

Certificate of compliance

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

Product: Photovoltaic and battery inverter (Hybrid-Inverter)

Model: SUN-3K-SG04LP1-EU, SUN-3K-SG04LP1-24-EU,
SUN-3.6K-SG04LP1-EU, SUN-5K-SG04LP1-EU,
SUN-6K-SG04LP1-EU, SUN-3K-SG04LP1-24-EU-SM1,
SUN-3K-SG04LP1-EU-SM1, SUN-3.6K-SG04LP1-EU-SM2,
SUN-5K-SG04LP1-EU-SM2, SUN-6K-SG04LP1-EU-SM2

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/A1:2023

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

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-P22010033-R2

Certificate number: U25-0086

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

Date of issue: 2025-01-28

Accreditation



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 and battery inverter (Hybrid-Inverter)			
Static converter model	SUN-3K-SG04LP1-24-EU	SUN-3K-SG04LP1-EU	SUN-3.6K-SG04LP1-EU	SUN-5K-SG04LP1-EU
Input DC (photovoltaic)				
MPP voltage range [V]	150-425	150-425	150-425	150-425
Max. input voltage [V]	500	500	500	500
Max. input current per MPPT [A]	18	18	18+18	18+18
Input DC (battery)				
DC voltage range [V]	20-30	40-60	40-60	40-60
Max. DC voltage [V]	30	60	60	60
Max. DC current per DC input [A]	140	70	90	120
Output AC				
Rated AC voltage [V]	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz
Rated output current [A]	13,0	13,0	15,7	21,7
Max. output current [A]	14,3	14,3	17,2	23,9
Nom. converter output (P _{NINV}) [W]	3000	3000	3600	5000
Max. apparent power [VA]	3300	3300	3960	5500
Static converter model	SUN-6K-SG04LP1-EU	SUN-3K-SG04LP1-24-EU-SM1	SUN-3K-SG04LP1-EU-SM1	SUN-3.6K-SG04LP1-EU-SM2
Input DC (photovoltaic)				
MPP voltage range [V]	150-425	150-425	150-425	150-425
Max. input voltage [V]	500	500	500	500
Max. input current per MPPT [A]	18+18	18	18	18+18
Input DC (battery)				
DC voltage range [V]	40-60	20-30	40-60	40-60
Max. DC voltage [V]	60	30	60	60
Max. DC current per DC input [A]	135	140	70	90
Output AC				
Rated AC voltage [V]	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz
Rated output current [A]	26,1	13,1	13,1	15,7
Max. output current [A]	28,7	14,4	14,4	17,3
Nom. converter output (P _{NINV}) [W]	6000	3000	3000	3600
Max. apparent power [VA]	6600	3300	3300	3960

Static converter model	SUN-5K-SG04LP1-EU-SM2	SUN-6K-SG04LP1-EU-SM2	--	--
Input DC (photovoltaic)				
MPP voltage range [V]	150-425	150-425	--	--
Max. input voltage [V]	500	500	--	--
Max. input current per MPPT [A]	18+18	18+18	--	--
Input DC (battery)				
DC voltage range [V]	40-60	40-60	--	--
Max. DC voltage [V]	60	60	--	--
Max. DC current per DC input [A]	120	135	--	--
Output AC				
Rated AC voltage [V]	L/N/PE, 230V, 50Hz	L/N/PE, 230V, 50Hz	--	--
Rated output current [A]	21,8	26,1	--	--
Max. output current [A]	24,0	28,7	--	--
Nom. converter output (P _{NINV}) [W]	5000	6000	--	--
Max. apparent power [VA]	5500	6600	--	--
Interface protection system and interface switch (Network and system protection “NS-protection”)				
Type of protection	Integrated NS-protection			
Assigned to generation unit type	SUN-3K-SG04LP1-EU, SUN-3K-SG04LP1-24-EU, SUN-3.6K-SG04LP1-EU, SUN-5K-SG04LP1-EU, SUN-6K-SG04LP1-EU, SUN-3K-SG04LP1-24-EU-SM1, SUN-3K-SG04LP1-EU-SM1,SUN-3.6K-SG04LP1-EU-SM2, SUN-5K-SG04LP1-EU-SM2, SUN-6K-SG04LP1-EU-SM2			
Integrated interface switch	Type of switching equipment 1: Relay (Model AZSR143) Type of switching equipment 2: Relay (Model AZSR143)			
	Note: The output is switched off by the inverter bridge and two relay in series in each line and neutral.			
Firmware version	4384			
Note				
The settings of the generators are password protected adjustable.				
In case the 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 and the 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.				