

Unit Certificate



FGW TG8 EZE

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No.: 968/GI 2118.01/24

Grid Integration of Distributed Energy Resources

Certificate Holder

Ginlong Technologies Co., Ltd.
No.57 Jintong Road, Binhai,
(seafront), Industrial Park,
Xiangshan Ningbo
315712 Zhejiang
China

Subject

Grid-Connected PV Inverter
Solis-80K-5G-PRO, Solis-100K-5G-PRO, Solis-110K-5G-PRO,
Solis-125K-5G-PRO

Codes and Standards

VDE-AR-N 4110:2023
FGW TG 8:2019 Revision 9
FGW TG 4:2019 Revision 9
FGW TG 3:2018 Revision 25

Scope and result

The conformity is declared by following documents:
Evaluation Report-No.: 968/GI 2118.01/24, 2024-08-21
Validation Report-No.: 968/GI 2118.00/24, 2024-08-20
Test Report No.: CN24AQWD 001, dated 2024-04-01

The manufacturer has provided proof of certification of the quality management system of his production facility in accordance with ISO 9001 or is subject to production monitoring.

Specific provisions

The deviations and conditions for conformity according to the evaluation report must be observed. The corresponding conditions and deviations are listed on page 2 of the certificate.

Valid until 2029-08-21

The issue of this certificate is based upon an evaluation in accordance with the Certification Program CERT GI3 V5.0:2021-11 in its actual version, whose results are documented in Report No. 968/GI 2118.01/24 dated 2024-08-21. This certificate is specifically valid for the above mentioned system only. It becomes invalid, if any unapproved changes are implemented without prior assessment/approval by the certification body. Authenticity and validity of this certificate can be verified through the above indicated QR-code or at <http://www.fs-products.com>.

TÜV Rheinland Industrie Service GmbH

Bereich Automation
Funktionale Sicherheit

Am Grauen Stein, 51105 Köln

Köln, 2024-08-21

Certification Body Safety & Security for Automation & Grid

Dipl.-Ing. Marco Klose

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Precisely Right.

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Technical data of the PGU:

Typ:	Solis-80K-5G-PRO	Solis-100K-5G-PRO	Solis-110K-5G-PRO	Solis-125K-5G-PRO
Rated apparent power:	88 kVA	110 kVA	121 kVA	137.5 kVA
Rated active power:	80 kW	100 kW	110 kW	125 kW
Max. active power (P ₆₀₀):	88.2 kW	110.3 kW	121.3 kW	137.8 kW
Rated voltage:	3/N/PE 400 VAC			
Nominal frequency:	50 Hz / 60 Hz			
Minimum required short-circuit power (only for type 1 PGU):	--			
Software-Version:	A1 (Firmware)			

Validated Simulation Model:

Reference name: Solis-(80-110)K-5G-PRO VDE V1_Encrypted.pfd

MD5 Checksum: 02f5378c7ed3efbaa52c6d6fb650d3a0

Simulation platform: DIgSILENT PowerFactory 2023 SP5

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The following deviations and restrictions apply:

None

The following:

- Q(U) control:
 - A voltage deadband cannot be set. If required, this has to be implemented on PGS level (e.g. via PGS controller).
 - An external interface for specifying the reference voltage U/U_c is not implemented. If required, this has to be implemented on PGS level (e.g. via PGS controller).
- Q(P) control: The PGU control only supports five reference points for Q(P) control. If more reference points are needed, the Q(P) control must be implemented on PGS level (e.g. by PGS controller).
- The PGU contains one single interface for active power setpoint by grid operator or any different third party (e.g. direct marketer). Separate implementation of the interfaces for the grid provider specification and other setpoint specifications, including implementation of the lowest value in accordance with VDE-AR-N 4110, must therefore be implemented at the PGS level (e.g. in the PGS controller). This must be considered accordingly during system certification. The parameters for the voltage and frequency thresholds with regard to connection and reconnection are not configurable. This has to be considered during system certification.
- The certified product does not provide a test terminal. A connecting terminal plate has to be installed separately, if necessary. Alternatively, this requirement can be fulfilled on PGS level through an intermediate decoupling protection device with valid component certificate according VDE-AR-N 4110 and separate circuit breaker.
- The validated simulation model of the PGUs specified shall be used in the certified version (see information above for details on file name and check sum (MD5)).

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Schematic overview of the PGU:

