

THREE-PHASE TRANSFORMERLESS DC-TO-DC STORAGE CONVERTER

DC-DC converter up to 1,700 kW

The DC-DC Series of the INGECON® SUN STORAGE Power family is a bi-directional DC-to-DC converter designed to operate in combination with DC-to-AC solar PV inverters. Thus, it is intended to create DC-coupled solar-plus-storage systems. Besides, it features the same technology as Ingeteam's PV inverters, facilitating the supply of spare parts.

Solar PV input

Optionally, this converter could feature a solar PV input. This additional PV input could also have its own fuses and motorized switch.

Battery management

The INGECON® SUN STORAGE Power features a highly advanced battery control technology, ensuring the maximum life of the storage system. The battery temperature could be controlled at all times ensuring an enhanced lifespan of the accumulator. This converter is 100% compatible with Ingeteam's PV inverters.

Software included

Included at no extra cost the software INGECON® SUN Manager for monitoring and recording the inverter data over the Internet. Ethernet communications are supplied as standard.

Standard 5 year warranty, extendable for up to 25 years

PROTECTIONS

- Lightning induced surge arresters, type II.
- Insulation failures.
- Motorized DC switch for the batteries.
- Additional protection for the power stack, as it is air cooled by a closed loop.

INTEGRATED ACCESSORIES

- Ethernet communication.
- DC pre-charge system.

OPTIONAL ACCESSORIES

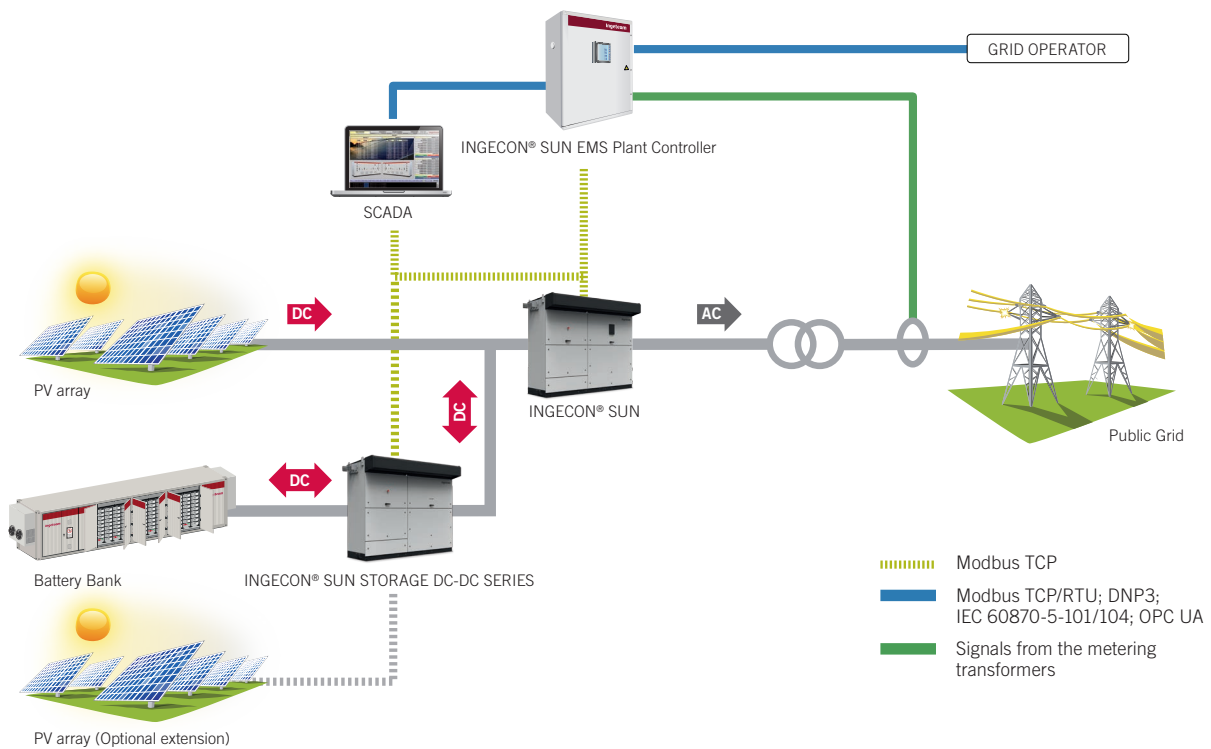
- DC fuses.
- Heating kit, for operating at an ambient temperature of -30 °C.
- PV input.
- Motorized DC switch for the PV input.



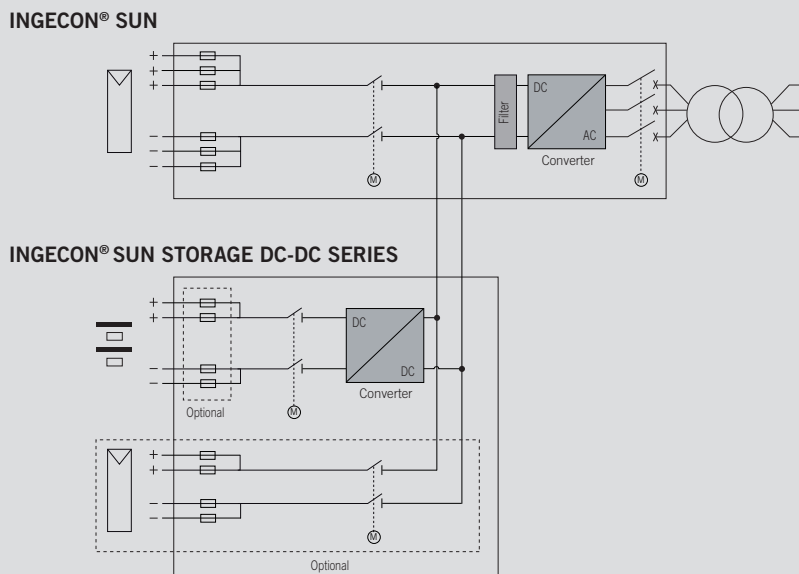
DC-DC converter up to 1500 kW

Advantages of DC-coupling

- The main advantage of a DC-coupled system is that the regulatory requirements are lower than the ones needed for an AC-coupled solar-plus-storage system, as there is no need to prepare an interconnection study. Thus, the administrative procedure and its costs are lower too.
- Clipping Recapture. The overall system revenues could be maximized by recapturing the excess of solar energy due to the oversizing ratio between the installed DC power and the AC output power of every PV power plant.
- Low voltage generation. Thanks to the battery voltage range, a DC-coupled solar-plus-storage system enables an earlier converter starting point, as the minimum voltage threshold for this equipment is lower. As a result, the solar generation can be maximized by capturing this energy at low voltages.



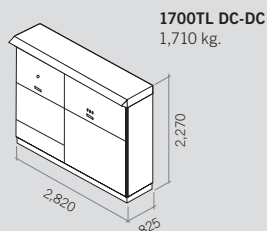
SYSTEM DIAGRAM



1700TL DC-DC	
Battery Input	
Voltage range	600 - 1,300 V
Maximum voltage	1,500 V
Maximum DC current	1,700 A
Number of inputs	6 inputs
Type of connection	Single copper bar (up to 30 cables) or multiple copper bars with fuse holders
DC switch	Motorized DC load break disconnect
Overvoltage protections	Type II surge arrester
DC Output	
Maximum power ⁽¹⁾	1,700 kW
Voltage range MPPT	600 - 1,300 V
Maximum voltage	1,500 V
Maximum DC current	1,700 A
Type of connection	Connection to copper bars
PV Input (optional)	
Voltage range MPPT	600 - 1,300 V
Maximum voltage	1,500 V
Maximum DC current	1,800 A
Number of inputs with fuse holders	8 inputs
Fuse dimensions	63 A / 1,500 V to 500 A / 1,500 V fuses (optional)
Type of connection	Connection to copper bar
DC switch	Motorized DC load break disconnect
Overvoltage protections	Type II surge arrester
Features	
Maximum efficiency	99%
Euroefficiency / CEC	98.5%
Max. consumption aux. services	4,250 W
Stand-by or night consumption	90 W
Average power consumption per day	2,000 W
General Information	
Ambient temperature	-20 °C to +60 °C
Relative humidity (non-condensing)	0 - 100%
Protection class	NEMA 3R / IP54
Maximum altitude	4,500 m (for installations beyond 1,000 m please contact Ingeteam's BESS sales department)
Cooling system	Air forced with temperature control (230V phase + neutral power supply)
Air flow range	0 - 7,800 m ³ /h
Average air flow	4,200 m ³ /h
Acoustic emission (100% / 50% load)	<66 dB(A) at 10 m / <54.5 dB(A) at 10 m
Safety certifications	EN 50178

Note: ⁽¹⁾ The maximum power depends on the minimum DC voltage of the system.

Size and weight (mm)





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