

100TL

THREE-PHASE TRANSFORMERLESS BATTERY INVERTER WITH THE MAXIMUM POWER DENSITY

Three-phase battery inverters for commercial, industrial and large-scale systems. These bidirectional storage inverters feature the same technology as Ingeteam's central photovoltaic inverters.

Lower operational costs

Thanks to the wireless communication network that the INGECON® SUN STORAGE 100TL enables, the storage system could be commissioned, monitored and controlled without cables. Moreover, its string inverter philosophy allows for a fast and easy replacement that does not require qualified technicians.

Greater flexibility and power density

A greater flexibility is possible thanks to its maximum DC voltage (1,100 V) and to its wide input voltage range (570-850 V). Great power density, with 100 kW of power in only 80 kg.

Robust and long-lasting design

Aluminium casing, especially conceived for outdoor installations (IP65). The design of the INGECON® SUN STORAGE 3Play inverter family guarantees the maximum life expectancy and the best features, even with high temperatures.

Ethernet and Wi-Fi as standard

This battery inverter features Ethernet and Wi-Fi communications as standard. These communications, together with the webserver that the inverter integrates, allow for a faster and more reliable commissioning by using a mobile phone, tablet or laptop. Furthermore, it is compatible with an external Cloud Connect.

EMS Inside

The inverter is equipped as standard with an energy management system (EMS). The EMS permits more advanced functionalities, such as self-consumption. Thanks to the built-in EMS, the installation can be monitored at all times via a Smartphone or a PC with the free INGECON® SUN Monitor application, available at the Play Store and App Store.

Possibility of reading an additional wattmeter in the existing PV system with inverters from another manufacturer.

EMS gateway

The INGECON SUN® EMS gateway functionality provides uniform, simple, and scalable control of generation and storage systems. This functionality enables remote control of the INGECON SUN® EMS using the Modbus TCP communication standard.

Standard 5 year warranty, extendable for up to 10 years

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Three-phase transformerless battery inverter with the maximum power density

Main features

- EMS inside, management of non-Ingteam PV inverters.
- Low voltage ride-through capability.
- Reactive power capability.
- Compatible with external Cloud Connect software.
- 98.8% maximum efficiency.
- Ethernet and Wi-Fi communications supplied as standard.

- Integrated Webserver.
- Software INGECON® SUN Monitor for PV plant monitoring.
- Suitable for indoor and outdoor installations (IP65).
- High temperature performance.
- 4 digital inputs and 2 digital outputs.
- It is necessary to add a pre-charge system.
- EMS gateway.

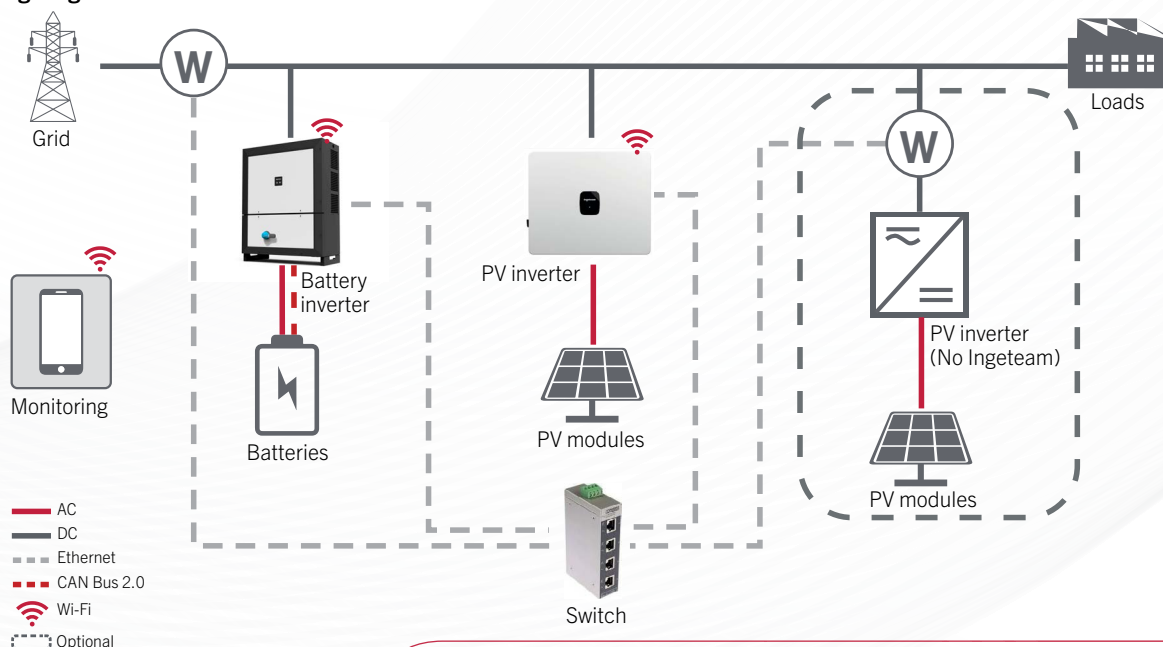
Protections

- Shortcircuits and overloads at the output.
- Anti-islanding with automatic disconnection.
- Insulation faults.
- AC overvoltages with type 2 surge arresters.
- DC overvoltages with type 2 surge arresters.

Benefits

- Greater power density.
- Greater cost-effectiveness thanks to the cabling cost reduction.
- High availability compared to central inverters.
- High efficiency rates.
- Easy maintenance.
- Possibility of AC paralleling up to 12 battery and 63 FV units.

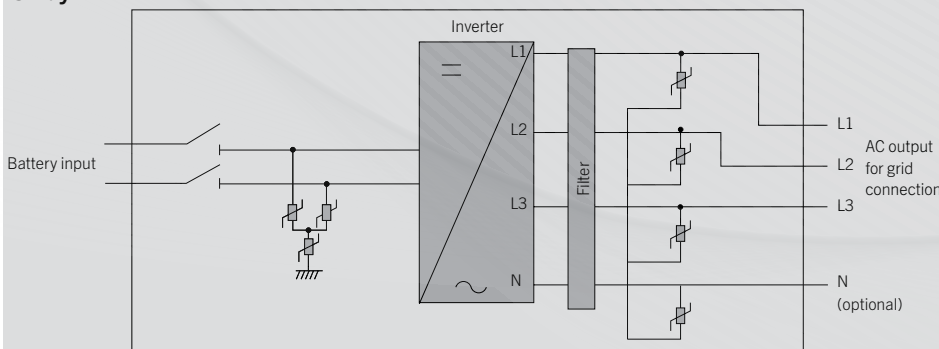
Wiring diagram



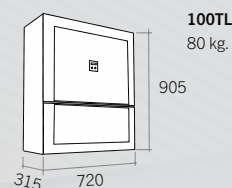
Integrated elements

Terminal blocks	✓
DC switch	✓
DC surge arresters, type 2	✓
AC surge arresters, type 2	✓

3Play TL



Size and weight (mm)



Specifications included in this datasheet could change without notice. Please contact Ingteam's sales department in case of any queries.

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INPUT (DC)

Voltage range ⁽¹⁾	627 - 850 V
Maximum voltage ⁽²⁾	1,100 V
Maximum power (charge / discharge)	60 kW / 100 kW
Maximum current (charge / discharge)	96 A / 159 A
Battery type	Li-ion, lead
Shortcircuit current	240 A
Communication with the BMS (Battery Management System)	CAN Bus 2.0

OUTPUT (AC)

Maximum power (charge / discharge)	60 kW / 100 kW
Max. temperature at rated power ⁽³⁾	50 °C
Maximum current (charge / discharge)	87 A / 145 A
Rated voltage	400 V
Rated frequency	50 / 60 Hz
Power factor	1
Adjustable power factor	Yes, 0 - 1 (leading / lagging)
THD	<3%

EFFICIENCY

Maximum efficiency	98.8%
Euroefficiency	98.1%

GENERAL INFORMATION

Refrigeration system	Forced ventilation
Air flow	570 m ³ /h
Stand-by consumption	20 W
Consumption at night	1 W
Ambient temperature	-25 °C to 60 °C
Relative humidity (non-condensing)	0 - 100%
Protection class	IP65 / NEMA 4
RCD	1,000 mA
Maximum operating altitude ⁽⁴⁾	3,000 m

Connection
 AC: Max. Cross section: 240 mm² (one wire)
 DC connection: Max. Cross section: 300 mm² (one wire)
 Copper and Aluminium cabling permitted for DC and AC

Marking	CE
EMC and safety standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12, EN 62109-1, EN 62109-2, EN 50178, IEC 62116, IEC 61683, EN 50530, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-30, IEC 60068-2-68
Grid connection standards	IEC 61727, EN 50549-1, EN 50549-2, UNE 206007-1 IN, NTS 2.1 SEPE, NTS 1.1 SENP, CEI 0-21, CEI 0-16, Arrete 9 du Juin, ABNT NBR 16149, ABNT NBR 16150, NDU-015, Portaria 73

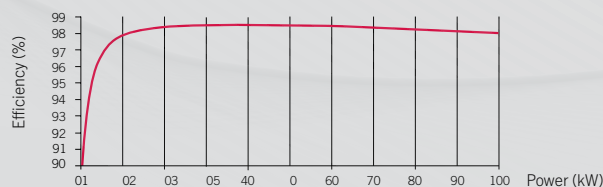
Notes

(1) $V_{min\ batt}$ is for rated conditions ($V_{ac}=1.1$ p.u. and Power Factor=1). $V_{min\ batt}$ will \otimes SUN STORAGE 100TL $V_{dc} = 627$ V depend on the grid voltage (V_{ac}), according to this relation: $V_{min\ batt}=1.1*1.425*V_{ac}$

(2) The inverter does not start operating until $V_{dc} < 1,000$ V

(3) For each °C of increase, the output power will be reduced at the rate of 2.3%

(4) Beyond 1,000 m, the maximum temperature at rated power will decrease at the rate of 5.5 °C per every additional 1,000 m.

Efficiency INGECON SUN STORAGE 100TL $V_{dc} = 627$ V

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