

# Certificate of Conformity

Certificate Number: CN-PV-230555

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

|   |   |
|---|---|
| <b>Applicant:</b>                                     | Shanghai SIGEN New Energy Technology Co., Ltd.<br>No. 175 Weizhan Road, Lingang New Area, China(Shanghai) Pilot Free Trade Zone, Shanghai, P.R.China  |
| <b>Manufacturer:</b>                                  | Shanghai SIGEN New Energy Technology Co., Ltd.<br>No. 175 Weizhan Road, Lingang New Area, China(Shanghai) Pilot Free Trade Zone, Shanghai, P.R.China  |
| <b>Product:</b>                                       | PV Hybrid inverter / AC coupled inverter  |
| <b>Ratings &amp; Principle Characteristics:</b>       | See appendix of Certificate of Conformity   |
| <b>Model:</b>   | SigenStor EC x TP, Sigen Hybrid x TP, SigenStor AC x TP, Sigen PV Max x TP (x: 5.0, 6.0, 8.0, 10.0, 12.0, 15.0, 17.0, 20.0, 25.0)   |
| <b>Brand Name&lt;s&gt;:</b>                           | <br>SIGENERGY  |
| <b>Product Complies with:</b>                         | Commission Regulation (EU) 2016/631 of 14 April 2016 (NC RfG) establishing a network code on the requirements for connecting generating units to the network (Journal of Laws UE L 112/1 of 27 April 2016);<br>PSE:18 December 2018: General Application Requirements resulting from the Regulation of the EU Commission 2016/631 of April 14, 2016 establishing the network code on the requirements for connecting generating units to the grid - approved by the Decision of the President of the Energy Regulatory Office DRE.WOSE.7128.550.2.2018.ZJ of January 2, 2019;<br>PTPIREE, 2021-04: Conditions and procedures for the use of certificates in the process of connecting power generation modules to power grids.<br>Type approval for Type A PPMs<br>Type 1a product certification scheme according to ISO/IEC 17067:2013<br>Certification procedure SMS-PV-OP-19 |
| <b>Certificate Issuing Office Name &amp; Address:</b> | Intertek Testing Services Ltd. Shanghai<br>West Area, 2 <sup>nd</sup> Floor, No. 707, Zhangyang Road<br>China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China<br>Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012   |
| <b>Test Report No.&lt;s&gt;:</b>                      | 230705118GZU-001, 230705116GZU-001  |

Additional information in Appendix.



Signature

**Certification Manager: Grady Ye**

**Issue Date: 27 September 2023**

**Valid Until: 26 September 2028**



PRD N° 306B

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## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230555

|                               |   |
|-------------------------------|---|
| <b>Product Complies with:</b> | EN 50549-1:2019 Requirements for generating plants to be connected in parallel with distribution networks<br>Part 1: Connection to a LV distribution network - Generating plants up to and including Type B |
|-------------------------------|---|

The following functionalities have been assessed based on the rules for the use of certificate for Power Park Modules (PPMs), as specified in chapter 7 and 9 of the PTPIREE 2021-04. The functions denoted “Not Applicable” in the table of chapter 7 has not been included.

| Capability   | NC RfG  | PSE 2018-12     | Type A | Assessment result |
|--|---------|-----------------|--------|-------------------|
| Frequency range  | 13.1(a) | 13.1(a)(i)      | x      | Compliant         |
| Rate of Change of Frequency (ROCOF)<br>Withstand capability, df/dt | 13.1(b) | 13.1(b)         | x      | Compliant         |
| Remote cessation of active power                                   | 13.6    | 13.6            | x      | Compliant         |
| Limited Frequency Sensitive Mode – Over frequency (LFSM-O)         | 13.2    | 13.2(a).(b).(f) | x      | Compliant         |

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## Ratings & Principle Characteristics:

| SigenStor EC, Sigen Hybrid         | 5.0 TP                       | 6.0 TP | 8.0 TP | 10.0 TP | 12.0 TP | 15.0 TP | 17.0 TP | 20.0 TP | 25.0 TP |  |
|------------------------------------|------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|--|
| Input (PV)                         |                              |        |        |         |         |         |         |         |         |  |
| Recommended max. PV power          | 8000W                        | 9600W  | 12800W | 16000W  | 19200W  | 24000W  | 27200W  | 32000W  | 40000W  |  |
| Max. input voltage                 | 1100 Vd.c.                   |        |        |         |         |         |         |         |         |  |
| MPPT voltage range                 | 160~1000 Vd.c.               |        |        |         |         |         |         |         |         |  |
| Start-up voltage                   | 180 Vd.c.                    |        |        |         |         |         |         |         |         |  |
| Nominal DC input voltage           | 600 Vd.c.                    |        |        |         |         |         |         |         |         |  |
| Max. input current per MPPT        | 16A                          |        |        |         |         |         |         |         |         |  |
| Max. short-circuit current         | 20A                          |        |        |         |         |         |         |         |         |  |
| Number of MPP trackers             | 2                            |        |        | 3       |         |         | 4       |         |         |  |
| Max. input number per MPP tracker  | 1                            |        |        |         |         |         |         |         |         |  |
| Input (DC Battery)                 |                              |        |        |         |         |         |         |         |         |  |
| Operating voltage range            | 600~900 Vd.c.                |        |        |         |         |         |         |         |         |  |
| Battery maximum continuous current | 40A                          |        |        |         |         |         |         |         |         |  |
| Output (On Grid)                   |                              |        |        |         |         |         |         |         |         |  |
| Rated output power                 | 5000W                        | 6000W  | 8000W  | 10000W  | 12000W  | 15000W  | 17000W  | 20000W  | 25000W  |  |
| Max. apparent power                | 5500W                        | 6600W  | 8800W  | 11000W  | 13200W  | 16500W  | 18700W  | 22000W  | 27500W  |  |
| Max. output current                | 8.4A                         | 10.0A  | 13.4A  | 16.7A   | 20.1A   | 25.1A   | 28.4A   | 33.4A   | 41.8A   |  |
| Rated output voltage               | 380/220 Va.c., 400/230 Va.c. |        |        |         |         |         |         |         |         |  |
| Rated AC grid frequency            | 50/60Hz                      |        |        |         |         |         |         |         |         |  |
| Adjustable power factor            | 0.8 leading~ 0.8 lagging     |        |        |         |         |         |         |         |         |  |
| General Data                       |                              |        |        |         |         |         |         |         |         |  |
| Operating temperature range        | -30 ~ + 60 °C                |        |        |         |         |         |         |         |         |  |
| Degree of protection               | IP66                         |        |        |         |         |         |         |         |         |  |
| FW Version                         | V100R001C21                  |        |        |         |         |         |         |         |         |  |

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### Ratings & Principle Characteristics:

| SigenStor AC                       | 5.0 TP                       | 6.0 TP | 8.0 TP | 10.0 TP | 12.0 TP | 15.0 TP | 17.0 TP | 20.0 TP | 25.0 TP |
|------------------------------------|------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|
| Input (DC Battery)                 |                              |        |        |         |         |         |         |         |         |
| Operating voltage range            | 600~900 Vd.c.                |        |        |         |         |         |         |         |         |
| Battery maximum continuous current | 40A                          |        |        |         |         |         |         |         |         |
| Output (On Grid)                   |                              |        |        |         |         |         |         |         |         |
| Rated output power                 | 5000W                        | 6000W  | 8000W  | 10000W  | 12000W  | 15000W  | 17000W  | 20000W  | 25000W  |
| Max. apparent power                | 5500W                        | 6600W  | 8800W  | 11000W  | 13200W  | 16500W  | 18700W  | 22000W  | 27500W  |
| Max. output current                | 8.4A                         | 10.0A  | 13.4A  | 16.7A   | 20.1A   | 25.1A   | 28.4A   | 33.4A   | 41.8A   |
| Rated output voltage               | 380/220 Va.c., 400/230 Va.c. |        |        |         |         |         |         |         |         |
| Rated AC grid frequency            | 50/60Hz                      |        |        |         |         |         |         |         |         |
| Adjustable power factor            | 0.8 leading~ 0.8 lagging     |        |        |         |         |         |         |         |         |
| General Data                       |                              |        |        |         |         |         |         |         |         |
| Operating temperature range        | -30 ~ + 60 °C                |        |        |         |         |         |         |         |         |
| Degree of protection               | IP66                         |        |        |         |         |         |         |         |         |
| FW Version                         | V100R001C21                  |        |        |         |         |         |         |         |         |

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### Ratings & Principle Characteristics:

| Sigen PV Max                      | 5.0 TP                       | 6.0 TP | 8.0 TP | 10.0 TP | 12.0 TP | 15.0 TP | 17.0 TP | 20.0 TP | 25.0 TP |  |
|-----------------------------------|------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|--|
| Input (PV)                        |                              |        |        |         |         |         |         |         |         |  |
| Recommended max. PV power         | 8000W                        | 9600W  | 12800W | 16000W  | 19200W  | 24000W  | 27200W  | 32000W  | 40000W  |  |
| Max. input voltage                | 1100 Vd.c.                   |        |        |         |         |         |         |         |         |  |
| MPPT voltage range                | 160~1000 Vd.c.               |        |        |         |         |         |         |         |         |  |
| Start-up voltage                  | 180 Vd.c.                    |        |        |         |         |         |         |         |         |  |
| Nominal DC input voltage          | 600 Vd.c.                    |        |        |         |         |         |         |         |         |  |
| Max. input current per MPPT       | 16A                          |        |        |         |         |         |         |         |         |  |
| Max. short-circuit current        | 20A                          |        |        |         |         |         |         |         |         |  |
| Number of MPP trackers            | 2                            |        |        | 3       |         |         | 4       |         |         |  |
| Max. input number per MPP tracker | 1                            |        |        |         |         |         |         |         |         |  |
| Output (On Grid)                  |                              |        |        |         |         |         |         |         |         |  |
| Rated output power                | 5000W                        | 6000W  | 8000W  | 10000W  | 12000W  | 15000W  | 17000W  | 20000W  | 25000W  |  |
| Max. apparent power               | 5500W                        | 6600W  | 8800W  | 11000W  | 13200W  | 16500W  | 18700W  | 22000W  | 27500W  |  |
| Max. output current               | 8.4A                         | 10.0A  | 13.4A  | 16.7A   | 20.1A   | 25.1A   | 28.4A   | 33.4A   | 41.8A   |  |
| Rated output voltage              | 380/220 Va.c., 400/230 Va.c. |        |        |         |         |         |         |         |         |  |
| Rated AC grid frequency           | 50/60Hz                      |        |        |         |         |         |         |         |         |  |
| Adjustable power factor           | 0.8 leading~ 0.8 lagging     |        |        |         |         |         |         |         |         |  |
| General Data                      |                              |        |        |         |         |         |         |         |         |  |
| Operating temperature range       | -30 ~ + 60 °C                |        |        |         |         |         |         |         |         |  |
| Degree of protection              | IP66                         |        |        |         |         |         |         |         |         |  |
| FW Version                        | V100R001C21                  |        |        |         |         |         |         |         |         |  |

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