Certificate of Conformity

Certificate Number: CN-PVES-240335

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.

Applicant:	REFU Elektronik GmbH Marktstrasse 185, 72793 Pfullingen, Germany
Product: **Ratings & Principle Characteristics:**	Solar Grid-tied Inverter See appendix of Certificate of Conformity
Model:	REFUsol 250K-6T, REFUsol 330K-6T, REFUsol 330K-8T REFUsol 350K-6T, REFUsol 350K-8T
Brand Name<s>:	REFUsol
Product Complies with:	EN 50549-1: 2019, Requirements for generating plants to be connected in parallel with distribution networks Part 1: Connection to a LV distribution network - Generating plants up to and including type B Type approval for type B
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	240618144GZU-001, 09 July 2024

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: 17 July 2024

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PRD N° 306B

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-240335

Model	REFUsol 250K-6T	REFUsol 330K-6T	REFUsol 330K-8T	REFUsol 350K-6T	REFUsol 350K-8T
DC Input					
Max. input voltage	1500 V				
MPPT operating voltage range	500 V~1500 V				
Max. input current	6*60A	6*80A	8*60A	6*80A	8*80A
Max. PV Isc	6*100A	6*100A	8*100A	6*100A	8*100A
AC Outputf					
Nominal grid voltage	3/PE,800Vac				
Nominal grid frequency	50Hz/60Hz				
Nominal Output Power	250kW	330kW		352kW	
Max. Output Power	250kVA	330kVA		352kVA	
Max. Output Current	180.5A	238.2A		254.1A	
Power factor	1(adjustable +/-0.8)				
General Data					
Safety level	Class I				
Ingress Protection	IP 66				
Operation Ambient Temperature	-30℃ - +60℃				
Topology	Transformerless				

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-240335

Interface protection settings according to EN 50549-1:2019			
Parameter	Max. disconnection time	Min. operate time	Trip value
Undervoltage threshold stage 1 [27 <]	100s	0.1s (0.1 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Undervoltage threshold stage 2 [27 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Overvoltage threshold stage 1 [59 >]	100s	0.1s (0.1 s steps)	Trip value Config. from 1.0 to 1.2 Un (0.01 Un steps)
Overvoltage threshold stage 2 [59>>]	5s	0.1s (0.05 s steps)	Trip value Config. from 1.0 to 1.3 Un (0.01 Un steps)
Overvoltage 10 min mean protection	Trip time Config≤ 3s not adjustable Time delay setting = 0 ms		Trip value Config. from 1.0 to 1.15Un (0.01 Un steps)
Underfrequency threshold stage 1 [81 <]	100s	0.1s (0.1s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Underfrequency threshold stage 2 [81 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Overfrequency threshold stage 1 [81 >]	100s	0.1s (0.1s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Overfrequency threshold stage 2 [81 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 50.0 to 52.0Hz (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 t0 EN 62116		Within 2s	