

Certificate of Conformity

Certificate Number: CN-PVES-240049R1

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:	WeCo SRL. Viale Kennedy 113-121 Scarperia e San Piero, Firenze, Italy
Product:	HYBO Power Converter System/Integrated Hybrid Inverter Cabinet
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	HYBO-TL 120P, HYBO-TL 180P, HYBO-TL 240P, HYBO-TL 300P, HYBO-TL 120P-OD, HYBO-TL 180P-OD, HYBO-TL 240P-OD, HYBO-TL 300P-OD, HYBO-TL 120-120, HYBO-TL 120-120-OD, HYBO-TL 120-180, HYBO-TL 120-180-OD, HYBO-TL 180-120, HYBO-TL 180-120-OD, HYBO-TL 180-180, HYBO-TL 180-180-OD, HYBO-TL 180-240, HYBO-TL 180-240-OD, HYBO-TL 240-180, HYBO-TL 240-180-OD, HYBO-TL 240-240, HYBO-TL 240-240-OD
Brand Name<s>:	
Product Complies with:	EN 50549-1: February 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, 2 nd 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>:	231213199GZU-001, Revision 1: 20 March 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.
Replaces certificate CN-PVES-240049, dated 05 February 2024
Additional information in Appendix.

Signature

Certification Manager: Grady Ye
Date: 31 March 2025



PRD N° 306B

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-240049R1

Model	HYB O-TL 120 P	HYBO-TL 120P-OD	HYBO-TL 180P	HYBO-TL 180P-OD	HYBO-TL 240P	HYBO-TL 240P-OD	HYBO-TL 300P	HYBO-TL 300P-OD
Battery side parameters								
Battery voltage range (Vdc)	680-1000							
Maximum charge/discharge power (kW)	120/120	180/180		240/240		300/300		
Maximum charge/discharge current (Adc)	176/176	264/264		352/352		440/440		
Number of battery-side circuit breakers	1							
Battery Input	4							
Grid side parameters								
Rated AC power (kW)	120	180		240		300		
Rated grid voltage (Vac)	230/400							
AC input mode	3P+N+PE							
Rated grid frequency (Hz)	50/60							
Rated alternating current (Aac)	172	258		344		430		
Power factor	0.8(lagging)~0.8(leading)							
System parameters								

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Operating temperature (°C)	-20~+60 (>50°C Derating)							
Permissible relative humidity	≤95%, non-condensing							
Noise (dB)	75							
Degree of protection	IP20	IP54	IP20	IP54	IP20	IP54	IP20	IP54
Cooling method	Forced air cooling							
Software version	V02							

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Model	HYBO-TL 120-120	HYBO-TL 120-120- OD	HYBO-TL 120-180	HYBO-TL 120-180- OD	HYBO-TL 180-120	HYBO-TL 180-120- OD	HYBO-TL 180-180	HYBO-TL 180-180- OD
PV Input Port								
Max. PV Input Voltage	680Vdc							
MPPT Operative Voltage Range	200-650Vdc							
PV Input Channels	2	2	3	3	2	2	3	3
PV Input Power	120KW	120KW	180KW	180KW	120KW	120KW	180KW	180KW
Max. PV Isc	250A							
Battery side parameters								
Battery voltage range (Vdc)	680-1000							
Maximum charge/discharge current (Adc)	176/176		264/176		264/264		264/264	
Battery Input terminals	4							
Battery Type	Lithium-ion							
Grid input/output port								
Grid Wiring Type	Five Wires (3P + N + PE)							
Rated grid voltage	400Vac							
Rated Grid Frequency	50/60Hz							
Rated Grid Power	120		120		180		180	

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Max Grid current	172	172	258	258				
Power factor	0.8(lagging)~0.8(leading)							
Back-up Output Port								
Rated Back-Up Voltage	400Vac							
Rated Back-Up Frequency	50/60Hz							
Max. Back-Up Output Power	120 (no overload)	120 (no overload)	180 (no overload)	180 (no overload)				
Max. Back-Up Output Current	172	172	258	258				
General Information								
Maximum efficiency	97%							
Operating temperature (°C)	-20~+50 (>50°C Derating)							
Inverter Topology	Transformerless							
Noise (dB)	75							
IP Rating	IP20	IP55	IP20	IP55	IP20	IP55	IP20	IP55
Software version	V02							

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Model	HYBO-TL 180-240	HYBO-TL 180-240-OD	HYBO-TL 240-180	HYBO-TL 240-180-OD	HYBO-TL 240-240	HYBO-TL 240-240-OD
PV Input Port						
Max. PV Input Voltage	680Vdc					
MPPT Operative Voltage Range	200-650Vdc					
PV Input Channels	4	4	3	3	4	4
PV Input Power	240KW	240KW	180KW	180KW	240KW	240KW
Max. PV Isc	250A					
Battery side parameters						
Battery voltage range (Vdc)	680-1000					
Maximum charge/discharge current (Adc)	352/264		352/352		352/352	
Battery Input terminals	4					
Battery Type	Lithium-ion					
Grid input/output port						
Grid Wiring Type	Five Wires (3P + N + PE)					
Rated grid voltage	400Vac					
Rated Grid Frequency	50/60Hz					
Rated Grid Power	180		240		240	
Max Grid current	258		344		344	
Power factor	0.8(lagging)~0.8(leading)					
Back-up Output Port						
Rated Back-Up Voltage	400Vac					
Rated Back-Up Frequency	50/60Hz					

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Max. Back-Up Output Power	180 (no overload)		240 (no overload)		240 (no overload)	
Max. Back-Up Output Current	258		344		344	
General Information						
Maximum efficiency	97%					
Operating temperature (°C)	-20~+50 (>50°C Derating)					
Inverter Topology	Transformerless					
Noise (dB)	75					
IP Rating	IP20	IP55	IP20	IP55	IP20	IP55
Software version	V02					

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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	0.05s (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	0.05s (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	0.05s (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	0.05s (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 to EN 62116	Within 2s		

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