Type Certificate

Applicant

Sigenergy Technology Co., Ltd.
No.175 Weizhan Road, Lingang New Area
China (Shanghai) Pilot Free Trade Zone Shanghai
P.R. China

Type of product	Grid-tied PV inverter / Battery converter	Sigen PV {50 ~ 150}M{1/2} / Sigen PV {50 ~ 150}M{1/2}-{HYA/HYB}
Technical data	Max. apparent power S_{Emax}	150 kW
	Nominal voltage	230 / 400 [3] or 480 V (for further details, see Annex)
	Nominal frequency	50 Hz
Technical data determined by measurements	Max. active power P_{Emax} / Max. active power peak P_{600}	[1] (for further details, see Annex)
Firmware version	V100R001	
Validated model	Model file	SIGEN Rocky encrypted V1_0_2.pfd
	Identification number (MD5)	00b3cb9cfc37e7757f2bbdd7a10842a0

Connection rule

VDE-AR-N 4110:2023-09 – Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage) [1]
VDE-AR-N 4120:2018-11 – Technical requirements for the connection and operation of customer installations to the high voltage network (TAR high voltage) [2]

Applicable standards / directives

Technical guidelines: FGW TR 3 Rev. 26 [3], FGW TR 4 Rev. 10 [4], FGW TR 8 Rev. 09 [5]

The power generating units, stated in the certificate, were tested and certified according to the technical guidelines referenced to the grid connection regulation. The electrical characteristics fulfil the requirements of the grid connection regulation:

- Quasi-steady-state operation
- Dynamic network stability (reactive current characteristic according to TCR medium voltage & TCR high voltage)
- Active power output and network security management
- Active power adjustment as a function of the grid frequency
- Protection technology and protection settings on generating unit level.
- Power quality

Restrictions or deviations: see annex of certificate

The manufacturer has provided proof of certification of the quality management system of his production facility in accordance with ISO 9001

The certificate contains the following information:

- technical data of the power generating unit, the auxiliary equipment used and the software version used;
- schematic structure of the power generating units;
- summarized information on the properties of the power generating unit.

The certificate is comprised of 200 pages (including Annex of 199 pages).

Project number: **25TH0137**
Certificate number: **U25-0444_1**
Issued: **2026-03-05**

Certification Program: **NSOP-0032-DEU-ZE-V10**
Valid until: **2030-04-28**

Certification body

Georg Loritz
Lab Supervisor Energy Systems

Accreditation

DAkkS Deutsche Akkreditierungsstelle D-ZE-12024-01-00

Accredited certification body by Deutsche Akkreditierungsstelle GmbH (DAkkS) according to ISO/IEC 17065. The accreditation is valid only for the scope listed in the annex of the accreditation certificate D-ZE-12024-01-00. The Deutsche Akkreditierungsstelle GmbH (DAkkS) is signatory of the multilateral arrangements of EA, ILAC and IAF for mutual recognition.

Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this certificate of conformity shall not be reproduced.

Ratings

Type of product	Photovoltaic inverter	**Sigen PV 50M1**	**Sigen PV 60M1**
Technical data	Rated active power	55 / 50 kW [2]	66 / 60 kW [2]
	Max. / Rated apparent power	55 / 50 kVA	66 / 60 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001 [2]	V100R001 [2]

Type of product	Photovoltaic inverter	**Sigen PV 80M1**	**Sigen PV 100M1**
Technical data	Rated active power	88 / 80kW [2]	110 / 100 kW [2]
	Max. / Rated apparent power	88 / 80 kVA	110 / 100 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Photovoltaic inverter	**Sigen PV 110M1**	**Sigen PV 125M1**
Technical data	Rated active power	121 / 110 kW [2]	137,5 / 125 kW [2]
	Max. / Rated apparent power	121 / 110 kVA	137,5 / 125 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Photovoltaic inverter	**Sigen PV 150M1**	**Sigen PV 50M2**
Technical data	Rated active power	150 kW	55 / 50 kW [2]
	Max. / Rated apparent power	150 kVA	55 / 50 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Ratings

Type of product	Photovoltaic inverter	**Sigen PV 60M2**	**Sigen PV 80M2**
Technical data	Rated active power	66 / 60 kW [2]	88 / 80 kW [2]
	Max. / Rated apparent power	66 / 60 kVA	88 / 80 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001 [2]	V100R001 [2]

Type of product	Photovoltaic inverter	**Sigen PV 100M2**	**Sigen PV 110M2**
Technical data	Rated active power	110 / 100 kW [2]	121 / 110 kW [2]
	Max. / Rated apparent power	110 / 100 kVA	121 / 110 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Photovoltaic inverter	**Sigen PV 125M2**	**Sigen PV 150M2**
Technical data	Rated active power	137,5 / 125 kW [2]	150 kW
	Max. / Rated apparent power	137,5 / 125 kVA	150 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 50M1-HYA**	**Sigen PV 60M1-HYA**
Technical data	Rated active power	55 / 50 kW [2]	66 / 60 kW [2]
	Max. / Rated apparent power	55 / 50 kVA	66 / 60 kVA
	Nominal voltage	230 / 400 V [3]	230 / 400 V [3]
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Ratings

Type of product	Hybrid inverter	**Sigen PV 80M1-HYA**	**Sigen PV 100M1-HYA**
Technical data	Rated active power	88 / 80kW [2]	110 / 100 kW [2]
	Max. / Rated apparent power	88 / 80 kVA	110 / 100 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 110M1-HYA**	**Sigen PV 125M1-HYA**
Technical data	Rated active power	121 / 110 kW [2]	137,5 / 125 kW [2]
	Max. / Rated apparent power	121 / 110 kVA	137,5 / 125 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	121,42 kW	[1]
Firmware version		V100R001 [2]	V100R001 [2]

Type of product	Hybrid inverter	**Sigen PV 150M1-HYA**	**Sigen PV 50M2-HYA**
Technical data	Rated active power	150 kW	55 / 50 kW [2]
	Max. / Rated apparent power	150 kVA	55 / 50 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 60M2-HYA**	**Sigen PV 80M2-HYA**
Technical data	Rated active power	66 / 60 kW [2]	88 / 80 kW [2]
	Max. / Rated apparent power	66 / 60 kVA	88 / 80 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Ratings

Type of product	Hybrid inverter	**Sigen PV 100M2-HYA**	**Sigen PV 110M2-HYA**
Technical data	Rated active power	110 / 100 kW [2]	121 / 100 kW [2]
	Max. / Rated apparent power	110 / 100 kVA	121 / 100 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 125M2-HYA**	**Sigen PV 150M2-HYA**
Technical data	Rated active power	137,5 / 125 kW [2]	150 kW
	Max. / Rated apparent power	137,5 / 125 kVA	150 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 50M1-HYB**	**Sigen PV 60M1-HYB**
Technical data	Rated active power	55 / 50 kW [2]	66 / 60 kW [2]
	Max. / Rated apparent power	55 / 50 kVA	66 / 60 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 80M1-HYB**	**Sigen PV 100M1-HYB**
Technical data	Rated active power	88 / 80 kW [2]	110 / 100 kW [2]
	Max. / Rated apparent power	88 / 80 kVA	110 / 100 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Ratings

Type of product	Hybrid inverter	**Sigen PV 110M1-HYB**	**Sigen PV 125M1-HYB**
Technical data	Rated active power	121 / 110 kW [2]	137,5 / 125 kW [2]
	Max. / Rated apparent power	121 / 110 kVA	137,5 / 125 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 150M1-HYB**	**Sigen PV 50M2-HYB**
Technical data	Rated active power	150 kW	55 / 50 kW [2]
	Max. / Rated apparent power	150 kVA	55 / 50 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 60M2-HYB**	**Sigen PV 80M2-HYB**
Technical data	Rated active power	66 / 60 kW [2]	88 / 80 kW [2]
	Max. / Rated apparent power	66 / 60 kVA	88 / 80 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Type of product	Hybrid inverter	**Sigen PV 100M2-HYB**	**Sigen PV 110M2-HYB**
Technical data	Rated active power	110 / 100 kW [2]	121 / 110 kW [2]
	Max. / Rated apparent power	110 / 100 kVA	121 / 110 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

Ratings

Type of product	Hybrid inverter	**Sigen PV 125M2-HYB**	**Sigen PV 150M2-HYB**
Technical data	Rated active power	137,5 / 125 kW [2]	150 kW
	Max. / Rated apparent power	137,5 / 125 kVA	150 kVA
	Nominal voltage	230 / 400 [3] or 480 V	230 / 400 [3] or 480 V
	Nominal frequency	50 Hz	
	Max. active power P_{Emax} / Max. active power peak P_{600} [1]	[1]	[1]
Firmware version		V100R001	V100R001

[1] Due to spot testing the tests marked were not conducted. The stated results were transferred from the type Sigen PV 110M1-HYA according to measurements of test 4.1.1, FGW TR 3 [3].

[2] Left number: Default setting. In this default operating mode, the reactive power supply at full load is zero, resulting in a power factor of 1.

Right number: Manufacturer-defined nominal power. With this setting, the units can supply reactive power corresponding to cosφ = 0,909 at full load & nominal voltage. In this mode, for voltages within the voltage range of 90%U_c to 110%U_c, no active power reduction is required.

See also p.120.

[3] Neutral conductor optional.

Restrictions, deviations or notes on usage

1. The PGU does not provide test terminals for on-site testing. For necessary on-site testing, a separate test terminal must be installed additionally.

Revision	
Rev. 0	First issue
Rev. 1	Typo corrected in Applicant Adress Typo corrected in Ratings of inverter model Sigen PV 801-HYA Typo corrected in reference table on page 11