

Certificate of Conformity

No. ESY 122411 0006 Rev. 00

**Holder of Certificate: Shenzhen Eternalplanet Energy
Pingshan Ltd.**

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Innovation Plaza
No. 2007, Pingshan Blvd, Liulian Community
Pingshan Subdistrict, Pingshan District
518118 Shenzhen, Guangdong
PEOPLE'S REPUBLIC OF CHINA

**Product: Converter
(Energy storage Inverter)**

**Model(s): EP Cube HES-EU1-706W,
EP Cube HES-EU1-706G,
EP Cube HES-EU1-710W,
EP Cube HES-EU1-710G,
EP Cube HES-EU1-713W,
EP Cube HES-EU1-713G,
EP Cube HES-EU1-716W,
EP Cube HES-EU1-716G,
EP Cube HES-EU1-720W,
EP Cube HES-EU1-720G**


Parameters: See page 3-5

Applicable standards: UNE 217001:2020
RD 244:2019

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.: 64290233047501

Date, 2023-10-09



(Billy Qiu)

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Certification Body TÜV SÜD Product Service GmbH performed assessment of the products listed below:

Test requirement	The certification complies with the requirements of the following documents: UNE 217001:2020 , Tests for systems that avoid energy discharge to the distribution network. Royal Decree 244:2019 , of April 5, which regulates the administrative, technical and economic conditions of self-consumption of electrical energy.
Manufacturer	Eternalplanet Energy Co.,Ltd. 27th Floor, Building 3A, Longgang Intelligent Park, 518116, Shenzhen, PEOPLE'S REPUBLIC OF CHINA
Product types used in power generation system	Inverter: Single-phase inverter Network analyzer/ Current transformer
Model and Technical Data	See page 3-5
Software version	Inverter: V0.0.8 Network analyzer: 6002.05
Test Report	64.290.23.30475.01
Issued by	Testing lab: TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Accreditation No.	D-PL-19065-01-01
Accreditation body ref.	DAkKS
Reference of the certification body	
Certification Body	TÜV SÜD Product Service GmbH
	DAKKS accreditation certificate D-ZE-11321-01-00 according to DIN EN ISO/IEC 17065:2013

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Inverter Parameters:

Model	EP Cube HES-EU1- 706W	EP Cube HES-EU1- 710W	EP Cube HES-EU1- 713W	EP Cube HES-EU1- 716W	EP Cube HES-EU1- 720W
PV input parameter					
Maximum input voltage	600 Vd.c.				
MPPT voltage range	90~550 Vd.c.				
MPPT voltage range (full load)	312.5~450.0 Vd.c.				
Maximum input current	2*16 Ad.c.				
PV I _{sc}	2*20 Ad.c.				
Maximum input power	10000 W				
Battery input/output parameter					
Battery type	LiFePO ₄				
Input voltage range	64.8~87.6 Vd.c.	97.2~131.4 Vd.c.	129.6~175.2 Vd.c.	162.0~219.0 Vd.c.	194.4~262.8 Vd.c.
Rate voltage	76.8 Vd.c.	115.2 Vd.c.	153.6 Vd.c.	192.0 Vd.c.	230.4 Vd.c.
Maximum input/output voltage	87.6 Vd.c.	131.4 Vd.c.	175.2 Vd.c.	219.0 Vd.c.	262.8 Vd.c.
Maximum charging current	55 Ad.c.				
Maximum charging power	3000 W	5000 W	6500 W	7600 W	7600 W
Maximum discharging current	55 Ad.c.				
Maximum discharging power	3000 W	5000 W	6500 W	7600 W	7600 W
Grid parameter					
Rated input/output voltage	L/N/PE~, 230 Va.c.				
Rated input/output frequency	50 Hz				
Maximum input current	33 Aa.c.				
Maximum input active power	7600 W				
Maximum input apparent power	7600 VA				
Maximum input active power from grid to battery	3000 W	5000 W	6500 W	7600 W	7600 W
Rated output current	33 Aa.c.				
Maximum continuous output current	33 Aa.c.				
Rated output active power	7600 W				
Maximum output active power	7600 W				
Maximum output apparent power	7600 VA				
Maximum output active power from battery to grid (without PV input)	3000 W	5000 W	6500 W	7600 W	7600 W
Power factor	0.8 inductive to 0.8 capacitive				

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Model	EP Cube HES-EU1- 706G	EP Cube HES-EU1- 710G	EP Cube HES-EU1- 713G	EP Cube HES-EU1- 716G	EP Cube HES-EU1- 720G
PV input parameter					
Maximum input voltage	600 Vd.c.				
MPPT voltage range	90~550 Vd.c.				
MPPT voltage range (full load)	312.5~450.0 Vd.c.				
Maximum input current	2*16 Ad.c.				
PV I _{sc}	2*20 Ad.c.				
Maximum input power	10000 W				
Battery input/output parameter					
Battery type	LiFePO ₄				
Input voltage range	64.8~87.6 Vd.c.	97.2~131.4 Vd.c.	129.6~175.2 Vd.c.	162.0~219.0 Vd.c.	194.4~262.8 Vd.c.
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Maximum charging current	55 Ad.c.				
Maximum charging power	3000 W	5000 W	6500 W	7600 W	7600 W
Maximum discharging current	55 Ad.c.				
Maximum discharging power	3000 W	5000 W	6500 W	7600 W	7600 W
Grid parameter					
Rated input/output voltage	L/N/PE~, 230 Va.c.				
Rated input/output frequency	50 Hz				
Maximum input current	33 Aa.c.				
Maximum input active power	7600 W				
Maximum input apparent power	7600 VA				
Maximum input active power from grid to battery	3000 W	5000 W	6500 W	7600 W	7600 W
Rated output current	33 Aa.c.				
Maximum continuous output current	33 Aa.c.				
Rated output active power	7600 W				
Maximum output active power	7600 W				
Maximum output apparent power	7600 VA				
Maximum output active power from battery to grid (without PV input)	3000 W	5000 W	6500 W	7600 W	7600 W
Power factor	0.8 inductive to 0.8 capacitive				

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Network analyzer Parameters(Meter):

Model	SDM120CT-M
Electrical parameter	
Voltage connect type	230 Va.c.
Rated Frequency	50 Hz
Current specification	120 A/40 mA
Energy consumption	<2W
Type	Through transformer
Precision parameter	
Maximum error limit percentage of various instruments	±1.0%
Precision class	Active Power class 1
Communications	
Communication type	RS485 ModBus RTU Protocol
Refresh time	≤1 s

Current transformer Parameters:

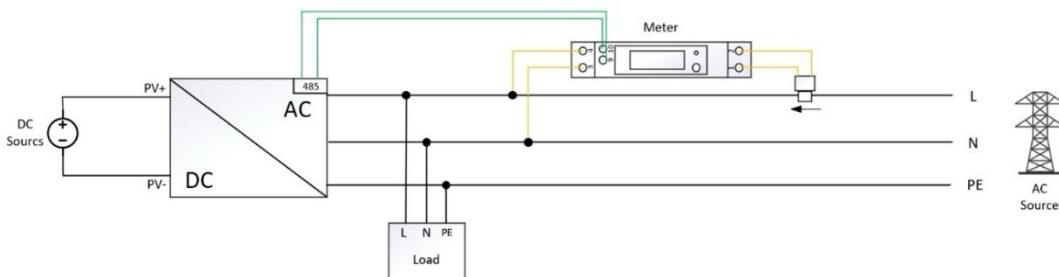
Model	ESCT-TA16
Rated primary current	120 Aa.c.
Rated transformation ratio	3000:1
Rated load	10 Ω
Rated Frequency	50 Hz
Accuracy	± 0.5%, class 1.0

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Electrical schematic diagram:

- The following figure shows the operating diagram of single generator. Generator communicates with SDM120CT-M (Meter) through RS485, receives the grid connection point current collected by the (ESCT-TA16), scheduling output active power to prevent energy from being injected into the grid in real time.



- Single generator connects to distribution network. Phase imbalance should be limited to less than 5 kW in final system installation.

Note:

Note 1: Variant models of network analyzer (without control) and current and voltage transformer can be included in the certified solution, provided that they comply with:

- Same connection scheme (single-phase or three-phase)
- Same measurement tolerance
- Same or shorter refresh time
- Same type of communication
- If additional current or voltage transformers are required, the accuracy of the components shall be the same or higher.

Note 2: All the tests conducted to obtain this certificate have been passed by acting on the generation system to regulate the power generated. No cut-off or current limiting element is required to be installed redundantly to the tested solution.