

Industrial Batteries / Network Power

Sonnenschein@home



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www.norwatt.es



Your benefits with Sonnenschein@home

- > Reduces energy consumption through self-generated power
- > Excellent quality powered by Sonnenschein[®] gel batteries
- > Easy installation with a modular, expandable system
- > Reliability in case of grid outage



**»Modular, highly efficient
storage of photovoltaic energy«**

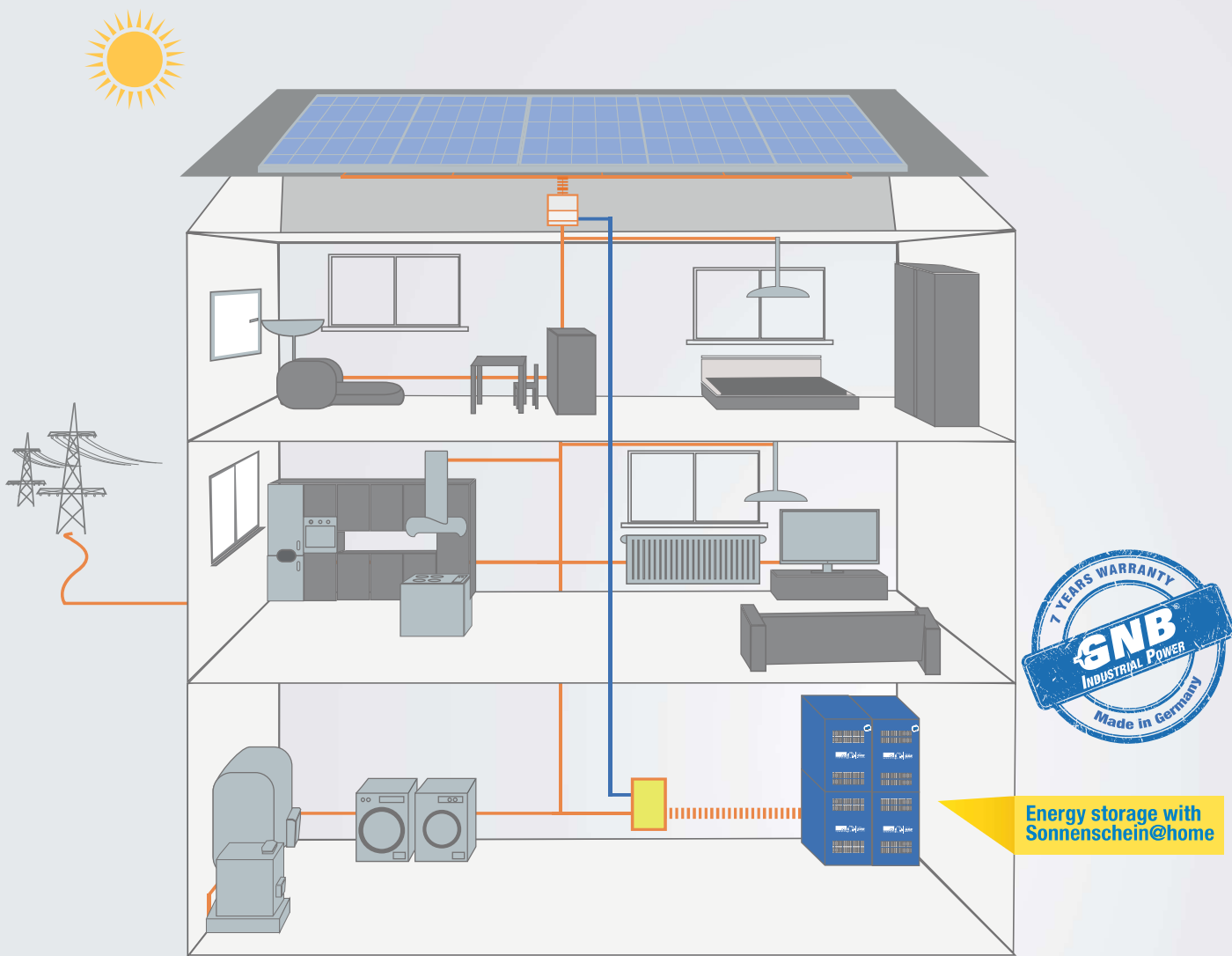


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Application

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The dryfit® range for modular power storage of photovoltaic energy

Sunny outlook for self-generated power

Take advantage of the natural power of the sun! More than ever before the world is focused on renewable energies and developing more responsible technologies. With Sonnenschein@home everybody can contribute to a better environment and save money. GNB® Industrial Power is the inventor of gel technology and offers with its Sonnenschein@home an excellent energy storage solution. The dryfit® gel battery provides ideal performance in a variety of applications. Be on the sunny side with Sonnenschein@home seven years warranty!

Sonnenschein@home battery

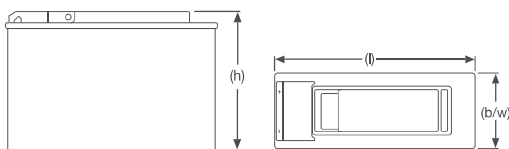
GNB® Sonnenschein@home are premium batteries for reliable storage of regenerative energy sources such as photovoltaic. They offer superior cycling performance (up to 3800 cycles at 50% depth of discharge operating in controlled partial state of charge) and extraordinary durability with the worldwide proven and successful dryfit® gel technology. This dryfit® gel battery is a valve regulated lead acid battery (VRLA) with electrolyte fixed in a gel.



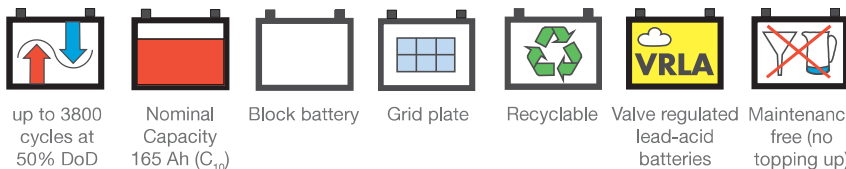
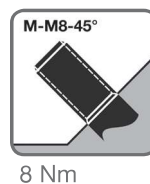
Specifications:

- > Outstanding cycling performance (up to 3800 cycles at 50% depth of discharge at 20 °C) in cPSOC*
- > Long shelf life up to 2 years at 20 °C without recharge due to very low self-discharge rate
- > Short recharge time
- > Grid plates made of highly corrosion-resistant alloy
- > No restrictions for rail, road, sea and air transportation of operational blocks (IATA, DGR, clause A67)
- > Very low gassing
- > Front terminal design for easy installation and maintenance
- > Insulated block connector and protected terminals
- > Lifting handles for easy transportation
- > Designed in accordance with IEC 60896-21/-22
- > dryfit® gel technology proven in many installations worldwide
- > Made in Germany, ISO 9001, 14001 and OHSAS 18001 certified

Drawing and terminal and torque



Not to scale!



* cPSOC = controlled Partial State Of Charge

Sonnenschein@home

Modular cabinet systems

Sonnenschein@home system solutions

GNB[®] offers Sonnenschein@home in a modular cabinet system, which can be individually configured. With Sonnenschein@home modules you can store your photovoltaic energy for your own consumption and achieve significant energy cost savings. Furthermore in combination with suitable hardware the power supply can be used as a back-up in case of grid outage. The storage system can be configured for small to medium storage units.



Technical characteristics and data

Type	Part number	Nom. voltage	Nom. capacity* C ₁₀ 1.80 V _{pc} 20 °C	Nom. energy 20° C	Length (l)	Width (b/w)	Height	Weight	Short circuit current	Internal resistance mOhm	Terminal
		V	Ahh	Wh	max. mm	max. mm	max. mm	approx. kg	A	mOhm	
SH12V2.0	NGSH1202D0HS0MA	12	165	1980	568	128	320	58.4	2432	5.10	M-M8-45°

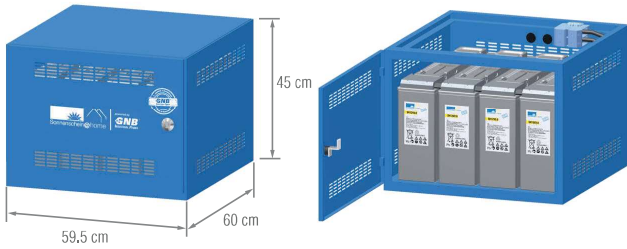
* Effective energy = 50% nominal energy



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Technical characteristics and drawings

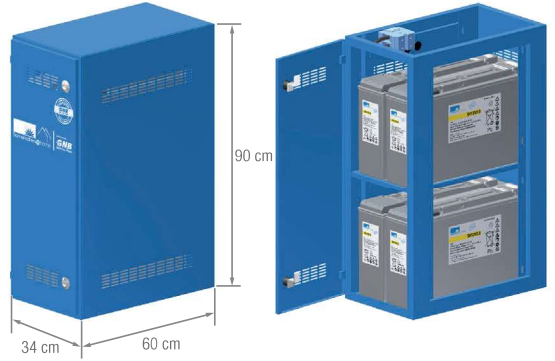
Variations of Sonnenschein@home Modules



Module: SH48V8.0-B
Order No.: YSH48V08C4T1B0

Module: SH24V8.0-B
Order No.: YSH24V08C4T1B0

Module Voltage: 48 V or 24 V
Module Energy: 8 kWh
Module weight: approx. 260 kg
Area load: approx. 720 kg/m²



Module: SH48V8.0-S
Order No.: YSH48V08C2T2B0

Module: SH24V8.0-S
Order No.: YSH24V08C2T2B0

Module Voltage: 48 V or 24 V
Module Energy: 8 kWh
Module weight: approx. 260 kg
Area load: approx. 1275 kg/m²



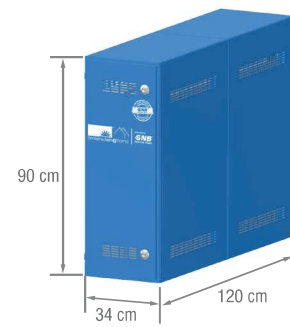
Module: SH48V16.0-B
Order No.: YSH48V16C4T2B0

Module Voltage: 48 V
Module Energy: 16 kWh
Module weight: approx. 510 kg
Area load: approx. 1420 kg/m²



Module: SH48V16.0-S
Order No.: YSH48V16C2T4B0

Module Voltage: 48 V
Module Energy: 16 kWh
Module weight: approx. 520 kg
Area load: approx. 2550 kg/m²



Module: SH48V16.0-S
Order No.: YSH48V16C2T2B0

Module Voltage: 48 V
Module Energy: 16 kWh
Module weight: approx. 520 kg
Area load: approx. 1275 kg/m²



Exide Technologies, with operations in more than 80 countries, is one of the world's largest producers and recyclers of lead-acid batteries. Exide Technologies provides a comprehensive and customized range of stored electrical energy solutions. Based on over 120 years of experience in the development of innovative technologies, Exide Technologies is an esteemed partner of OEMs and serves the spare parts market for industrial and automotive applications.

GNB Industrial Power – A division of Exide Technologies – offers an extensive range of storage products and services, including solutions for telecommunication systems, railway applications, mining, photovoltaic (solar energy), uninterrupted power supply (UPS), electrical power generation and distribution, fork lifts and electric vehicles.

Exide Technologies takes pride in its commitment to a better environment. An integrated approach to manufacturing, distributing and recycling of lead-acid batteries has been developed to ensure a safe and responsible life cycle for all of its products.

GNB[®] INDUSTRIAL POWER devises enduring energy concepts that convince with efficiency, flexibility and profitability.