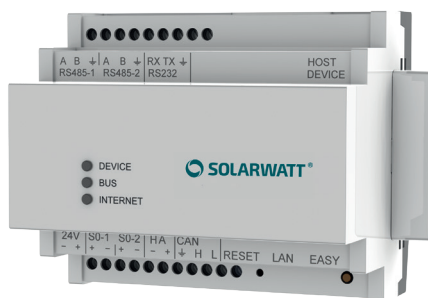## PRODUCT

SOLARWATT Manager flex

EnergyManager pro

SOLARWATT Manager flex 1.0

EnergyManager pro

Energy independence within reach

The SOLARWATT Manager reduces energy costs for your customers and allows them to look at electricity bills with a sense of relief.

It keeps an eye on all energy flows within your household and automatically actuates many key electrical devices, so that they are powered by free, self-generated PV-power and ensure worry-free convenience.

With the Manager, the installer recieves all the installations data at a glance, can provide remote support and help his customers pave the way to a modern and future-oriented energy supply.

ADVANTAGE

- overview of all energy data
- switching of appliances when surplus PV-power is available
- integrating of water heating or e-mobility
- maximum of data security

OUR SERVICE

FullCoverage
on purchasing a Solarwatt system solution*

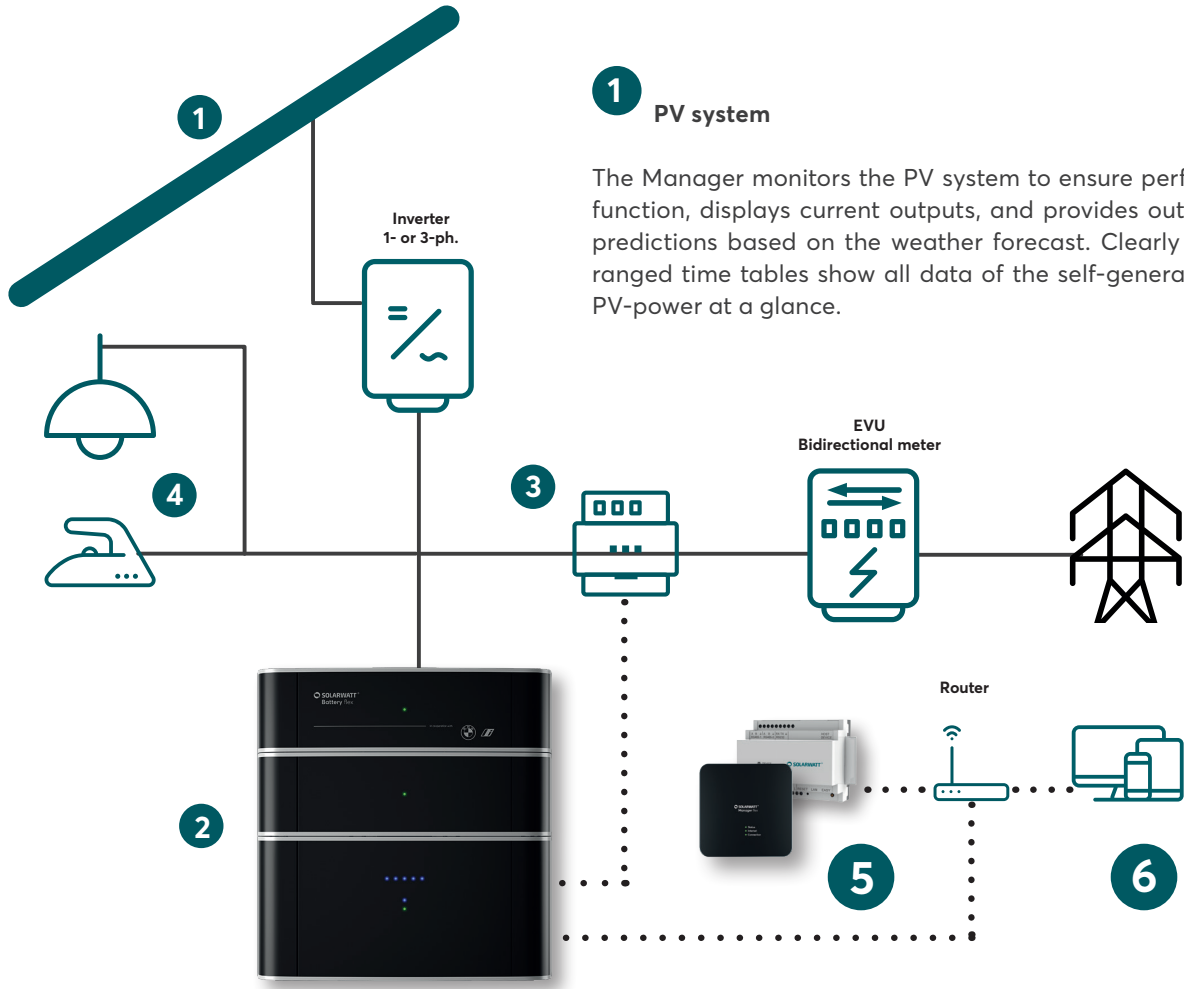**guaranty of origin**
quality Made in Germany

competent consulting
experts via hotline or on location

SOLARWATT Battery flex ready
perfect system integration

* As specified in insurance conditions

PREMIUM QUALITY
MADE IN GERMANY

IN ALL GERMAN FACTORIES
100% GREEN ENERGY

Inverter 1- or 3-ph.

EVU Bidirectional meter

Router

1 PV system

The Manager monitors the PV system to ensure perfect function, displays current outputs, and provides output predictions based on the weather forecast. Clearly arranged time tables show all data of the self-generated PV-power at a glance.

2 SOLARWATT Battery flex AC-1

Battery flex is designed to increase the energy self-sufficiency. The ACS Sensor measures the grid import vs. the grid export from surplus PV energy, and communicates this information to the Battery flex. When energy is purchased from the grid, the Battery flex discharges to support the household consumption. When energy is exported to the grid, the Battery flex then charges to store the excess energy for later use.

3 AC-Sensor Flex

The AC sensor Flex measures the electrical power export/import into/from the grid and sends it to Battery flex, which is regulated accordingly.

4 Electrical devices in households

By linking the Battery flex and major energy consumers such as a heat pump or wallbox (EV charger) and the SOLARWATT Manager, it can be ensured that they are operated as much as possible with low-cost solar power. This leads to higher self-consumption at lower cost without compromising the level of comfort and convenience.

5 SOLARWATT Manager (flex or pro)

The SOLARWATT Manager leads the combination of PV system and Battery flex to the optimum - maximum independence and minimum costs.

- monitor and analyse electricity flows
- detect energy wasters
- intelligent appliance control

6 SOLARWATT Manager Portal

Manager Portal and InstallerCenter allow users to view their energy data via Internet – on a computer, tablet or smartphone.

Manager Portal for end customers
- obtain all energy data wherever you are
- meter and switch electrical devices conveniently
- benefit from maximum data security (online banking standards)

InstallerCenter for electrical installers
- monitor Manager installations online
- identify problems and their causes automatically
- access all Manager configurations remotely

SOLARWATT Manager PV-optimization – key to independence

The SOLARWATT Manager monitors the current PV-energy production and consumption in the household at all times to determine whether surplus PV-power is available.

The Manager can control many important home appliances, so they can be powered with free, self-generated PV-power - allowing users to save money, gain independence, and reduce their impact on the environment.

CONSUMPTION OPTIMIZATION WITH THE SOLARWATT MANAGER PORTAL

There are three ways to switch appliances and thus optimize their consumption with the SOLARWATT Manager Portal:

Manual

The Control app in the Manager Portal shows all appliances available for switching and optimizing consumption. The app can be used to switch an appliance on or off directly using a digital switch.
The Lock icon shows that manual switching is not possible – because it's not conducive to the appliance's functions, for example.

Time-optimized

Time optimization allows the Portal user to set specific times when an appliance is switched on or off, no matter whether there is surplus PV-power or not.
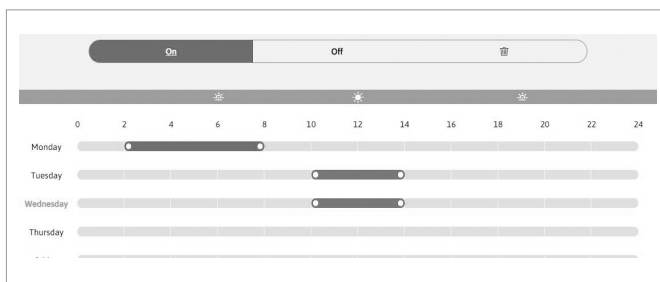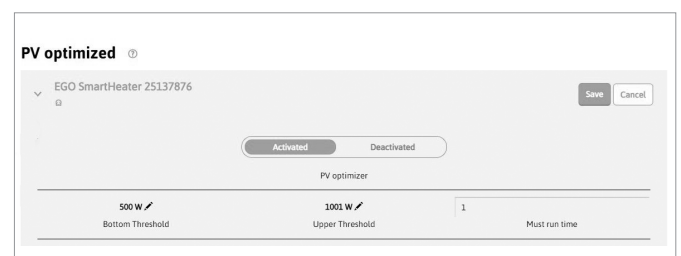

PV-optimized

If PV optimization is activated, the appliance concerned is automatically switched on when there is a surplus of PV-power.
The user can configure the activation threshold and a minimum runtime and/or a minimum rest period for the appliance.

If several appliances are activated for PV optimization a prioritization can be easily determined in the Portal. This prioritization specifies which device should benefit from surplus PV-power first.


If the consumption strategy for devices is to be a combination of PV optimization and time control, the Manager Portal also offers the option of defining time periods in which PV-optimization is compulsively deactivated.

HARDWARE OPTIONS FOR PV-OPTIMIZATION

Optimization using LAN connection

Example: Charging of electric vehicles
The Keba or Webasto wallbox is connected to the SOLARWATT Manager via the router using an LAN cable.

SOLARWATT Manager — Router — Wallbox
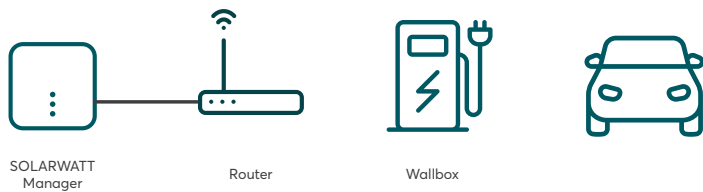
Optimization using smart plug connection

Example: Small electrical devices with standard plug
A smart plug is connected between the device and socket, communicating with the SOLARWATT Manager via the router.

SOLARWATT Manager — Router — Smart Plug
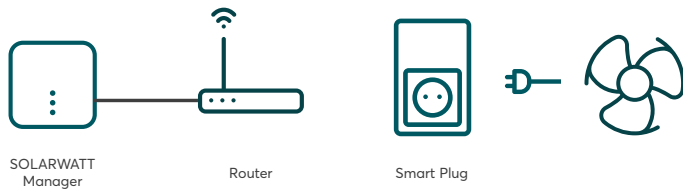
Optimization using SG Ready connection

Example: heat pump or immersion heater
A relay and thus a signal is sent via the Shelly 3EM, which the (SG Ready) heat pump converts.

SOLARWATT Manager — Shelly 3EM — Coupling relay — 230 V — Hot water heat pump
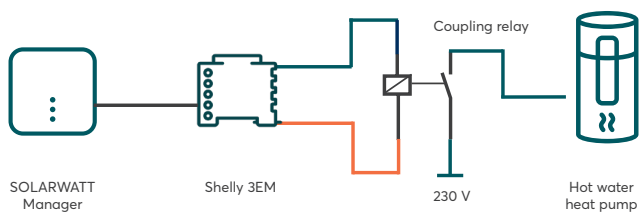
TECHNICAL SPECIFICATIONS

GENERAL DATA

	EnergyManager pro	Manager flex
Device supply	via external top hat rail power supply (230 V AC/24 V DC; 1,5 A; 3 TE)	internal universal power supply (120-240 V; 50/60 Hz)
Power input	2,4 W	nom. 3 W; max. 12 W
Ambient temperature	–10°C to +40°C	–10 °C to +50 °C
Housing	Composite	Composite
Dimensions (BxHxT)	108 x 90 x 70 mm, 6 TE (horizontal pitch)	130 x 130 x 40 mm
Installation type	Top-hat rail TS35	Wall installation
IP rating	IP20	IP20
Hardware editions	ERCxx–xxxxxxxxx, ERKxx–xxxxxxxxx, ERZxx–xxxxxxxxx	EMCxx–xxxxxxxxx, EMXxx–xxxxxxxxx, SMFxx–xxxxxxxxx
Operating system	Linux, Kernel 2.6	Linux, Kernel 7.x
Communications platform	SOLARWATT Manager portal (Cloud)	
Security	VPN tunnel based on the IPSec standard, secure protocols (SSH/SSL, SFTP, HTTPS)	
Firmware and app-updates	via Update-Server	
Language Manager portal	de, en, fr, it, nl, es, se	

I/O INTERFACES AND CONNECTABLE DEVICES

	EnergyManager pro		Manager flex
Ethernet	1x RJ-45 10/100Mbit		1x RJ-45 10/100Mbit
PLC	-		AV Home Green Phy
Clamp connection	2x RS485	10 devices per interface	2x S0/Digital In
	2x S0/Digital In	1 device per interface	
	1x CAN (AC-Sensor connection)		
USB	Serial number ERCxx-xxxxxxxxx: 2x USB-2.0-Device, USB socket type A Serial number ERKxx-xxxxxxxxx, ERZxx-xxxxxxxxx: 1x USB-2.0-Device, USB socket type A		2x USB-2.0-Host USB socket type A no differences between the hardware versions

SUPPORTED METERS

	Connection via				Functions	EnergyManager pro	Manager flex
	LAN	WIFI	CAN	S0			
AC-Sensor Flex			X		Main meter*	X	
	X				Main meter* connected with Battery flex	X	X
KDK PRO380-S				X	Main meter*, energy meter, generation meter	X	X
Shelly 3EM		X			Main meter*		X
Shelly Pro 3EM	X	X			Main meter*, energy meter, generation meter	X	X
EnergyMeter				X	Energy meter, generation meter	X	X
Manager meter 1-phase				X	Energy meter, generation meter	X	X

* Requirements for use as main meter for energy management: bidirectional meter, balancing measuring method (consumption/purchase of the individual phases are netted against each other)

SUPPORTED APPLIANCES SECTOR E-MOBILITY (WALLBOXES)

	Connection	Functions	EnergyManager pro	Manager flex
Keba P30 (x-series, c-series)	LAN	measuring/switching	1 device*	3 devices*
Webasto Live	LAN	measuring/switching	1 device*	1 device*
Webasto Next	LAN	measuring/switching		1 device*
Alfen (Eve Single S-line, Eve Single Pro-line) **	LAN	measuring/switching	1 device*	3 devices*

* Number of devices that can be controlled by the manager at the same time.
** For the connection to Energy Management, the Alfen software licence 'Active Load Balancing' is required.

TECHNICAL SPECIFICATIONS

SUPPORTED INVERTERS AND STORAGES

	Connection via			Functions			EnergyManager pro	Manager flex
	LAN	RS485	S0	Type	measuring	dyn. curtailing via:		
Fronius	X				x	SOLARWATT Manager	X	X
		X			x	Inverter features*	X	X
SMA	X			SunSpec-certified	x	SOLARWATT Manager	X	X
		X		older generation	x	SOLARWATT Manager	X	
			X		x	Inverter features*	X	X
KOSTAL	X			PLENTICORE, PIKO IQ	x	SOLARWATT Manager	X	X
		X		PIKO	x	SOLARWATT Manager	X	
			X		x	Inverter features*	X	X
Steca	X			coolcept FleX XL	x	SOLARWATT Manager	X	X
		X		coolcept FleX, coolcept³ FleX	x	SOLARWATT Manager	X	
			X		x	Inverter features*	X	X
KACO	X			NX3	x	SOLARWATT Manager		X
		X	X	NX1	x	Inverter features*	X	X
APsystems		X			x	Inverter features*	X	X
SolarEdge		X			x	Inverter features*	X	
			X		x	Inverter features*	X	X
Other inverters		X			x	Inverter features*	X	X
Battery flex AC-1	X				x	-	X	X
VARTA battery	X				x	-	X	

* Follow the manufacturer's instructions for installing and setting up the inverter. Additional accessories from the manufacturer may be necessary.

SUPPORTED APPLIANCES SECTOR HEAT

	Connection	Functions	EnergyManager pro	Manager flex
Appliances without standard plug	EnergyMeter (S0-pulse measurement)	measuring	X	X
Heating element my-PV AC ELWA-E Heating element my-PV AC ELWA 2	LAN	measuring/ switching		1 device*
Power-Manager my-PV AC THOR /AC-THOR 9s	LAN	measuring/ switching		1 device*
Heating element EGO Smart Heater Ethernet**	LAN	measuring/ switching	2 devices*	1 device*
Heating element EGO Smart Heater RS485**	RS485	measuring/ switching	1 device*	
Heating element (fix cable)	Shelly 3EM	measuring/ switching	X	
Heating heat pump or hot water pump (SG Ready)	Shelly 3EM	measuring/ switching	X	X
Heating heat pump (Stiebel Eltron - Thermal EM)	LAN, Stiebel Eltron ISG web, EnergyMeter	measuring/ switching		X

* Number of devices that can be controlled by the manager at the same time.
** EGO heating elements with RS485 and LAN cannot be operated together on the EnergyManager pro.

SUPPORTED SMART HOME COMPONENTS

	Connection		Functions	EnergyManager pro	Manager flex
Shelly Pro 1PM, Pro 2PM, Pro 4PM	WIFI, LAN	DIN rail	measuring/ switching	X	X
Shelly Plus 1PM, Plus 2PM	WIFI	flush mounting installation	measuring/ switching	X	X
Shelly (Plus) Plug S	WIFI, Bluetooth	appliances with standard plug	measuring/ switching	X	X
myStrom WiFi Switch	WIFI	appliances with standard plug (Typ F, Typ J)	measuring/ switching	X	X

Subject to change. Errors excepted.
Extended data sheet SOLARWATT Manager | EN