Unit Certificate

FGW TG8 EZE

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No.: 968/GI 2098.03/25 Grid Integration of Distributed Energy Resources

Certificate Holder	SMA Solar Technology AG Sonnenallee 1 34266 Niestetal Germany
Subject	Grid-Connected Photovoltaic Inverter STP 125-70
Codes and Standards	VDE-AR-N 4110:2023 VDE-AR-N 4120:2018 FGW TG 3:2023 Revision 26 FGW TG 4:2023 Revision 10 FGW TG 8:2019 Revision 9
Scope and result	The power generating units mentioned above meet the requirements of standards listed above. The conformity is declared by following documents: Evaluation Report-No.: 968/GI 2098.03/25, 2025-01-15 Validation Report-No.: 968/GI 2098.02/24, 2025-01-15 Test Report No.: CN23HR1H 001, dated 2024-05-04 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 3 of the certificate.

Valid until 2029-11-06

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 2098.03/25 dated 2025-01-15. 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.

Köln, 2025-01-15

TÜV Rheinland Industrie Service GmbH
Bereich Automation
Funktionale Sicherheit
Am Grauen Stein, 51105 Köln
Certification Body Safety & Security for Automation & Grid

Armin Kerperin

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Technical data of the PGU:

Typ:	STP 125-70
Rated apparent power:	125 kVA
Rated active power:	125 kW
Max. active power (P_{600}):	124.47 kW
Rated voltage:	400 V_{AC}
Nominal frequency:	50/60 Hz
Minimum required short-circuit power (only for type 1 PGU):	N/A
Software-Version:	4.0.0.R

Validated Simulation Model:

Reference name: VDE_STP 125-70_PF2022_240624.pfd

MD5 Checksum: 706826D6133297F072A26D5DEBF467F4

Simulation platform: DIgSILENT PowerFactory 2022

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The following deviations and restrictions apply:

☐ **None**

☒ **The following:**

- The PGU control only supports eight 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). This must be considered accordingly during system certification.
- To meet the requirements for reactive power control according to VDE-AR-N 4120, an external PGS controller with valid component certificate is required. This has to be implemented on PGS level and evaluated during system certification.
- 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 prioritization of active power setpoints in accordance with VDE-AR-N 4110 or VDE-AR-N 4120, must therefore be implemented at the PGS level (e.g. in the PGS controller). This must be considered accordingly during system certification.
- Active power prioritization with regard to primary power supply has to be implemented on PGS level (e.g. by PGS-controller) and be evaluated as part of system certification, if required.
- The function tests with regard to compensation to ensure substation supply operation or rapid resynchronization were not performed during unit certification and have to be evaluated as part of system certification, if required.
- 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 to VDE-AR-N 4110 or VDE-AR-N 4120 and separate circuit breaker.
- As the unit does not contain a display, this has to be considered on project level. With regard to the requirements of the corresponding grid provider, an appropriate device to check the protection settings has to be provided on demand or should be stored on site.
- In some cases, the measured tripping time was less than the tripping time set. This has to be considered accordingly during system certification.
- 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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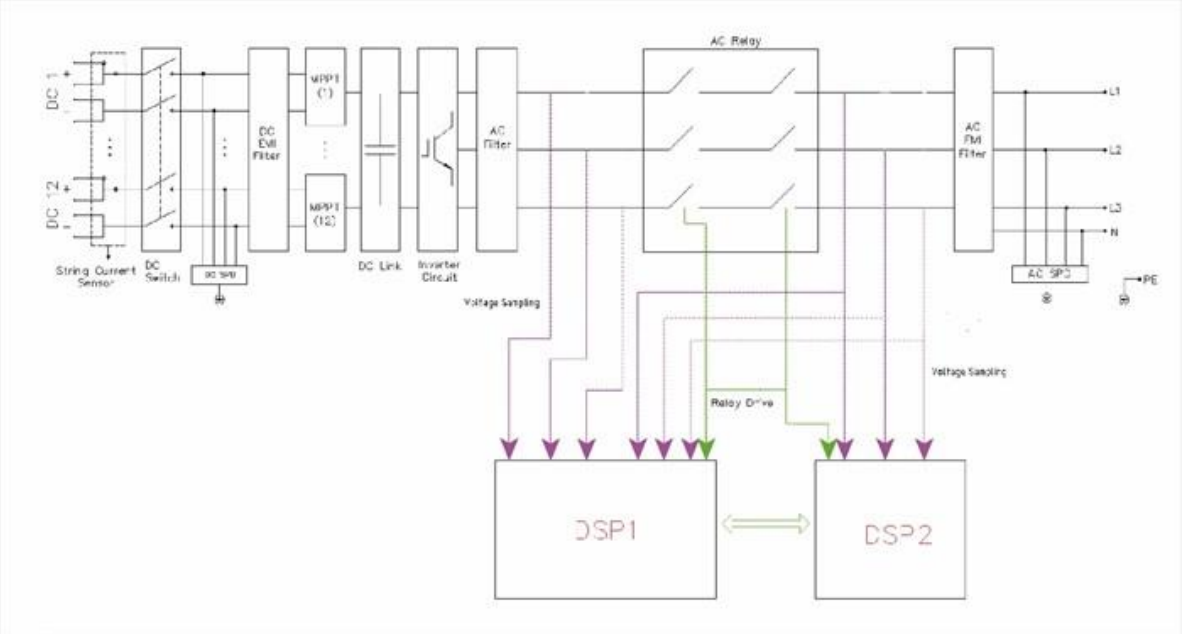
Schematic overview of the PGU:



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