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Certificate of compliance

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

Product: Photovoltaic (PV) and battery inverter

Model: SUN-50K-SG01HP3-EU-BM4, SUN-40K-SG01HP3-EU-BM4, SUN-35K-SG01HP3-EU-BM3, SUN-30K-SG01HP3-EU-BM3, SUN-29.9K-SG01HP3-EU-BM3

Inverter for three-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 50549-1:2019-02, NBN EN 50549-1:2019-02

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

C10/11:2021-03

Specific technical prescription regarding power-generating plant operating in parallel to the distribution network

DIN VDE V 0124-100:2020 (5.5.2.1 Functional safety of network and system protection)

Grid integration of generator plants - Low-voltage - Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks

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 and Type B plants.

At the time of issue of this certificate, the representative product listed above corresponds to the stated rules and standards.

Report number: ASUE-ESH-P22110231 **Certification program:** NSOP-0032-DEU-ZE-V01
Certificate number: U23-0157 **Date of issue:** 2023-03-08

Certification body

Alf Assenkamp



Certification body of Bureau Veritas Consumer Products Services Germany GmbH accredited according to DIN EN ISO/IEC 17065

Testing laboratory accredited according to DIN EN ISO/IEC 17025

A partial representation of the certificate requires the written permission of Bureau Veritas Consumer Products Services Germany GmbH



Annex to the EN 50549-1 / C10/11 certificate of compliance No. U23-0157

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Appendix
 Extract from test report according to EN 50549-1 / C10/11 Nr. ASUE-ESH-P22110231

Type Approval and declaration of compliance with the requirements of EN 50549-1, Commission Regulation (EU) 2016/631 of 14 April 2016 and C10/11 for Belgium

Manufacturer / applicant	NingBo Deye Inverter Technology Co., Ltd. No. 26 South YongJiang Road, Daqi, Beilun, NingBo, China
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Micro-generator Type	Photovoltaic and battery inverter			
	SUN-50K-SG01HP3-EU-BM4	SUN-40K-SG01HP3-EU-BM4	SUN-35K-SG01HP3-EU-BM3	SUN-30K-SG01HP3-EU-BM3
Max.DC voltage [V]	1000			
MPPT voltage range [V]	150-850			
Max. PV current [A]	4*36	4*36	3*36	3*36
Battery Voltage [V]	160-800			
Max.Charging/Discharging Current [A]	50+50			
Rated grid voltage [V]	3L/N/PE, 230/400 Va.c., 50 Hz			
Rated AC Output current[A]	72,5	58,0	50,8	43,5
Max AC Output current [A]	79,8	63,8	55,8	47,9
Rated AC Output active Power [W]	50000	40000	35000	30000
Max. Apparent Output Power [VA]	55000	44000	38500	33000
	SUN-29.9K-SG01HP3-EU-BM3	--	--	--
Max.DC voltage [V]	1000	--	--	--
MPPT voltage range [V]	150-850	--	--	--
Max. PV current [A]	3*36	--	--	--
Battery Voltage [V]	160-800	--	--	--
Max.Charging/Discharging Current [A]	50+50	--	--	--
Rated grid voltage [V]	3L/N/PE, 230/400 Va.c., 50 Hz	--	--	--
Rated AC Output current[A]	43,4	--	--	--
Max AC Output current [A]	43,4	--	--	--
Rated AC Output active Power [W]	29900	--	--	--
Max. Apparent Output Power [VA]	29900	--	--	--

Firmware version	1020
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Description of the structure of the power generation unit:
 The power generation unit is equipped with a PV and line-side EMC filter. The power generation unit has no galvanic isolation between DC input and AC output. Output switch-off is performed with single-fault tolerance based on the inverter bridge and two series-connected relays in (each) line and neutral. This enables a safe disconnection of the power generation unit from the network in case of error.



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Appendix

Extract from test report according to EN 50549-1 / C10/11

Nr. ASUE-ESH-P22110231

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 and C10/11 for Belgium. 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.