

Instructions for integrating  
**AC•THOR<sup>®</sup> or AC ELWA<sup>®</sup>-E**  
 into SMA Sunny Home Manager (SHM)  
 or SMA Energy Meter



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# 1. Default settings on AC•THOR or AC ELWA-E

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-E operation manual [here](#).

Two control types are available for SMA:

SMA Home Manager	<p>The power signal which the SMA Sunny Home Manager gives the my-PV device depends not only on the feed-in, but also on the superordinate energy planning that can be configured in the SMA Portal. In this control mode, the SMA Home Manager decides when the my-PV device outputs power.</p> <p><b>NOTE:</b> There are no records of grid consumption and grid feed-in in the my-PV Cloud.</p>
SMA Direct meter communication	<p>This control type can be used with the signal sources SMA Energy Meter and SMA Sunny Home Manager.</p> <p>In contrast to the "SMA Home Manager" control type, the my-PV device itself takes over the function of the controller, as the surplus information is read directly from the SMA meter. The power control is carried out much faster than with the "SMA Home Manager" control type.</p> <p><b>NOTE:</b> The my-PV device is not listed in the load overview in the Sunny Portal.</p> <p> This control type is available for the AC•THOR from firmware version a0020202, for the AC ELWA-E from firmware version 201.00!</p> <p><b>NOTE for AC•THOR:</b> To install this firmware on already delivered devices, please send us the 16-digit serial number to support@my-pv.com. We will gladly activate the update for you!</p>

## AC•THOR Control setting for "SMA Home Manager"

With the AC•THOR, "SMA Home Manager" must be selected either on the display or in the web interface for the control type. Further settings are not required for communication with SMA.



or

**Control Settings**

Control type: SMA Home Manager

AC•THOR Number >1: only 'Slave' selectable.

Control source IP address: 0 0 0 0

Control state: No Control

Power timeout: 150

Control target: -50

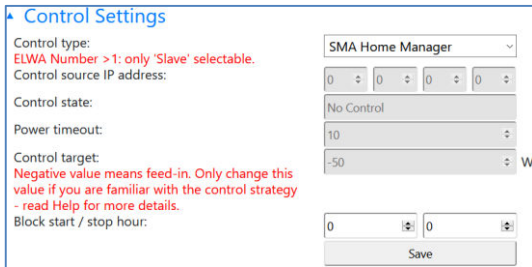
Negative value means feed-in. Only change this value if you are familiar with the control strategy - read Help for more details.

Block start / stop hour: 0 0

**Save**

## AC ELWA-E Control setting for “SMA Home Manager”

With the AC ELWA-E, "SMA Home Manager" must be selected for the control type in the web interface. Further settings are **not** required for communication with SMA.



Control Settings

Control type: SMA Home Manager

ELWA Number >1: only 'Slave' selectable.

Control source IP address: 0 0 0 0

Control state: No Control

Power timeout: 10

Control target: -50 W

Negative value means feed-in. Only change this value if you are familiar with the control strategy - read Help for more details.

Block start / stop hour: 0 0

Save



TIP: If the Sunny Home Manager does not find the device immediately, a restart after saving the control type could help!

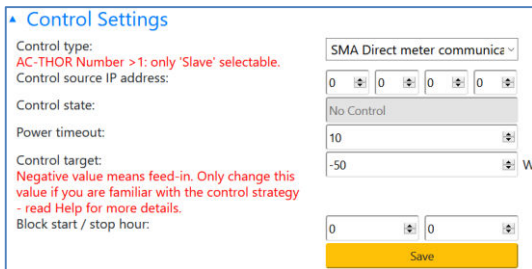
## AC•THOR / AC ELWA-E Control setting for “SMA Direct meter communication”

This control is suitable for both the SMA Sunny Home Manager and the SMA Energy Meter!

For both AC•THOR and AC ELWA-E, "SMA Direct meter communication" must be selected in the web interface for the control type. Further settings are **not** required for communication with SMA.



If this type of control is used in combination with a storage battery, we recommend setting the "Control target" to "-200" Watt!



Control Settings

Control type: SMA Direct meter communication

AC•THOR Number >1: only 'Slave' selectable.

Control source IP address: 0 0 0 0

Control state: No Control

Power timeout: 10

Control target: -50 W

Negative value means feed-in. Only change this value if you are familiar with the control strategy - read Help for more details.

Block start / stop hour: 0 0

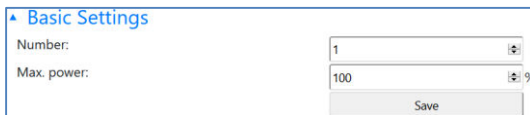
Save

Select "SMA Direct meter communication **Auto**" if there is only one meter.

Select "SMA Direct meter communication **Manual**" if there are multiple meters on the network and a specific one of them is to be selected as the control source by specifying its IP address.



TIP: The control settings can only be adjusted if the my-PV device has the factory preset device number "1". Even if several devices are controlled by „SMA Home Manager“, it is not necessary to change the device numbers! See heading "Basic settings" also on the "Setup" page.




Basic Settings

Number: 1

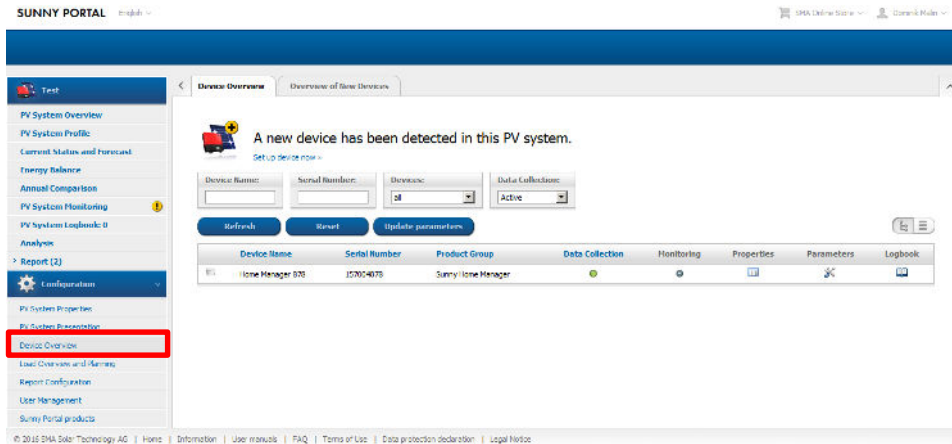
Max. power: 100 %

Save

## 2. Integrating the device in the Sunny Portal for control type “SMA Home Manager”

 The SHM must already be registered in the SMA portal!

If – Configuration – Device overview is selected in the SMA portal, only the SHM will be displayed at first. AC•THOR or AC ELWA-E will not appear to start with. Once the configuration process is complete, it will appear in the lower-level menu item – Load overview and planning.




The screenshot shows the Sunny Portal interface. The left sidebar has 'Device Overview' highlighted with a red box. The main content area shows a notification: 'A new device has been detected in this PV system.' Below this is a form with fields for 'Device Name', 'Serial Number', 'Device', and 'Data Collection'. There are 'Refresh', 'Reset', and 'Update parameters' buttons. A table below lists the detected device:

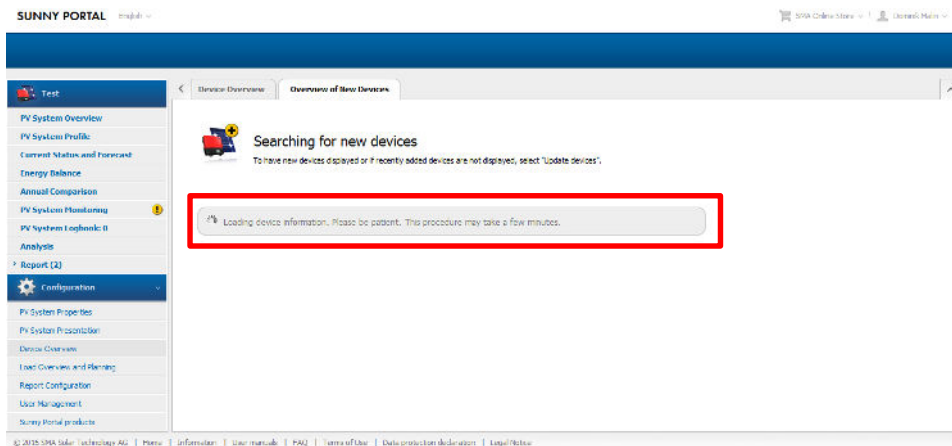
Device Name	Serial Number	Product Group	Data Collection	Monitoring	Properties	Parameters	Logbook
Home Manager 878	157004078	Sunny Home Manager					

### Searching for and adding AC•THOR or AC ELWA-E in the SHM

Update the list under – Configuration – Device overview – Overview of New Devices – “Refresh devices”.

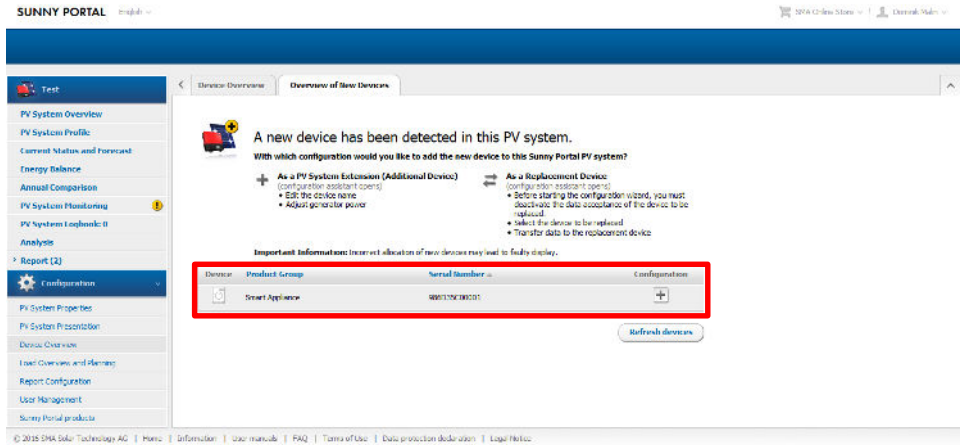
This process may take several minutes.

 Admin rights are required for this setting!



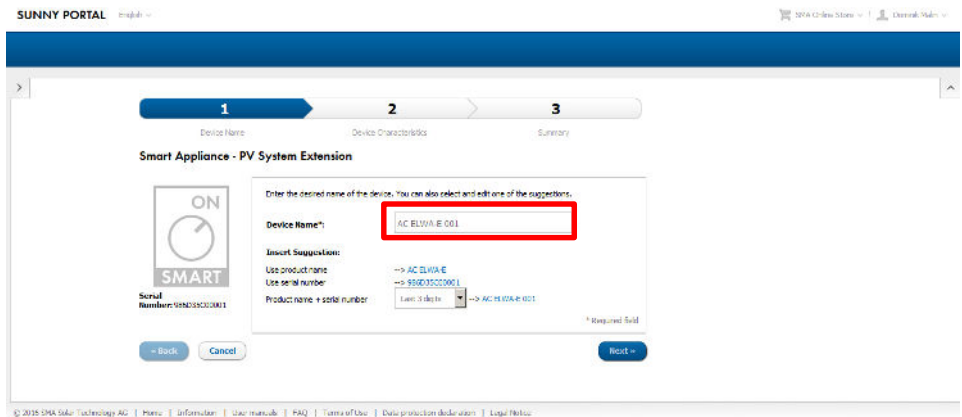
The screenshot shows the Sunny Portal interface. The left sidebar has 'Device Overview' highlighted with a red box. The main content area shows a notification: 'Searching for new devices'. Below this is a message: 'To have new devices displayed or if recently added devices are not displayed, select "Update Devices"'. A progress bar is shown with the text: 'Loading device information. Please be patient. This procedure may take a few minutes.'

AC•THOR or AC ELWA-E will appear as a “Smart Appliance” together with its MAC-address - click “+” to configure.



## Configuration - Step 1

Product type will be used automatically in combination with the last three characters of the MAC address as a device name. The MAC address can also be seen on the type plate.



## Configuration - Step 2

In order for AC•THOR or AC ELWA-E to simply make use of surplus energy that can no longer be used by other loads, my-PV recommends the following settings:

- Set the priority of the load to a very low
- Switch on the load depending on the proportion of PV energy
- Move the “Optional energy demand” slide as required

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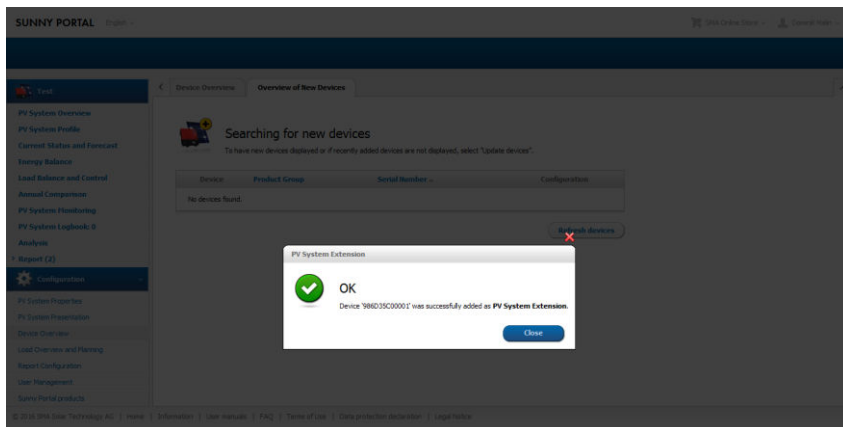
## Configuration - Step 3

These settings are displayed once more for checking.

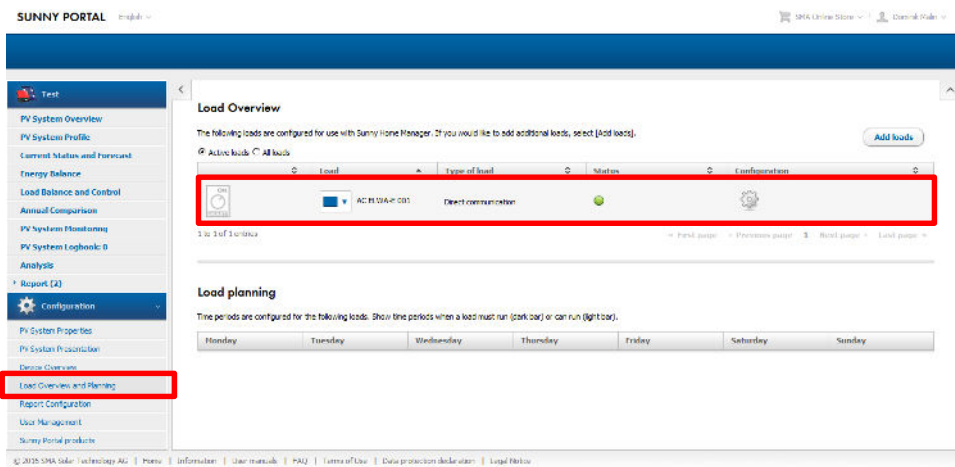
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Click the “Finish” button to complete the addition of the new system extension. This is confirmed with a message.



Once the configuration is complete, AC•THOR or AC ELWA-E will appear in the menu item – Load overview and planning.



The load characteristics of the new “Smart Appliance” can be displayed again at any time.

**Test**

- PV System Overview
- PV System Profile
- Current Status and Forecast
- Energy Balance
- Load Balance and Control
- Annual Comparison
- PV System Monitoring
- PV System Logbook: 0
- Analysis
- Report (2)
- Configuration**
- PV System Properties
- PV System Production
- Device Overview
- Load Overview and Planning
- Report Configuration
- User Management
- Sunny Portal products

Load Overview and Planning AC ELWA-E 001

### Load characteristics

<b>Data Collector:</b>	<input checked="" type="checkbox"/> Active
<b>Name of load:</b>	AC ELWA-E 001
<b>Product Group:</b>	AC ELWA-E
<b>Serial Number:</b>	98623900201
<b>Power Consumption:</b>	3020 W
<b>Priority of the load:</b>	low <span style="float: right;">high</span>
<b>Optional energy demand:</b>	Load will be activated on depending on: <input checked="" type="radio"/> Proportion of the PV energy <input type="radio"/> Maximum permitted energy costs <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>Internal energy supply: 0 %</div> <div>PV power generation: 100 %</div> </div>
<b>Load icon:</b>	
<b>Load color:</b>	<span style="background-color: #0070C0; color: white; padding: 2px 5px;">▼</span>

Save
Cancel
Delete
Upload load icon

**⚠** In the SHM AC•THOR or AC ELWA-E are not managed via time windows as is usually the case with wireless sockets for example!

**⚠** Periods in which hot water securing must be boosted are specified in AC•THOR or AC ELWA-E settings directly. (see respective operating instructions on [www.my-pv.com](http://www.my-pv.com))

**⚠** Bear in mind the optimization target settings within the SHM!

The factory setting of the SHM for the payment settings has an optimisation target of “economical”. In this case, my-PV recommends changing the optimisation target to “ecological”! Readjust this under – Configuration – PV system properties - Parameters.

**Optimization Target**

The optimization target indicates whether the Sunny Home Manager should prioritize ecological or economical factors for load management. If you select “ecological” as the optimization target, the Sunny Home Manager calculates the solution which uses the greatest self-consumption. Greater self-consumption conserves the environment because there is no energy loss caused by the transport of current through the power distribution grid. If you select the “economical” optimization target, the Sunny Home Manager calculates the most financially rewarding control of the loads, taking into consideration the feed-in and self-consumption tariffs. In certain cases, it may be more economical to feed the PV electricity into the power distribution grid and to operate the individual loads at night using electricity purchased from the grid.

**Optimization Target**

ecological

←

economical



## AC•THOR or AC ELWA-E with SHM and battery

my-PV recommends prioritising the use of excess energy for charging the battery. Only once the battery has finished charging AC•THOR or AC ELWA-E should start generating heat. This is achieved by making the following setting:

- Activate "Storage management via the Home Manager"
- Activate "Charging of the battery prior to optional loads"

Device Overview	
Device:	[REDACTED]
Parameters	
<b>Device Characteristics</b>	
Device Class:	Sunny Home Manager
Product Group:	Sunny Home Manager 2.0
Serial Number:	[REDACTED]
Manufacturer:	SMA Solar Technology AG
Device Name:	Home Manager [REDACTED]
Description:	
Data Request Interval:	automatic
Time Zone:	(UTC+01:00) Amsterdam, Berlin, Bern, Nuremberg, Rome, Stockholm
PV System Password:	*****
Automatic updates:	<input checked="" type="checkbox"/> Sunny Home Manager <input checked="" type="checkbox"/> PV system devices
<b>SMA SMART HOME Settings</b>	
FFBUS protocol:	<input checked="" type="checkbox"/>
Storage management via the Home Manager:	<input checked="" type="checkbox"/>
Charging of battery prior to optional loads:	<input checked="" type="checkbox"/>

Once the battery is fully charged, AC•THOR or AC ELWA-E are only then used when no other consumer has a higher priority!



If the excess PV power is greater than the maximum charging capacity of the battery, generation of heat can simultaneously happen with battery charge!

## Control multiple devices with the SHM

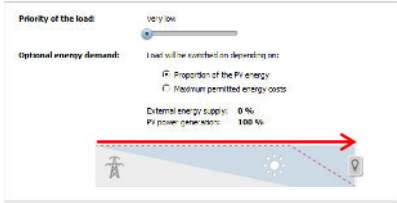


The adaptation of the internal multi-settings for the operation of several devices is **not required** when the control type is “SMA Home Manager”!

Since the control type “SMA Home Manager” actively controls loads like AC•THOR or AC ELWA-E, it is not necessary to configure one device as master and the others as slaves. All devices continue to have the factory pre-set device number 1.

## Settings for systems with zero feed-in

For systems with zero export to the power-grid the settings have to be made as follows.



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Subject to change.

**MYPV**