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| <b>Product Certificate Number</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>20487-2-CER</b>                                                                                                                                                                                                                                        |
| <b>Applicant</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ingeteam Power Technology S.A. - Energy<br>Avenida Ciudad De La Innovación, 13.<br>31621. Sarriguren. Navarra. SPAIN                                                                                                                                      |
| <b>Series/</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | INGECON SUN Power B Series 1500 Vdc<br>INGECON SUN Power B Series<br>INGECON SUN STORAGE Power B Series<br>INGECON SUN STORAGE Power B Series 1500 Vdc                                                                                                    |
| <b>Model/</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | See page 2                                                                                                                                                                                                                                                |
| <b>Type of generating unit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Photovoltaic Inverter                                                                                                                                                                                                                                     |
| <b>Technical Data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>See pages 3, 4, 5 and 6</b>                                                                                                                                                                                                                            |
| <b>Network connection rule</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>IEC 61000-3-11: 2017.</b> EMC -- Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current $\leq 75$ A and subject to conditional connection. Chapter 5. |
| <p>Having assessed the test report number: B28-15-AJ-02v2 performed by Fundación Tecnalia Research and Innovation and 11251-1-TR performed by Astrom Technical Advisors (CERE) based on the requirements of the EN ISO/IEC 17025:2005.</p> <p>The above-mentioned generating unit complies with the requirements of the: <b>IEC 61000-3-11: 2000.</b> EMC -- Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current <math>\leq 75</math> A and subject to conditional connection. Chapter 5.</p> <p>This certification is according the CERE internal process PET-CERE-09 Rev 20 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"><li>• Testing of production samples selected by CERE.</li><li>• Audit of quality system according ISO 9001 with certificate number: 0. 04. 12231 issued by a certification body accredited according EN ISO/IEC 17021.</li><li>• Inspection of the manufacturing process.</li></ul> <p>This certificate cancels and supersedes the certificate 11251-31-CER-E7 issued on May 30, 2019</p> |                                                                                                                                                                                                                                                           |
| Madrid, February 13, 2020. This certificate is valid until February 13, 2023.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                           |
| Miguel Martínez Lavin<br>Certification Manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                           |

Models

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <p><u>INGECON SUN Power B Series</u><br/> INGECON SUN 720TL B260<br/> INGECON SUN 748TL B270<br/> INGECON SUN 830TL B300<br/> INGECON SUN 860TL B310<br/> INGECON SUN 890TL B320<br/> INGECON SUN 915TL B330<br/> INGECON SUN 940TL B340<br/> INGECON SUN 970TL B350<br/> INGECON SUN 1000TL B360<br/> INGECON SUN 1025TL B370<br/> INGECON SUN 1050TL B380<br/> INGECON SUN 1070TL B385<br/> INGECON SUN 1080TL B390<br/> INGECON SUN 1110TL B400<br/> INGECON SUN 1140TL B410<br/> INGECON SUN 1165TL B420<br/> INGECON SUN 1190TL B430<br/> INGECON SUN 1220TL B440<br/> INGECON SUN 1250TL B450<br/> INGECON SUN 1250TL B450<br/> INGECON SUN 1275TL B460<br/> INGECON SUN 1303TL B470<br/> INGECON SUN XXXXTL BYYY (*)</p>                                                                                                                                        | <p><u>INGECON SUN STORAGE Power B Series</u><br/> INGECON SUN STORAGE 720TL B260<br/> INGECON SUN STORAGE 748TL B270<br/> INGECON SUN STORAGE 830TL B300<br/> INGECON SUN STORAGE 860TL B310<br/> INGECON SUN STORAGE 890TL B320<br/> INGECON SUN STORAGE 915TL B330<br/> INGECON SUN STORAGE 940TL B340<br/> INGECON SUN STORAGE 970TL B350<br/> INGECON SUN STORAGE 1000TL B360<br/> INGECON SUN STORAGE 1025TL B370<br/> INGECON SUN STORAGE 1050TL B380<br/> INGECON SUN STORAGE 1070TL B385<br/> INGECON SUN STORAGE 1080TL B390<br/> INGECON SUN STORAGE 1110TL B400<br/> INGECON SUN STORAGE 1140TL B410<br/> INGECON SUN STORAGE 1165TL B420<br/> INGECON SUN STORAGE 1190TL B430<br/> INGECON SUN STORAGE 1220TL B440<br/> INGECON SUN STORAGE 1250TL B450<br/> INGECON SUN STORAGE 1275TL B460<br/> INGECON SUN STORAGE 1303TL B470<br/> INGECON SUN STORAGE XXXXTL BYYY (**)</p>                                                                                                                                                                       |
| <p><u>INGECON SUN Power B Series 1500 Vdc</u><br/> INGECON SUN 1170TL B450<br/> INGECON SUN 1195TL B460<br/> INGECON SUN 1220TL B470<br/> INGECON SUN 1247TL B480<br/> INGECON SUN 1273TL B490<br/> INGECON SUN 1300TL B500<br/> INGECON SUN 1325TL B510<br/> INGECON SUN 1350TL B520<br/> INGECON SUN 1376TL B530<br/> INGECON SUN 1400TL B540<br/> INGECON SUN 1430TL B550<br/> INGECON SUN 1455TL B560<br/> INGECON SUN 1480TL B570<br/> INGECON SUN 1500TL B578<br/> INGECON SUN 1532TL B590<br/> INGECON SUN 1560TL B600<br/> INGECON SUN 1580TL B630<br/> INGECON SUN 1600TL B615<br/> INGECON SUN 1640TL B630<br/> INGECON SUN 1665TL B640<br/> INGECON SUN 1690TL B650<br/> INGECON SUN 1715TL B660<br/> INGECON SUN 1740TL B670<br/> INGECON SUN 1767TL B680<br/> INGECON SUN 1800TL B690<br/> INGECON SUN 1820TL B700<br/> INGECON SUN XXXXTL BYYY (***)</p> | <p><u>INGECON SUN STORAGE Power B Series 1500 Vdc</u><br/> INGECON SUN STORAGE 1170TL B450<br/> INGECON SUN STORAGE 1195TL B460<br/> INGECON SUN STORAGE 1220TL B470<br/> INGECON SUN STORAGE 1247TL B480<br/> INGECON SUN STORAGE 1273TL B490<br/> INGECON SUN STORAGE 1300TL B500<br/> INGECON SUN STORAGE 1325TL B510<br/> INGECON SUN STORAGE 1350TL B520<br/> INGECON SUN STORAGE 1376TL B530<br/> INGECON SUN STORAGE 1400TL B540<br/> INGECON SUN STORAGE 1430TL B550<br/> INGECON SUN STORAGE 1455TL B560<br/> INGECON SUN STORAGE 1480TL B570<br/> INGECON SUN STORAGE 1500TL B578<br/> INGECON SUN STORAGE 1532TL B590<br/> INGECON SUN STORAGE 1560TL B600<br/> INGECON SUN STORAGE 1600TL B615<br/> INGECON SUN STORAGE 1640TL B630<br/> INGECON SUN STORAGE 1665TL B640<br/> INGECON SUN STORAGE 1690TL B650<br/> INGECON SUN STORAGE 1715TL B660<br/> INGECON SUN STORAGE 1740TL B670<br/> INGECON SUN STORAGE 1767TL B680<br/> INGECON SUN STORAGE 1800TL B690<br/> INGECON SUN STORAGE 1820TL B700<br/> INGECON SUN STORAGE XXXXTL BYYY (***)</p> |
| <p>(*) This reference indicates the equipment between 220 V and 470 V of AC voltage (YYY) and between 610 kW and 1303 kW of AC power at 35°C (XXXX).<br/> (**) This reference indicates the equipment between 220 V and 470 V of AC voltage (YYY) and between 610 kW and 1303 kW of AC power at 35°C (XXXX).<br/> (***) This reference indicates the equipment between 333 V and 700 V of AC voltage (YYY) and between 865 kW and 1820 kW of AC power at 30°C (XXXX).</p>                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

INGECON SUN Power B Series 1500 Vdc

| PV inverters with AC voltage ranging from 333 V to 700 V |                                                                                 |
|----------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                        |                                                                                 |
| Recommended PV array power range                         | $P_{dc.min} = 1,1 * P_{ac}$ (50°C) $P_{ac.max} = 1,3 * P_{ac}$ (30 °C)          |
| Voltage MPP min                                          | $V_{mpp.min} = \frac{1,732 \sqrt{\frac{2}{3} V^2 + (0,04 * I_{max})^2}}{0,985}$ |
| Voltage MPP max                                          | 1300 V                                                                          |
| Maximum Voltage                                          | 1500 V                                                                          |
| Maximum Current                                          | 1850 A                                                                          |
| <b>Output (AC)</b>                                       |                                                                                 |
| Power @30°C/@50°C                                        | $P_{ac} = (\sqrt{3}) * V_{ac} * I_{ac}$                                         |
| Current @30°C/@50°C                                      | 1500 A/1350 A                                                                   |
| Rated Voltage                                            | $V_{ac} = 333 \text{ V} \dots 700 \text{ V}$                                    |
| Frequency                                                | 50/60 Hz                                                                        |
| Software version                                         | ABK1000_B                                                                       |

INGECON SUN STORAGE Power B series 1500 Vdc

| PV inverters with AC voltage ranging from 333 V to 700 V |                                                                                      |
|----------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                        |                                                                                      |
| Min battery Voltage                                      | $V_{mpp.min} = \frac{1,732 \sqrt{\frac{2}{3} (1,1V)^2 + (0,04 * I_{max})^2}}{0,985}$ |
| Max. Battery voltage                                     | 1300 V                                                                               |
| Maximum Current                                          | 1850 A                                                                               |
| <b>Output (AC)</b>                                       |                                                                                      |
| Power @30°C/@50°C                                        | $P_{ac} = (\sqrt{3}) * V_{ac} * I_{ac}$                                              |
| Current @30°C/@50°C                                      | 1500 A/1350 A                                                                        |
| Rated Voltage                                            | $V_{ac} = 333 \text{ V} \dots 700 \text{ V}$                                         |
| Frequency                                                | 50/60 Hz                                                                             |
| Software version                                         | ABK1000_B                                                                            |

INGECON SUN Power B Series 1000 Vdc

| PV inverters with AC voltage ranging from 220 V to 470 V |                                                                                   |
|----------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                        |                                                                                   |
| Recommended PV array power range                         | Pdc.min = 1,1*Pac (50°C) Pdc.max = 1,3*Pac (35°C)                                 |
| Voltage MPP min.                                         | $V_{mpp.min} = \frac{1,732 \sqrt{\frac{2}{3} V^2 + (0,0311 * I_{max})^2}}{0,985}$ |
| Voltage MPP max.                                         | 820 V                                                                             |
| Maximum Voltage                                          | 1050 V                                                                            |
| Maximum Current                                          | 2000 A                                                                            |
| <b>Output (AC)</b>                                       |                                                                                   |
| Power 35°C/50°C                                          | Pac = ( $\sqrt{3}$ ) * Vac * Iac                                                  |
| Current 35°C/50°C                                        | 1600 A/ 1472 A                                                                    |
| Rated Voltage                                            | Vac = 220 V ... 470 V                                                             |
| Frequency                                                | 50 Hz/60 Hz                                                                       |
| Software version                                         | ABK1000_A                                                                         |

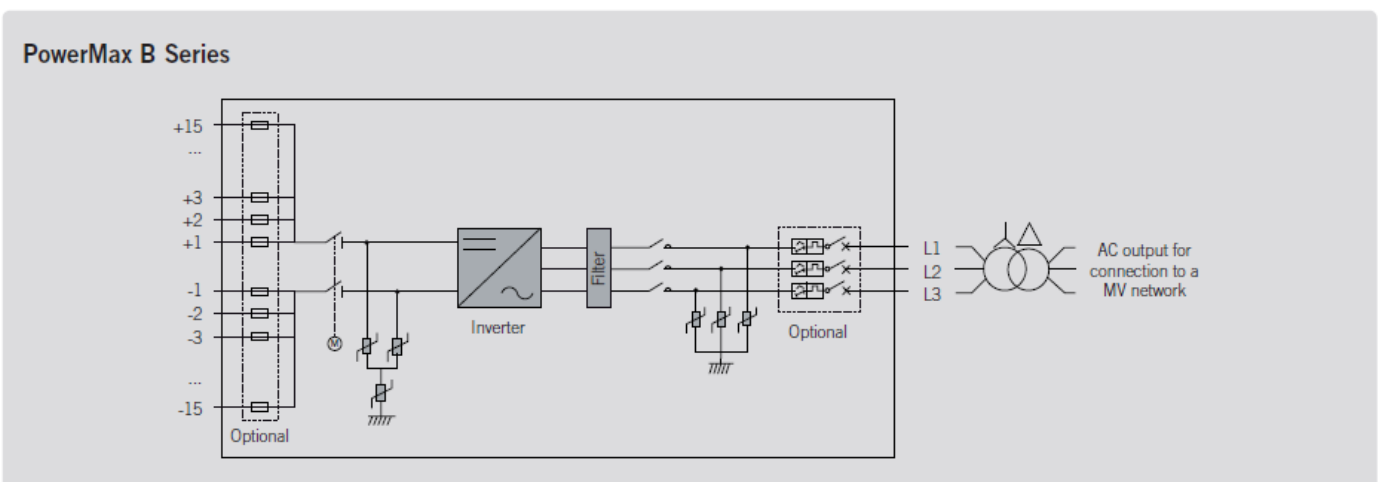
INGECON SUN STORAGE Power B Series 1000 Vdc

| PV inverters with AC voltage ranging from 220 V to 470 V |                                                                                        |
|----------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                        |                                                                                        |
| Min. Battery Voltage                                     | $V_{mpp.min} = \frac{1,732 \sqrt{\frac{2}{3} (1,1V)^2 + (0,0311 * I_{max})^2}}{0,985}$ |
| Max. Battery Voltage                                     | 820 V                                                                                  |
| Maximum Current                                          | 2000 A                                                                                 |
| <b>Output (AC)</b>                                       |                                                                                        |
| Power 35°C/50°C                                          | Pac = ( $\sqrt{3}$ ) * Vac * Iac                                                       |
| Current 35°C/50°C                                        | 1600 A/ 1472 A                                                                         |
| Rated Voltage                                            | Vac = 220 V ... 470 V                                                                  |
| Frequency                                                | 50 Hz/60 Hz                                                                            |
| Software version                                         | ABK1000_A                                                                              |

INGECON SUN Power B Series 1000 Vdc: 1250 TL B450

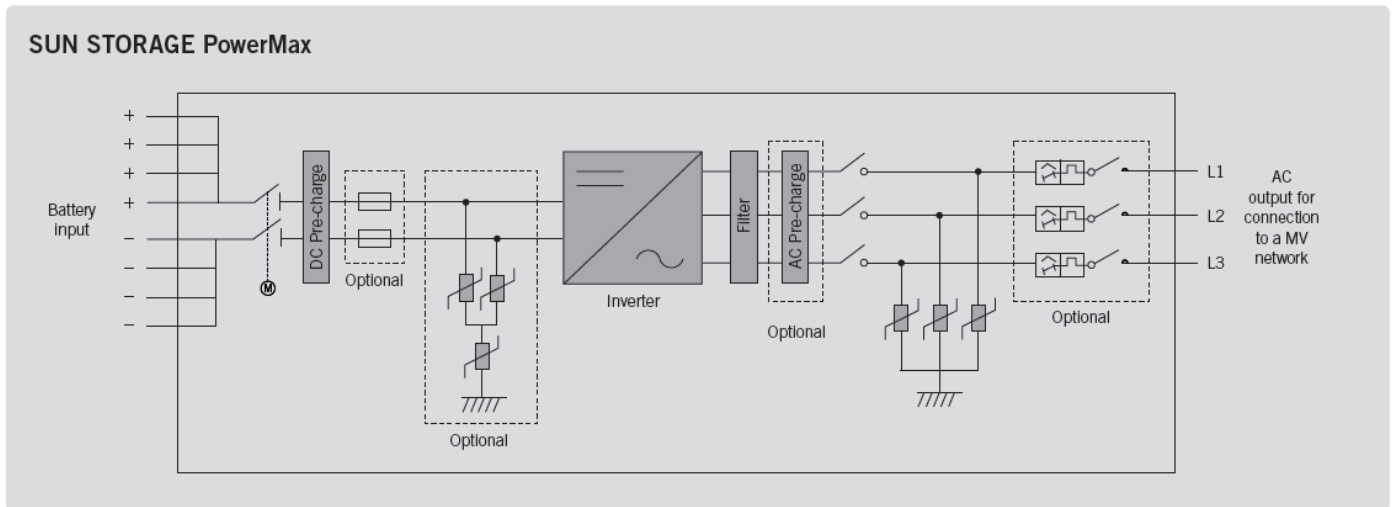
| <b>1250 TL B450</b>              |                                |
|----------------------------------|--------------------------------|
| <b>Input (DC)</b>                |                                |
| Recommended PV array power range | 1262-1621 kWp                  |
| Voltage MPP min.                 | 653-820 V                      |
| Voltage MPP max.                 | 820 V                          |
| Maximum Voltage                  | 1050 A                         |
| Maximum Current                  | 2000 A                         |
| <b>Output (AC)</b>               |                                |
| Power 35°C/46°C/52°C             | 1247 kVA / 1208 kVA / 1169 kVA |
| Current 35°C/46°C/52°C           | 1600 A / 1550 A / 1500 A       |
| Rated Voltage                    | 450 V IT System                |
| Frequency                        | 50/60 Hz                       |
| Software version                 | ABK1000_B                      |

Electrical Diagram of INGECON SUN Power B Series (1000 Vdc and 1500 Vdc):



Electrical Diagram of INGECON SUN STORAGE Power B Series (1000 Vdc and 1500 Vdc):

:



Manufacturer:

Ingeteam Power Technology S.A. - Paneles  
Pol. Ind. El Juncarillo, Nave 1  
31293 Sesma (Navarra) - SPAIN

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

May 31, 2016

Sample Report Number:

11251-1-TM

The inspection of manufacturing process was performed in  
manufacture facilities:

December 10, 2019

Inspection Report Number:

10978-19-2-IF