

CERTIFICATE
of Conformity
EC Council Directive 2014/30/EU
Electromagnetic Compatibility

Registration No.: AE 50543194 0001

Report No.: CN21R79Q 003

Holder: **SUNGROW ENERGY STORAGE TECHNOLOGY CO., LTD.**
No. 788, Mingchuan Road,
Boyan Technology Park, Hi-tech Zone
Hefei City,
230088 Anhui
P.R. China

Product: **Lithium-ion battery**
(Rechargeable Li-ion Battery System)

Identification: R287-111 R344-111 R573-111 R688-111
Serial No.: n.a.
Remark: Refer to test reports CN21R79Q 001-003 for details.

Tested acc. to: EN 61000-6-4:2007+A1
EN 61000-6-2:2005
IEC 61000-6-4:2006+A1
IEC 61000-6-2:2005
EN IEC 61000-6-4:2019
EN IEC 61000-6-2:2019
IEC 61000-6-4:2018
IEC 61000-6-2:2016

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the a.m. Directive.

Certification Body

Date 11.05.2022



Xinhua Lu
Xinhua Lu

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

SUNGROW ENERGY STORAGE TECHNOLOGY
CO., LTD.

Date : 11.05.2022
Our ref. : Zhangleoh 01
Your ref.:

No.788, Mingchuan Road,
Boyan Technology Park, Hi-tech Zone
Hefei City,
230088 Anhui
P.R. China

Ref : AE Certificate of Conformity EMC

Type of Equipment : Rechargeable Li-ion Battery System
Model Designation : See Certificate
Certificate No. : AE 50543194 0001
Report No. : CN21R79Q 003

Dear Ladies and Gentlemen,

We herewith confirm that a sample of the above mentioned technical equipment has been tested and was found to be in accordance with the relevant requirements.

Enclosed please find your Certificate of Conformity.

We appreciate your kind support and would like to offer our assistance and continuous services in the future.

With kind regards,

Certification Body



Xinhua Lu

CC: SUNGROW-SAMSUNG SDI ENERGY STORAGE

Enclosure

证书的详细信息请登陆www.tuvdotcom.com查询, 或拨打我司客服热线800 999 3688 / 400 883 1300咨询

Prüfbericht-Nr.: <i>Test Report No.:</i>	CN21R79Q 003	Auftrags-Nr.: <i>Order No.:</i>	244329098	Seite 1 von 4 <i>Page 1 of 4</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	40852945	Auftragsdatum: <i>Order date.:</i>	2022-04-28	
Auftraggeber: <i>Client:</i>	SUNGROW ENERGY STORAGE TECHNOLOGY CO.,LTD. No.788, Mingchuan Road, Boyan Technology Park, Hi-tech Zone, Hefei City, 230088 Anhui, P.R. China			
Prüfgegenstand: <i>Test item:</i>	Rechargeable Li-ion Battery System			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	R287-111, R344-111, R573-111, R688-111			
Auftrags-Inhalt: <i>Order content:</i>	TÜV Rheinland EMC service			
Prüfgrundlage: <i>Test specification:</i>	EN 61000-6-4:2007+A1 EN 61000-6-2:2005 IEC 61000-6-4:2006+A1 IEC 61000-6-2:2005 BS EN 61000-6-4:2007+A1 BS EN 61000-6-2:2005		EN IEC 61000-6-4:2019 EN IEC 61000-6-2:2019 IEC 61000-6-4:2018 IEC 61000-6-2:2016 BS EN IEC 61000-6-4:2019 BS EN IEC 61000-6-2:2019	
Wareneingangsdatum: <i>Date of receipt:</i>	N/A			
Prüfmuster-Nr.: <i>Test sample No.:</i>	N/A			
Prüfzeitraum: <i>Testing period:</i>	N/A			
Ort der Prüfung: <i>Place of testing:</i>	N/A			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: / tested by: Leo Zhang		genehmigt von: / authorized by: Hexiong Liu		
Datum: / Date: 2022-05-10 		Datum: / Date: 2022-05-10 		
Stellung: / Position: Senior project engineer		Stellung: / Position: Department manager		
Sonstiges / Other:	Refer to Page 2 – 4 for details.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

V05

Prüfbericht - Nr.: CN21R79Q 003

Test Report No.:

Seite 2 von 4

Page 2 of 4

	Cell	Module	Batterysystem
Product	Rechargeable Lithium Ion Cell	Rechargeable Li-ion Battery	LFP Lithium Ion Energy Storage System
Type/model	CB310	P573-111, P573B-111	R344-111
Cell Capacity [Ah]	280	280	280
Cell Quantity	1	64	384
Battery structure	--	64S	(64S)6S
Nominal voltage [V]	3.2	204.8	1228.8
Rated capacity [Wh]	896	57344	344064
Upper limit charging voltage [V]	3.65	233.6	1401.6
Recommend charging current [A]	140	140	140
Maximum charging current [A]	140	140	140
Recommend discharging current [A]	140	140	140
Maximum discharging current [A]	140	140	140
Discharge cut-off voltage [V]	2.5	172.8	1036.8
Temperature range for charging [°C]	0 to 60	0 to 50	0 to 50*
Temperature range for discharging [°C]	-20 to 65	-30 to 50	-30 to 50*
Temperature threshold for protection	-	58	58
Overcharge protected voltage supply by battery system	-	≥3.65V /Cell	≥3.65V /Cell
Recommend charging method by manufacturer	Charge at constant current 140A until the voltage reaches 3.65V, then switch to constant voltage 3.65V till charge current drops to 14A	Charge at constant current 140A until the voltage reaches 233.6V, then switch to constant voltage 233.6V till charge current drops to 14A	Charge at constant current 140A until the voltage reaches 1401.6V, then switch to constant voltage 1401.6V till charge current drops to 14A
Dimension [mm]	71.7±1 *173.9±1 *204.6±1 T*W*H(mm) without terminal	868±5mm(W)×247±5mm(H) ×1415±5mm(D)	Rack: 3117±10mm(W)×1474±10mm(D) ×520±10mm(H) DC/DC: 720±5mm(W)×788±5mm(D) ×294±5mm(H)
Weight [kg]	5.35±0.2	≤400kg	Rack: ≤2400kg DC/DC: 75kg
Ingress Protection (IP)	--	IP65	IP65
Protective Class	-	-	I
Cooling type	-	-	Liquid cooling
Altitude	-	-	4000m

*: Constant Power 172kW and max charging and discharging current is 140A when ambient temperature is no more than 45°C, it will start derating when ambient temperature more than 45°C. The battery cell shall be heated first through the liquid cycle when discharging below -20°C.

Prüfbericht - Nr.: CN21R79Q 003

Test Report No.:

Seite 3 von 4

Page 3 of 4

	Battery system	Battery system	Battery system
Product	LFP Lithium Ion Energy Storage System	LFP Lithium Ion Energy Storage System	LFP Lithium Ion Energy Storage System
Type/model	R287-111	R688-111	R573-111
Cell Capacity [Ah]	280	280	280
Cell Quantity	320	768	640
Battery structure	(64S)5S	((64S)6S)2P	((64S)5S)2P
Nominal voltage [V]	1024	1228.8	1024
Rated capacity [Wh]	286720	688128	573440
Upper limit charging voltage [V]	1168	1401.6	1168
Recommend charging current [A]	140	140	140
Maximum charging current [A]	140	140	140
Recommend discharging current [A]	140	140	140
Maximum discharging current [A]	140	140	140
Discharge cut-off voltage [V]	864	1036.8	864
Temperature range for charging [°C]	0 to 50*	0 to 50*	0 to 50*
Temperature range for discharging [°C]	-30 to 50*	-30 to 50*	-30 to 50*
Temperature threshold for protection	58	58	58
Overcharge protected voltage supply by battery system	≥3.65V /Cell	≥3.65V /Cell	≥3.65V /Cell
Recommend charging method by manufacturer	Charge at constant current 140A until the voltage reaches 1168V, then switch to constant voltage 1168V till charge current drops to 14A	Charge at constant current 140A until the voltage reaches 1401.6V, then switch to constant voltage 1401.6V till charge current drops to 14A	Charge at constant current 140A until the voltage reaches 1168V, then switch to constant voltage 1168V till charge current drops to 14A
Dimension [mm]	Rack: 3117±10mm(W)×1474±10mm(D) ×520±10mm(H) DC/DC: 720±5mm(W)×788±5mm(D) ×294±5mm(H)	Rack: 3117±10mm(W)×1474±10mm(D) ×1040±10mm(H) DC/DC: 720±5mm(W)×788±5mm(D) ×294±5mm(H)	Rack: 3117±10mm(W)×1474±10mm(D) ×1040±10mm(H) DC/DC: 720±5mm(W)×788±5mm(D) ×294±5mm(H)
Weight [kg]	Rack: ≤2000kg DC/DC: 75kg	Rack: ≤4800kg DC/DC: 75kg	Rack: ≤4000kg DC/DC: 75kg
Ingress Protection (IP)	IP65	IP65	IP65
Protective Class	I	I	I
Cooling type	Liquid cooling	Liquid cooling	Liquid cooling
Altitude	4000m	4000m	4000m

*: Constant Power 172kW and max charging and discharging current is 140A when ambient temperature is no more than 45°C, it will start derating when ambient temperature more than 45°C. The battery cell shall be heated first through the liquid cycle when discharging below -20°C.

Prüfbericht - Nr.: CN21R79Q 003

Test Report No.:

Seite 4 von 4

Page 4 of 4

Identities and differences:

The above models were already EMC tested in report CN21R79Q 001 and 002. In this report, the models of battery module were changed from P573-V111, P573B-V111 to P573-111, P573B-111. Therefore, the above models are deemed to meet the requirements of prescribed standards without actual testing.

End of Test Report