



# Certificate of compliance

**Applicant:** Zigong Xingchuan Photoelectric Co., Ltd  
No. 19, East Ring Road, Bancang Industrial Park, Yantan District,  
Zigong City, Sichuan Province  
China

**Product:** Photovoltaic (PV) inverter

**Model:** Apollo 6K-T0, Apollo 8K-T0, Apollo 10K-T0, Apollo 12K-T0, Apollo 15K-T0

Inverter for three-phase parallel connection to the public grid. The network monitoring and disconnection device is an integral part of the above-mentioned model.

## Applied rules and standards:

### EN 50549-1:2019

Requirements for parallel connection of installations with distribution networks - Part 1: Connection to an LV distribution network - Production of installations up to and including Type B

- 4.4 Normal operating range
- 4.5 Immunity to disturbances
- 4.6 Active response to frequency deviation
- 4.7 Power response to voltage variations and voltage changes
- 4.8 EMC and power quality
- 4.9 Interface protection
- 4.10 Connection and starting to generate electrical power
- 4.11 Ceasing and reduction of active power on set point
- 4.13 Requirements regarding single fault tolerance of interface protection system and interface switch

### DIN VDE V 0124-100:2020 (5.5.2.1 Functional safety of network and system protection)

Grid integration of generator plants - Low-voltage - Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks

### Commission Regulation (EU) 2016/631 of 14 April 2016

Establishing a network code on requirements for grid connection of generators (NC RFG).  
Type approval for generation units to use in Type A and Type B plants.

At the time of issue of this certificate, the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

**Report number:** PV2208WDG0052-1

**Certificate number:** U22-0533

**Certification Program:** NSOP-0032-DEU-ZE-V01

**Date of issue:** 2022-09-09

**Certification body**



Alf Assenkamp



Certification body Bureau Veritas Consumer Products Services Germany GmbH accreditation to DIN EN ISO/IEC 17065

Testing laboratory accredited according to DIN EN ISO/IEC 17025

A partial representation of the certificate requires the written approval of Bureau Veritas Consumer Products Services Germany GmbH



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## Annex to the EN 50549-1 certificate of compliance No. U22-0533

### Appendix

Extract from test report according to EN 50549-1

No. PV2208WDG0052-1

#### Type Approval and declaration of compliance with the requirements of EN 50549-1 and Commission Regulation (EU) 2016/631 of 14 April 2016

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        |              |               |               |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|---------------|---------------|
| Manufacturer / applicant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Zigong Xingchuan Photoelectric Co., Ltd<br>No. 19, East Ring Road, Bancang Industrial Park, Yantan District,<br>Zigong City, Sichuan Province<br>China |              |               |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        |              |               |               |               |
| Micro-generator Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Photovoltaic inverter                                                                                                                                  |              |               |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Apollo 6K-T0                                                                                                                                           | Apollo 8K-T0 | Apollo 10K-T0 | Apollo 12K-T0 | Apollo 15K-T0 |
| MPP DC voltage range [V]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 300-800                                                                                                                                                | 380-800      | 470-800       | 380-800       | 470-800       |
| Input DC voltage range [V]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 160-1000                                                                                                                                               |              |               |               |               |
| Input DC current [A]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 11/11                                                                                                                                                  |              |               | 11/22         |               |
| Output AC voltage [V]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3/N/PE, 400Vac, 50Hz                                                                                                                                   |              |               |               |               |
| Output AC current [A]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3×10                                                                                                                                                   | 3×13         | 3×16          | 3×19          | 3×23          |
| Active Power [kW]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6,0                                                                                                                                                    | 8,0          | 10,0          | 12,0          | 15,0          |
| Apparent power [kVA]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6,6                                                                                                                                                    | 8,8          | 11,0          | 13,2          | 16,5          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        |              |               |               |               |
| Firmware version                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 151900                                                                                                                                                 |              |               |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        |              |               |               |               |
| <b>Description of the structure of the power generation unit:</b><br>The power generation unit is equipped with a PV and line-side EMC filter. The power generation unit has no galvanic isolation between DC input and AC output. Output switch-off is performed with single-fault tolerance based on the inverter bridge and two series-connected relays in each line and neutral. This enables a safe disconnection of the power generation unit from the network in case of error.                                                                                                                    |                                                                                                                                                        |              |               |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        |              |               |               |               |
| <b>Note:</b><br>The settings of the interface protection are password protected adjustable.<br>In case the above stated generators are used with an external protection device, the protection settings of the inverters are to be adjusted according to the manufacturer's declaration.<br>The above stated generators are tested according to the requirements in the EN 50549-1:2019 Commission Regulation (EU) 2016/631 of 14 April 2016. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements. |                                                                                                                                                        |              |               |               |               |