

fosera PSHS

Pico Solar Home System

Description:



The PSHS is an autonomous and mobile energy system that can be used for rural electrification. State of the art lithium battery technology used by fosera offers unprecedented performance and long battery life without sulphation while being maintenance free. The fosera ceiling and wall-lamps use highly efficient LEDs of highest lifetime and illumination-stability. The solar modules use crystalline silicon solar cell technology with a lifetime of over 20 years. With a unique, modular PSHS extension the system can grow with energy demand. Additional fosera power boxes or lanterns can be connected with a Plug & Play cable. Efficient appliances can be connected to the system including lamps, fans, radios, and phone chargers.

With German engineering, fosera has developed a new, high quality system of home solar energy supply with unique features at a very reasonable price. Each 3.25 V fosera PSHS can power several bright lights for many years without having to replace batteries or lamps, can power radios and cooling fans, and can charge mobile phones.

Modern Battery Technology

fosera uses new, high-quality lithium iron phosphate battery technology, to store energy. This technology allows long battery life, and the same battery can be used for five to ten years, lasting up to three times longer than conventional battery technologies on the market. Unlike the fosera battery technology, most traditional solar home systems use lead acid batteries that suffer limitations in battery life due to sulphation. fosera batteries have a high efficiency and can be kept at a low charge, ensuring that no solar electricity is wasted.

Intelligent battery charge management protects the systems from harmful conditions, maintains the high efficiency of the new battery technology and allows for the system to be stored without any loss of performance. An intuitive LED display shows the state of battery charge and the status of the system. The system incorporates effective surge protection.

Easy Extension

fosera is the first pico solar energy system that can grow with energy demand. One fosera system allows up to four different loads to be connected at one time. If demand grows, the fosera system can grow as well. The unique modular system design allows parallel connection of up to four fosera systems to meet growing power demand. This parallel connection is very simple; by plugging in one connector cable the additional fosera power pack will work perfectly in sync with the primary system.



Easy to Install

All fosera systems function with a very simple Plug & Play installation. The solar module and the load can be connected in a matter of seconds, as the cable and plug design is intuitive and does not allow any wrong connections. A special cable is offered that can add up to four power packs in parallel connection. It is not necessary to have any special education or technical skills to install a fosera system.

Multiple Applications

The PSHS is also available with a USB plug for the universal use of charging devices such as mobile phones, MP3 players and computers. Several lamps, a phone charger, and a radio are currently available. Engineers are constantly expanding the product range.



Efficient fosera Light

fosera uses the latest, most efficient LED technology that can produce very bright light for a very long time. If the LED is used five hours a day it can last for more than 15 years. fosera lamps are available in three sizes to provide 45 lm, 70 lm and 180 lm. The fosera Lamp 200 only uses 1 W electrical power yet is as bright as a 30 W incandescent lamp.

Technical Data

	PSHS 2800	PSHS 4200	PSHS 7000
System Voltage	3.25 V	3.25 V	3.25 V
System Capacity @ C10	2.8 Ah	4.2 Ah	7.0 Ah
Module Peak Power	1.5 Wp	2.5 Wp	5 Wp
Module Current (I_{MPP})	0.34 A	0.58 A	1.15 A
Lamps Included	fosera Lamp 100	fosera Lamp 200	fosera Lamp 200
Possible Loads	Phone charging, Radio, fairy light, fans and many more		
Daily operation hours of one light *	7 hrs (Lamp 100)	6 hrs (Lamp 200)	12 hrs (Lamp 200)
Recommended Number of Loads **	1 x Lamp 100 1 x Lamp 50 1 x phone charge	1 x Lamp 200 2 x Lamp 50 1 x phone charge	2 x Lamp 200 2 x Lamp 100 1 x phone charge
Maximal number of loads	4 + USB	4 + USB	4 + USB

* Operation hours at an average irradiation of 5 kWh/m²/day

** phone charge per day ca. 500mAh, daily operation hours per lamp more than 3 hrs