

Certificate of compliance

Applicant: NingBo Deye Inverter Technology Co., Ltd.
No. 26 South YongJiang Road, Daqi, Beilun, NingBo
China

Product: Photovoltaic inverter

Model: SUN-1K-G04P1-EU-AM1, SUN-1.5K-G04P1-EU-AM1,
SUN-2K-G04P1-EU-AM1, SUN-2.2K-G04P1-EU-AM1,
SUN-2.5K-G04P1-EU-AM1, SUN-2.7K-G04P1-EU-AM1,
SUN-3K-G04P1-EU-AM1, SUN-3.3K-G04P1-EU-AM1,
SUN-3.6K-G04P1-EU-AM1, SUN-4K-G04P1-EU-AM1

The device is designed to work as a generation unit of the type: A

Inverter for single-phase parallel connection to the public grid. The network monitoring and disconnection device is an integral part of the above-mentioned model.

Applied rules and standards:

EN 50549-1:2019

Requirements for parallel connection of installations with distribution networks - Part 1: Connection to an LV distribution network - Production of installations up to and including Type B

- 4.4 Normal operating range
- 4.5 Immunity to disturbances
- 4.6 Active response to frequency deviation
- 4.7 Power response to voltage variations and voltage changes
- 4.8 EMC and power quality
- 4.9 Interface protection
- 4.10 Connection and starting to generate electrical power
- 4.11 Ceasing and reduction of active power on set point
- 4.13 Requirements regarding single fault tolerance of interface protection system and interface switch

EN 50549-10:2022

Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units

Commission Regulation (EU) 2016/631 of 14 April 2016

Establishing a network code on requirements for grid connection of generators (NC RFG).
Type approval for generation units to use in Type A plants.

At the time of issue of this certificate, the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

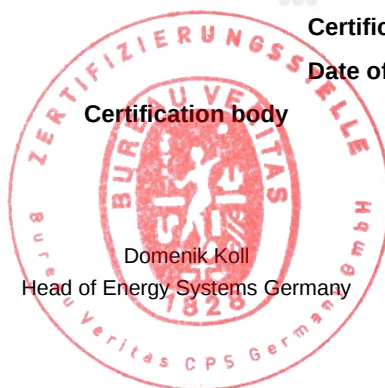
Report number: ASUE-ESH-P24100557

Certificate number: U25-0012

Certification Program: NSOP-0032-DEU-ZE-V10

Date of issue: 2025-01-17

Accreditation



Domenik Koll
Head of Energy Systems Germany



Type Approval and declaration of compliance with the requirements of EN 50549-1 and Commission Regulation (EU) 2016/631 of 14 April 2016

Manufacturer	NingBo Deye Inverter Technology Co., Ltd. No. 26 South YongJiang Road, Daqi, Beilun, NingBo China			
Product type	Photovoltaic inverter			
Static converter model	SUN-1K-G04P1-EU-AM1	SUN-1.5K-G04P1-EU-AM1	SUN-2K-G04P1-EU-AM1	SUN-2.2K-G04P1-EU-AM1
Input DC (photovoltaic)				
MPP voltage range [V]	70-500	70-500	70-500	70-500
Start-up Voltage [V]	80	80	80	80
Rated PV Input Voltage [V]	360	360	360	360
Max. input voltage [V]	550	550	550	550
Max. Operating PV Input Current [A]	20	20	20	20
Max. Input Short Circuit Current [A]	30	30	30	30
Output AC				
Rated AC voltage [V]	L/N/PE 230	L/N/PE 230	L/N/PE 230	L/N/PE 230
Rated output current [A]	4,4	6,5	8,7	9,6
Max. output current [A]	4,8	7,2	9,6	10,6
Nom. converter output (P _{NINV}) [kW]	1,0	1,5	2,0	2,2
Max. apparent power [kVA]	1,1	1,65	2,2	2,42
Static converter model	SUN-2.5K-G04P1-EU-AM1	SUN-2.7K-G04P1-EU-AM1	SUN-3K-G04P1-EU-AM1	SUN-3.3K-G04P1-EU-AM1
Input DC (photovoltaic)				
MPP voltage range [V]	70-500	70-500	70-500	70-500
Start-up Voltage [V]	80	80	80	80
Rated PV Input Voltage [V]	360	360	360	360
Max. input voltage [V]	550	550	550	550
Max. Operating PV Input Current [A]	20	20	20	20
Max. Input Short Circuit Current [A]	30	30	30	30
Output AC				
Rated AC voltage [V]	L/N/PE 230	L/N/PE 230	L/N/PE 230	L/N/PE 230
Rated output current [A]	10,9	11,8	13,1	14,4
Max. output current [A]	12,0	13,0	14,4	15,8
Nom. converter output (P _{NINV}) [kW]	2,5	2,7	3,0	3,3
Max. apparent power [kVA]	2,75	2,97	3,3	3,63
Static converter model	SUN-3.6K-G04P1-EU-AM1	SUN-4K-G04P1-EU-AM1	--	--

Input DC (photovoltaic)				
MPP voltage range [V]	70-500	70-500	--	--
Start-up Voltage [V]	80	80	--	--
Rated PV Input Voltage [V]	360	420	--	--
Max. input voltage [V]	550	550	--	--
Max. Operating PV Input Current [A]	20	20	--	--
Max. Input Short Circuit Current [A]	30	30	--	--
Output AC				
Rated AC voltage [V]	L/N/PE 230	L/N/PE 230	--	--
Rated output current [A]	15,7	17,4	--	--
Max. output current [A]	17,3	19,2	--	--
Nom. converter output (P _{NINV}) [kW]	3,6	4,0	--	--
Max. apparent power [kVA]	3,96	4,4	--	--
Interface protection system and interface switch (Network and system protection “NS-protection”)				
Type of protection	integrated NS-protection			
Assigned to generation unit type	SUN-1K-G04P1-EU-AM1, SUN-1.5K-G04P1-EU-AM1, SUN-2K-G04P1-EU-AM1, SUN-2.2K-G04P1-EU-AM1, SUN-2.5K-G04P1-EU-AM1, SUN-2.7K-G04P1-EU-AM1, SUN-3K-G04P1-EU-AM1, SUN-3.3K-G04P1-EU-AM1, SUN-3.6K-G04P1-EU-AM1, SUN-4K-G04P1-EU-AM1			
Integrated interface switch	Type of switching equipment 1: Relay (Model HF161F-W) Type of switching equipment 2: Relay (Model HF161F-W)			
	Note: The output is switched off by the inverter bridge and two relay in series in each line and neutral.			
Firmware version	V8431-0105			
Note				
The settings of the interface protection are password protected adjustable.				
In case the above stated generators are used with an external protection device, the protection settings of the inverters are to be adjusted according to the manufacturer’s declaration.				
The above stated generators are tested according to the requirements in the EN 50549-1:2019 Commission Regulation (EU) 2016/631 of 14 April 2016. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements.				