

CONVERT^{SC} FLEX

Bi-directional Storage Converter

On-grid & off-grid versions
up to 1000 kVA



Outstanding conversion efficiency

ConvertSC FLEX is a bi-directional power converter from AEG Power Solutions with IGBT technology. The converter is the core element of any battery energy storage system as it charges and discharges batteries to store or provide power according to the application requirement (frequency control, peak shaving, energy shifting), or voltage control.

Critical applications

New challenges are appearing in the energy sector due to the ongoing shift from base-load fossil power plants towards volatile renewable energy sources, such as wind and photovoltaic. Among these challenges are voltage and frequency stabilization, as well as an increasing demand for balanced power and peak shaving. The majority of these problems can be solved with battery storage solutions.

While the battery system solely provides the storage capacity, it is the Storage Converter that ultimately transforms the chemically stored energy into a grid service by supplying power according to the application requirement.

FEATURES

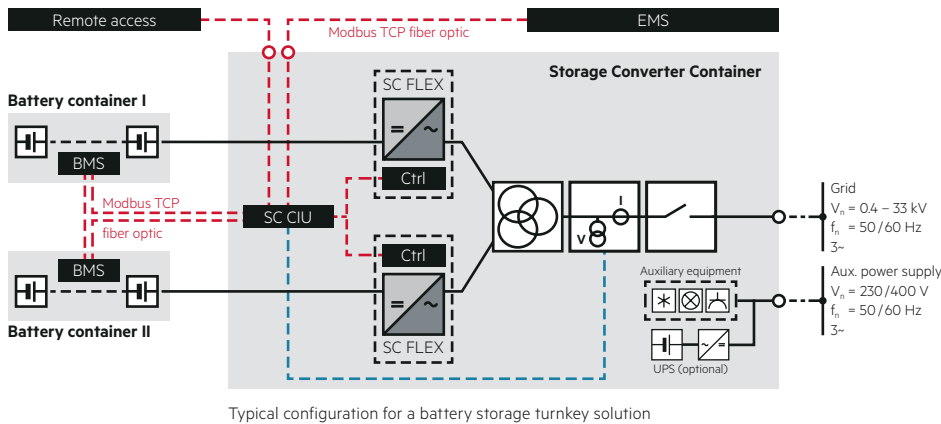
- Utility scale storage converter
- Up to 1000 kVA @50 °C conversion power
- Highest efficiency for charging and discharging
- Fully grid code compliant: BDEW & others
- Wide DC input range for various battery technologies
- Black start capability
- Seamless transition between on- and off-grid
- Cabinet depth 600 mm
- Initial charge function
- Highest power density
- Optional: back-up power for control & communication
- Modular design

BENEFITS

ConvertSC FLEX provides an outstanding conversion efficiency factor for both the charging and discharging phases. Thanks to its wide DC input range, it may be used with any state of the art battery technology currently available.

The latest option available features a seamless transition between on-grid and off-grid mode. This extends the battery energy storage system's usage beyond its core functions to back-up in the event of a black-out. The system can also be provided as a turnkey solution including battery and medium voltage transformer.

Storage solution



Storage Converter Technical Data*

- Power up to 1000 kVA
- DC-voltage range 330 V – 1000 V
- Max. efficiency 98.4 %
- Frequency 50/60 Hz
- Battery technology Pb, Li, Flow etc.
- Temperature range -20 °C to +50 °C
- Operation mode on-grid & off-grid

Storage Converter functionality

ConvertSC FLEX is based on the highly successful Protect PV solar inverter platform. A power stack with advanced design, measuring and control technology forms the heart of the Storage Converter. The IGBT based converter technology is inherently bi-directional and allows a four quadrant operation. The converter provides an outstanding conversion efficiency factor during inverter and rectifier operation.

The Storage Converter can be controlled by an Energy Management System, building or micro grid management system. AEG PS' Storage Converter supports multiple communication protocols such as Modbus TCP, Modbus RTU or RS485.

Remote control of the Storage Converter through an Energy Management System (EMS) is possible when integrated into a smart grid. Data recording of the Storage Converter is available 24/7 and is accessible anywhere in the world.

Specialized distinction

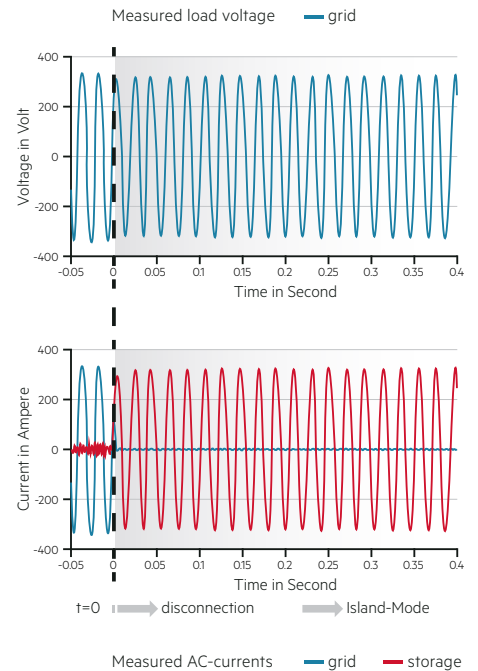
The cabinets are only 600 mm deep, thereby allowing for two rows of ConvertSC FLEX to be installed in a standard industrial container with space in between for personnel access. The modular design allows for easy expansion by the addition of supplementary ConvertSC FLEX units.

Due to the wide DC input range that is available, ConvertSC FLEX also lends itself readily for use with any state of the art battery technology currently available.

Seamless on-grid/off-grid transition

The off-grid option allows the inverter to transition smoothly from on-grid to off-grid and vice versa. It allows usage of energy storage similar to a traditional UPS as it transfers between off-grid and on-grid without interruption and with only a limited distortion to the voltage.

Battery Energy Storage Solutions (BESS) dedicated to peak shaving will serve at the same time as a back-up power system. Paralleling of several energy sources is possible and allows the implementation of a stable power supply to remote areas. The option also allows to black start an electrical power supply with several independent energy sources working together.



* Further information available upon request

AEG Power Solutions

Approach your local AEG Power Solutions representative for further support. Contact details can be found on: www.aegps.com