SOLARWATT®

power to the people

EnergyManager Core

EnergyManager Core	
Device supply	via internal universal power supply (120–240 V)
Power input	3W
Ambient temperature	-10°C to +50°C
Housing	Composite
Dimensions (W x H x D)	130 x 130 x 40mm
Installation type	Wall installation
IP rating	IP20

EnergyManager Pro	
Device supply	via external top hat rail power supply (230 V AC/24 V DC; 1.5 A; 3 TE)
Power input	2.4 W
Ambient temperature	-10°C to +50°C
Housing	Composite
Dimensions (W x H x D)	108 x 90 x 70 mm, 6 HP (horizontal pitch)
Installation type	Top-hat rail TS35 (DIN)
IP rating	IP20

I/O interfaces and connectable devices		
Ethernet	1x RJ-45 10/100 Mbit	
PLC	AV Home Green Phy	
Terminal connection	2x SO/digital in	
USB	2x USB 2.0 host USB socket type A	

I/O interfaces and connectable devices		
Ethernet	1x RJ-45 10/100 Mbit	
Clamp connection	2x RS485	10 devices per interface
	2x SO/digital in	1 device per interface
	1x CAN	MyReserve, AC sensor
USB	2x USB 2.0 host USB socket type A	

Figure
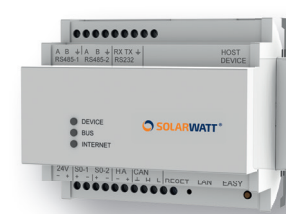
Device software	
Operating system	Linux, Kernel 7.x
Communications platform	EnergyManager Portal (cloud)
Management	Cloud access
Security	VPN tunnel based on the IPSec standard, secure protocols (SSH/SSL, SFTP, HTTPS)
Firmware and app updates	via update server
Language	English, French, German, Spanish, Italian, Dutch, Swedish

EnergyManager Portal	
Supported display media	Desktop PC, tablets, smart phones
Supported browsers	Google Chrome, Mozilla Firefox, MS Internet Explorer, Apple Safari
Security	VPN tunnel based on the IPSec standard, secure protocols (SSH/SSL, SFTP, HTTPS)
Language	English, French, German, Spanish, Italian, Dutch, Swedish

Supported inverters and storages

	Connection via					Energy Manager core	Energy Manager pro
	Ethernet	RS-485	SO	Unit type	Functions		
Fronius	X				Measuring/dynamic curtailment *	X	X
			X		Measuring	X	X
SMA	X			SunSpec-certified	Measuring/dynamic curtailment *	X	X
		X		Older generation	Measuring/dynamic curtailment *		X
			X		Measuring	X	X
KOSTAL	X			PLENTICORE, PIKO IQ	Measuring/dynamic curtailment *	X	X
		X		PIKO (established generation)	Measuring/dynamic curtailment *		X
			X		Measuring	X	X
Steca	X			coolcept FleX XL	Measuring/dynamic curtailment *	X	X
		X		coolcept	Measuring/dynamic curtailment *		X
			X		Measuring	X	X
SolarEdge		X			Measuring		X
			X		Measuring	X	X
Other Inverters			X		Measuring	X	X
MyReserve		CAN			Measuring/monitoring	X	X

* in compliance with German renewable energy legislation

Supported electric charging stations

	Connection	Functions	Energy Manager core	Energy Manager pro
Keba P30 (X series, C series)	Ethernet	Measuring/switching	X	X

Supported smart home components

	Technology	Supported plugs		Functions	Energy Manager core	Energy Manager pro
myStrom Smart Home	WLAN	myStrom WiFi Switch	devices with standard plug (Type F, Type J)	Measuring/switching (max 16 A)	X	X
Fibaro Home Center	Z-Wave Firmware version 4.0.8.0 and higher	Fibaro plugs	devices with standard plug	Measuring/switching (max 11 A)	X	X
		Devolo plugs	devices with standard plug	Measuring/switching (max 13 A)	X	X
		Aeotec plugs	devices with standard plug	Measuring/switching (max 16 A)	X	X

Other electrical loads supported

	Connection	Functions	Energy Manager core	Energy Manager pro
Appliances without standard plug	Energy Meter (SO pulse measurement)	Measuring	X	X
EGO Smart Heater	Ethernet	Measuring/switching	X	X
Heating element (fixed wiring)	Digital Extension, EnergyMeter, coupling relay	Measuring/switching		X
Hot water pump (SG-ready/with standard plug)	Digital Extension, myStrom WiFi Switch, coupling relay	Measuring/regulating		X
Hot water pump (SG-ready/fixed wired)	Digital Extension, EnergyMeter, coupling relay	Measuring/regulating		X

Extended datasheet

EnergyManager

Managing energy
Energy independence within reach

EnergyManager 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 solar power and ensure worry-free convenience.

With the EnergyManager, 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.

Advantages

- An overview of all energy data – available anytime, anywhere
- Exploits the full potential of PV system and battery
- Integrates water heating or e-mobility
- Automated switching of appliances when surplus solar power is available
- Price guarantee due to self-generation of power
- Maximum data security

Our service
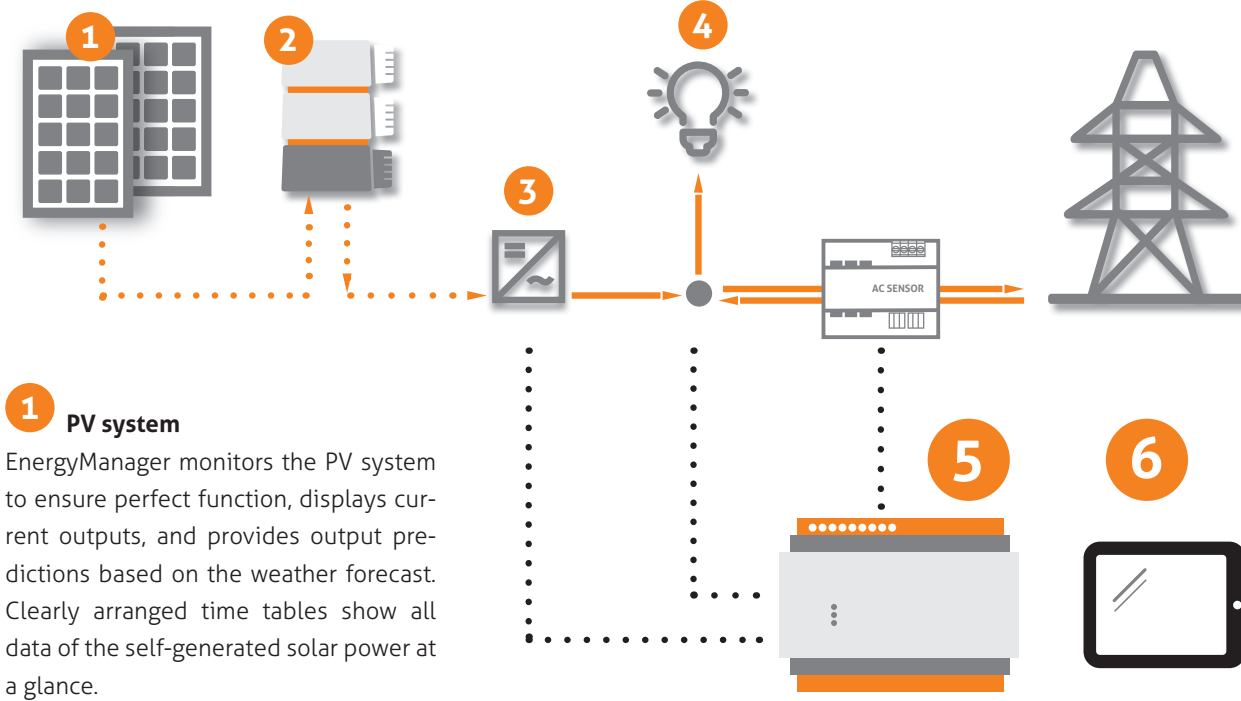
Full Coverage
On purchasing a SOLARWATT system solution*

Guaranty of origin
Quality Made in Germany

Competent Consulting
Experts via hotline or on location

MyReserve ready
Perfect system integration

* As specified in insurance conditions

EnergyManager

1 PV system
EnergyManager 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 solar power at a glance.

2 MyReserve batteries
EnergyManager can use the weather forecast to make predictions on the extent and time of expected outputs. It supplies this information to MyReserve, , which then intelligently adjusts its charging strategy to the expected power yield situation. The EnergyManager Portal also displays all battery data in a transparent format.

3 Inverter
EnergyManager communicates with all inverters via Ethernet, an RS-485 interface or S0 and is therefore ideally suited for retrofitting existing PV systems. An Ethernet or RS-485 interface allows EnergyManager to satisfy statutory requirements on dynamic curtailment . Since EnergyManager actively takes household consumption into account, only a minimum has to be curtailed.

4 Electrical devices in households
By connecting important energy consumers of the household to the EnergyManager, it can be ensured that they are operated as much as possible with cost-effective solar power. This leads to greater internal consumption while reducing costs and retaining the same level of comfort and convenience.

5 EnergyManager
The EnergyManager is the centerpiece, that ensures optimum use of the combination of a PV system and battery – maximum independence at minimum costs.
- Detect and analyze electricity flows
- Monitor power guzzlers
- Switch appliances on and off intelligently

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

EnergyManager 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 EnergyManager installations online
- Identify problems and their causes automatically
- Access all EnergyManager configurations remotely

EnergyManager solar optimization – key to independence

The EnergyManager monitors the current solar energy production and consumption in the household at all times to determine whether surplus solar power is available.

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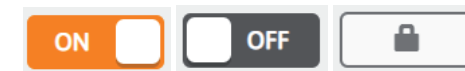
Solar optimization with the EnergyManager Portal

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

Manual
The *Control* app in the EnergyManager 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 *None* icon shows that manual switching is not possible – because it's not conducive to the appliance's functions, for example.

**Time-controlled (switching without solar optimization)**
Time control allows the EnergyManager Portal user to set specific times when an appliance is switched on or off, no matter whether there is surplus solar power or not.
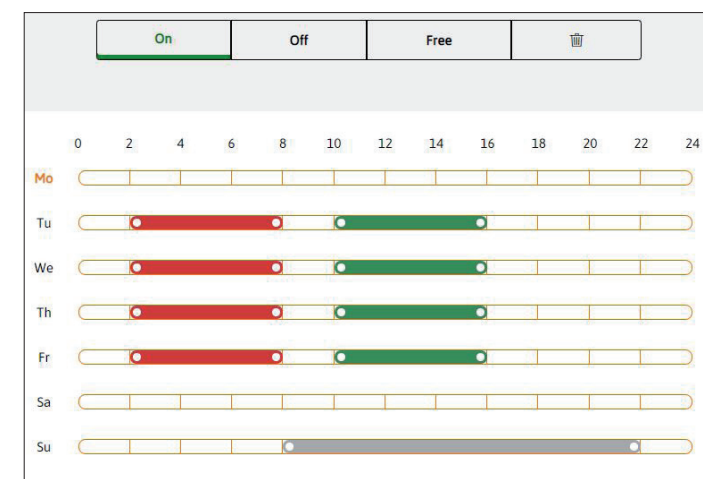
Solar-optimized (switching with solar optimization)
If solar optimization is activated, the appliance concerned is automatically switched on when there is a surplus of solar power. The user can configure the activation threshold and a minimum runtime and/or a minimum rest period for the appliance.

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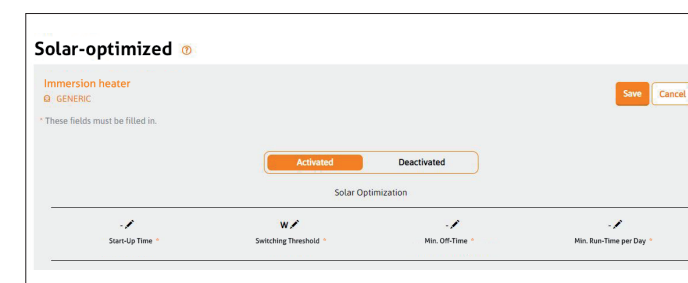

If the consumption strategy for devices is to be a combination of solar optimization and time control, the EnergyManager Portal also offers the option of defining time periods in which solar optimization is compulsively deactivated.

Hardware options for solar optimization

Optimization using Ethernet connection
Example: Charging of electric vehicles
The charging station is connected to EnergyManager via the router using an Ethernet cable.

EnergyManager — Router — Electric charging station
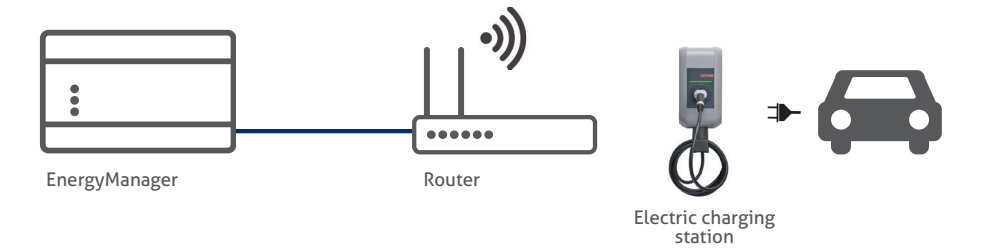
Optimization using smart plug connection
Example: Small electrical devices with standard plug
A smart plug is connected between the device and socket, communicating with the EnergyManager via the router.

EnergyManager — Router — Small electrical device with smart plug
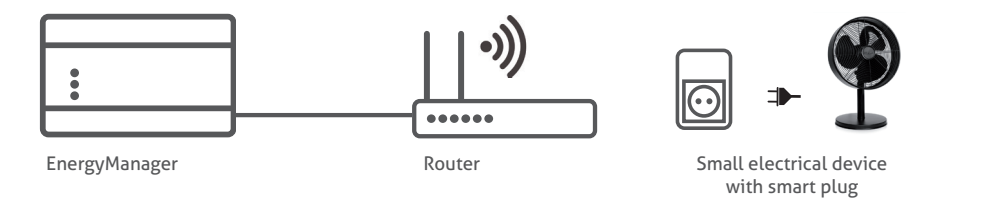
Optimization using coupling relay connection
Example: heat pump or immersion heater
A relay and, consequently, a signal are controlled via the digital extension. This is used to implement the (SG-ready) heat pump.

EnergyManager — Digital extension — Coupling relay — 230 V — Hot water heat pump — Smart Plug WiFi Switch