

SUNSYS PCS²: the solution for smart integration of PV energy in electrical grids

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Matching intermittent energy sources (solar or wind power) with fluctuating demand is a major obstacle for smart grids. Socomec is facing up to this challenge by offering a system that converts and stores the renewable energy produced and compensates the intermittent nature of the energy source. But this solution offers more than that: SUNSYS PCS² optimizes self-consumption of smart grids, alleviates variances between the energy available and demand and meets islanding requirements.

Special features

Thanks to the totally innovative features of SUNSYS PCS², Socomec is one of the first manufacturers able to meet the requirements of multiple applications in one single device. SUNSYS PCS² assures three separate functions:

• Self consumption maximization in smart grid networks

The renewable energy that is produced is converted into AC current and used to supply the loads. Any surplus energy is stored in the SUNSYS PCS² batteries. If production of the renewable energy is interrupted, SUNSYS PCS² converts the energy stored in its battery system back into AC current in order to supply the loads. Once the batteries have been depleted, the system switches over to the grid.

• Grid support and ancillary services

When production of renewable energy is higher than demand, SUNSYS PCS² charges the batteries and maintains the frequency within tolerance. If demand is higher than the energy produced, SUNSYS PCS² injects the energy stored in the batteries back into the grid.

• Predictability of renewable energy production

Used in conjunction with renewable energy high power installations, SUNSYS PCS² can be used to ensure the production profile of a non-predictable renewable energy plant on the base of the values defined by the power utility.

SUNSYS PCS² is a modular “hot swap” scalable system, with an extremely wide power range (from a few kW up to several MW). This is extendible through the addition of different parallel units set up in a mixed configuration with the Socomec PV inverter and different battery technologies, depending on the applications to be supplied. Configuration is quick and simple.

The range includes:

• PCS² energy converters with transformer, suitable for buildings or solar farms, depending on their power:

- SUNSYS-PCS2-33TR – Rated output 33.3 kW
- SUNSYS-PCS2-66TR – Rated output 66.6 kW
- SUNSYS-PCS2-100TR – Rated output 100 kW

- PCS² energy converters without transformer, suitable for network support:
 - SUNSYS-PCS2-66TL – Rated output 66.6 kW
 - SUNSYS-PCS2-100TL – Rated output 100 kW
- PCS² energy storage systems using lithium-ion batteries, ideal for peak shaving applications:
 - SUNSYS-AB-LT30 – Rated capacity 30 kWh
 - SUNSYS-AB-LT38 – Rated capacity 38 kWh
- PCS² energy storage systems using lead-acid batteries, suitable for rapid recharging systems:
 - SUNSYS-AB-LA22 – Rated capacity 22 kWh to 33 kWh
 - SUNSYS-AB-LA32 – Rated capacity 32 kWh to 49 kWh

Additional functions

Socomec offers these optional extras:

- Insulation monitoring device (IMD),
- AC and DC surge protection devices (SPD).

Compliance with standards

SUNSYS PCS² is manufactured in Europe.

Key points:

- A modular, flexible and scalable solution: power and back-up requirements easily upgraded,
- High output efficiency (up to 98%),
- Compatible with different battery technologies, depending on the type of application,
- Easily integrated in existing renewable energy production installations



ABOUT SOCOMEC

Founded in 1922, SOCOMEC is an industrial group with a workforce of over 3000 people around the world in 21 subsidiaries. Our core business: the availability, control and safety of low voltage electrical networks... with increased focus on our customers' power performance. In 2012, SOCOMEC posted turnover of 441 million euros.



FOR MORE INFORMATION

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