

Unit Certificate



FGW TG8 EZE

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No.: 968/GI 2326.01/26

Grid Integration of Distributed Energy Resources

Certificate Holder

Huawei Technologies Co., Ltd.
Huawei Headquarters, Bantian,
Longgang District,
Shenzhen, 518129 Guangdong
P.R. China

Subject

Grid-Connected Photovoltaic Inverter
SUN2000-30K-MC0, SUN2000-40K-MC0, SUN2000-50K-MC0

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 2326.01/26, 2026-05-22
Validation Report-No.: 968/GI 2326.00/26, 2026-05-22
Test Report No.: CN25IVIK 001, dated 2025-12-27

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 2031-05-22

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 2326.01/26 dated 2026-05-22. 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, 2026-05-22

Certification Body Safety & Security for Automation & Grid

Dipl.-Ing. Marco Klose

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Technical data of the PGU:

Type:	SUN2000-30K-MC0	SUN2000-40K-MC0	SUN2000-50K-MC0
Max. apparent power:	33 kVA	44 kVA	55 kVA
Rated active power:	30 kW	40 kW	50 kW
Max. active power (P ₆₀₀):	32.93 kW	43.91 kW	54.88 kW
Rated voltage:	400 V _{AC}		
Nominal frequency:	50/60 Hz		
Minimum required short-circuit power (only for type 1 PGU):	--		
Software-Version:	V800R025		

Validated Simulation Model:

Reference name: HW_PV_MC0(30~50K).zip

MD5 Checksum: 7202DD313924EA03F2537E9497EB6AF0

Simulation platform: DIgSILENT PowerFactory 2025 SP1

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The following deviations and restrictions apply:

None

The following:

Proof	Deviation / Restriction
Method for reactive power supply	<ul style="list-style-type: none"> ▪ To meet the requirements for fixed Q control and fixed $\text{Cos } \varphi$ control according to VDE-AR-N 4120, an external PGS controller with valid component certificate is required. This must be implemented on PGS level and evaluated during system certification. ▪ Q(U) control: <ol style="list-style-type: none"> 1) A voltage deadband cannot be set. If required, this has to be implemented on PGS level (e.g. via PGS controller). 2) 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). ▪ $\text{Cos } \varphi(P)$ control: This function is not verified in the laboratory test and therefore must be evaluated as part of system certification.
Active power – general and grid security management	<ul style="list-style-type: none"> ▪ Separate interfaces for setpoint specifications regarding active power (e.g. grid operator, direct marketer) must be implemented at PGS level (e.g. by PGS-controller) and be evaluated as part of system certification.
Active power output dependent on grid frequency	<ul style="list-style-type: none"> ▪ Active power prioritization in case of underfrequency is also not implemented in PGU. This must be implemented at PGS level and evaluated during system certification.
Connecting – limit values for connection without prior protection tripping	<ul style="list-style-type: none"> ▪ According to the manufacturer declaration the PGU will follow the command from the PGP controller and only connect after the external “enable” signal is released when apply the grid code VDE-AR-N 4120. This feature is not verified in the laboratory test and therefore must be evaluated as part of system certification.
Protection technology and settings – readability of the protection settings	<ul style="list-style-type: none"> ▪ 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.
Protection technology and settings – Test terminal block	<ul style="list-style-type: none"> ▪ If required, this has to be installed separately.
Simulation model (validation)	<ul style="list-style-type: none"> ▪ The validated simulation model of the PGUs specified shall be used in the certified version

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Schematic overview of the PGU:

