Instructions for integrating

# AC•THOR / AC•THOR 9s / AC ELWA 2

## in off-grid systems with SMA Sunny Island

By combining AC•THOR or AC ELWA 2 with an SMA Sunny Island inverter, it is **possible in off-grid systems** to use surplus photovoltaic electricity that cannot be stored in the battery to generate heat. When the battery is fully charged, the SMA Sunny Island inverter increases the AC output frequency. my-PV detects the increase in frequency and increases the heating power accordingly.

⚠ Under no circumstances can my-PV be held liable for any battery damage, as our units act as excess consumers ("dump load") but cannot guarantee overcharge protection in every case (e.g. when the target hot water temperature is reached).

Overcharge protection must be guaranteed by the charge controller or PV inverter! Deep discharge protection by the inverter is also essential.

## 1. Default settings on my-PV device

Before commissioning, it is essential that you read the assembly instructions that accompany the device, as well as the operating instructions available on line.
Find the AC•THOR operation manual **here**.
Find the AC ELWA 2 operation manual **here**.

⚠ The AC•THOR or the AC ELWA 2 must always be taken into account when planning loads!

The factory setting of my-PV 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).

System requirements of AC ELWA 2 for frequency control:

Hardware version: 1.5A or higher
Firmware version: e0000600 or higher
Power stage firmware version ep102 or higher

## 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 my-PV device, not the power of the PV inverter. Like all consumption devices, the AC•THOR or AC ELWA 2 is connected to the AC output of the Sunny Island unit via the off-grid net.

Subject to change.

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