

# Certificate of Conformity

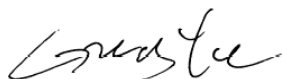
Certificate Number: CN-PVES-250112

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>                                     | Shenzhen Growatt New Energy Co., Ltd<br>4-13/F, Building A, Sino-German (Europe) Industrial Park, Hangcheng Ave, Bao'an District, Shenzhen, China                                                                                                                                                                                                                                                                                    |
| <b>Product:</b>                                       | Hybrid Inverter & AC Coupled Inverter                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Ratings &amp; Principle Characteristics:</b>       | See appendix of Certificate of Conformity                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Model:</b>                                         | NEO 1600M-X2, NEO 1800M-X2, NEO 2000M-X2,<br>NEO 2250M-X2, NEO-2500M-X2.                                                                                                                                                                                                                                                                                                                                                             |
| <b>Brand Name&lt;s&gt;:</b>                           | GROWATT                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Product Complies with:</b>                         | EN 50549-1:2019/A1:2023, 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<br>EN 50549-10:2022, Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units<br>Type approval for type A and B |
| <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>                      | 240829071GZU-001, March 5, 2025                                                                                                                                                                                                                                                                                                                                                                                                      |

According to Annex H of the standard EN 50549-1:2019, generating plants compliant with the clauses of this European Standard are considered to be compliant with the relevant Article of COMMISSION REGULATION (EU) 2016/631, provided that all settings as provided by the DSO and the responsible party are complied with.

Additional information in Appendix.



Signature

**Certification Manager: Grady Ye**  
**Date: 06 March 2025**



PRD N° 306B

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250112

| Model                       | NEO 1600M-X2              | NEO 1800M-X2 | NEO 2000M-X2 |
|-----------------------------|---------------------------|--------------|--------------|
| Max.DC voltage              | 60Vdc                     |              |              |
| MPP voltage range           | 16-55Vdc                  |              |              |
| Max. input current          | 18 d.c.A                  |              |              |
| PV Isc                      | 20 d.c.A*4                |              |              |
| Max. output power           | 1600W                     | 1800W        | 2000W        |
| Max. output apparent power  | 1600VA                    | 1800VA       | 2000VA       |
| Nominal AC voltage          | 230Vac                    |              |              |
| Nominal output frequency    | 50/60Hz                   |              |              |
| Max. output current         | 7.27 a.c.A                | 8.18 a.c.A   | 9.09 a.c.A   |
| Power factor range          | 0.8 leading – 0.8 lagging |              |              |
| Operating temperature range | –40 °C ... +65°C          |              |              |
| Topology                    | Isolated                  |              |              |
| Protection degree           | IP 67                     |              |              |
| Protection class            | Class I                   |              |              |
| Software version            | G11.0                     |              |              |

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250112

| Model                       | NEO 2250M-X2              | NEO 2500M-X2 |
|-----------------------------|---------------------------|--------------|
| Max.DC voltage              | 60Vdc                     |              |
| MPP voltage range           | 16-55Vdc                  |              |
| Max. input current          | 18 d.c.A                  |              |
| PV Isc                      | 20 d.c.A*4                |              |
| Max. output power           | 2250W                     | 2500W        |
| Max. output apparent power  | 2250VA                    | 2500VA       |
| Nominal AC voltage          | 230Vac                    |              |
| Nominal output frequency    | 50/60Hz                   |              |
| Max. output current         | 10.23 a.c.A               | 11.36 a.c.A  |
| Power factor range          | 0.8 leading – 0.8 lagging |              |
| Operating temperature range | –40 °C ... +65°C          |              |
| Topology                    | Isolated                  |              |
| Protection degree           | IP 67                     |              |
| Protection class            | Class I                   |              |
| Software version            | GI1.0                     |              |

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250112

| Interface protection settings according to EN 50549-1 |                                                                   |                        |                                                          |
|-------------------------------------------------------|-------------------------------------------------------------------|------------------------|----------------------------------------------------------|
| Parameter                                             | Max. disconnection time                                           | Min. operate time      | Trip value                                               |
| Undervoltage threshold stage 1 [27 < ]                | 100s                                                              | 0.1s<br>(0.1 s steps)  | Trip value Config. from 0.2 to 1 Un<br>(0.01 Un steps)   |
| Undervoltage threshold stage 2 [27 << ]               | 5s                                                                | 0.1s<br>(0.05 s steps) | Trip value Config. from 0.2 to 1 Un<br>(0.01 Un steps)   |
| Overvoltage threshold stage 1 [59 > ]                 | 100s                                                              | 0.1s<br>(0.1 s steps)  | Trip value Config. from 1.0 to 1.2 Un<br>(0.01 Un steps) |
| Overvoltage threshold stage 2 [59 >> ]                | 5s                                                                | 0.1s<br>(0.05 s steps) | Trip value Config. from 1.0 to 1.3 Un<br>(0.01 Un steps) |
| Overvoltage 10 min mean protection                    | Trip time Config ≤ 3s not adjustable<br>Time delay setting = 0 ms |                        | Trip value Config. from 1.0 to 1.15Un<br>(0.01 Un steps) |
| Underfrequency threshold stage 1 [81 < ]              | 100s                                                              | 0.1s<br>(0.1s steps)   | Trip value Config. from 47.0 to 50.0Hz<br>(0.1Hz steps)  |
| Underfrequency threshold stage 2 [81 << ]             | 5s                                                                | 0.1s<br>(0.05 s steps) | Trip value Config. from 47.0 to 50.0Hz<br>(0.1Hz steps)  |
| Overfrequency threshold stage 1 [81 > ]               | 100s                                                              | 0.1s<br>(0.1s steps)   | Trip value Config. from 50.0 to 52.0Hz<br>(0.1Hz steps)  |
| Overfrequency threshold stage 2 [81 >> ]              | 5s                                                                | 0.1s<br>(0.05 s steps) | Trip value Config. from 50.0 to 52.0Hz<br>(0.1Hz steps)  |
| Starting to and reconnection settings for voltage     | 50%-120% adjustable, 85%Un ≤ U ≤ 1.10Un default                   |                        |                                                          |
| Starting to generate electrical power                 | 47Hz – 52Hz adjustable, 49.5Hz ≤ U ≤ 50.1Hz default               |                        |                                                          |
| Reconnection settings for frequency                   | 47Hz – 52Hz adjustable, 49.5Hz ≤ U ≤ 50.2Hz default               |                        |                                                          |
| Observation time                                      | 10s-60s adjustable, 60s default                                   |                        |                                                          |
| Active power increase gradient                        | 6%-3000%/min adjustable, 10%/min default                          |                        |                                                          |
| Permanent DC injection                                | 0.5% of rated inverter output                                     |                        |                                                          |
| Loss of mains according to EN 62116                   | Within 2s                                                         |                        |                                                          |

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.