverter of 51-52 Hz).

### **2. Settings on Sunny Island**

 No special settings need be made on the components by SMA!

### 3. Properties of the off-grid system

Since the AC input and output are separate at the Sunny Island unit, the power of the battery inverter matters for the AC•THOR, not the power of the PV inverter. Like all consumption devices, the AC•THOR is connected to the AC output of the Sunny Island unit via the off-grid net.

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Subject to change.

