

Product Certificate Number	230253-CER
Applicant	INGETEAM POWER TECHNOLOGY, S.A. Ciudad de la Innovación avenue 13 31621, Sarriguren, Navarra (Spain)
Series	INGECON SUN 3Play INGECON SUN STORAGE 3Play
Models	See pages 2 to 6
Type of generating unit	Photovoltaic inverter Energy storage Inverter
Technical Data	See pages 2 to 6
Software versions	Photovoltaic inverter: ABS1004_K Energy storage inverter: ABS1008_I
Network connection Standards	IEC 62109-1: 2010: Safety of power converters for use in photovoltaic power systems - Part 1: General requirements. IEC 62109-2: 2011: Safety of power converters for use in photovoltaic power systems. – Part 2: Particular requirements for inverters.
<p>Having assessed the report numbers: 20266-3-TR, 11505-35-TR and 11505-36-TR performed by CERE (Accredited Laboratory Nº 5314.01) based on the requirements of the EN ISO/IEC 17025: 2017.</p> <p>The above-mentioned generating unit complies with the requirements of the:</p> <p>IEC 62109-1: 2010: Safety of power converters for use in photovoltaic power systems - Part 1: General requirements. IEC 62109-2: 2011: Safety of power converters for use in photovoltaic power systems. – Part 2: Particular requirements for inverters.</p> <p>This certification is according to the CERE internal process PET-CERE-09 Rev 35, that defines the certification scheme, based on the requirements of the EN ISO/IEC 17065:2012. For this certification process the conformity assessment activities were based on:</p> <ul style="list-style-type: none"> • Testing of production samples selected by CERE. • Audit of quality system according to ISO 9001 with certificate number: ES123508-1 issued by a certification body accredited according to EN ISO/IEC 17021. • Inspection of the manufacturing process. <p>This certificate cancels and supersedes the certificate number 20552-10-CER issued on November 4, 2020.</p>	
<p>Madrid, April 17, 2023. This certificate is valid until November 4, 2025</p> <p style="text-align: right;">Miguel Martínez Lavin Certification Director</p>	

Technical data

INGECON SUN 3Play

INGECON SUN 100TL STD / INGECON SUN 100TL PRO						
Input (DC)						
Recommended PV array power range	56 – 80,2 kWp	91,1 – 130,5 kWp	96,2 – 137,8 kWp	101,2 - 145 kWp	106,3 – 152,3 kWp	111,3 – 159,5 kWp
Voltage range MPP	513 - 850 V	513 - 850 V	541,5 - 850 V	570 - 850 V	598,5 - 850 V	627 - 850 V
Maximum voltage	1100 V					
Maximum current	185 A					
Output (AC)						
Rated power at rated Vac	55,3 kW	90 kW	95 kW	100 kW	105 kW	110 kW
Maximum current	145 A					
Rated voltage	220 V	360 V	380 V	400 V	420 V	440 V
Rated frequency	50 Hz / 60 Hz					
Adjustable power factor	0 – 1 (leading / lagging)					

For AC voltage ranges not listed in the table above, between 360V and 440V, refer to the following formula:

Input (DC)	
Min MPP Voltage	$V_{ac} \times 1,425$
Max MPP Voltage	850 V
Maximum current	185 A
Output (AC)	
Rated power	$P_{ac} = \sqrt{3} \times V_{ac} \times I_{ac}$
Maximum current	145 A @50°C
Rated voltage	360 - 440 V
Rated frequency	50 Hz / 60 Hz

INGECON SUN 160TL STD / INGECON SUN 160TL PRO						
Input (DC)						
Recommended PV array power range	95 – 136 kWp	113 – 162,5 kWp	141 - 203 kWp	148 - 213 kWp	153,5 - 220 kWp	162 – 233,5 kWp
Voltage range MPP	576 - 1250 V	692 - 1250 V	864 - 1250 V	908 - 1250 V	936 - 1250 V	994 - 1250 V
Maximum voltaje	1500 V					
Maximum current	168 A					
Output (AC)						
Rated power at 25 °C / 40 °C / 50 °C	92,8 kW / 85,9 kW / 83,8 kW	111,4 kW / 103,1 kW / 100,6 kW	139,3 kW / 128,9 kW / 125,8 kW	146,2 kW / 135,3 kW / 132 kW	150,9 kW / 139,6 kW / 136,2 kW	160,1 kW / 148,2 kW / 144,6 kW
Maximum current at 25 °C / 40 °C / 50 °C	134 A / 124 A / 121 A					
Rated voltage	400 V	480 V	600 V	630 V	650 V	690 V
Rated frequency	50 Hz / 60 Hz					
Adjustable power factor	0 – 1 (leading / lagging)					

For AC voltage ranges not listed in the table above, between 400V and 690V, refer to the following formula:

Input (DC)	
Min MPP Voltage	$V_{ac} \times 1,44$
Max MPP Voltage	1250 V
Maximum current	168 A
Output (AC)	
Rated power	$P_{ac} = \sqrt{3} \times V_{ac} \times I_{ac}$
Maximum current	134 A @ 25°C 124 A @ 40°C 121 A @ 50°C
Rated voltage	400 - 690 V
Rated frequency	50 Hz / 60 Hz

INGECON SUN STORAGE 3Play

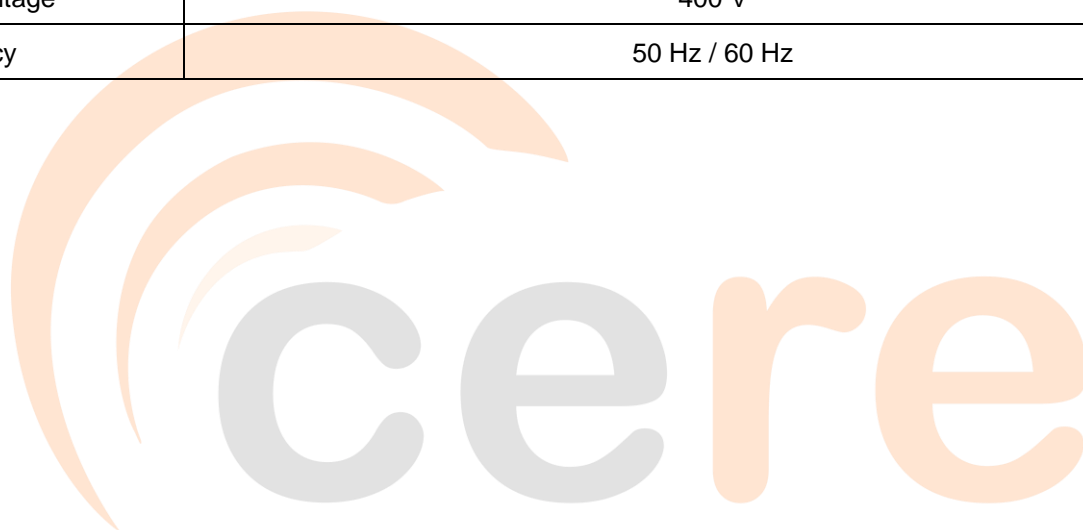
INGECON SUN STORAGE 100TL HV						
Input (DC)						
Voltage range (Min. / Max)	673 - 1250 V	729 - 1250 V	800 - 1250 V	895 - 1250 V	935 - 1250 V	951 - 1250 V
Maximum voltage	1500 V					
Maximum power (charge /discharge)	80 kW / 97,5 kW	86,6 kW / 98,8 kW	95 kW / 98,8 kW	98,8 kW / 98,8 kW	98,8 kW / 98,8 kW	98,8 kW / 98,8 kW
Maximum current (charge /discharge)	119 A / 144,7 A	119 A / 135,5 A	119 A / 123,5 A	119 A / 110,4 A	119 A / 105,7 A	119 A / 103,9 A
Output (AC)						
Rated power charge (25°C / 40°C / 50°C)	81 / 75 / 73,6 kW	87,6 / 81,3 / 79,7 kW	96,2 / 89,2 / 87,5 kW	100 / 99,8 / 97,9 kW	100 / 100 / 100 kW	100 / 100 / 100 kW
Rated power discharge (25°C / 40°C / 50°C)	98,6 / 91,3 / 89 kW	100 / 98,8 / 96,4 kW	100 / 100 / 100 kW	100 / 100 / 100 kW	100 / 100 / 100 kW	100 / 100 / 100 kW
Maximum current charge (25°C / 40°C / 50°C)	110 / 102 / 100 A					
Maximum current discharge (25°C / 40°C / 50°C)	134 / 124 / 121 A	125,5 / 124 / 121 A	114,3 / 114,3 / 114,3 A	102,2 / 102,2 / 102,2 A	97,9 / 97,9 / 97,9 A	96,2 / 96,2 / 96,2 A
Rated voltage	425 V	460 V	505 V	565 V	590 V	600 V
Rated frequency	50 Hz / 60 Hz					
Adjustable power factor	0 – 1 (leading / lagging)					

INGECON SUN STORAGE 140TL HV						
Input (DC)						
Voltage range (Min. / Max)	673 - 1250 V	729 - 1250 V	800 - 1250 V	895 - 1250 V	935 - 1250 V	951 - 1250 V
Maximum voltage	1500 V					
Maximum power (charge/ discharge)	80 kW / 97,5 kW	86,6 kW / 98,8 kW	95,1 kW / 115,8 kW	106,4 kW / 129,6 kW	111,1 kW / 135,3 kW	112,9 kW / 137,6 kW
Maximum current (charge/discharge)	119 A / 144,7 A					
Output (AC)						
Rated power charge (25°C / 40°C / 50°C)	81 / 75,1 / 73,6 kW	87,6 / 81,3 / 79,7 kW	96,2 / 89,2 / 87,5 kW	107,6 / 99,8 / 97,9 kW	112,4 / 104,2 / 102,2 kW	114,3 / 106 / 103,9 kW
Rated power dis- charge (25°C / 40°C / 50°C)	98,6 / 91,3 / 89,1 kW	106,8 / 98,8 / 96,4 kW	117,2 / 108,5 / 105,8 kW	131,1 / 121,3 / 118,4 kW	136,9 / 126,7 / 123,7 kW	139,3 / 128,9 / 125,7 kW
Maximum current charge (25°C / 40°C / 50°C)	110 / 102 / 100 A					
Maximum current discharge (25°C / 40°C / 50°C)	134 / 124 / 121 A					
Rated voltage	425 V	460 V	505 V	565 V	590 V	600 V
Rated frequency	50 Hz / 60 Hz					
Adjustable power factor	0 – 1 (leading / lagging)					

For AC voltage ranges not listed in the tables above, between 425V and 600V, refer to the following formula:

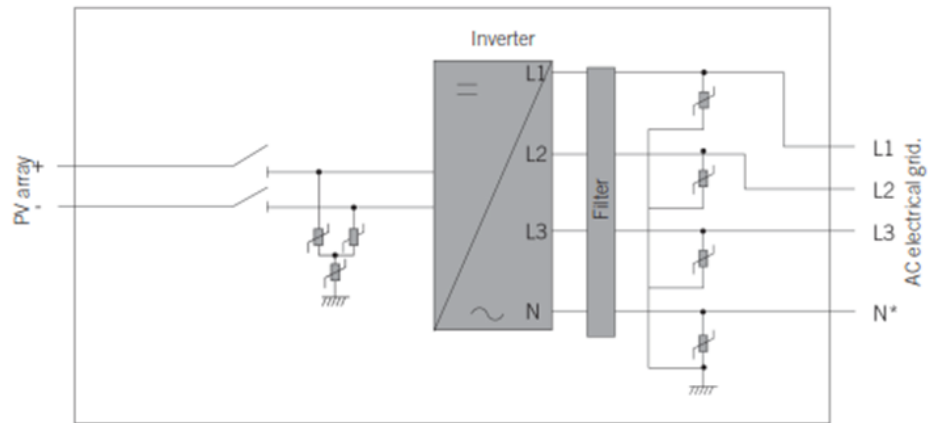
Input (DC)	
Vmin Batt	$V_{ac} \times 1,44 \times 1,1$
Vmax Batt	1250 V
Maximum current (charge / discharge)	119 A / 144,7 A
Output (AC)	
Rated power	$P_{ac} = \sqrt{3} \times V_{ac} \times I_{ac}$
Maximum current (charge / discharge)	110 A / 134 A @ 25°C 102 A / 124 A @ 40°C 100 A / 121 A @ 50°C
Rated voltage	425 - 600 V
Rated frequency	50 Hz / 60 Hz

Models	INGECON SUN STORAGE 100TL
Input (DC)	
Voltage range	627 - 850 V
Maximum Voltage	1100 V
Maximum power (charge/discharge)	60 kW / 100 kW
Maximum current charge/discharge	96 A / 159 A
Output (AC)	
Maximum active power (charge/discharge)	60 kW / 100 kW
Maximum reactive power	Qmax=60 kVAR @ S=100 kVA
Maximum current (charge/discharge)	87 A / 145 A
Rated voltage	400 V
Frequency	50 Hz / 60 Hz

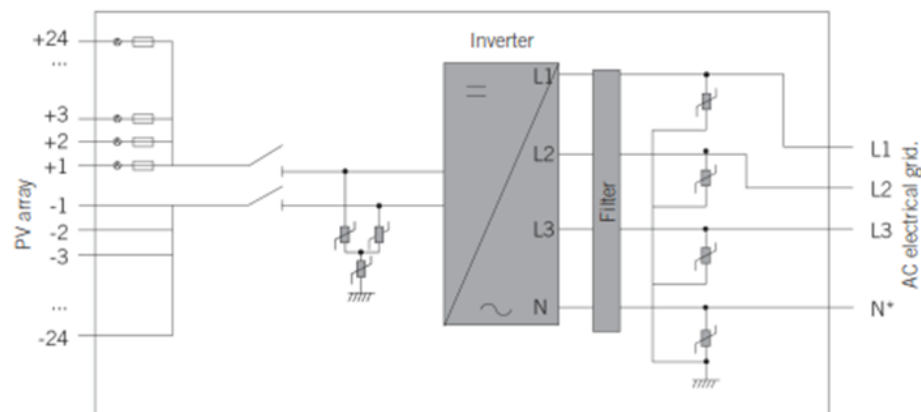


- Electrical diagram of INGECON SUN 3PLAY

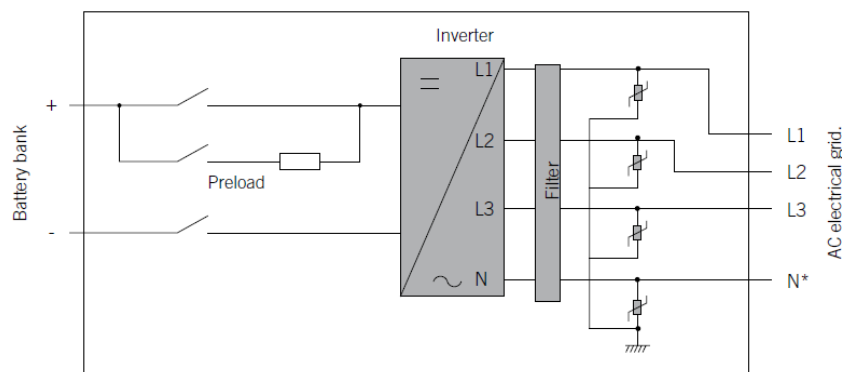
STD Version



PRO Version



- Electrical diagram of INGECON SUN STORAGE 3Play



The sample selected to test was representative of the production. The sample was selected in:

INGETEAM POWER TECHNOLOGY S.A. (Paneles)
Polígono Industrial El Juncarillo
31293, Sesma. Navarra. Spain

Sample Report Number:

11505-3-TM
20266-TM

The inspection of manufacturing process was performed in:
On June 14, 2022

INGETEAM POWER TECHNOLOGY S.A. (Paneles)
Polígono Industrial El Juncarillo
31293, Sesma. Navarra. Spain

Inspection Report Number:

21596-22-1-IF

RECORD OF CHANGES

Revision	Reason of the modification	Modification	Date
0	Initial version/Update of certificate 20552-10-CER	Inclusion of new variant models (Pages 2 to 6) and the update of the software version (Page 1)	17/04/2023