Certificate of Compliance

Certificate: 80022929 **Master Contract:** 273488

Project: 80022929 **Date Issued:** 2019-12-24

Issued To: **Ningbo Ginlong Technologies Co., Ltd.**
No.57, Jintong Road, Xiangshan
Ningbo, Zhejiang, 315712,
China

Attention: Mr. Ruyi Pan

The products listed below are eligible to bear the CSA Mark shown with adjacent indicator 'US'

Issued by: *Peng (Cheney) Chen*
Peng (Cheney) Chen

US

PRODUCTS

CLASS 3701-84 ELECTRICAL ENERGY STORAGE SYSTEMS - Certified to US Standard.

Li-ion Battery Energy Storage System (Pre-Engineered of Matched Component), models HS@K-B-BOXH5.0, HS@K-B-BOXH7.5, HS@K-B-BOXH10.0.
@ - may be 5,6,7,7.6,8,9,10, which is corresponding to different Inverters used in the system, represents different AC output rating on the Grid side.

Model Difference:
HS@K-B-BOXH5.0, HS@K-B-BOXH7.5, and HS@K-B-BOXH10.0 are similar to each other, except for the different Battery Pack used in the system.

Refer to following table for main components included in Battery Energy Storage System .

Model/Component	HS@K-B-BOXH5.0	HS@K-B-BOXH7.5	HS@K-B-BOXH10.0

Inverter	RHI-1P5K-HVES-5G, RHI-1P6K-HVES-5G, RHI-1P7K-HVES-5G, RHI-1P7.6K-HVES-5G, RHI-1P8K-HVES-5G, RHI-1P9K-HVES-5G, RHI-1P10K-HVES-5G		
Battery Pack (**Note 1**)	Battery-Box H5.0	Battery-Box H7.5	Battery-Box H10.0

Note1: The models Battery-BOX H 7.5 and Battery-BOX H 10.0 are identical with model Battery-BOX H 5.0 except for number of Modules in series and Nominal Voltage.

Electrical Ratings:
Refer to below table for the ratings of the Battery Energy Storage System.

Model	HS@K-B-BOXH5.0, HS@K-B-BOXH7.5, HS@K-B-BOXH10.0						
	Charge Mode			**Utility Interactive Mode**		**Off Grid Mode**	
INPUT RATINGS:	**PV Port**	**AC Grid Port**		**PV Port**	**Battery Port**	**PV Port**	**Battery Port**
Input Voltage, V	90~450 Vdc	Peak, Vac	Rated, Vac	90~450Vdc	451~320 Vdc **(Note 2)**	90~450Vdc	451~320 Vdc **(Note 2)**
		264	240				
		228	208				
Max Input Current, A	26Adc (per MPPT)	48Arms		26Adc (per MPPT)	20	26Adc (per MPPT)	20
Max Input Power, W	-	-		-	6000	-	6000
Number of Phase	-	Single Phase		-	-	-	-
Frequency, Hz	-	59.5-60.5		-	-	-	-
OUTPUT RATINGS:							
Output Voltage, V	320~451Vdc **(Note 3)**			Peak, Vac	Rated, Vac	Peak, Vac	Rated, Vac
				264	240	264	240
				228	208	132	120
Max Output Current, A	20Adc			48Aac@208 41.7Aac@240 **(Note 4)**		25A@240Vnom	
Max Output Power, W	6000			10000 **(Note 4)**		6000	
Number of Phase	-			Single Phase		Split Phase	
Frequency, Hz	-			59.5-60.5		55~65	

OTHER RATINGS:	
Cooling	Nature convection
Operating Temperature Range, °C	-10~50 (Battery Discharge), 0~50 (Battery Charge)
Special Environmental Ratings	Indoor/Protected Outdoor Use (Residential use only)
Max short circuit Current	377.9Apk
Battery Enclosure Rating	IP55
Inverter Enclosure Rating	Type 4X
Overvoltage category of Battery	II
Overvoltage category of Inverter	III/IV

Note 2: Corresponding to different Battery Pack used in the system, 225~160 Vdc for Battery-Box H5.0; 338~240 Vdc for Battery-Box H7.5; 451~320 Vdc for Battery-Box H10.0.

Note 3: Corresponding to different Battery Pack used in the system, 160~225 Vdc for Battery-Box H5.0; 240~338 Vdc for Battery-Box H7.5; 320~451 Vdc for Battery-Box H10.0.

Note 4: Corresponding to different Inverter used in the system, details see below Table.

Inverter Model	RHI-1P5K-HVES-5G	RHI-1P6K-HVES-5G	RHI-1P7K-HVES-5G
Max Output Current, A	24Aac@208 21Aac@240	28.8Aac@208 25Aac@240	33.7Aac@208 29.2Aac@240
Max Output Power, W	5000	6000	7000
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Inverter Model	RHI-1P7.6K-HVES-5G	RHI-1P8K-HVES-5G	RHI-1P9K-HVES-5G
Max Output Current, A	36.5Aac@208 31.7Aac@240	38.5Aac@208 33.3Aac@240	43.3Aac@208 37.5Aac@240
Max Output Power, W	7600	8000	9000
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Inverter Model	RHI-1P10K-HVES-5G	--	--
Max Output Current, A	48Aac@208 41.7Aac@240	--	--
Max Output Power, W	10000	--	--

Conditions of Acceptability:

1. The acceptability of grid support utility interactive inverters shall be determined by the local electric utility.
2. The installation was not evaluated. The ESS shall be installed in accordance with applicable local installation code.
3. This is a residential use system which is not designed for seismic or coastal regions, also arc flash risk is not considered.
4. As the ESS will be shipped out with only battery pack, inverter, and necessary accessory, herein, Grounding and Bonding System Check test may be considered in the installation site, determined by the local AHJ.

APPLICABLE REQUIREMENTS

ANSI/UL-9540:2016 - Energy Storage Systems and Equipment, 1st Edition.

MARKINGS

See CSA report.

Supplement to Certificate of Compliance

Certificate: 80022929 **Master Contract:** 273488

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80022929	2019-12-24	Original certification for Li-ion battery energy storage system (Pre-Engineered of Matched Component), models HS@K-B-BOXH5.0, HS@K-B-BOXH7.5, HS@K-B-BOXH10.0 to ANSI/UL-9540:2016.