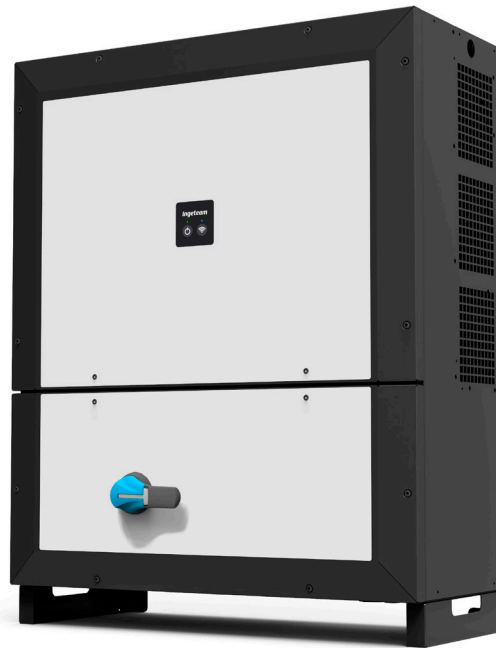


**INGECON**

**SUN STORAGE**

**3Play**  
TL Series



## 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.

**Standard 5 year warranty, extendable upon request.**

# 100TL Three-phase transformerless battery inverter with the maximum power density

### Main features

- EMS inside.
- 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.

### 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.

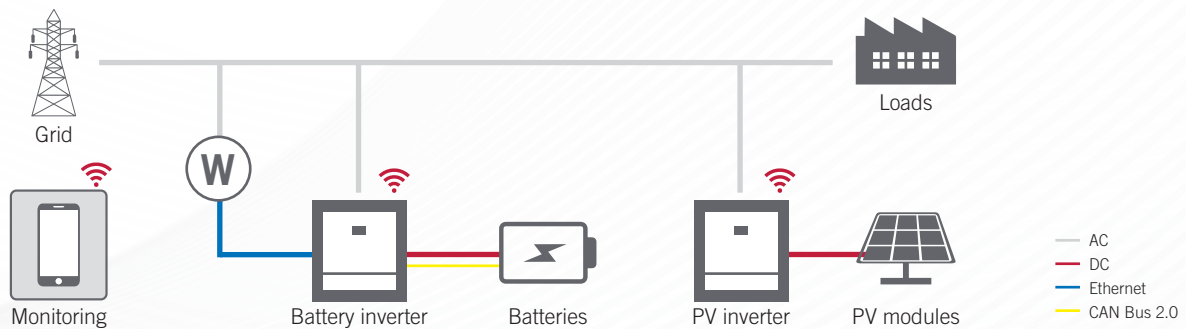
### Optional accessories

- Self-consumption kit.
- RS-485 communication.

### Benefits

- Greater power density.
- Greater cost-effectiveness thanks to the cabling cost reduction.
- High availability compared to central inverters.
- High efficiency rates.
- Easy maintenance.

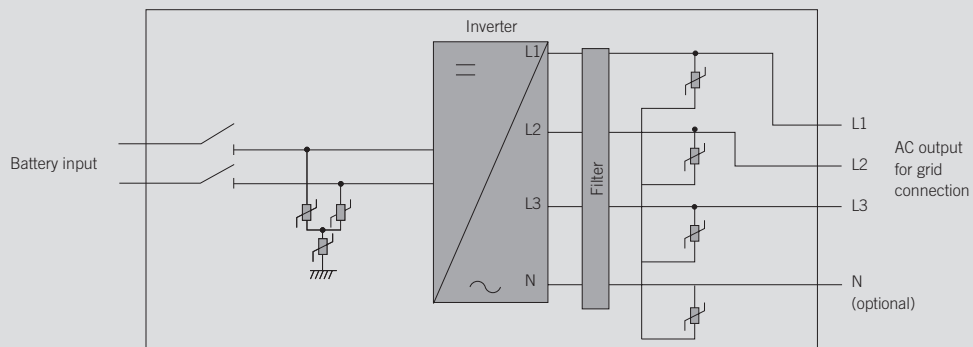
### Wiring diagram



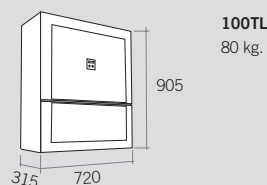
### Integrated elements

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

### 3Play TL



### Size and weight (mm)



## 100TL

## INPUT (DC)

Voltage range <sup>(1)</sup>	627 - 850 V
Maximum voltage <sup>(2)</sup>	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 <sup>(3)</sup>	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 m3/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 <sup>(4)</sup>	3,000 m
Connection	AC: Max. Cross section: 240 mm <sup>2</sup> (one wire) DC connection: Max. Cross section: 300 mm <sup>2</sup> (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

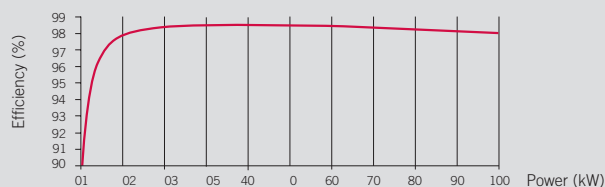
## Notes

(1)  $V_{min\ batt}$  is for rated conditions ( $V_{ac}=1.1\ p.u.$  and Power Factor=1).  $V_{min\ batt}$  will @ 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  $V_{dc} = 627V$ 

**Ingeteam Power Technology S.A. - Energy**

Sarriguren (Navarra), ESPAÑA  
(+34) 94 828 80 00  
energy@ingeteam.com

**Ingeteam Power Technology S.A. - Paneles**

Sesma (Navarra), ESPAÑA  
(+34) 94 869 84 55  
paneles@ingeteam.com

**Ingeteam Power Technology S.A. - Service**

Albacete, ESPAÑA  
(+34) 96 724 55 04  
service@ingeteam.com

**Ingeteam Power Technology S.A. - Technology**

Zamudio (Bizkaia), ESPAÑA  
(+34) 94 403 96 00  
technology@ingeteam.com

**Ingeteam Power Technology S.A. - Electronics**

Zamudio (Bizkaia), ESPAÑA  
(+34) 94 403 96 00  
ingeteam.electronics@ingeteam.com

**Ingeteam Power Technology S.A. - Converters**

Ortuella (Bizkaia), ESPAÑA  
(+34) 94 403 96 00  
technology@ingeteam.com

**Ingeteam Indar Machines S.A.**

Beasain (Gipuzkoa), ESPAÑA  
(+34) 94 302 82 00  
indar@ingeteam.com

**Ingeteam R&D Europe, S.L.**

Zamudio (Bizkaia), ESPAÑA  
(+34) 94 403 96 00

**Ingeteam SAS**

Labège, FRANCIA  
33 (0) 5 61 25 00 00  
france@ingeteam.com

**Ingeteam UK LTD**

East Kibride, REINO UNIDO  
+44 (0) 141 488 5290

**Ingeteam S.r.l**

Castel Bolognese (RA), ITALIA  
(+39) 0546 651490  
Italia.energy@ingeteam.com

**Ingeteam GmbH**

Düsseldorf, ALEMANIA  
+49 (0) 211 7817 7950  
deutschland@ingeteam.com

**Ingeteam a.s.**

Ostrava-Pustkovec, REPÚBLICA CHECA  
+42(0) 59 747 68 20  
czech@ingeteam.com

**Ingeteam Sp.zo.o.**

Warsaw, POLONIA  
+48 22 821 99 30  
polska@ingeteam.com

**Ingeteam Service s.r.l.**

Constanta, RUMANIA  
(+40) 728 993 202

**Ingeteam Bulgaria EAD**

Kavarna, BULGARIA

**Ingeteam Inc Headquarters**

Milwaukee, EE.UU.  
(+1) 414 934 4100  
usa@ingeteam.com

**Ingeteam México S.A. de C.V.**

Ciudad de México, MÉXICO  
(+52) 55 6586 9930  
northamerica@ingeteam.com

**Ingeteam México S.A. de C.V.**

Juchitán (Oaxaca), MÉXICO  
+52 971 281 0996  
service@ingeteam.com

**Ingeteam SpA**

Las Condes, Santiago CHILE  
(+56) 232 637 200  
chile@ingeteam.com

**Ingeteam Uruguay S.A.**

Montevideo, URUGUAY  
+59 8 2623 2805

**Ingeteam Panamá S.A.**

Penonomé, PANAMÁ  
(507) 66444834  
service@ingeteam.com

**Ingeteam Ltda.**

São Paulo, BRASIL  
(+55) 19 30 37 37 73  
brazil@ingeteam.com

**Ingeteam Ltda.**

Curitiba, BRASIL  
(+55) 41 32769841  
brazil@ingeteam.com

**Ingeteam Power Technology Shanghai Co., Ltd**

Shanghai, CHINA  
+86 139 1622 4886  
liu.yimin@ingeteam.com

**Ingeteam Vietnam CO., LTD**

Hanoi City, VIETNAM

**Ingeteam Power Technology SA**

Abu Dhabi, UAE  
+971 2 207 666

**Ingeteam Power Technology India Pvt. Ltd.**

Tamilnadu, INDIA

**Ingeteam Morocco SARLAU**

Casablanca, MARRUECOS

**Ingeteam Australia Pty Ltd**

North Wollongong, AUSTRALIA