

# THE BATTERY FUTURE IS MODULAR.



**MyReserve.** THE WORLD'S MOST EFFICIENT BATTERY.

**MyReserve – fits perfectly, no matter what you have planned.**

## **SOLAR POWER AROUND THE CLOCK – MORE INDEPENDENCE, LOWER ELECTRICITY COSTS.**

**An battery is the ideal complement to any photovoltaic system. It stores the electricity your roof produced during the day for when you need it most: in the evening. You save up to 80 % of your electricity costs. And thanks to its modular design, it fits your individual electricity needs perfectly.**

### **Two compact building blocks – one common goal.**

#### **MyReserve Command – the intelligent control unit for maximum usable power**

The MyReserve Command contains all the battery's power electronics. Connectors, sensors, software – all packed together in one space-saving, durable aluminum housing. This control unit is built to ensure that you can use the power you generate yourself optimally – and have to buy as little grid power as possible. This way you get more energy from each ray of sunshine!



#### **MyReserve Pack – the compact battery for optimum capacity**

With its outstanding battery efficiency of 99.2 %, the MyReserve Pack is the most efficient battery module in the world. For you this means: You can rely on MyReserve to store your solar power efficiently. This means that you can use the energy you generate yourself exactly when you need it. Each lithium-ion battery module has a capacity of 2.4 kWh.



**Download**  
MyReserve App  
at the App Store  
or Google Play



Get more out of each ray of sunshine.

## IT PAYS FOR ITSELF.

With its exceptional efficiency, MyReserve sets the benchmark in the storage market. Cover up to 80 % of your average annual power requirements with your own rooftop solar system – on some days even up to 99 %! The key to this: optimized consumption. With these unique operating protocols, your MyReserve secures you as much free solar energy as possible instead of expensive grid electricity:

### Highest reaction speed

Many electrical devices such as induction ranges or coffee machines demand power for just a few seconds which creates short-term consumption peaks. Conventional batteries cannot react fast enough to meet this sudden demand and household appliances end up using expensive grid electricity. MyReserve registers demand immediately and delivers electricity in almost real-time.

### Clever battery management system

An intelligent management system is the heart of our efficient battery. The system monitors hundreds of system parameters every second and optimizes charging and discharging.

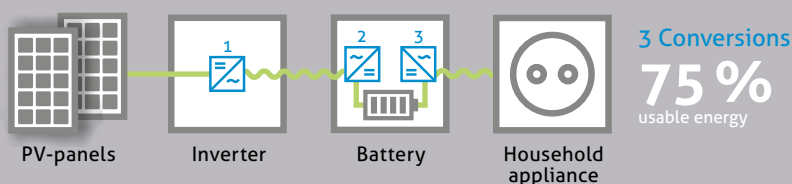
This is how MyReserve achieves not only the fastest reaction speed, but also a particularly long battery cell life.

Less conversion loss.

## MORE USABLE SOLAR POWER.

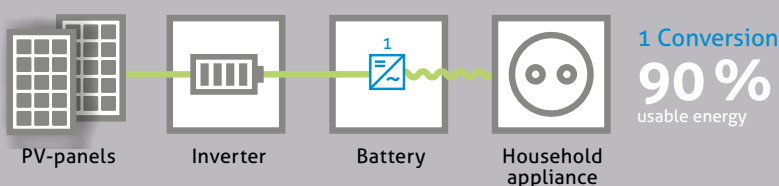
PV modules produce direct current (DC) and batteries store electricity in DC as well. Households, however, use alternating current (AC). The DC power must be converted to AC power and this conversion is performed by the inverter.

### STANDARD AC BATTERY



Electricity from the roof goes through an inverter and is converted into alternating current. If it is directed to a **conventional battery**, it is converted back into direct current. But as the battery discharges the current must be converted once again to alternating current. With each conversion you lose some of your precious solar power and end up with only 75 % for your own use.

### MYRESERVE: DC COUPLED



**MyReserve**, on the other hand, is installed before the inverter. It stores the direct current from the PV system. Only when the electricity is consumed in the household is it converted into alternating current. This leaves you over 90 % of your own solar power. That pays off!



**MyReserve environmental concept.  
Resource-saving manufacturing, easy recycling.**

## **SO YOUR GREEN ELECTRICITY STAYS THAT WAY.**

With SOLARWATT, you not only get products which supply environmentally friendly electricity, but also products that pollute the environment as little as possible.

During its service life, MyReserve stores about ten times more clean energy than was necessary for its production – a powerful plus for the environment. The compact design of MyReserve means its production requires very few materials and saves space during storage and transport. SOLARWATT is committed to constant improvement of each product's ecobalance and MyReserve is no exception. It is a significant improvement on preceding models.

The modular design is not only green for new installations, but also for repairs! If an exchange is necessary, only the affected module has to be replaced and transported and not the entire battery. Short production distances also help the environment and, excluding the battery cells, all MyReserve components are produced directly in Germany.

Even during the product development of MyReserve, SOLARWATT was thinking of future recycling. All components are designed to be dismantled easily and damage-free. The reuse rate of the components produced by SOLARWATT is, at 86 %, an industry trend-setter.

**MyReserve is your battery with sustainability  
built-in.**

Highest physical safety. Uncompromising data security.

## SAFETY IS NON NEGOTIABLE.

Maximum security was an integral part of MyReserve right from the start. It's no wonder that MyReserve was the first battery to completely fulfill the requirements of the safety guideline for lithium-ion household storage. MyReserve sets new standards:

### Physical safety

Each MyReserve module is sealed in a 1.4 cm thick aluminum cast housing.

The electrical battery poles are insulated from each other by ceramic separators, just like a high-voltage line. This reliably prevents short circuits from deposits on the cathode and anode.

To ensure that your MyReserve can be shut off at any time, SOLARWATT relies on autonomous relays. All relays switch independently, each one securing the system. This means that the relays cannot interfere with each other in the event of faults – maximum safety for you.

### Data security

Most conventional batteries rely on an Internet connection which means that digital intrusion is always possible. To exclude manipulation by third parties, the internal and external CAN data buses in the MyReserve are physically separated.

Data about device status is the only sort MyReserve transmits externally. The inner physical interfaces protect the remaining data 100 % from unauthorized external access. This ensures that no one can manipulate your battery from the outside.

## WHAT CAN YOU POWER WITH YOUR BATTERY?

The capacity of electricity storage batteries is expressed in kilowatt hours (kWh). 1 kWh means that the battery could power a device with an output of 1,000 watts for 1 hour. However, most devices require much less than 1,000 watts. Here are a few examples of how much energy your battery can provide:

2.4 kWh



=



1h

+



13h

7.2 kWh



=



1h

+



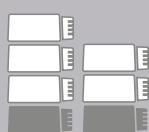
13h

+



4,5h

12 kWh



=



1h

+



13h

+



4,5h

+



1h

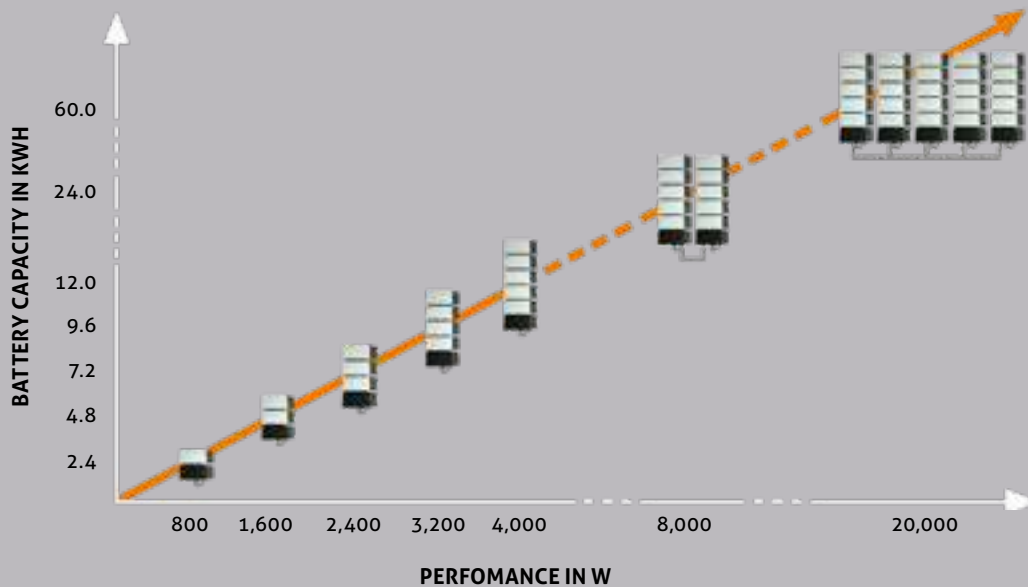
+



1,5h

## TWO BUILDING BLOCKS, ENDLESS POSSIBILITIES

Thanks to its complete modularity, MyReserve can always be configured to your exact specifications.



All-round protection with SOLARWATT Warranties and FullCoverage.

## WHERE OTHERS PROMISE, SOLARWATT GUARANTEES.

With a SOLARWATT battery you are investing in the future – yours and that of future generations. SOLARWATT offers a performance guarantee for your MyReserve which exceeds the legal requirements by a factor of five.



### Guaranteed Performance

We guarantee that your MyReserve battery will last at least 10 years – and still have 80 % or more of its original storage capacity, regardless of charge/discharge cycles. If not, we will repair your MyReserve free of charge or replace the affected module.



### SOLARWATT FullCoverage

Every MyReserve comes with a free insurance policy – SOLARWATT FullCoverage. Among other things, this insurance covers:

- theft of system components
- damage from extreme weather, flooding, vandalism
- defects due to overvoltage, short circuits, e. t. c...

Detailed warranty and FullCoverage information is available on our homepage or from your expert installer.

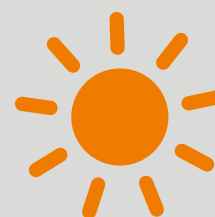


# POWERFUL AND COST-EFFECTIVE. THE SOLARWATT SYSTEM APPROACH.

**SOLARWATT is the only supplier to produce all the essential components of your solar system itself: PV modules, energy managers, and battery storage. These building blocks complement each other perfectly and using them together strengthens their efficacy. The result for you: maximum efficiency and independence.**

## PRODUCE ENERGY

Glass-glass modules for the highest aesthetic quality and stable yields for decades.



## MANAGE ENERGY

EnergyManager for intelligent control of all power-consuming appliances in the house and maximum utilisation of your PV system.



## STORE ENERGY

MyReserve battery so you can use your own solar electricity at night when the sun is not shining.


**DE**

### Made in Germany

As a German company we develop and produce all components at our locations in Dresden and Frechen (near Cologne).


**30**

### 30 Year Warranty

We guarantee that your modules will function for 30 years and still provide at least 87 % of their original output.



### FullCoverage

We insure your system and your electricity yield free of charge against storms, vandalism, theft, technical defects, and other damage.



**If you have any questions, please do not hesitate to contact us:**

**SOLARWATT International** + 49-351-8895-444  
 Maria-Reiche-Straße 2a info@solarwatt.com  
 01109 Dresden Stand 05.2018  
 www.solarwatt.com

**MYRESERVE**

**CERTIFIED SAFETY.  
HIGHEST EFFICIENCY.  
GUARANTEED PERFORMANCE.**

**[www.solarwatt.com](http://www.solarwatt.com)**



**EnergyManager pro**

**SOLARWATT Energy Systems**

## INTELLIGENT AND EASY ENERGY CONTROL

### ENERGYMANAGER PRO

The EnergyManager Pro is the central interface for monitoring solar energy production. It can control electrical appliances, optimize household consumption, and saves energy costs. The EnergyManager Pro is installed in the building switchboard and connected to the internet. You can view the data of your EnergyManager and (optionally) control your energy from anywhere.

- Monitor your PV system
- Flexible activation of devices
- Highest data security
- Simple installation on a top-hat DIN rail
- Dynamic in-feed management  
(saves costs for small PV systems by eliminating the ripple control receiver)
- Free access to the browser-based, intuitively operated Energy Portal

#### Included in delivery

- EnergyManager Pro
- Network cable



EnergyManager Portal



EnergyManager Pro

#### SOLARWATT Service



**MyReserve ready**  
Perfect system integration



**Competent Consulting**  
Experts via Hotline or on location



**Guaranty of origin**  
Quality Made in Germany

## Technical Data | EnergyManager Pro

ENERGYMANAGER PRO	
Device supply	via external top-hat rail power supply unit (230 V AC/24 V DC; 1,5 A; 3 HP)
Power input	2.4 W
Ambient temperature	-10°C to +50°C
Plastic housing dimensions (W x H x D)	108x90x70 mm, 6 HP (horizontal pitch)
Installation type	Top-hat rail TS35 (DIN)
Protection rating	IP 20

## I/O INTERFACES AND CONNECTABLE DEVICES

Ethernet	1x RJ-45 10/100 Mbit	
	2x RS485	10 devices per interface
Clamp connection	2x SO/Digital In	1 device per interface
	1x CAN	MyReserve, AC-Sensor
USB	2x USB 2.0 host, USB socket type A	

ENERGYPORTAL	
Supported display media	Desktop PC, tablets, smart phones
Supported browsers	Google Chrome, Mozilla Firefox, MS IE Explorer, Apple Safari
Security	VPN tunnel according to IPSec standard, secure protocols (SSH/SSL, SFTP, HTTPS)
Language	German, English, French, Italian, Dutch

## DEVICE SOFTWARE

Operating system	Linux, Kernel 2.6
Communications platform	EnergyManager Portal (Cloud)
Management	Offline: Integrated webserver, online: Cloud access
Security	VPN tunnel according to IPSec standard, secure protocols (SSH/SSL, SFTP, HTTPS)
Firmware and app updates	via update server
Language	German, English, French, Italian, Dutch

SUPPORTED INVERTERS AND STORAGES	CONNECTION VIA	FUNCTIONS
STECA Steca Grid coolcept	direct connection via RS485*	Measuring / dynamic throttling in compliance with German renewable energy legislation
SMA (older generation)	direct connection via RS485*	Measuring / dynamic throttling on request (some SMA devices only on request)
KOSTAL PIKO	direct connection via RS485*	Measuring / dynamic throttling in compliance with German renewable energy legislation
SolarEdge	direct connection via RS485*	Measuring
Fronius	via Ethernet	Measuring / dynamic throttling in compliance with German renewable energy legislation
SMA (SunSpec certified devices)	via Ethernet	Measuring / dynamic throttling in compliance with German renewable energy legislation
Other inverters	via SO-interface (for example with EnergyMeter)	Measuring
MyReserve	via CAN interface	Measuring / monitoring

\*if different manufacturers: 1 manufacturer per interface

ADDITIONAL SUPPORTED APPLIANCES	CONNECTION VIA	FUNCTIONS
Appliances without standard plug	EnergyMeter (SO pulse measurement)	Measuring
Hot water pump (SG ready / with standard plug)	EnergyManager Heat Pump Kit	Measuring / regulating
Hot water pump (SG ready/ fixed wiring)	Digital Extension, EnergyMeter, coupling relay	Measuring / regulating
Heating element (fixed wiring)	Digital Extension, EnergyMeter, coupling relay	Measuring / switching

## SOLARWATT WARRANTY CONDITIONS for ENERGYMANAGER

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

### A Applicability

1. These warranty conditions apply to the SOLARWATT Energy Manager ("Product").
2. The warranty pursuant to these warranty conditions applies to Products which the End Customer has purchased in Australia. In the event that the End Customer transfers the Product to and operates the Product in a country other than Australia, the Warranty pursuant to these warranty conditions will remain unaffected.
3. This warranty applies exclusively to any rights of the end customer based on defects. The "End Customer" is the purchaser of the Product who has obtained it from a dealer of SOLARWATT products (irrespective of whether this dealer belongs to the sales network of SOLARWATT or not) for their own use and not for the purpose of resale or any other type of commercial exploitation or use.

### B Warranty

1. SOLARWATT GmbH ("SOLARWATT") guarantees the End Customer that the Product will remain free from defects in material and workmanship that influence the functionality of the Product ("Product Defects") for a period of two years from the date the End Customer purchased the Product, however, for a maximum of two and a half years after the date the Product is shipped from the factory (which will be notified by SOLARWATT to the End Customer on request) ("Warranty Period").
2. The warranty is provided exclusively to the End Customer.

### C SOLARWATT warranty claims

1. If a Product Defect arises during the Warranty Period, and that Product Defect is minor, SOLARWATT will address the Product and/or affected components of the Product as follows, at its own discretion:

- a) perform an on-site repair on the premises of the End Customer;
- b) perform a repair on the premises of SOLARWATT or a third party; or
- c) deliver an equivalent replacement product and/or an equivalent replacement component to the End Customer.

If the original Product and/or the original component is no longer in serial production, SOLARWATT reserves the right to provide a functionally equivalent replacement product and/or a functionally equivalent replacement component.

2. If the Product Defect arises during the Warranty Period, and that Product Defect is a major failure, SOLARWATT will address the Product and/or affected components of the Product as follows, at the discretion of the End Customer:
  - a) perform an on-site repair on the premises of the End Customer;
  - b) perform a repair on the premises of SOLARWATT or a third party; or
  - c) deliver an equivalent replacement product and/or an equivalent replacement component to the End Customer.

3. With receipt of the replacement product / replacement component by the End Customer, the ownership of the original component shall be transferred to SOLARWATT. Components replaced during the course of repairs also become the property of SOLARWATT.
4. SOLARWATT bears the transport/shipping costs and the material and repair costs for the provision of the warranty claims services in accordance with these warranty conditions.

If SOLARWATT repairs the Product at SOLARWATT's or a third party's facility or supplies an equivalent replacement Product, SOLARWATT will engage a carrier company who will collect the Product from the End Customer's home at SOLARWATT's risk. If SOLARWATT ac-

cepts the warranty claim, SOLARWATT will bear the arising collection and delivery costs.

5. If, on inspection, SOLARWATT reasonably determines that there is not a legitimate warranty claim, because there was no fault in operation, the End Customer has misused the Product or the End Customer was aware (or ought to have been aware) that no legitimate fault existed, SOLARWATT reserves the right to bill the End Customer for costs reasonably incurred by SOLARWATT and for services provided.

#### **D Exclusion of warranty**

1. The warranty does not extend to Products that are compromised, damaged or destroyed because they:
  - a) were not stored or transported properly by the End Customer or a third party;
  - b) were not installed, removed or re-installed appropriately in accordance with the installation manual of SOLARWATT;
  - c) were operated in a manner contrary to their intended use and especially in a manner contrary to the operating instructions in the installation manual;
  - d) were not properly maintained in a manner that corresponds to the maintenance instructions in the installation manual;
  - e) were improperly modified by the end customer or a third party or subjected to inappropriate tampering in another manner;
  - f) are outside the Warranty Period; or
  - g) suffered or became subject to an act of force majeure (particularly lightning, fire or natural disaster).

#### **E Provisions for asserting warranty claims**

1. The End Customer may only assert a warranty claim against SOLARWATT in writing and by submitting a copy of the original invoice issued by the SOLARWATT product dealer or other proof of purchase. The claim form for End Customers which is available at [www.solarwatt.com](http://www.solarwatt.com) should be used for this purpose.
2. Further documents (e.g. photos, records, etc.) must be provided to SOLARWATT at SOLARWATT's reasonable request.
3. If an obvious legitimate warranty Claim arises, the End Customer shall notify SOLARWATT thereof immediately, how-ever within a cutoff period of three (3) months of the relevant fault.

Recognizable transport damages should be reported using the claim form for transport damages, available from [www.solarwatt.com](http://www.solarwatt.com).

#### **F Transfer to new owner**

If this Product is sold by the End Customer, this warranty will be transferred from the End Customer to the new owner of the Product within the scope of the remaining Warranty Period. The respective new owner is then deemed to be the End Customer in the sense of these warranty conditions. The original End Customer may not claim under the warranty once transferred.

#### **G Liability limitation**

To the extent permitted by law, damage claims or claims for reimbursement of expenses against SOLARWATT from or in connection with this warranty or the warranty services are excluded, regardless of the reasons. Where not excluded by law, SOLARWATT is not liable for damages which the Product causes to other legal assets of the End Customer, or for lost profit and turnover, loss of use and production, operational shutdowns, data loss, financing costs or consequential and indirect damages. This also applies if as such damages are incurred by a third party.

#### **H Final provisions**


If any provisions in this warranty conditions are or become invalid, the validity of the remaining provisions remains unaffected.

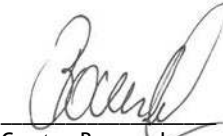
##### Warrantor:

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Fax: +49 351 889 51 11

E-mail: [info@solarwatt.de](mailto:info@solarwatt.de)

  
Detlef Neuhaus  
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Carsten Bovenschen  
CFO

Dresden, 06/2017