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Certificate of compliance

Applicant: KACO new energy GmbH
Werner-von-Siemens-Allee 1
74172 Neckarsulm
Germany

Product: Photovoltaic (PV) inverter

Model: KACO blueplanet 50.0 TL3 M1 WM OD IIGM KACO blueplanet 50.0 TL3 M1 WM OD HUGM
KACO blueplanet 50.0 TL3 M1 WM OD IIGB KACO blueplanet 50.0 TL3 M1 WM OD HUGX
KACO blueplanet 50.0 TL3 M1 WM OD IIGX KACO blueplanet 60.0 TL3 M1 WM OD IIGB
KACO blueplanet 50.0 TL3 M1 WM OD IIGS KACO blueplanet 60.0 TL3 M1 WM OD IIGM
KACO blueplanet 50.0 TL3 M1 WM OD FRGX KACO blueplanet 60.0 TL3 M1 WM OD IIGX
KACO blueplanet 29.0 TL3 M1 WM OD II4M KACO blueplanet 60.0 TL3 M1 WM OD FRGX
KACO blueplanet 29.0 TL3 M1 WM OD II4X KACO blueplanet 60.0 TL3 M1 WM OD TWGB
KACO blueplanet 29.0 TL3 M1 WM OD II4S

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

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
- 4.12 Remote information exchange
- 4.13 Requirements regarding single fault tolerance of interface protection system and interface switch

EN 50438:2013

Requirements for micro-generating plants to be connected in parallel with public low-voltage distribution networks

DIN V VDE V 0126-1-1:2006 (4.1 Functional safety)

Automatic disconnection device between a generator and the public low-voltage grid

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 safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

Report number: 15TH0250-EN50549-1_2
15TH0250-FRT_1

Certification Program:

NSOP-0032-DEU-ZE-V01

Certificate number: U21-0790

Date of issue:

2021-09-17

Certification body



Thomas Lammel



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

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



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Annex to the EN 50549-1 certificate of compliance No. U21-0790

Appendix

Extract from test report according to EN 50549-1 No. 15TH0250-EN50549-1_2 15TH0250-FRT_1

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

Manufacturer / applicant	KACO new energy GmbH Werner-von-Siemens-Allee 1 74172 Neckarsulm Germany
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Micro-generator Type	Photovoltaic inverter			
	KACO blueplanet 60.0 TL3	KACO blueplanet 50.0 TL3	KACO blueplanet 29.0 TL3	KACO blueplanet 50.0 TL3 M1 WM OD HUGX
MPP DC voltage range [V]	580 – 900	580 – 900	200 – 800	580 – 900
Input DC voltage range [V]	580 – 1100	580 – 1100	360 – 900	580 – 1100
Input DC current [A]	107 Inom / 190 Isc max	90 Inom / 190 Isc max	85 Inom / 190 Isc max	90 Inom / 190 Isc max
Output AC voltage [V]	220 / 380; 230 / 400; 240 / 415 (3/N/PE – 3/PEN); 42 – 68 Hz	220 / 380; 230 / 400; 240 / 415 (3/N/PE – 3/PEN); 42 – 68 Hz	220/127 (3/N/PE – 3/PEN); 42 – 68 Hz	220 / 380; 230 / 400; 240 / 415 (3/N/PE – 3/PEN); 42 – 68 Hz
Output AC current [A]	3 x 90	3 x 76,5	3 x 76,5	3 x 76,5
Output power [VA]	60000	50000 nom / 52000 max.	29000 nom / 30100 max.	49900 nom. / 52000 max.
	KACO blueplanet 50.0 TL3 M1 WM OD HUGM	--	--	--
MPP DC voltage range [V]	580 – 900	--	--	--
Input DC voltage range [V]	580 – 1100	--	--	--
Input DC current [A]	90 Inom / 190 Isc max	--	--	--
Output AC voltage [V]	220 / 380; 230 / 400; 240 / 415 (3/N/PE – 3/PEN); 42 – 68 Hz	--	--	--
Output AC current [A]	3 x 76,5	--	--	--
Output power [VA]	49900 nom. / 52000 max.	--	--	--

Firmware version	Beginning with PKT: 5.67
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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.

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.