



SUNSYS Shelter

Solar Power System in shelter or container

Solution
in container



SHELT 003 A

The solution for

- > PV production and energy storage in on-grid applications
- > PV production and energy storage in off-grid applications

The benefits

- > High efficiency in all types of weather conditions
- > High reliability
- > Fault-tolerant solution
- > Savings on the overall cost of the plant

SOCOME C: guaranteed bankability

A solar park is an investment that often requires additional funding. Due to our financial stability, independence, recognized expertise and the quality of the proposed solutions provided to create many prestigious photovoltaic installations, SOCOME C is a bankable company with a solid reputation among credit institutions.

Related products

- > SUNSYS inverters, page 12
- > SUNSYS HPS hybrid power system, page 46
- > SUNSYS PCS² power conversion system and storage, page 42
- > IFB enclosures, page 54

Centralized Grounding Kit option

The single centralized grounding kit, available as option for all SUNSYS P inverters installed in the same PV plant, allows to earth the solar modules in total safety and permanently control the status of the photovoltaic field, signalling any irregularities and maintaining the operating status of the entire plant.

A perfect tailor-made solution

- Complete infrastructure for medium and large photovoltaic power plants to be installed between the photovoltaic modules and the MV network.
- Suitable for installation in harsh environments with heavy climatic and weather conditions (i.e. desert, marine and industrial applications).
- Modular solution up to 2 MVA in a single 40 ft container managing up to 60 independent MPPT.
- Fully assembled and tested turnkey solution ready to be installed.
- Easy transportation via road, rail or water in 20 ft or 40 ft high-cube container.
- No construction permit required.
- Property cost savings.

A comprehensive infrastructure

- SUNSYS SHELTER is a complete infrastructure in shelter or container including the following devices according to the application:
 - SUNSYS P100TL or P100TL1K photovoltaic inverters,
 - SUNSYS HPS hybrid power system,
 - SUNSYS PCS² power conversion system and storage,
 - IFB enclosures,
 - low-voltage protection board,
 - medium-voltage protection board
 - network interface device,
 - certified energy meter, conductors and accessories,
 - high output three-phase medium voltage transformer,
 - high-efficiency, three-phase auxiliary server,
 - air conditioning system,
 - monitoring system.
- Full metal structure sized for static and electromagnetic protection.
- Wall and roof thermal insulation ensures the highest protection against water, wind, sand and dust even in the worst operating conditions.
- Internal wall and ceiling materials provide fire protection that meet international standard requirements.

Specialist service for your projects

The SOCOMEC pre-sales service personnel will help develop a tailor-made solution for your installation site, optimising efficiency and reliability, as well the output of your investment. Our engineers will design, develop and configure the project in collaboration with you - the customer - in mind. Our technical assistance service is on-hand to commission and activate the site, configure the system and if necessary provide customer training.

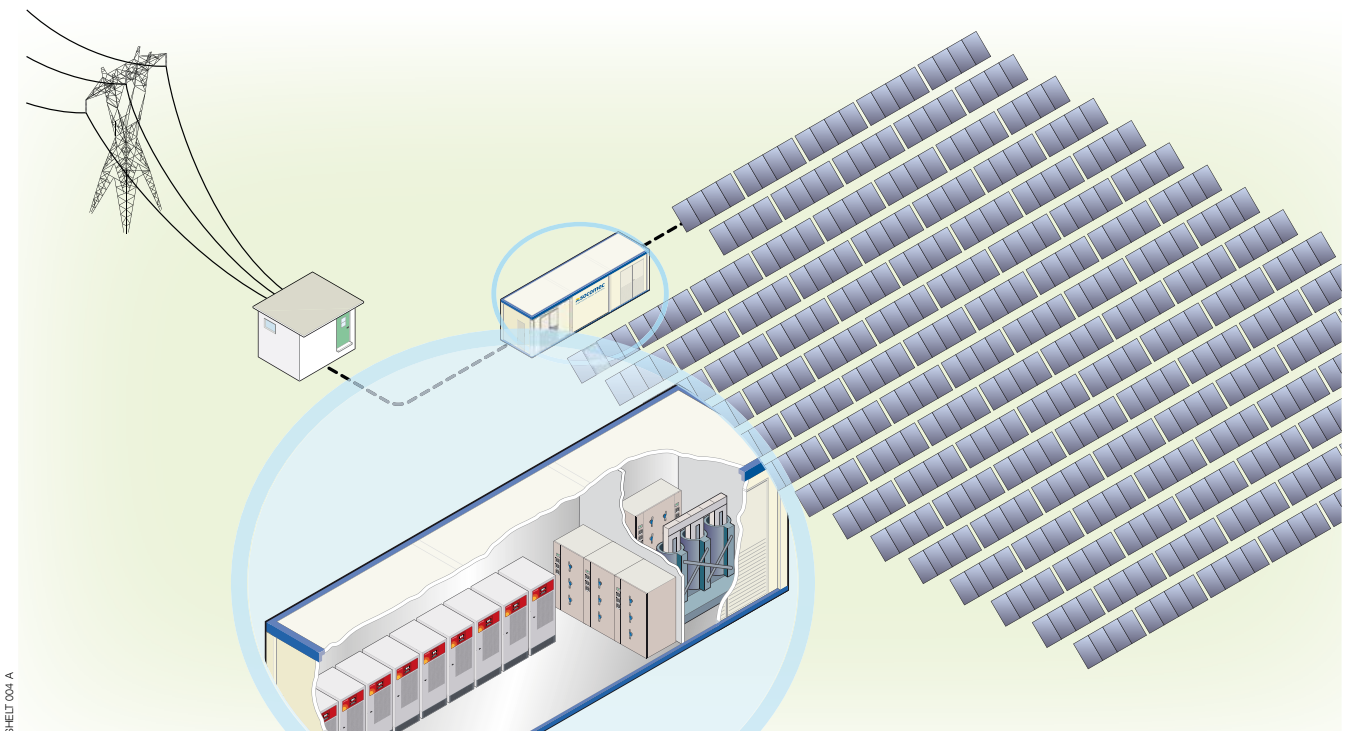
Quality of materials

SOCOMECS has selected partners that supply high-quality European-manufactured materials. The materials are designed to last in critical operating and environmental conditions and to guarantee continuous operation throughout the entire life of the installation. The electrical dimensioning of components and the thermal adaptation of technical rooms ensure that components operate in favourable conditions and maximize their lifetime.



APPLI 622 A

Example of application: solar park



SHELT 004 A

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Solution in container

SUNSYS P100TL - P100TL1K

SUNSYS 048 B



- Three-phase photovoltaic inverter.
- Output power rating: 100 kW.
- Modular architecture with three-level conversion.
- DPC (Dynamic Power Control) function.
- Transformerless architecture.
- Maximum efficiency: 98 %.

Further information, p. 32 & 34.

IFB enclosures

COIFF-PIV (023 A



- Photovoltaic string protection and monitoring enclosures.
- For parallel connection, protection and isolation up to 32 strings.
- Protection against overvoltage.
- Monitoring of the strings and photovoltaic installation.

Further information, p. 54.

MV protection enclosure

- Prefabricated NMG cells or similar.
- Rated voltage: 20 kV⁽¹⁾.
- Isolation voltage: 24 kV⁽¹⁾.
- Rated frequency: 50/60 Hz.
- Rated current: 630 A⁽¹⁾.
- Short-circuit current: 12.5 kA.
- Degree of protection: IP30.
- Compliance to standards: IEC EN 62271-100.
- Includes isolation box with fuses and transformer isolation cell with break switch.

MV/LV transformer

SHLTT 007 A



- Epoxy resin isolated three-phase transformer.
- Power: 160 to 2000 kVA (depending on the number of inverters).
- Vn1: 20 kV⁽¹⁾.
- Vn2: 0.28 kV or 0,32 kV.
- Dyn11 group.
- Frequency: 50 Hz.
- Temperature probe: 3 x PT100 probes and digital thermometric monitoring controller.
- Options: additional ventilation kits.

LV protection enclosure

- FUSERBLOC, fuse combination switches.
- Insulation controller.
- SURGYS G51-PV and SURGYS D40, surge protection devices (page 61).
- Thermometric measurement switchboard for transformer protection and certified current transformers for measurements.

Three-phase auxiliary server transformer

- Epoxy resin.
- Power: 10/16/25/50 kVA (depending on the number of inverters).
- Vn1 primary voltage: 0.40 kV.
- Vn2 secondary voltage: 0.28 kV or 0.32 kV.
- Frequency: 50 Hz.

SUNSYS HPS

SUNSYS 120 A



- Three-phase hybrid power system
- Output power from 40 to 200 kVA.
- Power scalability up to 1.2 MVA

Further information, p. 46.

ITYS ES

GAMME 120 A



- Single-phase UPS system for supplying MV/LV transformer cabins.
- Power: 1000/2000/3000 VA.
- Technology: VFI - online double conversion.
- Output rated voltage: 230 VAC.
- Permanent regulation of output voltage and frequency.
- Internal batteries.

Enclosure for meters

- Durable resin enclosure placed close to the inverter's mains box.
- Certified energy meter.
- Conductors.
- Accessories.

Air-conditioning

- Forced ventilation controlled by two thermostats, one for the transformer room and one for the inverter room.
- High precision free-cooling operating system.
- Three-phase air-conditioner.
- Rated thermal power: 10.5 kW, 36100 BTU⁽¹⁾.
- Rated electric power: 2.94 kW⁽¹⁾.
- Rated voltage supply: 400 VAC/50 Hz.

Supervision

- SUNGUARD, monitoring system (page 66).
- DIRIS, monitoring of energy efficiency (page 76).

SUNSYS PCS²

SUNSYS 120 A

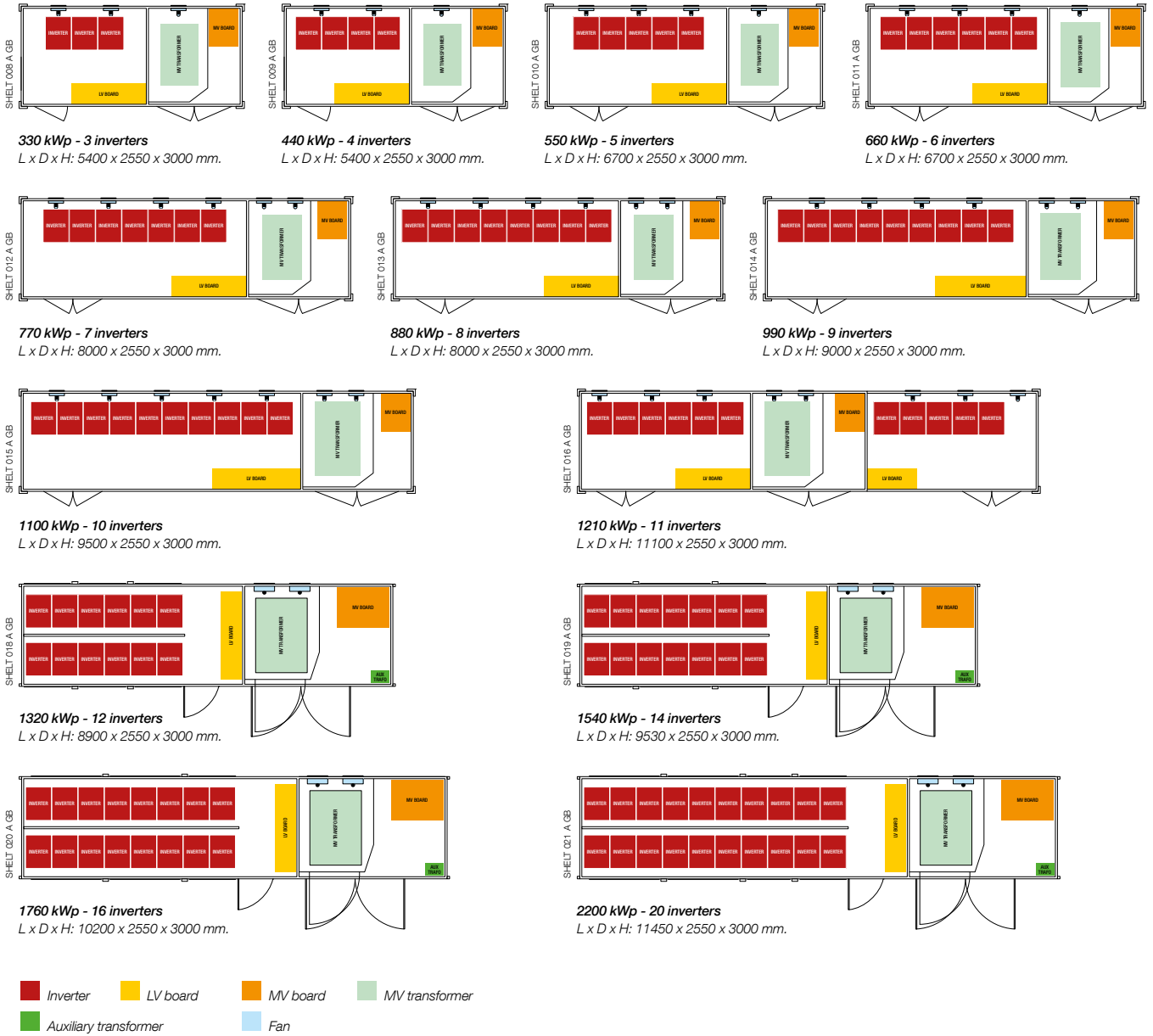


- Power conversion system and storage.
- Output power from 33 to MW.
- Modular, flexible and scalable solutions.
- Highly efficient.
- Compatible with different battery technologies depending on the application (e.g. lead-acid, lithium-ion).

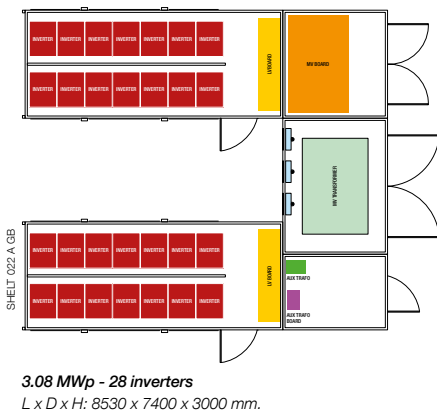
Further information, p. 42.

(1) Others on request.

Shelter - standard configurations for on-grid applications



Shelter - special configurations for on-grid applications



Container - standard configurations for off-grid applications

