

# EET SOLMATE<sup>3</sup>



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## General








This manual applies to SolMate3 by EET. It describes the installation, operation and maintenance of the SolMate® system for grid-parallel operation, designed for household use. Read this entire document before installing or using SolMate®.

The installation and handling of your SolMate® system are beyond control of EET Efficient Energy Technology GmbH. Therefore, EET cannot assume responsibility for any damages, losses, or costs resulting from improper installation, incorrect handling of the product, or misuse.

SolMate® must be reliably connected to the internet to enable firmware updates and ensure safe operation.

## Safety

	<b>This heading indicates a hazardous situation which, if not avoided, could result in death or serious injury.</b>
	<b>This heading indicates a hazardous situation which, if not avoided, could result in minor or moderate injury or equipment damage.</b>
	<b>Warning:</b> This device is not designed for operating life-sustaining medical devices. When powering general medical devices, power consumption must be monitored, and sufficient power shall be ensured.
	<b>Warning:</b> The device has a dedicated feed-in plug that prevents contact with the plug terminals. Ensure all plugs are securely seated in the sockets to avoid loose connections. Do not use extension cords to connect the device.
	<b>Warning:</b> To avoid the hazard of electric shock, do not tamper with, modify, disassemble, or pierce the device with sharp objects.
	<b>Warning:</b> The device is designed for outdoor use and is waterproof (IP 65). Use of the AC outlet may however affect the ingress protection rating. Do not immerse the device in water or other fluids. If the device is immersed, it is prohibited to use it again.
	<b>Warning:</b> Do not operate the device in high-humidity environments. To minimize water exposure, the device shall be placed in a protected outdoor area.
	<b>Warning:</b> Do not operate the device near heat sources, in explosive environments, or in environments with strong static electricity or magnetic fields.
	<b>Warning:</b> Carefully select the installation site and comply with specified cooling requirements. The device shall not be exposed to ambient temperatures above 60°C (140°F) or below -30°C (-22°F). To prevent overheating, avoid covering the device during operation, and protect the device from direct sunlight. Excessively high temperatures can cause fire or explosion, while very low temperatures can reduce performance or lifetime.
	<b>Warning:</b> To prevent fire or electric shock from a damaged unit, the device shall be turned off immediately if it tips over and sustains significant damage. It must be placed in an open area away from flammable materials and people and disposed of according to local regulations.

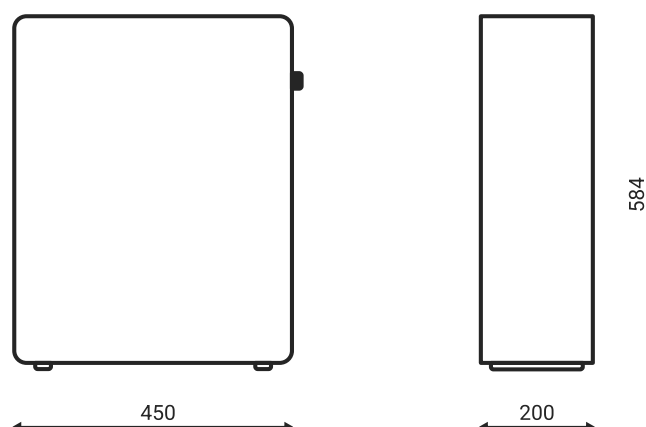
	<b>Warning:</b> The nature of a safe installation requires a functional miniature circuit breaker with a rated current no higher than B16A. A functional RCD (Residual Current Device) with a sensitivity of $\leq 30$ mA must be installed as a condition for safe operation.
	<b>Warning:</b> Devices with a maximum power of 2500W can be operated with the integrated inverter. Only one Class I device (usually with metal casing) or multiple Class II devices (usually with plastic casing) shall be operated per socket simultaneously.
	<b>Warning:</b> The device shall not be operated without an installed grounding conductor. The grounding impedance of the equipment shall meet the requirements of local electrical standards.
	<b>Caution:</b> The device shall be used for energy storage of solar energy in domestic environments. Only one device per household shall be operated. It may be operated with solar inverters up to 800 VA.
	<b>Caution:</b> The device shall be handled with care. To prevent damage from impacts, falls, or strong vibrations, the device must be well-secured during transport and storage.
	<b>Caution:</b> The device shall be checked for pre-existing damage before installation. Do not install a damaged device.
	<b>Caution:</b> To prevent damage from tipping over, the device must be placed on a level surface.

## Conformity

EET – Efficient Energy Technologies GmbH declares that complies with directive 2014/53/EU (RED), 2011/65/EU(RoHS), 2015/863/ EU(RoHS). The full text of the Declaration of Conformity is available at the following web address: <https://docs.eet.energy>

The national, European, and international guidelines and regulations applicable at the installation site must be observed. These can be obtained from the local electricity provider. Any reporting obligations to the electricity provider must be fulfilled before commissioning.

## Specifications



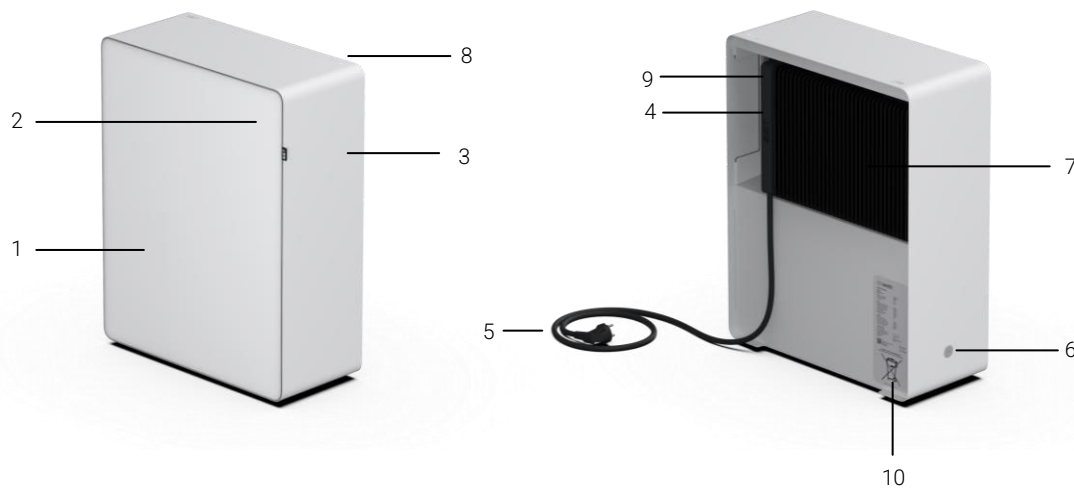
Nominal Energy	2560 Wh
Integrated Metering Technology <sup>1</sup>	SolBrain®
Battery Function	Bidirectional (Charge and Discharge)
Battery Type	LFP (Lithium-Iron-Phosphate)
Battery Voltage	51.2 V
Capacity	50 Ah
Depth Of Discharge	90 %
Nominal Voltage	230 Vac
Nominal Frequency	50 Hz
Max. Grid Output Power	800 VA
Max. Backup Output Power	2500 VA
Max. Grid Input Power	2500 VA
Max. Solar Input Power	800 VA
Power Factor	>0.99
Dimensions	450 x 582 x 200 mm
Weight	43 kg
Ingress Rating <sup>2</sup>	IP65
Protective Class	I
Overvoltage Category	DC II / AC III
Operating Temperature <sup>3</sup>	-20 to + 55 °C
Maximum Elevation	2000 m
Communication	Wi-Fi (2,4 GHz, 5 GHz)
User Interface	SolMate App / LED Interface
Warranty	10 years
Lifetime	>6000 cycles to 80%
Certifications	VDE 4105 (grid interconnection DE/AT) CE (EMC, RED, LVD, RoHS, REACH and WEEE)

<sup>1</sup> Patented, built-in software for real-time measurement of the total electrical load on all three phases in a household.

<sup>2</sup> The storage unit is designed for outdoor use and is waterproof on all sides (IP 65). However, use of the AC outlet may affect the ingress protection rating. To minimize exposure to water, place the device in a protected outdoor area.

<sup>3</sup> Power may be derated outside optimal range of 0 to +40 °C. Power will be derated outside the range of -20 to + 55 °C.

## Overview



1	<b>Front Cover</b>	<i>Removable for service</i>
2	<b>Antenna Cover</b>	<i>Non-removable Antenna Cover (Behind 1)</i>
3	<b>Side Cover</b>	Remove when mounted against the wall to connect loads
4	<b>AC power sockets (emergency off-grid)</b>	To connect to 800W of solar or 2500W of loads
5	<b>AC power cable/plug</b>	To import up to 2500W or export up to 800W to house/grid
6	<b>Power button</b>	Press once to turn ON Press 3 sec to turn OFF (not during device update)
7	<b>Heat sink</b>	
8	<b>LED interface</b>	See below
9	<b>USB-C connector</b>	For internet connection
10	<b>Product label</b>	

### On-grid operation:

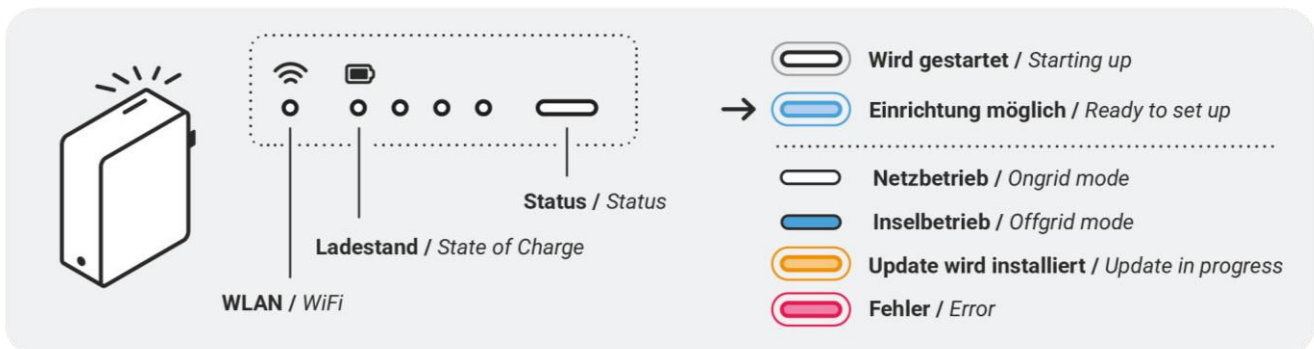
- Charge Mode: the device with load (connected on an AC power socket) can take up to 2500W of power with up to 800W coming from solar (connected on an AC power socket) and the remainder from the grid (connected through the AC power cable).
- Discharge Mode: the device with solar (connected on an AC power socket) can deliver up to 2500W with up to 800W going to the grid (connected through the AC power cable) and the remainder to the loads (connected on an AC power socket).

### Off-grid operation:

- Charge Mode: the device with load (connected on an AC power socket) can take up to 800W from solar (connected on an AC power socket)
- Discharge Mode: the device with solar (connected on an AC power socket) can deliver up to 2500W to the loads (connected on an AC power socket).



## User Interface



## Installation

### 1. Find location



**Installiere SolMate® in einem Bereich mit stabilem WLAN und guter Belüftung.**  
*Install SolMate® in an area with stable WiFi and good ventilation.*



**SolMate® möglichst nicht direkter Sonne, Regen oder Schnee aussetzen.**  
*Avoid exposing SolMate® to direct sunlight, rain or snow.*

**AWAY FROM**



Solvents



Gasoline



Heat source



Flammable material



Moisture

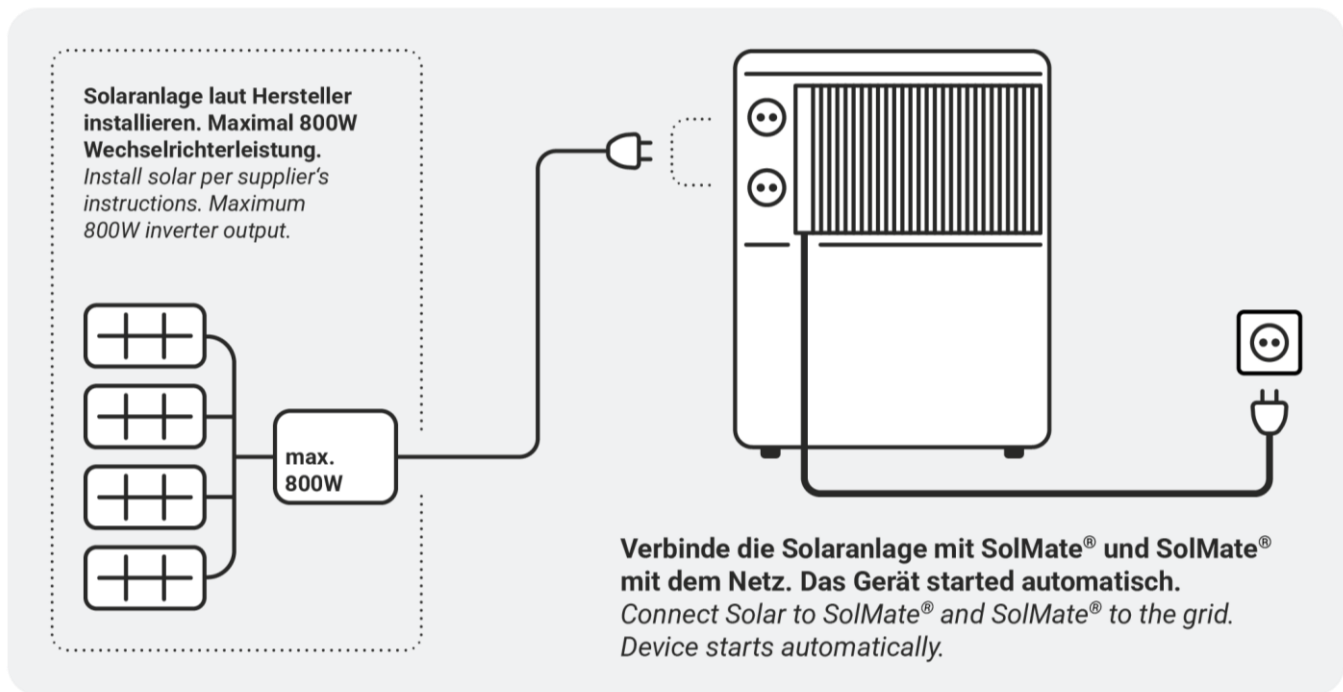


Explosive material



Infrared radiation

- Install SolMate in a dry and well-ventilated environment. Maintain sufficient distance from walls to ensure adequate ventilation for cooling.
- It is recommended to protect SolMate from direct exposure to sunlight, rain, or snow for a long lifespan. Make sure the location is protected from potential hazards like flooding.
- Avoid installing SolMate in living areas like living room or bedrooms to ensure fire safety and to avoid nuisance from noise at high power.
- Install SolMate on a level and solid surface to ensure stability.
- Ensure SolMate is powered off before further installation. Press the power button for 3 seconds to turn off the device.



## 2. Connect Solar/Load

- Install solar inverter and panels as per supplier instructions. The solar inverter can have a maximum power output of 800W. Make sure your balcony solar system is working correctly before connecting it to Solmate.
- Connect the solar inverter to one of both sockets on the backside of Solmate. The other socket can be used to connect loads up to 2500W for emergency power. Ensure the socket cover remains closed when the socket is not in use.

## 3. Connect Grid

- Plug the device into a wall socket. The connection must be connected to a grounded electrical socket or grounding busbar.
- Additionally, grounding the product casing via its dedicated grounding terminal is recommended for enhanced safety. A local qualified electrician can provide advice and assistance in this regard.

## 4. Switch On

SolMate will automatically switch on when you connect the AC cable to the power grid. Wait until the status indicator is blinking blue. This may take a few minutes.



## Commission

Install the MySolMate App from the Google Play Store or App Store

Follow further instructions for commissioning in the app.

## Maintenance

Always disconnect the device from the power grid and shut it down before performing maintenance, cleaning or moving.

The device and cables must be visually inspected at least twice a year. Keep the device clean and free of dust and dirt to ensure proper functionality. The device should only be cleaned using a damp cloth, and not with aggressive cleaning chemicals.

Do not operate the device if unusual noises, smells, or smoke occur, or in case of visible damage, such as cracks or broken parts. The device must be immediately taken out of service and checked and repaired by a qualified person before being put back into operation.

When not in operation for extended periods, switch off and store the device in its original packaging to protect it from dust and moisture. Avoid storing the device in extremely cold or hot environments to prevent damage to internal components. Nevertheless, ensure that the battery is charged every 3 months to prevent unavoidable deep discharge.

## Warranty

- Your SolMate® comes with a warranty of 10 years or 6,000 charge cycles, (whichever comes first), starting from your purchase date.
- To get the most out of your warranty and keep your SolMate® running smoothly, make sure it's connected to the internet for updates and monitoring.

Please refer to the documentation on our website for all the details and specific conditions for the 10-year warranty, along with extra product and performance warranty.

[www.docs.eet.energy](http://www.docs.eet.energy)

## Recycling



SolMate® contains batteries and therefore must not be disposed of with household waste to avoid environmental pollution and safety risks. Please always adhere to local laws and regulations for battery disposal and recycling.

Environmental sustainability is our top priority, which is why we strive to repair or recycle every SolMate® as much as possible if it ever stops functioning. Please contact us if your system has reached the end of its lifespan.

Fully discharge the battery before sending it for recycling. If the battery cannot be fully discharged due to a malfunction, contact a professional recycling company.

## Support

Please refer to the documentation on our website for most up to date information about issues during installation, commissioning or operation.

[www.docs.eet.energy](http://www.docs.eet.energy)