

Certificate of Conformity

No. ESY 105515 0074 Rev. 00

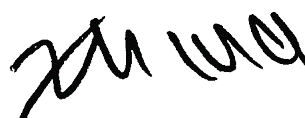
Holder of Certificate: **Suzhou Hypontech Co., Ltd.**
No.1508 Xiangjiang Road,
SND,
215010 Suzhou
PEOPLE'S REPUBLIC OF CHINA

Product: **PV inverter**
Hybrid Inverter

This Certificate of Conformity confirms the compliance with the above listed standards on a voluntary basis. It refers only to the sample submitted to TÜV SÜD Product Service GmbH and does not certify the quality or safety of the serial products. It was issued according to TÜV SÜD Product Service certification program Photovoltaics and Grid Integration. For details see: www.tuvsud.com/ps-cert

Test report no.: 5040922010518-00

Date, 2022-11-07



(Zhengdong Ma)

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Model(s): HHT-5000, HHT-6000, HHT-8000, HHT-10000, HHT-12000

Technical Certifier (Zhengdong Ma) appointed by Certification Body TÜV SÜD Product Service GmbH performed assessment of the products listed in this certification in the place: Ridlerstraße 65, 80339 Munich, Germany.

<p>Test requirement</p>	<p>The certification complies with the requirements of the following documents for Type A PGM installations:</p> <p>EN 50549-1:2019 Wymagania dla instalacji wytwórczych przeznaczonych do równoległego przyłączenia do publicznych sieci dystrybucyjnych -- Część 1: Przyłączenie do sieci dystrybucyjnej nN -- Instalacje wytwórcze aż do typu B włącznie <i>(EN: 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)</i></p> <p>RfG:2016 Rozporządzenie Komisji (UE) 2016/631 z dnia 14 kwietnia 2016 r. ustanawiające kodeks sieci dotyczący wymogów w zakresie przyłączenia jednostek wytwórczych do sieci (Dz.U. UE L 112/1 z 27.4.2016) <i>(EN: Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for the connection of generating units to the Network (OJ EU L 112/1 of 27.4.2016))</i></p> <p>NC RfG:2018 Wymogi Ogólnego Stosowania wynikające z rozporządzenia komisji UE 2016/631 z dnia 14 kwietnia 2016 r. ustanawiającego kodeks sieci dotyczący wymogów w zakresie przyłączenia jednostek wytwórczych do sieci (NC RfG, 2018) - zatwierdzone Decyzją Prezesa Urzędu Regulacji Energetyki DRE.WOSE.7128.550.2.2018.ZJ z dnia 2 stycznia 2019 r. <i>(EN: General applicability requirements resulting from EU commission regulation 2016/631 of of 14 April 2016 establishing a network code concerning the requirements for with regard to the connection of generating units to the grid (NC RfG-2018)- approved by the Decision of the President of the Energy Regulatory Office DRE.WOSE.7128.550.2.2018.ZJ dated 2 January 2019.)</i></p> <p>PTPiREE:2021 Warunki i procedury wykorzystania certyfikatów w procesie przyłączenia modułów wytwarzania energii do sieci elektroenergetycznych V1.2 <i>(EN: Conditions and procedures for the use of certificates in the process of connecting modules generation modules to the power grid V1.2)</i></p>
<p>Type of certification programme</p>	<p>1(a) according to EN ISO/IEC 17067</p> <p>Based on Photovoltaics and Grid Integration Certification Program (Revision 6, Dated 5 Dec 2021) for Poland Grid Code</p>
<p>Manufacturer & Address of manufacturing site</p>	<p>Suzhou Hypontech Co., Ltd. No.1508 Xiangjiang Road, SND, 215010, Suzhou, PEOPLE'S REPUBLIC OF CHINA</p>
<p>Software version</p>	<p>Firmware version (settings for grid protection and power control): V1.0</p>
<p>Certificate expiry date</p>	<p>2027-10-28</p>

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Parameters:

Model	HHT-5000	HHT-6000	HHT-8000
PV input parameters:			
Max. input voltage	d.c. 1000 V		
Max. input current	d.c. 2*15 A		
Isc PV (absolute maximum)	d.c. 2*20 A		
MPP voltage range	d.c. 150-850 V		
Battery port parameters:			
Battery type	Li-ion		
Battery voltage range	d.c. 160-800 V		
Max. charge/discharge current	d.c. 25 /25 A		
Back-up parameters:			
Back-up max. apparent power	5000 VA	6000 VA	8000 VA
Back-up nominal voltage	3/N/PE~, 400/230 V		
Back-up nominal output Frequency	50 Hz		
Back-up max. current	a.c. 8.5 A	a.c. 10 A	a.c. 13.5 A
AC output parameters (Grid side):			
Rated active power to Grid	5000 W	6000 W	8000 W
Max./Rated apparent power to Grid	5500 VA	6600 VA	8800 VA
Rated grid voltage	3/N/PE~, 400/230 V		
Rated grid frequency	50 Hz		
Max.continuous current to Grid	a.c. 8.5 A	a.c. 10 A	a.c. 13.5 A
AC input parameters:			
Rated voltage	3/N/PE~, 400/230 V		
Max.continuous current from Grid	a.c. 17 A	a.c. 20 A	a.c. 23 A
Rated active power from Grid	10000 W	12000 W	15000 W
Max./Rated apparent power from Grid	11000 VA	13200 VA	16500 VA
Rated grid frequency	50 Hz		
Adjustable cos(φ)	0.8ind...0.8cap		

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Model	HHT-10000	HHT-12000
PV input parameters:		
Max. input voltage	d.c. 1000 V	
Max. input current	d.c. 2*15 A	
Isc PV (absolute maximum)	d.c. 2*20 A	
MPP voltage range	d.c. 150-850 V	
Battery port parameters:		
Battery type	Li-ion	
Battery voltage range	d.c. 160-800 V	
Max. charge/discharge current	d.c. 25 /25 A	
Back-up parameters:		
Back-up max. apparent power	10000 VA	12000 VA
Back-up nominal voltage	3/N/PE~, 400/230 V	
Back-up nominal output Frequency	50 Hz	
Back-up max. current	a.c. 16 A	a.c. 20 A
AC output parameters (Grid side):		
Rated active power to Grid	10000 W	12000 W
Max./Rated apparent power to Grid	11000 VA	13200 VA
Rated grid voltage	3/N/PE~, 400/230 V	
Rated grid frequency	50 Hz	
Max.continuous current to Grid	a.c. 16 A	a.c. 20 A
AC input parameters:		
Rated voltage	3/N/PE~, 400/230 V	
Max.continuous current from Grid	a.c. 23 A	a.c. 29 A
Rated active power from Grid	15000 W	18000 W
Max./Rated apparent power from Grid	16500 VA	20000 VA
Rated grid frequency	50 Hz	
Adjustable cos(φ)	0.8ind...0.8cap	

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Scope of assessment and results

Clause of RfG	Requirement	Type A	Type B	Type C	Type D	Assessment Result
Article 13.1 (a)	Frequency range	Y	-	-	-	Pass
Article 13.1 (b)	Ability to withstand the rate of change of frequency (RoCoF)	Y	-	-	-	Pass
Article 13.2	Limited frequency sensitive mode — overfrequency (LFSM-O)	Y	-	-	-	Pass
Article 13.4 & 13.5	Maximum power capability reduction with falling frequency	Y	-	-	-	Pass
Article 13.6	Remote ceasing active power	Y	-	-	-	Pass
Article 13.7	Automatic connection to the network	Y	-	-	-	Pass

Applicable standards:

EN 50549-1:2019/AC:2019
RfG:2016
NC RfG:2018
PTPiREE:2021