

125 / 250

**THREE-PHASE  
BATTERY  
INVERTER WITH  
TRANSFORMER**

The INGECON® SUN STORAGE Power battery inverter is a three-phase, two-way unit that can either be used in off-grid systems or connected to the general supply network. This inverter offers a high power density in a single power block, providing a choice of configurable operating modes.

**Battery management**

The INGECON® SUN STORAGE Power features high-tech battery management in order to maximise the useful life of the storage system. The battery temperature can be monitored at all times, guaranteeing a correct operation.

**Back-up genset**

Furthermore, the INGECON® SUN STORAGE Power permits the connection of a back-up generator, should this be necessary. It is possible to start-up the inverter by using the genset, in order to charge the batteries.

**Maximum compatibility**

This inverter is 100% compatible with the INGECON® SUN inverters, making it possible to integrate a solar energy source into the AC grid. To do so, additional PV inverters are required.

**Software included**

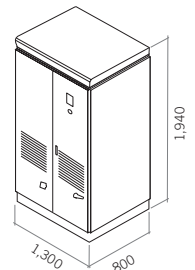
The INGECON® SUN Manager software is included at no extra charge. This can be used to monitor and record the inverter data over the Internet. Ethernet-TCP communications are supplied as standard.

The INGECON® SUN STORAGE Power three-phase inverter complies with the most demanding international standards and regulations.

**Standard 3 year warranty, extendable for up to 25 years**



Size (mm)



**Operating modes:**

**- Stand-alone mode**

The INGECON® SUN STORAGE Power generates a stand-alone AC grid and acts as a grid manager, guaranteeing the correct balance between generation, consumption and the storage system. To achieve this, the INGECON® SUN STORAGE Power is able to control the energy flows between the grid and the batteries, based on the status at any given time. The INGECON® SUN STORAGE Power inverter allows a solar energy source to be integrated into the grid, through the use of INGECON® SUN inverters.

An advanced control system, requiring no communications, manages the power generated by the INGECON® SUN inverters, based on consumption data and the battery state of charge status. The back-up power source (a genset or the public grid) only connects when the battery state of charge is below a certain programmable threshold.

**- Grid-connected mode**

In this operating mode the inverter is connected to the grid and operates under the instructions of an external

controller (EMS: Energy Management System). Thus, in combination with the EMS Board, the EMS Manager or the EMS Plant Controller and an external wattmeter, the battery inverter is able to adapt the output power to a required value. In this way, different options are available: ramp rate control, self-consumption or constant power output in a PV plant. Furthermore, this operating mode makes it possible to implement peak-shaving strategies to reduce the electricity bill by decreasing the contracted power.

PROTECTIONS

- Galvanic isolation between the DC and AC sides.
- Short-circuits and overloads at the output.
- Insulation faults.
- DC switch.
- AC circuit breaker.

ACCESSORIES SUPPLIED AS STANDARD

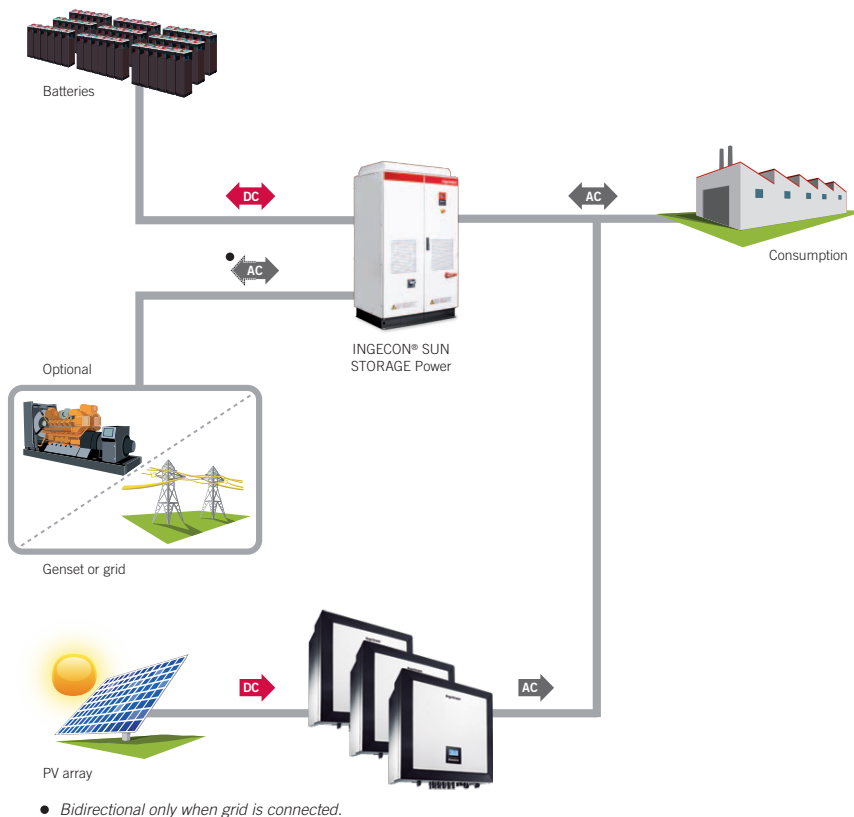
- Ethernet-TCP communication.
- CAN communication for smart batteries.
- Configurable potential free inputs.
- Configurable potential-free outputs, some for the connection and disconnection of a back-up genset.
- DC pre-charge system.
- Type 2, AC surge arresters.

- AC pre-charge system.
- AC wattmeter and switch for the auxiliary AC input.

OPTIONAL ACCESSORIES

- DC fuses.

**Schema for the Stand-alone mode**

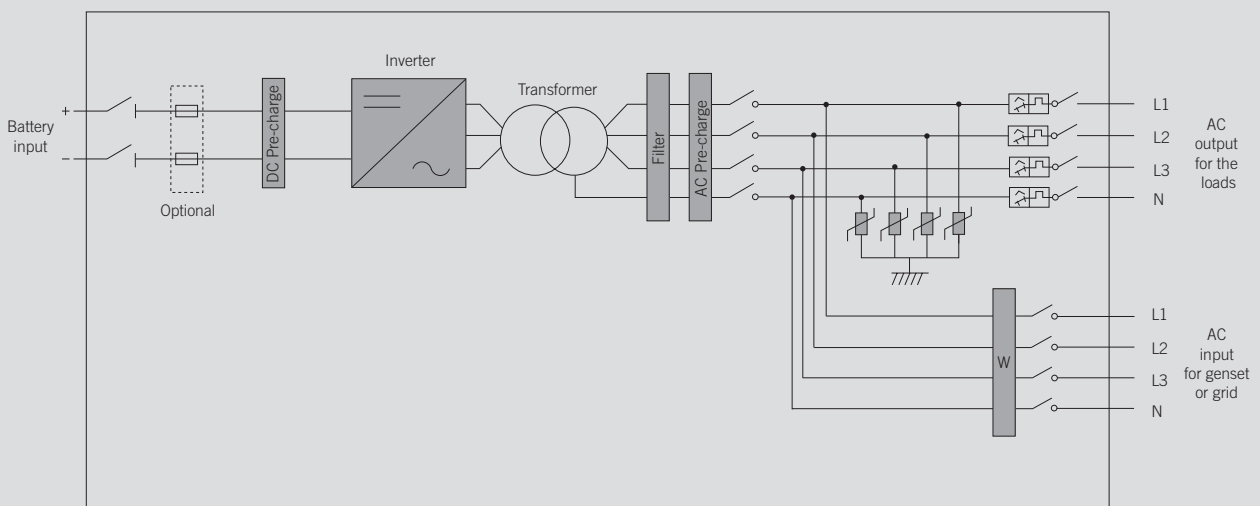


	125	250
<b>Batteries (DC)</b>		
Voltage range for stand-alone mode	330 - 820 V	578 - 820 V
Voltage range for grid-connected mode <sup>(1)</sup>	330 - 820 V	637 - 820 V
Maximum voltage <sup>(2)</sup>	1,000 V	1,000 V
Maximum current	400 A	450 A
Inputs	4	
Type of battery	Lead, Ni-Cd, Li-ion	
<b>Grid / Genset Input (AC)</b>		
Rated voltage	400 V	
Voltage range	320 - 480 V	
Frequency	50 / 60 Hz	
Frequency Range	40 - 70 Hz	
Charging current range	0 - 200 A	0 - 368 A
Maximum power	250 kVA	
<b>Output (AC)</b>		
Rated power <sup>(3)</sup>	125 kVA	250 kVA
Maximum current	200 A	368 A
Rated voltage	400 V	
Frequency	50 / 60 Hz	
<b>Efficiency</b>		
Maximum efficiency	96.9%	97.5%
<b>General Information</b>		
Galvanic isolation	Yes	
Air cooling	2,600 m <sup>3</sup> /h	
Stand-by consumption	30 W	
Ambient temperature	-20 °C to +65 °C	
Relative Humidity (Non-condensing)	0 - 95%	
Maximum altitude <sup>(4)</sup>	3,000 m	
Protection Class	IP20	
Weight	1,162 kg	1,500 kg

**Compliance with standards:** EN 61000-6-1, EN 61000-6-2, EN 61000-6-4, EN 61000-3-12, EN 61000-3-11, EN 62109-1, EN 62109-2, IEC 62103, EN 50178, FCC Part 15, EN 50438, IEC 62116, IEC 61727, VDE 0126-1-1

**Notes:** <sup>(1)</sup> Minimum voltage DC (V<sub>dc,min</sub>) for V<sub>grid,max</sub>=1.1 p.u. and Phi Cosine=1. If V<sub>grid,max</sub> is higher than this value, the minimum voltage should be corrected as V<sub>dc,min</sub> \* V<sub>grid,max</sub> / 1.1 <sup>(2)</sup> Above 820 V, the maximum current decreases gradually <sup>(3)</sup> AC Power for 40 °C ambient temperature <sup>(4)</sup> Over 1,000 m temperature for rated power is reduced at the rate of 4.5 °C for each 1,000 m.

SUN STORAGE Power





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