Unit Certificate Number	**21575-CER**	
Applicant	KACO new energy GmbH Werner-von-Siemens-Alle 1 74172. Neckarsulm, Germany	
Series	KACO blueplanet gridsave	
Models/	See page 3	
Type of generating unit	Grid-tied battery inverter	
Technical Data	See page 4-6	
Software version	V03.64	
Simulations	**Model name:**	KACO_blueplanet_gridsave_3TL440_series.pfd
	Checksum:	15480DF63DB8995C44B8F320936D5A5F
	Software environment:	DIgSILENT Powerfactory 2022 SP1
VDE application guide	**VDE-AR-N 4110:** 2018-11. Technical requirements for the connection and operation of customer installations to the medium voltage network (TCR medium voltage). **+ FAEE + A1:2022** **VDE-AR-N 4120:** 2018-11. Technical requirements for the connection and operation of customer installations to the high voltage network (TCR high voltage) + **CORR:2020**	
Certification programme	**TG 8** – Certification of the Electrical Characteristics of Power Generating Units, Systems and Storage Systems as well as for their Components to the Grid. **Rev 9 + FAEE: 2022**	
Standards/guidelines which are also applicable	**TG 3** – Determination of the Electrical Characteristics of Power Generating Units and systems, Storage Systems as well for their Components in medium-, high- and extra-high voltage grids. **Rev 25.** **TG 4** – Demands on Modelling and Validating Simulation Models of the Electrical characteristics of Power Generating Units and Systems, Storage Systems as well as for their Components. **Rev 9**.	

Having assessed the report number:

- Test reports: 21748-3-TR, 21749-1-TR, 21749-3-TR performed by CERE (EA Accredited Laboratory Nº 1376/LE2560) based on the requirements of the EN ISO/IEC 17025: 2017.
- Simulation report 21575-S performed by CERE (Accredited Laboratory Nº 1376/LE2560) based on the requirements of the EN ISO/IEC 17025: 2017 with its annex with plausibility tests 21575-S-ANNEX
- Certificate annex with unit certificate requirements 21575-CER ANNEX performed by CERE (Accredited Entity Nº 147/C-PR335) based on the requirements of the EN ISO/IEC 17065: 2012

The above-mentioned generating unit complies with the requirements of the following VDE application guide(s):

VDE-AR-N 4110:2018-11. Technical requirements for the connection and operation of customer installations to the medium voltage network (TCR medium voltage) **+FAEE+A1:2022**
VDE-AR-N 4120:2018-11. "Technical requirements for the connection and operation of customer installations to the high voltage network (TCR high voltage) **+ CORR: 2020**

Indication of deviations / special issues according to Clause 2.6 of certification guide FGW TG8 Rev 9:

1) Requirement 6.3.3.5: A test terminal strip is not available. The requirement for a test terminal strip can be implemented via an external monitoring unit, e.g. "Powador-protect" as an intermediately located protection, using the coupling switch integrated in the generation unit.
2) CERE has not tested any of the protection functions in the device according to manufacturer's request. The internal interface switch can be triggered by an external interface protection or external relays/switches.
3) Active power priority in reactive power set point function not available.

Certification programme:
TG 8 – Certification of the Electrical Characteristics of Power Generating Units, Systems and Storage Systems as well as for their Components to the Grid. **Rev 9**

Standards/guidelines which are also applicable:
TG 3 – Determination of the Electrical Characteristics of Power Generating Units and systems, Storage Systems as well for their Components in medium-, high- and extra-high voltage grids. **Rev 25.**
TG 4 – Demands on Modelling and Validating Simulation Models of the Electrical characteristics of Power Generating Units and Systems, Storage Systems as well as for their Components. **Rev 9**.

The certificates include the following information:

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

This certification is according to the CERE internal process PET-CERE-29 Rev 5, that defines the certification scheme, based on the requirements of the EN ISO/IEC 17065:2012. For this certification process the conformity assessment activities were based on:

- Testing of production samples selected by CERE.
- Audit of quality system according to ISO 9001 with certificate number: 2020-0109492-00 issued by a certification body accredited according EN ISO/IEC 17021.
- Inspection of the manufacturing process.

Madrid, April 04, 2023. This certificate is valid until April 04, 2028

Miguel Martínez Lavin
Certification Director

Models
blueplanet gs 92.0 TL3-S B1 WM OD IIGM
blueplanet gs 92.0 TL3-S B1 WM OD IIGL
blueplanet gs 92.0 TL3-S B1 WM OD IIGX
blueplanet gs 110 TL3-S B1 WM OD IIKM
blueplanet gs 110 TL3-S B1 WM OD IIKL
blueplanet gs 110 TL3-S B1 WM OD IIKX
blueplanet gs 137 TL3-S B1 WM OD IIPM
blueplanet gs 137 TL3-S B1 WM OD IIPL
blueplanet gs 137 TL3-S B1 WM OD IIPX

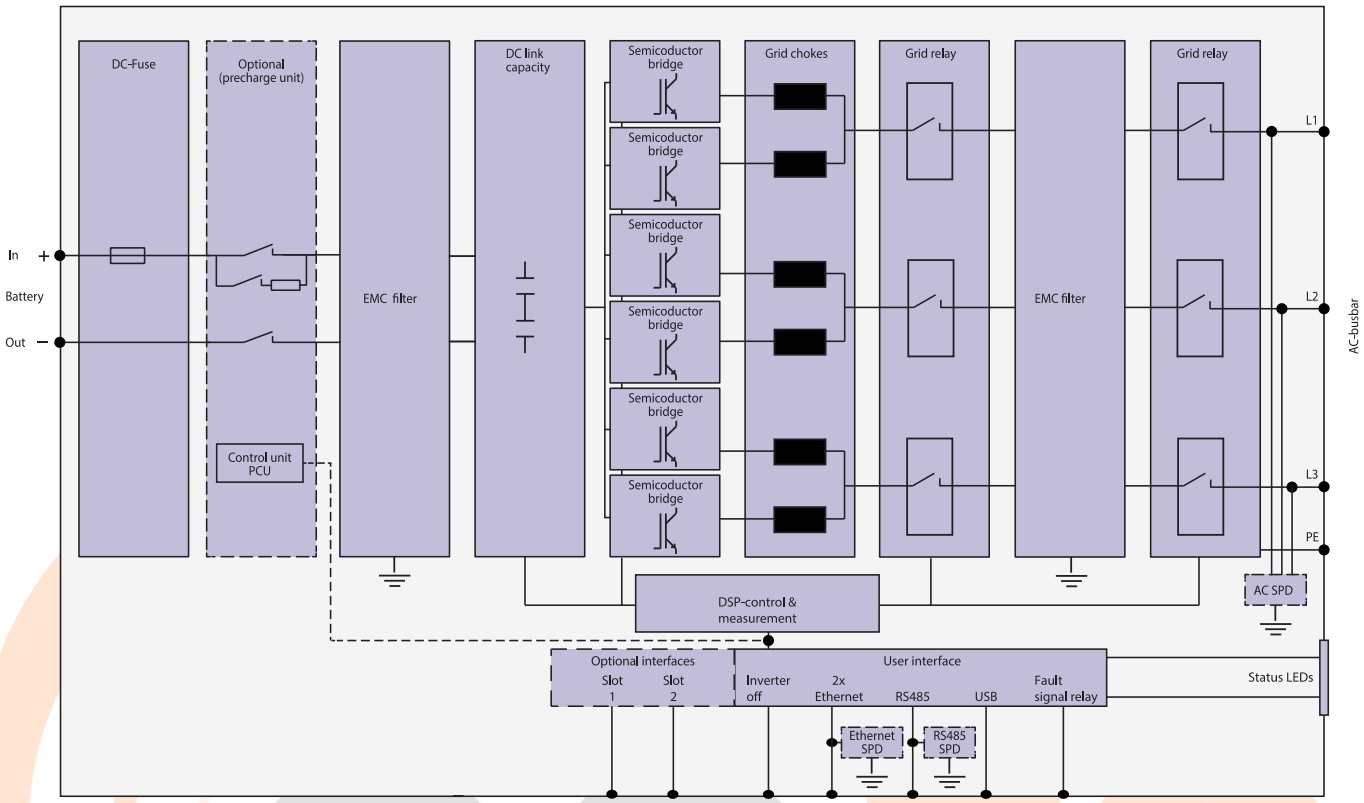
Technical data

KACO blueplanet	
	blueplanet gs 92.0 TL3-S B1 WM OD IIGM **blueplanet gs 92.0 TL3-S B1 WM OD IIGL** **blueplanet gs 92.0 TL3-S B1 WM OD IIGX**
DC INPUT DATA	
Voltage range	668-1315 V
Max. input current	145 A
Max. short circuit current $I_{sc\ max}$	300 A
Number of DC inputs	1
AC OUTPUT DATA	
Rated output	92 000 VA
Max. power	92 000 VA
Line voltage	400 V (3P+PE)
Voltage range: continuous operation	300 V - 580 V
Rated frequency (range)	50 Hz / 60 Hz (45 Hz – 65 Hz)
Rated current	3 x 132.3 A
Max. current	3 x 132.3 A
Reactive power / cos phi	0 – 100 % Snom / 0.3 - 1 ind/cap
Max. total harmonic distortion (THD)	< 3 %
Number of grid phases	3
GENERAL DATA	
Operation mode	Grid dependent (charge/discharge)
Standby consumption	<8 W without PCU, <14 W with PCU relay closed
Circuitry topology	transformerless
MECHANICAL DATA	
Display	LEDs
Control units	Webserver
Humidity	0 – 100 %

KACO blueplanet	
	blueplanet gs 110 TL3-S B1 WM OD IIKM **blueplanet gs 110 TL3-S B1 WM OD IIKL** **blueplanet gs 110 TL3-S B1 WM OD IIKX**
DC INPUT DATA	
Voltage range	801-1315 V
Max. input current	145 A
Max. short circuit current $I_{sc\ max}$	300 A
Number of DC inputs	1
AC OUTPUT DATA	
Rated output	110 000 VA
Max. power	110 000 VA
Line voltage	480 V (3P+PE)
Voltage range: continuous operation	300 V - 580 V
Rated frequency (range)	50 Hz / 60 Hz (45 Hz – 65 Hz)
Rated current	3 x 132.3 A
Max. current	3 x 132.3 A
Reactive power / cos phi	0 – 100 % Snom / 0.3-1 ind/cap
Max. total harmonic distortion (THD)	< 3 %
Number of grid phases	3
GENERAL DATA	
Operation mode	Grid dependent (charge/discharge)
Standby consumption	<8 W without PCU, <14 W with PCU relay closed
Circuitry topology	transformerless
MECHANICAL DATA	
Display	LEDs
Control units	Webserver
Humidity	0 – 100 %

KACO blueplanet	
	blueplanet gs 137 TL3-S B1 WM OD IIPM **blueplanet gs 137 TL3-S B1 WM OD IIPL** **blueplanet gs 137 TL3-S B1 WM OD IIPX**
DC INPUT DATA	
Voltage range	1002-1315 V
Max. input current	145 A
Max. short circuit current $I_{sc\ max}$	300 A
Number of DC inputs	1
AC OUTPUT DATA	
Rated output	137 000 VA
Max. power	137 000 VA
Line voltage	600 V (3P+PE)
Voltage range: continuous operation	480 V - 760 V
Rated frequency (range)	50 Hz / 60 Hz (45 Hz – 65 Hz)
Rated current	3 x 132.3 A
Max. current	3 x 132.3 A
Reactive power / cos phi	0 – 100 % Snom / 0.3 -1 ind/cap
Max. total harmonic distortion (THD)	< 3 %
Number of grid phases	3
GENERAL DATA	
Operation mode	Grid dependent (charge/discharge)
Standby consumption	<8 W without PCU, <14 W with PCU relay closed
Circuitry topology	transformerless
MECHANICAL DATA	
Display	LEDs
Control units	Webserver
Humidity	0 – 100 %

Electrical Diagram of KACO blueplanet gridsave series



The sample selected to test was representative of the production. The sample was selected in

KACO new energy GmbH
Werner-von-Siemens Alle 1
74172 Neckarsulm, Germany

Sample Report Number:

21748-TM
21749-TM

The inspection of manufacturing process was performed in:
On December 13, 2022

KACO new energy GmbH
Werner-von-Siemens Alle 1
74172 Neckarsulm, Germany

Inspection Report Number:

60029-22-1-IF KACO

RECORD OF CHANGES

Revision	Reason of the modification	Modification	Date
0	Initial version		04/04/2023