



**BUREAU
VERITAS**

Certificate of compliance

Applicant: **Anker Innovations Limited**
Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road
Central and Western District, HONG KONG
P.R. China

Product: **Photovoltaic and Battery inverter (Hybrid-Inverter)**

Model: **X1-H3.68K-S**
X1-H4.6K-S
X1-H5K-S
X1-H6K-S

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

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.

Applicable Documents:

DTIS-230206-BRL: Conditions Governing the Connection and Operation of Micro-Generation:2021

Applied rules and standards:

EN 50549-1:2019, I.S. 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

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.

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: **HC2408270138GC02**

Certificate number: **U24-1086**

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

Date of issue: **2024-11-06**

Accreditation



Accredited certification body by Deutsche Akkreditierungsstelle GmbH (DAkkS) according to ISO/IEC 17065. The accreditation is valid only for the scope listed in the annex of the accreditation certificate D-ZE-12024-01-00. The Deutsche Akkreditierungsstelle GmbH (DAkkS) is signatory of the multilateral arrangements of EA, ILAC and IAF for mutual recognition.

Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this certificate of conformity shall not be reproduced.



**BUREAU
VERITAS**

Annex certificate of conformity No. U24-1086

Extract from test report HC2408270138GC02 issued by a testing laboratory accredited by "A2LA" according to ISO/IEC 17025. The accreditation is only valid for the scope listed in the annex of the accreditation certificate "5200.02".

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

Manufacturer	Anker Innovations Limited Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road Central and Western District, HONG KONG P.R. China			
Product type	Photovoltaic and battery inverter (Hybrid-Inverter)			
Static converter model	X1-H3.68K-S	X1-H4.6K-S	X1-H5K-S	X1-H6K-S
Input DC (photovoltaic)				
MPP voltage range [V]	80 - 550	80 - 550	80 - 550	80 - 550
Max. input voltage [V]	600	600	600	600
Max. input current per MPPT [A]	16 / 16	16 / 16	16 / 16	16 / 16
Input DC (battery)				
DC voltage range [V]	390 - 550	390 - 550	390 - 550	390 - 550
Max. DC voltage [V]	370 - 550	370 - 550	370 - 550	370 - 550
Max. DC current per DC input [A]	9,2	11,5	12,5	15,0
Output AC				
Rated AC voltage [V]	220 / 230 / 240	220 / 230 / 240	220 / 230 / 240	220 / 230 / 240
Rated output current [A]	18,1	22,7	25,0	30,0
Max. output current [A]	3,68	4,6	5,0	6,0
Nom. converter output (P_{NINV}) [kW]	3,68	4,6	5,0	6,0
Rated apparent power [kVA]	4,0	5,0	5,5	6,6
In on-grid battery mode AC				
P_{Sn} (nom. discharge power) [kW]	3,68	4,6	5,0	6,0
Type	Unidirectional (DC coupled storage system)	Unidirectional (DC coupled storage system)	Unidirectional (DC coupled storage system)	Unidirectional (DC coupled storage system)
In off-grid battery mode				
P_{Sn} (nom. discharge power) [kW]	3,68	4,6	5,0	6,0
P_{Smax} (max. discharge power) [kW]	4,0	5,0	5,5	6,6



BUREAU
VERITAS

Annex certificate of conformity No. U24-1086

Extract from test report HC2408270138GC02 issued by a testing laboratory accredited by "A2LA" according to ISO/IEC 17025. The accreditation is only valid for the scope listed in the annex of the accreditation certificate "5200.02".

Interface protection system and interface switch (Network and system protection "NS-protection")	
Type of protection	Integrated NS-protection
Assigned to generation unit type	X1-H3.68K-S X1-H4.6K-S X1-H5K-S X1-H6K-S
Integrated interface switch	Type of switching equipment 1: Relay (Model CHFN-V-112H1A2F) Type of switching equipment 2: Relay (Model CHFN-V-112H1A2F)
	Note: The output is switched off by the inverter bridge and two relay in series in each line and neutral.
Firmware version	V1.0
Note 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.	