

SOL • THOR

Photovoltaic-Power-Manager
for hot water and heating

operation manual



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1. Introduction

These operating instructions are designed to help you get the best out of your SOL•THOR. It contains important information on operating and maintaining the product.

Please be sure to observe the safety instructions and carefully read the assembly instructions and the quick start guide supplied with the device.

The current version of this manual, the assembly instructions and the quick start guide can be found at <https://www.my-pv.com/de/info/downloads/>

1.1 Explanation of the safety instructions



Danger!

Indicates a hazard with a high-risk, death or serious injury.



Warning!

Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.



Caution!

Indicates a hazard with low risk which, if not avoided, may result in minor or moderate injury.



Note!

Indicates information that is considered important but is not related to hazards

1.2 Intended use

The SOL•THOR electronic photovoltaic power manager is designed to operate resistive loads such as electric heating elements, electric boilers, electric convectors, heating mats or infrared panels with an output of up to 3.6 kW.

The device continuously controls the output voltage and thus the power of the connected consumer. It is not possible to feed electricity into the grid. Therefore, no authorisation from the grid operator or energy supplier is required for operation.

2 Exclusion of liability and warranty

The information in this manual has been carefully researched and checked. However, the manufacturer does not guarantee the accuracy, completeness or actuality of the information provided. Any use of the product described in this manual is at your own risk. The manufacturer is not liable for any damage caused by improper handling, installation or use of the product.

Always follow the safety instructions given in this manual to avoid injury or damage.

Changes or modifications to the products without the express approval of the manufacturer can affect safety and performance and will void the warranty.

Please be sure to read the safety instructions and information on how to assemble the device correctly in the assembly instructions provided with the device!

The product complies with legal, national and European requirements.

The company name and product designation are trademarks of my-PV GmbH.

All rights reserved

3 Safety instructions

Note:

Carefully read the assembly instructions before installation and commissioning.

Any use other than that described in this manual may result in damage. This can result in hazards such as short circuits, fire, electric shock, etc.

Any damage caused by not observing these operating instructions will void the warranty!



Danger!

- Do not ground the photovoltaic side!
- Never disconnect the AC or the DC cable during operation!
- The phases and the neutral conductor are not allowed to be grounded on the load outputs Out-1 and Out-2. It is not permissible to connect an FI in between. The load must be connected directly to the load outputs of the SOL•THOR!
- The relevant standards and local regulations must be observed during installation and connection!
- The maximum DC input voltage of 230 VDC should never be exceeded!
- Do not install the device in ammonia-containing or explosive environments.



Warning!

- Before installation or service work, make sure that AC and DC are not active.
- Only heat generators with an integrated safety temperature limiter are allowed to be connected for hot water heating.
- The electrical connection, commissioning and service work should only be carried out by an authorized technician!



Caution!

- The housing should never be covered.
- The device casing can become very hot during operation. Only install the device on non-flammable surfaces.
- In damp rooms and in outdoor areas, the relevant regulations must be observed!
- This device can be used by children aged 8 and up, as well as by persons with limited physical, sensory or mental abilities or a low level of experience and knowledge, provided they are supervised or have been instructed in the safe use of the device and understand the resulting dangers. Children are not allowed to play with the device. Cleaning and user maintenance should not be carried out by children without supervision.
- AC and DC lines must be installed separately from each other.



Note!

- Connected devices must be purely resistive consumers, e.g. heating rods, electric boilers, convectors, heating mats or infrared panels! Connected devices must be suitable for variable supply voltages between 0 - 230 VAC (never use devices with electronic power supplies!).
- It is not possible to operate heating devices with electronic thermostats, fans, motors or a pump!
Otherwise, damage to SOL•THOR or the connected device may occur.
- Avoid extreme heat (>80 °C), cold (<-20 °C) and humidity during storage and operation.
- The SOL•THOR needs to be protected from direct sunlight when installed outside and should not be directly exposed to rain! A suitable protective shelter must be provided for SOL•THOR.

3.1 Symbols on the marking plate



Protection Class II



Caution!

risk of electric shock!



Caution!

risk of danger



Caution!

hot surface



Refer to the operating instructions

4 Assembly

Information on installing the SOL-THOR can be found in the installation instructions supplied with the device.

The current version of the installation instructions can be found at:

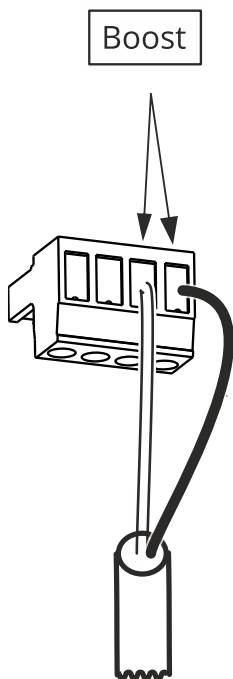
<https://www.my-pv.com/en/info/downloads/>

4.1 Boost relay

The "Boost" relay can be used to activate an external heat source that ensures the minimum temperature.



A load with a maximum of 4 A can be connected.



5 Operating and display elements

5.1 Home screen

The content of the home screen varies depending on the operating mode and the settings.



1. Switch for activating / deactivating the device
2. Date / Time
3. Operating mode see chapter:
[Operating mode M1: Hot water](#)
[Operating mode M2: Hot water Stratified charging](#)
4. Status symbols Heating mode:



Flashes = Standby



Lights up = Target temperature reached. Heating finished



Lights up = heating with PV surplus.
Flashing = Backup mode



Lights up = device starts DC operation

5. Status symbols network:



Lights up = No intact physical connection on the RJ45 network connection



Lights up = Physical connection on the RJ45 network connection intact



Lights up = WLAN not connected



Lights up = WLAN connected (incl. signal strength display)



Lights up = WLAN access point active

6. Measured temperature value(s) and sensor number

This information is displayed if at least one sensor is connected.
If no sensor is connected, the current line is displayed.

7. Boost button:

When backup mode is activated, the "Single boost" button is displayed. Pressing the button starts a single backup operation. It is also possible to deactivate the current process. It is not possible to deactivate the button for an automatic backup, which is based on the day of the week, time, and temperature.

8. Data logger:

For more information, see the "[Data logger \(device-internal\)](#)" section.

We would like to point out that this is a different form of data logging than data logging in the my-PV Cloud.

Further information can be found in the "[Cloud mode](#)" chapter.

9. Current device data

see chapter "[Status information on the display](#)"

10. Home button:

takes you back to the home screen

11. Settings:

Please refer to the "[General settings](#)" chapter for more information on general device settings. Specific settings for the operating mode can be found in the "[Operating modes](#)" chapter. There are also device settings that can only be made via the web interface and not on the display. Further information can be found in the chapter "[Special setting options in the web interface](#)".

12. Help:

After pressing the button, brief information on the current view is shown on the display. In the web interface, pressing the button opens the download area for the SOL•THOR documents on the my-PV homepage.

5.2 Data logger (device-internal)

The internal data logger must be distinguished from online data recording in the cloud [live.my-pv.com](#). See chapter [Cloud mode](#).

Recorded performance data, meter values and temperatures can be viewed at any time. The respective values can be selected via the "Open" button. Using the "Calendar" button, these can be displayed in the three views of the current year, month or day.



Tip: To view the data in a more detailed view, tap directly on the individual bars in the diagram. To return to the higher level, tap the data logger button.

The following data can be displayed:

- PV power: Energy from the PV modules for the connected load
- Mains power (if AC connected): Energy from the grid for the connected load.
- Total power: Shows the total power values of the SOL•THOR. The orange bars show the excess PV power used, the pink bars show the proportion of grid energy when using the optional temperature backup or in legionella mode.
- Temperature 1, 2, 3: Shows the measured value of the respective temperature sensor.

5.3 Status information on the display

The values of all variables relevant to operation are displayed in a list.

- Total output: Current output of the SOL•THOR
- Grid power: Current AC power
- PV output: Current PV output
- PV voltage: Current PV voltage
- Temperature 1: Current measured value of internal temperature sensor T1
- Temperature 2: Current measured value of external temperature sensor T2
- Temperature 3: Current measured value of external temperature sensor T3
- Mains voltage: Current input voltage
- Frequency: Current mains frequency
- IP: Current IP address of the SOL•THOR
- Status: Current device status
- Power unit temperature: Current temperature of the power electronics
- Serial number: Serial number of the SOL•THOR
- MAC address: MAC address of the SOL•THOR
- HW version: Shows the status of the installed hardware.
- Version: Shows the current firmware version of the controller.
- Version Co.: Shows the current firmware version of the Co-Controller.
- Version LT: Shows the current firmware version of the power unit
- Operating mode: Shows the set operating mode. This can also be seen on the home screen.

- BOOST relay status: Displays the current status of the relay (0 or 1).
- ALARM relay status: Displays the current status of the relay (0 or 1).
- Cloud status: Regardless of whether cloud mode is active or not, it is displayed whether the my-PV cloud server is accessible. If the information "99, Timeout" is displayed at this point, check in the user interface of your router whether the SOL•THOR has a connection to the router and whether it can establish a connection to the Internet.

6 Operating modes



The wiring diagrams for the respective operating mode can be found in the enclosed assembly instructions and at any time in the current version at <https://www.my-pv.com/en/info/downloads/>.

6.1 Operating mode M1: Hot water

6.1.1 Explanation

In this operating mode, an electric heat generator is supplied continuously with excess PV. If a bimetal thermostat is present, the SOL•THOR switches off via this when the preset temperature is reached. Alternatively, the my-PV temperature sensor can be used.

6.1.2 Optional hot water boost function

Optionally, the SOL•THOR can also maintain a minimum temperature. Two boost modes are available in operating mode M1. See "[Specific settings for operating mode M1](#)".



The my-PV temperature sensor must always be installed above the heating element in the boiler in order to provide a usable measurement result!

6.1.3 Specific settings for operating mode M1

WW 1 Temperatures

The maximum temperature that may be reached at the my-PV temperature sensor can be set here (the factory setting is 60 °C). This has no influence on any bimetal thermostat that may be present.



If the switch-off temperature on a heating element with a bimetal thermostat is set too low, the SOL•THOR may not be able to reach the target temperature!

The optional *automatic temperature boost backup* can be set to the right of the temperature setting. It is only possible to enter a minimum temperature if AC has been connected and the boost function has been activated (factory setting: Off). The factory-set minimum temperature is 50 °C. The backup boost can be set to "On" or "Relay"



When backup mode is activated, the heating element is supplied with maximum power from the mains!

Automatic temperature boost backup "On":

When active, the heating rod at the electronics is supplied with maximum power.

Automatic temperature boost backup "Relay":

Alternatively, the minimum temperature can be maintained by enabling an external heat source. For details of wiring the potential-free contacts, please refer to the chapter "[Boost Relays](#)".

The selection of the following setting: "WW1 min switching times", "WW 1 min weekdays" and the "Legionella mode" is only possible if the backup boost setting is not "Off" under "WW 1 temperatures" and AC is connected.

WW 1 min Switching times

Two time windows are available to maintain the minimum temperature. The start and end times can be specified in full hours. The default switching times are as follows: 5 pm - 2 pm and 5 am - 7 am.



TIP: We recommend limiting the times when the minimum temperature should be maintained to the morning and evening hours in order to increase PV self-consumption during the day.
If you only want to use the BOOST button, enter 0 in all fields of the two time windows.



- The start hour and end hour refer to the same calendar day. If a time window is defined over midnight, there is no hot water boost!
- If the set start hour is after the end hour, there is no hot water boost!

WW 1 min Weekdays

You have the option of selecting the days of the week on which the minimum temperature should be maintained. All days of the week are activated by default.

Legionella mode

To ensure drinking water hygiene, a time period can be specified by which a defined minimum temperature must be reached again after the last time this value was reached at the internal sensor T1. The number of days of this period can be set between 1 and 14. It is possible to specify a time for the start of the legionella programme. The factory setting is for a period of seven days, the legionella programme starts at 8 p.m., the target temperature is 60 °C and the programme is deactivated.

The SOL•THOR is supplied with maximum power until the target temperature set for the legionella mode at sensor T1 is reached. Please note that electricity is drawn from the mains in this context.

6.2 Operating mode M2: Hot water stratified charging

6.2.1 Explanation

In this operating mode, two electric heating rods in a storage tank are supplied with PV energy in turn and in an infinitely variable manner. The upper heating rod has priority. The aim is to reach the desired temperature as quickly as possible at the tapping point, before any further surplus warms the rest of the storage tank contents.

As soon as the upper heating rod has reached the target temperature, the lower heating rod is supplied. If the my-PV temperature sensor is not used, the changeover is done via the thermostats of the heating rods. The SOL•THOR then periodically monitors whether the upper heating rod is available again. When using the my-PV temperature sensor, the changeover occurs as soon as the temperature at the sensor reaches the set maximum value.



- When connecting a my-PV temperature sensor, make sure that it is installed in the cylinder above the upper heating element in order to obtain a usable measurement result.
- The temperature sensor must be connected to terminal T1 on the SOL•THOR.
- The bottom heating element must be fitted with a bimetallic thermostat.



TIP: It is also possible to control two heating elements in different storage tanks. The "upper" heating element is then located in a drinking water cylinder, for example, and the "lower" heating element in a buffer cylinder next to it. However, the temperature sensor is essential and must be installed above the "upper" heating element!

6.2.2 Optional boost backup

Optionally, the SOL•THOR can also ensure a minimum temperature at the external sensor T1. See "[Specific settings for operating mode M2](#)".

6.2.3 Specific settings for operating mode M2

WW 1 Temperatures

The maximum temperature that may be reached at the my-PV temperature sensor can be set here (the factory setting is 60 °C). This has no influence on any bimetal thermostat that may be present.



If the switch-off temperature on a heating element with a bimetal thermostat is set too low, the SOL•THOR may not be able to reach the target temperature!

The optional *automatic temperature boost backup* can be set to the right of the temperature setting. It is only possible to enter a minimum temperature if AC has been connected and the boost function has been activated (factory setting: Off). The factory-set minimum temperature is 50 °C. The backup boost can be set to "On" or "Relay"



When backup boost mode is activated, both heating elements are supplied with maximum power from the mains!

Automatic temperature boost backup "On":

When active, the heating rods at "OUT-1" and "OUT-2" are supplied with maximum power.

Automatic temperature boost backup "Relay":

Alternatively, the minimum temperature can be maintained by enabling an external heat source. For details of wiring the potential-free contacts, please refer to the chapter "[Boost Relays](#)".

The selection of the following setting: "WW1 min switching times", " WW 1 min weekdays" and the "Legionella mode" is only possible if the backup boost setting is not "Off" under "WW 1 temperatures" and AC is connected.

WW 1 min Switching times

This setting can be selected if the temperature safety setting is not "Off" under "WW 1 temperatures".

Two time windows are available to maintain the minimum temperature. The start and end can be specified in full hours. The default switching times are 17-23 h and 5-7 h.



TIP: Restrict the times when the minimum temperature should be maintained to mornings and evenings in order to increase your PV self-consumption during the day!



The start hour and end hour refer to the same calendar day. If a time window is defined over midnight, there is no hot water backup!
If the set start hour is after the end hour, there is no hot water backup!

WW 1 min Weekdays

This setting can be selected if the temperature safety setting is not "Off" under "WW 1 temperatures".

The days of the week on which the minimum temperature is to be maintained can be selected. All weekdays are activated by default.

Legionella mode

To ensure drinking water hygiene, a period can be specified by which an adjustable minimum temperature must be reached again after the last time this value was reached at the internal sensor T1. The number of days of this period can be set between 1 and 14. A time at which the legionella programme is to be started can be specified. By default, the number of days is 7, the start time is 8 pm, the temperature is 60°C and the legionella mode is "Off".

7 General settings

For specific settings for the various operating modes, please refer to the "[Operating modes](#)" chapter. There are also device settings that can only be made in the web interface, but not on the display. See chapter "[Special settings on the web interface](#)".

Time zone:

From the English-language list, first select the continent, then the country and, if necessary, the city (required for countries with several time zones).

Date:

The date can be set in the format dd.mm.yy. If an Internet connection is available, the device automatically obtains this setting from a time server.

Time:

The date can be set in the format hh:mm:ss. If an internet connection is available, the device automatically obtains this setting from a time server

IP DHCP/static:

DHCP is activated by default, i.e. the device obtains an IP address from the router to which it is connected. This only works if the router is configured as a DHCP server. If no DHCP server is active in the network or if static assignment is required, fixed IP addressing is necessary.



The settings must be adapted to the router, otherwise the device will not be visible in the network!

IP address:

Can only be set if "Static IP" has been selected.

Subnet mask:

Can only be set if "Static IP" has been selected.

Gateway address:

Can only be set if "Static IP" has been selected.

DNS server:

Can only be set if "Static IP" has been selected.

Display duration:

The number of seconds until the display is switched off can be set. A value between "10" and "250" seconds can be selected here.

Display brightness:

The brightness of the display can be adjusted in 10 levels.

Logo brightness:

The brightness of the illuminated my-PV logo on the device can be set in 10 levels. "0" means the logo is switched off.

Operating mode:

Detailed description in chapter "Operating modes".

Language:

In addition to German and English, other languages will be available in future.

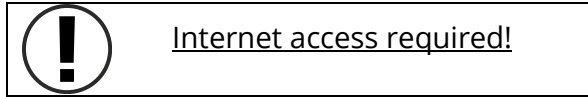
Hysteresis:

Switching hysteresis can be set for hot water. These do not cause an increase at the target temperature! Once the target temperature has been reached, however, the value may drop by the set amount before the heating process is restarted.

Hot water maximum temperature (factory setting 3.0 °C)

Hot water minimum temperature (factory setting 3.0 °C)

Check for new FW:



If a new version is available, the following buttons are displayed.

- *sXXXXXXXX Download*
The download may take several minutes. Do not interrupt the process!
- *sXXXXXXXX Installation*
After installation, the device is automatically restarted.
- *scYYY update*
After installation, the device is automatically restarted.
- *spZZZ update*
After installation, the device is automatically restarted.

Factory settings:

Tapping this menu item resets the SOL•THOR settings to the factory settings. All changed device settings will be deleted!

Debug mode:

Debug mode can be activated in coordination with support@my-pv.com to analyse control problems.

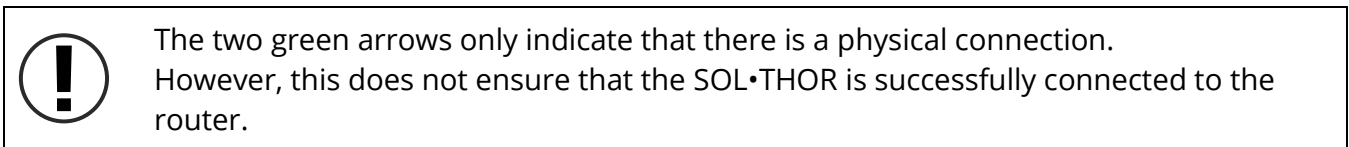
WLAN password:

This option can be selected if "WLAN" is already selected under "Ethernet mode" (next menu item). An automatic search for available networks is performed. After selecting this option, you will be prompted to enter the WLAN password. Press the Shift key and the "123?" key to use additional special characters.

Ethernet mode:

There are three options to choose from:

- Ethernet
The SOL•THOR is connected to the router using a network cable. Two green arrows appear at the top right of the home screen as soon as the connection is intact.



- WiFi
The SOL•THOR is connected to the router via WLAN.
An automatic search for available networks is performed. After the selection, you will be prompted to enter the WiFi password. Press the Shift key and the "123?" key to use additional special characters.

As soon as the connection is established, a WiFi symbol appears in the top right-hand corner of the home screen (including a signal strength indicator).

- o WiFi Access Point

The SOL•THOR can set up an access point to which WLAN-capable devices can connect.

The WiFi password is administrator

The IP address of the SOL•THOR is: 11.11.11.2

A WiFi symbol with the letters "AP" appears at the top right of the home screen.

TIP: To be able to access the local web interface (HTML file) in systems without Internet access, download it to your end device beforehand:

<http://www.my-pv.com/download/currentversionget.php>



The IP search range in the web interface must be set for the SOL•THOR access point.

IP Suchbereich

11 .11 .11 .1-254

Übernehmen

Cloud mode / cloud connection:

If desired, the SOL•THOR settings can also be accessed from outside the local network. To do this, it is necessary to register the device with the serial number and device key in the my-PV data cloud:

<https://live.my-pv.com/>

Open the website and log in or register as a new user. When you register, you will receive an e-mail with a confirmation link. If the e-mail does not appear in your inbox, it may be in your spam folder.



TIP: If you already have a user profile from the previous version of the my-PV data cloud, this will still be valid in the new cloud. You also automatically have full access to all devices that you have already integrated in the past.

The serial number and device key can be found under [Cloud connection](#).

If cloud mode is also activated, an overview of the recorded operating data is also available once the device has been connected to the my-PV data cloud.

Activate data transfer under [Cloud mode](#).

Data protection:

Information on the data protection regulations can be found at

<https://www.my-pv.com/en/datenschutz/>.

8 Local web interface

The local web interface is a single HTML file that is saved locally after downloading. After that, Internet access is no longer necessary.

It only connects to the device within the local network, while remote access is only possible via the data cloud.



The local web interface must be distinguished from the data cloud
<https://live.my-pv.com/>



TIP: The web interface offers significantly more extensive setting options than the display!

8.1 Download local web interface



Internet access required once!

Check which IP address the SOL•THOR has in the local network. This can be read directly from the display. From the home screen, you can access the status information via the info button (second from the left). Use the arrow to the right to scroll to the "IP" display. Four numerical blocks are displayed next to it, each separated by a dot. This is the IP address you will need next

Enter the IP address of the SOL•THOR in the address line of the web browser.

DE: Der Aufruf des SOL•THOR Webinterfaces erfolgt durch eigene HTML Datei, die einmalig lokal gespeichert werden muss.

EN: The SOL•THOR web interface is called via a separate HTML file, which must be saved locally once.

FR: L'interface web de l'SOL•THOR est appelée via un fichier HTML séparé, qui doit être sauvegardé localement une fois.

ES: Se accede a la interfaz web SOL•THOR a través de un archivo HTML independiente, que debe guardarse localmente una vez.

NL: De webinterface van SOL•THOR wordt opgeroepen via een afzonderlijk HTML-bestand, dat eenmalig lokaal moet worden opgeslagen.

[Download Webinterface](#)

DE: Alternativ kann das SOL•THOR Webinterface auch direkt im Browser geöffnet werden.

EN: Alternatively, the SOL•THOR webinterface can also be opened directly in the browser.

FR: L'interface web de la SOL•THOR peut également être ouverte directement dans le navigateur.

ES: Alternativamente, la interfaz web de SOL•THOR también puede abrirse directamente en el navegador.

NL: Als alternatief kan de SOL•THOR webinterface ook rechtstreeks in de browser worden geopend.

[Open Webinterface in Browser](#)

Follow the download link (above) and save the file locally, then open the file to access the web interface. Alternatively, you can also open the web interface directly in the web browser (link below).



TIP: To be able to access the local web interface (HTML file) in systems without Internet access, download it to your end device beforehand:

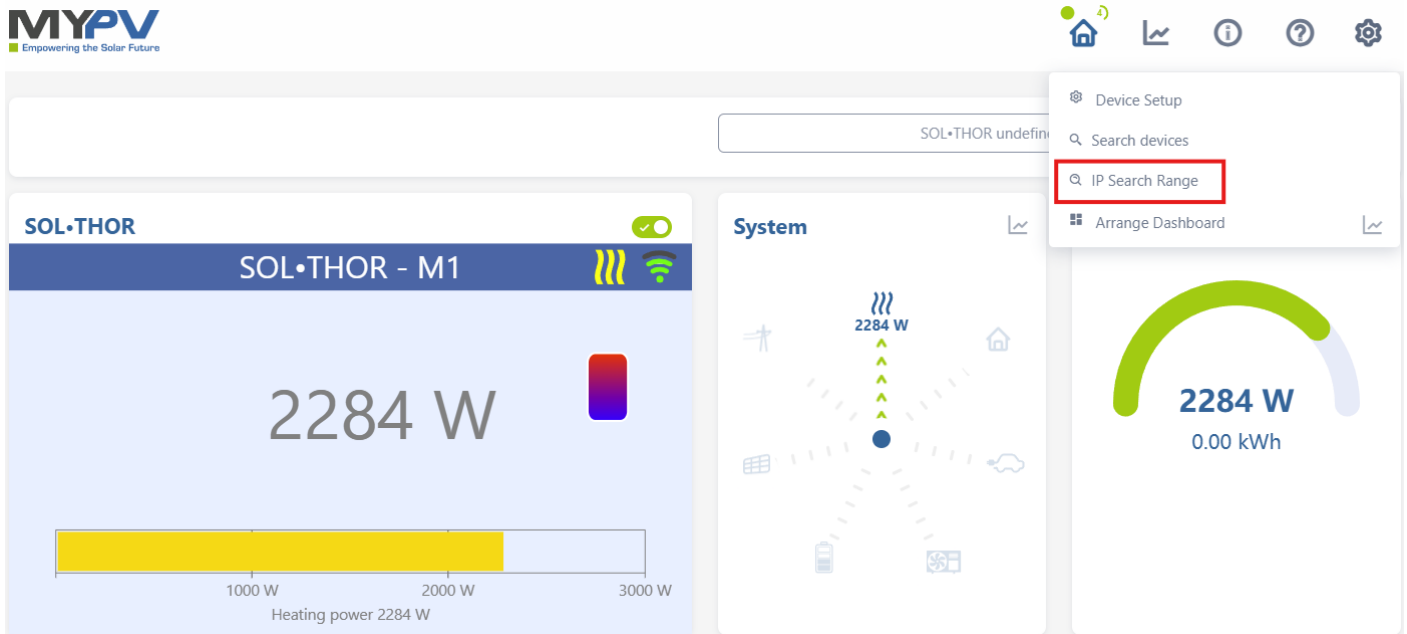
<http://www.my-pv.com/download/currentversionget.php>



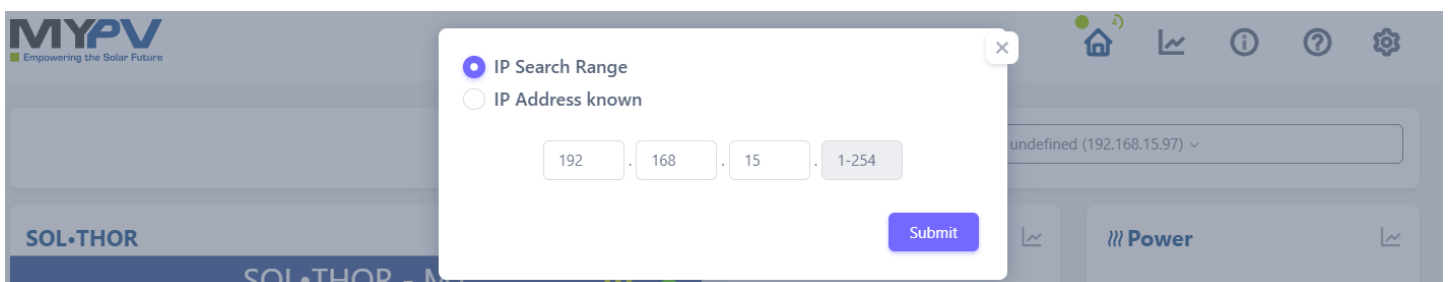
- my-PV recommends not making the SOL•THOR accessible to the Internet via port forwarding!
- Please note that the display and setting options may change with more recent software versions.

8.2 Local Web-Interface

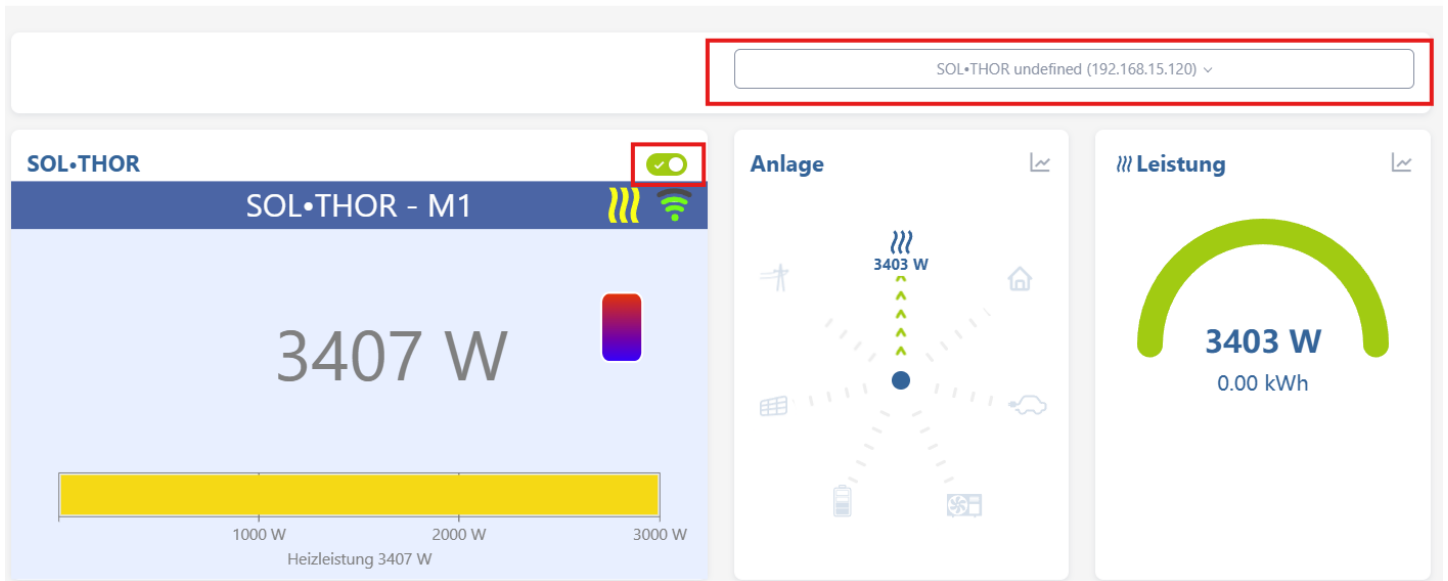
When opening for the first time, the IP address range of the network in which the device is located must be set. The entry is saved by the web browser, but the address range can be redefined at any time via Settings and the "IP search range" button.



If the IP address of the device is known, it can also be entered directly by selecting "IP address known". The address can be read in the status information on the display.



8.3 Home (Homepage)



The start page offers the same information in the web browser as the home screen on the display.

The countdown (10 seconds) next to the Home button shows the time remaining until the next data update.

The SOL•THOR can be deactivated with "Device status on/off".

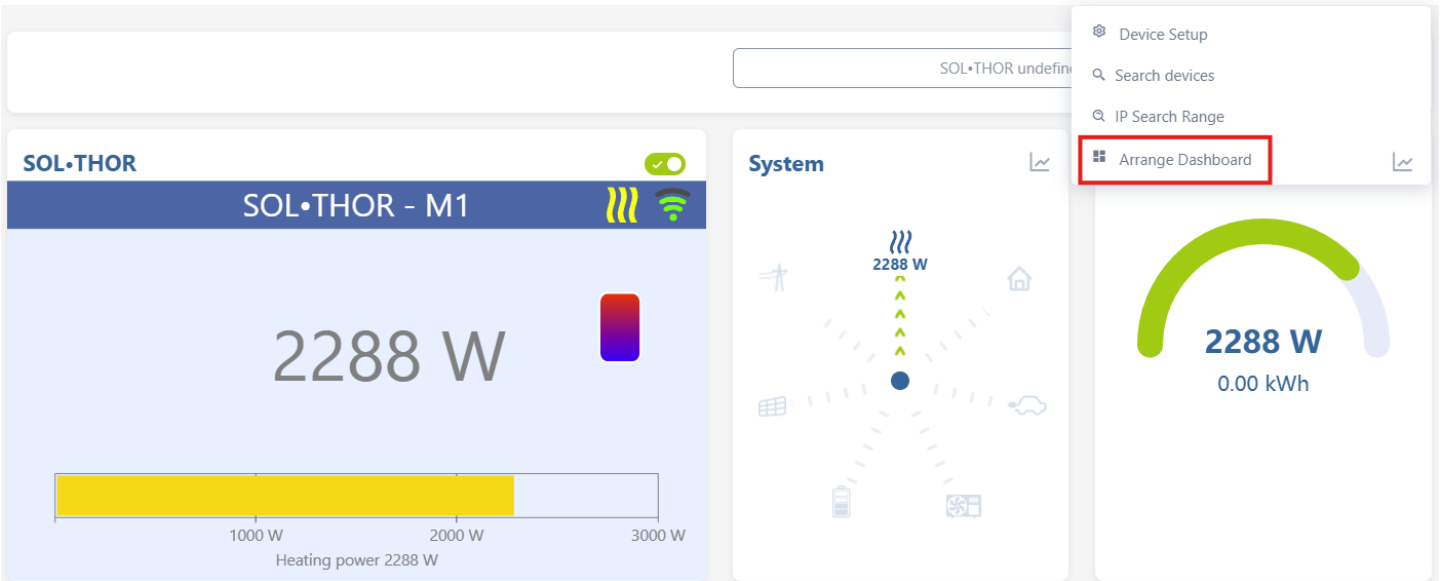
The web interface of other my-PV devices in the same network can be accessed directly via a quick selection in the top right-hand corner.

8.3.1 Widgets

If you are on the start page, the "Arrange dashboard" button is available under Settings. This allows you to rearrange the windows on the start page ("Widgets"). To hide a widget, drag it under the horizontal line and press the "Save" button to save the new arrangement.

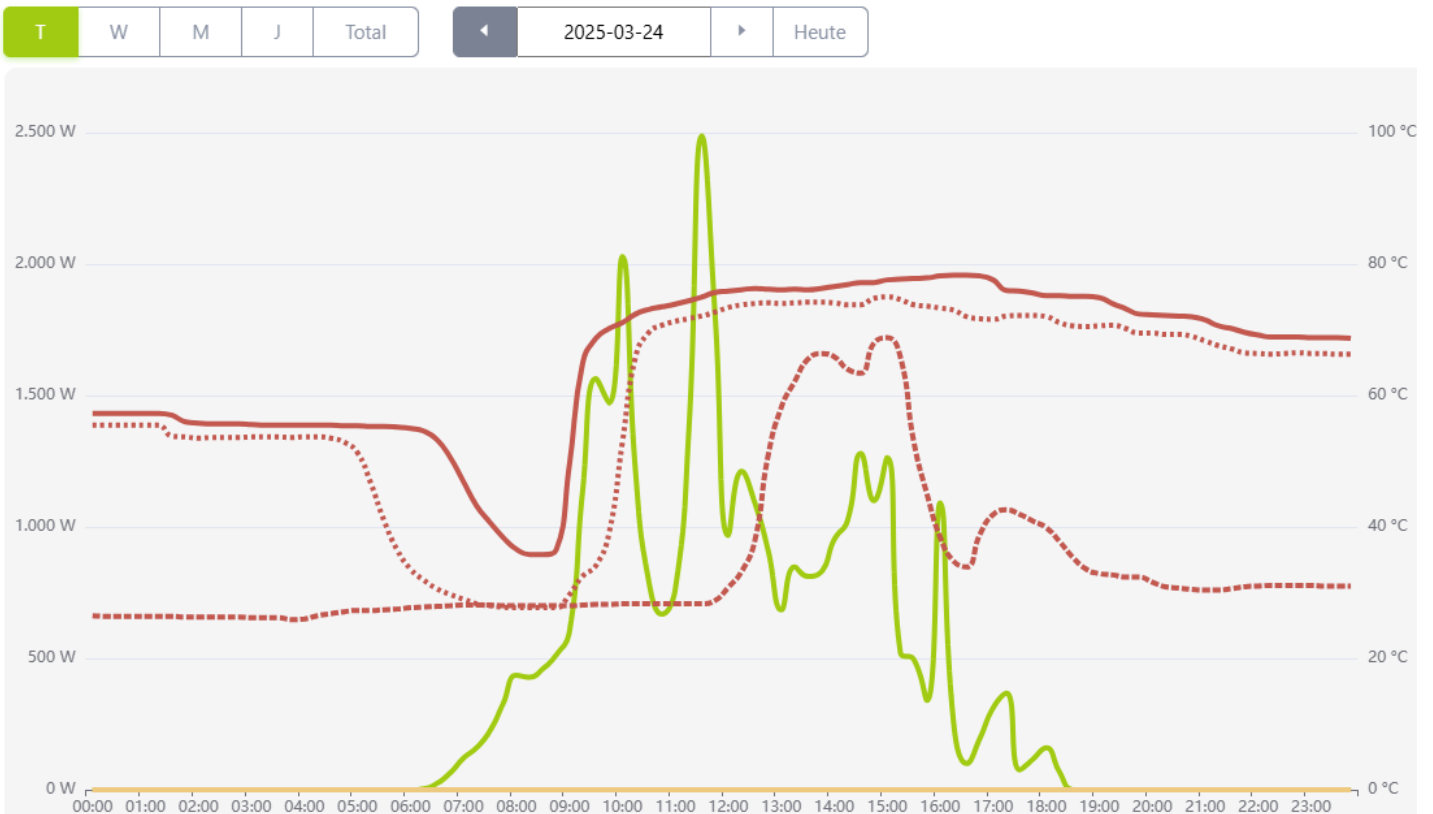


The selection of widgets depends on the available data!



8.4 Data logger

The data logger provides the same information in the web browser as the data logger on the display. The values and the time period can be selected using the menu bar above the diagram.



8.5 Status information

The status information in the web browser contains more details than that on the display. Explanations can be found in the chapter "Status information on the display ". This display varies depending on the operating mode and application.

Solthor State

State	1, Heating
Solthor	2.289 W
Solarpart	2.289 W
Gridpart	0 W
Temperature 1	0 °C
Temperature 2	0 °C
Temperature 3	0 °C
Boost active	0
Time	18:20:17
Input voltage power stage L1	142,38 V
Current L1	0 A
Mains frequency	0 Hz
Temperature power stage	47,6 °C
State power stage	Wait for startup
Mains Input Voltage	0 V
Relay Boost	0
Relay Alarm	0
Cloud state	4, Connected

8.6 Device settings

The setting options in the web browser are more extensive than those on the display. See the next section "[Special setting options in the web interface](#)".

An explanation of the other general device settings can be found in the chapter "[General settings](#)".

An explanation of the other specific device settings for the various operating modes can be found in the "[Operating modes](#)" chapter.

↻

▼
Advanced Settings

Mode
>

Hot Water
>

Legionella Protection
>

Hysteresis
>

Time
>

IP Settings
>

Cloud Mode
>

Debug Mode
>

Version Firmware
>

8.7 Special setting options in the web interface

The following device settings are only possible in the web interface and cannot be made on the display.

8.7.1 Time of day

A time server or NTP server (NTP = Network Time Protocol) can be defined in the web setup using a domain name. The region and location can also be set on the display under "Time zone".

Uhrzeit

Aktuelle Uhrzeit AC ELWA 2

Region ▼
Europe

Ort ▼
Austria/Vienna

Zeitserver

Speichern

9 Error Signals

If an error occurs, the cause and the next steps are shown on the display.

If an earth fault occurs, the SOL-THOR emits an acoustic signal.

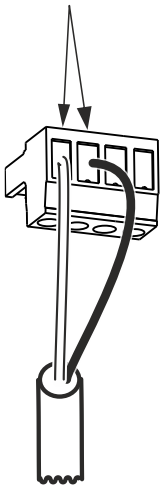
Alarm relay

The alarm relay is intended for the connection of an external alarm signal in the event of an earth fault.



A maximum of 4 A can be connected!

Alarm



10 Technical Data

DC operation

$U_{MAX PV}$	230 VDC
PV-input voltage range	30 – 230 VDC
Maximum input voltage	230 V_{oc}
Maximum PV input current	26 A
$I_{SC PV}$	32 A
Output alternating current:	
Voltage	0 – 230 VDC-PWM 100 Hz – 18 kHz
Current	26 A
power factor	1
Continuous output max.	0 – 3.600 W, two outputs, can be set to alternate max. 3.600 W at 25°C ambient temperature, derating in case of overheating, input voltage range 30 – 230 V (max. open-circuit voltage)
Number of MPP trackers	1
DC-Inputs	2 parallel, MC4 compatible plugs
Max. Input current	26 A, current-limited

AC operation (optional for hot water boost)

Heating capacity max.	3.600 W
Internal consumption in pure AC operation	ca. 2 W
grid connection	Single-phase, max. 4 mm ² , 230 V, 45 – 65 Hz
AC protection	max. 16 A, Trip characteristic B

General data

load connections	Terminal contacts, single-phase, max. 4 mm ²
Display	Colour Graphic, Touch Screen 2,83"
interfaces	<ul style="list-style-type: none">• Ethernet RJ45, WLAN, RS485• Two potential-free switching outputs:• 4 A (AC or SELV)• 3 external temperature sensors
external temperature sensors	5 m, one temperature sensor is included in the scope of delivery.
Type of protection	IP 54
protection class	1
Dimensions (L x H x W)	248,5 x 167,4 x 116,2 mm (incl. wall bracket)
Weight	2,95 kg (incl. wall bracket)
operating temperature range	-20 °C bis 60 °C
storage temperature	-20 °C bis 70 °C
mounting position	vertical, wall-mounted

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Subject to changes.

