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Certificate for the NS protection

Manufacturer / applicant: **ALTENERGY POWER SYSTEM INC.**
No.1 Yatai Road,
Jiaxing 314050 Zhejiang Province,
P.R. China

Type of grid and plant protection:	Integrated NS protection
Assigned to generation unit type:	YC600

Firmware version: **V7**

Connection rule: **VDE-AR-N 4105:2018-11 – Power generation systems connected to the low-voltage distribution network**
Technical minimum requirements for the connection to and parallel operation with low-voltage distribution networks.

Applicable standards / directives: **DIN VDE V 0124-100 (VDE V 0124-100):2019-09 – Grid integration of power generation systems – low voltage**
Test requirements for power generation units to be connected and operated parallel with the low-voltage distribution networks

The above mentioned grid and plant protection has been tested and certified according to the test guideline VDE 0124-100. The electrical properties required in the connection rule are satisfied.

- Setting values and disconnect times
- Properly functioning functional chain "NS protection – interface switch"
- Technical requirements of the switching device
- Integrated interface switch that can also be used in conjunction with a central interface protection relay (VDE-AR-N 4105:2018-11 §6.4.1)
- Passive detection of unintended islanding
- Single-fault tolerance

The certificate contains the following information:

- Technical specifications of the NS protection and corresponding power generation type
- Setting values of the protection functions
- Trip values of the protection functions

BV project number: **ZEK-18JA0679FCSHP-R1**

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

Certificate number: **U20-0328**

Date of issue: **2020-05-07**

Certification body



Thomas Lammel



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

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Unit Certificate

Manufacturer / applicant: **ALTENERGY POWER SYSTEM INC.**
No.1 Yatai Road,
Jiaxing 314050 Zhejiang Province,
P.R. China

Type of power generation unit:	Grid-tied photovoltaic (PV) inverter
Name of PGU:	YC600
Active power (nominal power at reference conditions) [W]:	550
Rated voltage:	230 V; N; PE

Firmware version: **V7**

Connection rule: **VDE-AR-N 4105:2018-11 – Power generation systems connected to the low-voltage distribution network**
Technical minimum requirements for the connection to and parallel operation with low-voltage distribution networks.

Applicable standards / directives: **DIN VDE V 0124-100 (VDE V 0124-100):2019-11 – Grid integration of power generation systems – low voltage**
Test requirements for power generation units to be connected and operated parallel with the low-voltage distribution networks

The above mentioned generation unit has been tested and certified according to the test guideline VDE 0124-100. The electrical properties required in the connection rule are satisfied.

- Verification of permissible system perturbations
- Verification of the symmetry characteristics of three-phase inverter modules
- Verification of the characteristics of the power generation unit on the network
- Verification of dynamic network support
- Verification of the possibility to take part in the generation management / network security management

The certificate contains the following information:

- Technical specifications of the power generation unit, the deployed auxiliary equipment and the software version used.
- Schematic structure of power generation unit
- Summarized information about the characteristics of the power generation unit (mode of operation)

BV project number: **ZEK-18JA0679FCSHP-R1**

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

Certificate number: **U20-0327**

Date of issue: **2020-05-07**



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