

C E R T I F I C A T E
of Conformity



Registration No.: AK 50458818 0001

Report No.: 50338641 001

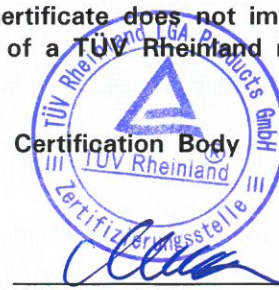
Holder: Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
Shanghai 201203
P. R. China

Product: Energy Storage system
(LFP Lithium Ion Energy Storage System)

Identification: Type Designation : Force-L1-48-zzz
(zzz=148~592, in step of 74)
Force-L2-48-zzz
(zzz=148~370, in step of 74)
Serial Number : Enigneering Sample
Remark(s) : Refer to test report 50338641 001
for details.

Tested acc. to: IEC 62040-1:2017

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. 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.



Date 02.03.2020

Weichun Li

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Pylon Technologies Co., Ltd.
Elvis Xu
—

Date : 02.03.2020
Our ref. : XGJ 01
Your ref. : Elvis Xu

No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
Shanghai 201203
P. R. China

Ref : AK Certificate of Conformity

Type of Equipment : LFP Lithium Ion Energy Storage System
Model Designation : See Certificate
Certificate No. : AK 50458818 0001
Report No. : 50338641 001

Dear Elvis Xu,

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


Weichun Li

CC: Pylon Technologies Co., Ltd.

Enclosure

证书的详细资料请登陆www.certipedia.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询

CERTIFICATE of Conformity



Registration No.: AK 50457545 0001

Report No.: 50330796 001

Holder: Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
Shanghai 201203
P. R. China

Product: Energy Storage system
(LFP Lithium Ion Energy Storage System)

Identification: Type Designation : Force-L1-48-zzz
(zzz=148~592, in step of 74)
Force-L2-48-zzz
(zzz=148~370, in step of 74)
Serial Number : Engineering Sample
Remark(s) : Refer to test report 50330796 001
for details.

Tested acc. to: IEC 62477-1:2012+A1
EN 62477-1:2012+A11+A1

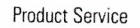
The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.



Date 20.01.2020

Bruce Li
Bruce Li

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg



No. Z2 090762 0026 Rev. 00

Holder of Certificate:

Pylon Technologies Co., Ltd.

No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park
201203 Pudong, Shanghai
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:

**Product:**

Energy Storage System

(LFP Lithium Ion Energy Storage Battery System)

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.:

64280193033101

Valid until:

2025-01-12

Date,

2020-01-13

Harry Zhang
(Harry Zhang)



Product Service

CERTIFICATE

No. Z2 090762 0026 Rev. 00

Model(s):

Force-L1-48-148, Force-L1-48-222, Force-L1-48-296,
Force-L1-48-370, Force-L1-48-444, Force-L1-48-518,
Force-L1-48-592, Force-L2-48-148, Force-L2-48-222,
Force-L2-48-296, Force-L2-48-370

Brand Name:

PYLONTECH



Parameters:

Nominal voltage: 48Vd.c.

Rated capacity: Force-L1-48-148: 148Ah,
Force-L1-48-222: 222Ah,
Force-L1-48-296: 296Ah,
Force-L1-48-370: 370Ah,
Force-L1-48-444: 444Ah,
Force-L1-48-518: 518Ah,
Force-L1-48-592: 592Ah,
Force-L2-48-148: 148Ah,
Force-L2-48-222: 222Ah,
Force-L2-48-296: 296Ah,
Force-L2-48-370: 370Ah

**Tested
according to:**

IEC 62619:2017

**Production
Facility(ies):**

091237

Notified Body
TÜV Rheinland
LGA Products GmbH

Tillystraße 2
90431 Nürnberg

notified by the

Bundesnetzagentur für Elektrizität, Gas,
Telekommunikation, Post und Eisenbahnen

under No. 0197

herewith issues an

EU-Type Examination Certificate

within the meaning of Annex III Module B of the 2014/53/EU Radio Equipment Directive (RED)
for compliance with the essential requirements of this directive

Registration Number: RT 60160101 0001

Evaluation Report Nr.: 50344251 002

Manufacturer: Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
201203 Shanghai
P.R. China

Product: Radio Equipment
(LFP Lithium Ion Energy Storage System)

Type Identification: Force-L1-48-zzz (zzz=148~592, in step of 74)
Force-L2-48-zzz (zzz = 148~370, in step of 74)
(PYLONTECH)

Essential requirements: 2014/53/EU (RED)
Article 3.1a Health
Article 3.1a Electrical Safety
Article 3.1b EMC
Article 3.2 Radio spectrum

The technical design of the assessed type has been verified based on the technical documentation presented by the manufacturer according to Annex III Module B of the Directive. As far as the essential requirements indicated, the Notified Body of TÜV Rheinland LGA Products GmbH confirms, that the technical design of the apparatus meets the essential requirements of the Directive 2014/53/EU Article 3.

This certificate consists of this page and Annex I.

Validity of the certificate is specified in the Annex I.


Date 25.11.2021



Notified Body


S. Peng

Equipment

Product : LFP Lithium Ion Energy Storage System
Trademark :  **PYLONTECH**
Identification : Force-L1-48-zzz (zzz=148~592, in step of 74),
Force-L2-48-zzz (zzz=148~370, in step of 74)
Product description : The above models are LFP Lithium Ion Energy Storage System with Wi-Fi function.

System description

Frequency band(s) of operation : 2400-2483.5MHz
Operating frequency : 2412-2472MHz
Channel spacing / bandwidth : 5MHz, 20MHz
RF output power : 19.98dBm (Max. e.i.r.p.)
Type of modulation : DSSS (DBPSK, DQPSK, CCK), OFDM (BPSK, QPSK, 16QAM, 64QAM)
Type of antenna : External Antenna
Mode of operation (simplex / duplex) : Duplex
Duty cycle (access protocol, if applicable) : Up to 100%
Hardware version : V10
Software version : V1

Documentation

User information and installation instructions ☒
Block diagram ☒
Circuit diagram ☒
Part list ☒
PCB layout ☒
Photo documentation ☒
Versions of firmware/software used ☒
Statement of compliance with art. 10.2 it can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum. ☒
Risk Analysis ☒

Conformity Assessment

Applied harmonised standards (Referred to the publication of harmonised standards in the official Journal of the EU at the time of issuance)			
Article	Standard	Test Report No.	Issued by
3.1a Health	--	--	--
3.1a Safety	--	--	--
3.1b EMC	--	--	--
3.2 Radio	EN 300 328 V2.2.2	50335898 002	TÜV Rheinland (Shanghai) Co., Ltd.
3.3 Others	--	--	--

Applied non-harmonised standards			
Article	Standard	Test Report No.	Issued by
3.1a Health	EN 62311:2008	50335898 001	TÜV Rheinland (Shanghai) Co., Ltd.
3.1a Safety	EN 62477-1:2012+A11+A1+A12	50330796 002	TÜV Rheinland (Shanghai) Co., Ltd.
3.1b EMC	EN IEC 61000-6-1:2019 EN IEC 61000-6-2:2019 EN 61000-6-3:2007+A1 EN IEC 61000-6-4:2019 IEC 61000-6-1:2016 IEC 61000-6-2:2016 IEC 61000-6-3:2006+A1 IEC 61000-6-4:2018; EN 301489-1 V2.2.3 EN 301489-17 V3.2.4	50335284 002; 50335285 002	TÜV Rheinland (Shanghai) Co., Ltd.
3.2 Radio	--	--	--
3.3 Others	--	--	--

Other solutions, adopted to meet the essential requirements			
Article	Standard	Test Report No.	Issued by
3.1a Health	--	--	--
3.1a Safety	--	--	--
3.1b EMC	--	--	--
3.2 Radio	--	--	--
3.3 Others	--	--	--

Rationale for applied non-harmonised standards or other solutions:

- EN 62311 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)
- EN 62477-1 Safety requirements for power electronic converter systems and equipment - Part 1: General
- EN IEC 61000-6-1 and IEC 61000-6-1 Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity standard for residential, commercial and light-industrial environments; EN IEC 61000-6-2 and IEC 61000-6-2 Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity standard for industrial environments; EN 61000-6-3 and IEC 61000-6-3 Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments; EN IEC 61000-6-4 and IEC 61000-6-4 Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments; EN 301 489-1 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; EN 301 489-17 Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

Remarks:

- This Type Examination Certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.
- This Type Examination Certificate only relates to the assessment of technical documentation to verify that the technical design of radio equipment meets the essential requirements of the RED 2014/53/EU and will not show compliance with essential requirements of other possible applicable EU Directives.
- The manufacturer has declared in compliance with art. 10.2 that the Radio Equipment can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum.
- Validity of this Type Examination Certificate is limited to the versions of the applied standard. If versions of standards change or modifications are made to the product, this Certificate will be invalidated.

Pylon Technologies Co., Ltd.

Date : 04.11.2021

Our ref. : WHF 01

Your ref.: 2089836

No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
201203 Shanghai
P.R. China

Ref : AW UK Radio Equipment Regulations 2017

Type of Equipment : LFP Lithium Ion Energy Storage System

Model Designation : See Certificate

Certificate No. : AW 50522940 0001

Report No. : CN21YRZY 001

Dear Ladies and Gentlemen,

The above specified technical equipment has been tested and found to be in accordance with the relevant requirements.

Enclosed you will find the certificate of approval.

If cancellation of the certificate is submitted by November 15 in a given year, no fee will be charged for the following year.

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

Please contact our office for approval of your new products.

With kind regards,

Certification Body


Ying Xie

Enclosure

证书的详细资料请登陆www.certipedia.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询

C E R T I F I C A T E

of

Conformity

Radio Equipment Regulations 2017

(UK SI 2017 No.1206)



Registration No.: AW 50522940 0001

Test Report No.: CN21YRZY 001

Holder: Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
201203 Shanghai
P.R. China

Product: Radio Equipment
(LFP Lithium Ion Energy Storage System)

Identification: Force-L1-48-zzz (zzz=148~592, in step of 74)
Force-L2-48-zzz (zzz=148~370, in step of 74)
Serial No.: n.a.
Remark: Refer to test report CN21YRZY 001

Tested acc. to: ETSI EN 300 328 V2.2.2:2019
ETSI EN 301 489-1 V 2.2.3:2019
ETSI EN 301 489-17 V 3.2.4:2020
BS EN IEC 61000-6-1:2019
BS EN 61000-6-1:2007
BS EN IEC 61000-6-2:2019
BS EN 61000-6-2:2005

This certificate of conformity is based on an evaluation of a sample of the above mentioned product, technical report and documentation. This certificate does not imply the assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.



Certification Body

Ying Xie

Shanghai, 04.11.2021

TÜV Rheinland (China) Ltd. - No. 01/03B-08, Floor 7 and No. 01/04B-08,
Floor 11, AVIC Building, No. 10B, Central Road East 3rd Ring Road,
Chaoyang District, Beijing P.R. China 100022



The UKCA mark may be used, if all relevant UK Legislations and the UK Declaration of Conformity has been completed.



C E R T I F I C A T E

of

Conformity

Radio Equipment Regulations 2017

(UK SI 2017 No.1206)



Registration No.: AW 50522940 0002

Test Report No.: CN21YRZY 001

Holder: Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
201203 Shanghai
P.R. China

Product: Radio Equipment
(LFP Lithium Ion Energy Storage System)

Identification: Remark: Refer to page 0001

Tested acc. to: BS EN 61000-6-3:2007+A1
BS EN IEC 61000-6-4:2019
BS EN 61000-6-4:2007+A1
BS EN 62477-1:2012+A12
BS EN 62311:2008

This certificate of conformity is based on an evaluation of a sample of the above mentioned product, technical report and documentation. This certificate does not imply the assessment of the production of the product and does not permit the use of a TUV Rheinland mark of conformity.

Shanghai, 04.11.2021



Certification Body


Ying Xie

TÜV Rheinland (China) Ltd. - No. 01/03B-08, Floor 7 and No. 01/04B-08,
Floor 11, AVIC Building, No. 10B, Central Road East 3rd Ring Road,
Chaoyang District, Beijing P.R. China 100022



The UKCA mark may be used, if all relevant UK Legislations and the UK Declaration of Conformity has been completed.



Pylon Technologies Co., Ltd.
Elvis Xu
-
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
Shanghai 201203
P. R. China

Date : 20.01.2020
Our ref. : DB 01
Your ref.: Elvis Xu

Ref : R TÜV-Mark Approval

Type of Equipment : LFP Lithium Ion Energy Storage System
Model Designation : See Certificate
Certificate No. : R 50458257 0001
Report No. : 50279924 001

Dear Elvis Xu,

The above specified equipment has been tested and found to be in accordance with the relevant requirements.

Please find enclosed your certificate as specified above.

If cancellation of the certificate is submitted by 15 November in a given year, no fee will be charged for the following year.

The certificate is issued with the reservation that the license holder applies all information required in § 6 of the ProdSG related to name and address of the manufacturer or his authorized representative / importer, including their respective contact addresses on the product prior to marketing of the product in the European Economic Area.

With kind regards,

Certification Body


Bruce Li

cc: Pylon Technologies Co., Ltd.

Enclosure

证书的详细资料请登陆www.tuvdotcom.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50458257

Blatt *Sheet*
0001

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum <i>Date of Issue</i>
Elvis Xu	01-DB-50279924 001	20.01.2020 (day/mo/yr)

Genehmigungsinhaber *License Holder*

Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
Shanghai 201203
P. R. China

Fertigungsstätte *Manufacturing Plant*

Pylon Technologies Co., Ltd.
Plant 8,
No.505 Kunkai Road, JinXi Town,
Kunshan City, Jiangsu Province
P. R. China

Prüfzeichen *Test Mark*



Bauart geprüft
Sicherheit
Regelmäßige
Produktions-
überwachung

www.tuv.com
ID 1419077941

Geprüft nach *Tested acc. to*

VDE-AR-E 2510-50:2017
2 Pfg 2698/08.19

Zertifiziertes Produkt (Geräteidentifikation) *Certified Product (Product Identification)*

Lizenzentgelte - Einheit *License Fee - Unit*

Energiespeichersystem (LFP Lithium Ion Energy Storage System)

Type designation	: 1) Force-L1-48-zzz (zzz=148-592, in step of 74) 2) Force-L2-48-zzz (zzz=148-370, in step of 74)	9
Total Storage Energy[kWh]	: 1) 3.552 * n (n=2 to 8) 2) 3.552 * n (n=2 to 5)	
Nominal voltage[Vd.c.]	: 48	
Nominal current[Ad.c.]	: 100	
Rated capacity[Ah]	: 74 (each Battery Module)	
Over voltage category (OVC)	: II	
Protection Class	: I	
Ingress Protection (IP)	: IP55	
Pollution degree (PD)	: PD 3	

Continued on page 0002

9

ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.

This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 <http://www.tuv.com/safety>



Bruce Li
Bruce Li

Zertifikat

Certificate



Zertifikat Nr. Certificate No.
R 50458257

Blatt Sheet
0002

Ihr Zeichen Client Reference
Elvis Xu

Unser Zeichen Our Reference
01-DB-50279924 001

Ausstellungsdatum Date of Issue
20.01.2020 (day/mo/yr)

Genehmigungsinhaber License Holder

Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park, Pudong
Shanghai 201203
P. R. China

Fertigungsstätte Manufacturing Plant

Pylon Technologies Co., Ltd.
Plant 8,
No.505 Kunkai Road, JinXi Town,
Kunshan City, Jiangsu Province
P. R. China

Prüfzeichen Test Mark



Bauart geprüft
Sicherheit
Regelmäßige
Produktions-
überwachung

www.tuv.com
ID 1419077941

Geprüft nach Tested acc. to
VDE-AR-E 2510-50:2017
2 Pfg 2698/08.19

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Energiespeichersystem (LFP Lithium Ion Energy Storage System)

as page 0001 continuation

Charging temp. upper limit : 55°C
Charging temp. lower limit : -8°C
Dsicharging temp. lower limit : -10°C
Altitude [m] : 4000

Remark(s) :

The installation has to be carried out according to the attached installation instruction.
Any additional requirements in countries where the product is going to be marketed have to be considered additionally.

ANLAGE (Appendix) : 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.

This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety



Bruce Li

Bruce Li



Test Report No. 64.168.21.60082.01Q
Rev. 00
Dated 2022-01-27

Applicant: Pylon Technologies Co., Ltd.

Address: No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park,
Pudong, 201203 Shanghai, P.R. China

Sample Description: Rechargeable Li-ion Battery excluding cell,
Battery Controller

Model No.: Force-L1(FC0048+FL48074),
Force-L2(FC0048M+FL4874M),
Force-H2(FC0500M+FH9637M),
PowerCube-M2A-180(S1000M2A180+HM2A180),
PowerCube-M3A-
100(SC1000M3A100+SC1500M3A100+HM3A100),
PowerCube-M3A-
180(SC1000M3A180+SC1500M3A180+HM3A180),
LV-HUB,
MBMS1000

Sample Received Date: 2021-04-20, 2021-10-09, 2022-01-13

Test Period: From 2021-04-27 to 2022-01-27

Purpose of examination: Based on randomly-sampled examination of the evaluated
Product, test Lead, Mercury, Cadmium, Chromium VI,
Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers
(PBDEs), DEHP, BBP, DBP and DIBP according to RoHS (Restriction
of Hazardous Substances) directive 2011/65/EU and its amendment
(EU) 2015/863.

Test Result: Refer to following page(s)

Remark: The result relates only to the items tested.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
TÜV SÜD Group

Prepared by:

Lily Feng
Project Handler



Reviewed by:

Kevin Zhang
Designated Reviewer

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.

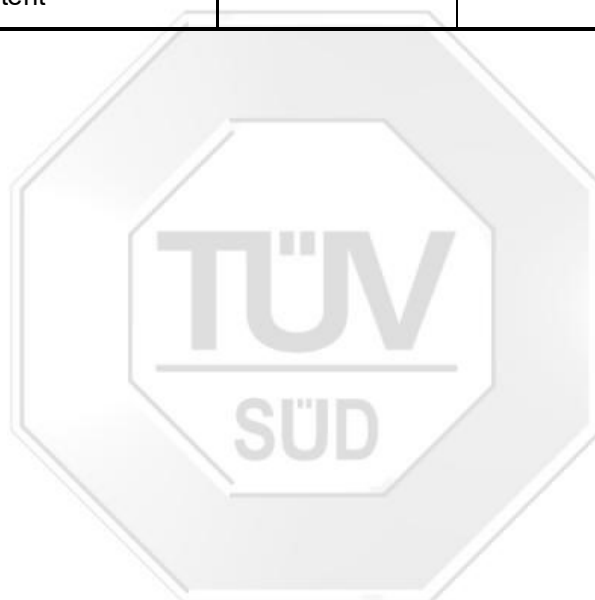
TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
TÜV SÜD Group
5F, Communication Building, 163 Pingyun Rd, Huangpu West Ave.
Guangzhou 510656, P.R. China

Tel.: (86) 20 38320668
Fax: (86) 20 38320478



SUMMARY OF TEST RESULTS

No.	Test Requested	Conclusion	Remarks
1.	Heavy Metal (Pb, Cd, Hg and Cr VI) Content	PASS	/
2.	Polybrominated Biphenyls (PBBs) and Polybrominated Diphenyl Ethers (PBDEs) Content	PASS	/
3.	Phthalates (DEHP, BBP, DBP and DIBP) Content	PASS	/



Product Carbon Footprint Verification Statement

The Product Carbon Footprint study of

1 kWh Force-L2

which is conducted by

Pylon Technologies Co.,Ltd.

71-72, 5th Floor, Lane 887, Zuchongzhi Road, China (Shanghai) Free Trade Area, Shanghai

has been verified meeting the requirements of

ISO 14067:2018

The carbon footprint of 1 kWh Force-L2 is as follow:

Product category for 1 kWh Force-L2	Carbon footprint of product / kg CO ₂ eq.
One BMS & Two batteries	111.96

For the life cycle stages assessment of product

[Cradle to gate]



Authorized by

David Xin

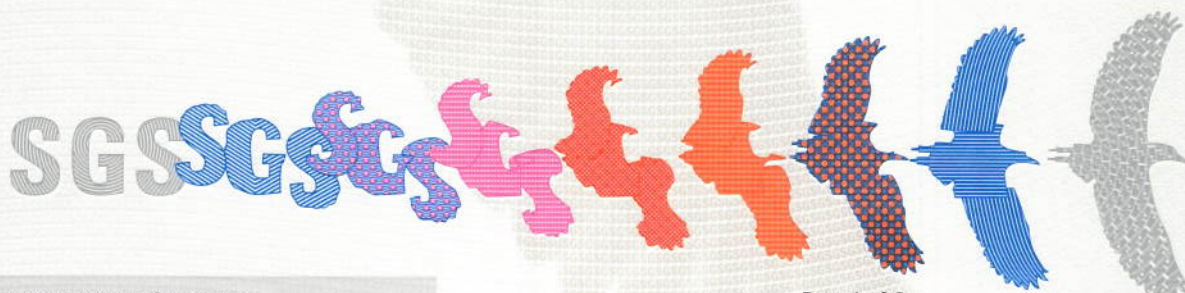
Sr. Director - Knowledge

Date: 04 December 2023

SGS-CSTC Standards Technical Services Co., Ltd.

16F Century YuHui Mansion, No. 73 Fucheng Road, Beijing, P.R. CHINA 100142

t +86 (0)10 58251188 www.sgsgroup.com.cn



SGS-CSTC Standards Technical Services Co., Ltd. (hereinafter referred to as "SGS") has been commissioned by Pylon Technologies Co.,Ltd. (hereinafter referred to as "PYLON"), 71-72, 5th Floor, Lane 887, Zuchongzhi Road, China (Shanghai) Free Trade Area, Shanghai, for the verification of the life cycle Greenhouse Gas emissions of product as provided by PYLON in accordance with

ISO 14067:2018

Roles and responsibilities

PYLON is responsible for the management of its GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of the life cycle GHG emissions of product information and the reported life cycle GHG emissions of product.

It is SGS's responsibility to express an independent GHG verification opinion on the life cycle GHG emissions of 1 kWh Force-L2.

SGS conducted a third-party verification of the provided GHG assertion against the principles of ISO 14067:2018, ISO 14040:2006 and ISO 14044:2006 in the period from 27 Jul 2023 to 28 Jul 2023. The verification was based on the verification scope, objectives and criteria as agreed between PYLON and SGS.

Level of Assurance

The level of assurance agreed is that of reasonable assurance.

Scope

PYLON has commissioned an independent verification by SGS to report the GHG emission of the manufacture of 1 kWh Force-L2 product following the established principle of ISO 14067:2018 outlined below.

This engagement covers verification of emission from partial life cycle of the product included within the organization's boundary.

- Title or description activities: GHG verification of the life cycle GHG emissions of 1 kWh Force-L2
- Product Category Rule: there was not relevant PCR can be considered
- Functional unit: 1 kWh Force-L2

- System boundary: Covers a "Cradle to gate" assessment of the life cycle emissions, from raw material extraction to production completion. The system boundary be clearly defined in accordance with ISO 14040:2006, ISO 14044:2006 and ISO 14067:2018.
- Use phase: Excluded in system boundary
- Retail locations: Excluded in system boundary
- Disposal phase: Excluded in system boundary
- Data resources: The primary data collection from manufacture and own operation phase. The secondary data collection from Ecoinvent 3.8 database.
- Life cycle assessment tool and index using:
 - Software applied SimaPro 9.5.
 - IPCC 2021 GWP values are applied in this inventory.
- Cut-off rules: If the flow is less than 1% of the cumulative mass of the model it would be excluded, providing its environmental relevance is not a concern, a minimum 97% of the total mass for the system is captured.
- Allocation rules:
 - Multi-output: The allocations are based on the changes in the resource consumption and pollutant emissions following the changes in the studied system's output product, or function or economical relationship.
 - Multi-input: The allocation is based on actual relationship. For example, the manufacturing process's consumption may be affected by the change in recycled resource input.
- Manufacturing locations: 71-72, 5th Floor, Lane 887, Zuchongzhi Road, China (Shanghai) Free Trade Area, Shanghai
- Emissions and removal of the product system included: Please refer to the CFP study reported provided by PYLON.
- Types of GHGs included: CO₂, CH₄, N₂O, Substances controlled by the Montreal Protocol, HFCs, PFCs, Fluorinated ethers, Perfluoropolyether, Hydrocarbons compounds.
- Mitigation: There is no GHG emissions offsetting be used at any point in the life cycle of the product.
- GHG information for the following production period was verified: The data collection period was from 01 January 2022 to 31 December 2022. Emissions covered the particular period.
- Intended user of the verification statement: Private

Objective

The purposes of this verification exercise are, by review of objective evidence, to independently

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review:

- Whether the life cycle GHG emissions and removals of product are as declared by the organization's CFP study report;
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

Criteria

Criteria against which the verification assessment is undertaken are the principles of ISO 14067:2018.

The IPCC 2021 AR6 GWP values are applied in this assessment of life cycle GHG emissions for the product.

Materiality

The materiality required of the verification was considered by SGS to be 5%, based on the needs of the intended user of the GHG assertion.

Conclusion

PYLON provided the GHG assertion based on the requirements of ISO 14067:2018. The life cycle GHG information of product manufactured in 2022 disclosing carbon emissions, covering a Cradle to Gate system boundary, are verified by SGS to a reasonable level of assurance, consistent with the agreed verification scope, objectives and criteria.

The life cycle GHG emissions of 1 kWh Force-L2 are described as below:

According to the communication needs of all parties involved, the function unit of this study is defined as 1 kWh Force-L2. The system boundary is defined as "cradle" to "gate", which covers the production process of upstream raw materials (PCB, electronic components, power modules, positive and negative electrode materials), as well as on-site production and processing of the product (energy consumption, waste treatment, etc.). The carbon footprint of 1 kWh Force-L2 is 127.99 kg CO₂ e, of which 32.07 kg CO₂ e (25.06%) is emitted by the BMS module and 95.92 kg CO₂ e (74.94%) by the battery module.

Product category for 1 kWh Force-L2	Carbon footprint of product / kg CO ₂ eq.
One BMS & Two batteries	111.96

SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting the life cycle GHG emissions of product information and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the organization's reported the life cycle GHG

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emissions of product.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a reasonable level of assurance that the life cycle GHG emissions of 1 kWh Force-L2.

We conducted our verification with regard to the GHG assertion of 1 kWh Force-L2 which included assessment of GHG information system, monitoring and reporting plan/protocol. This assessment included the collection of evidence supporting the reported data, and checking whether the provisions of the protocol reference, were consistently and appropriately applied

In SGS's opinion the presented GHG assertion

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with ISO 14067:2018 on GHG quantification, monitoring and reporting.

The validity of this verification declaration is consistent with the validity of the corresponding carbon footprint study report of 1 kWh Force-L2 product. If the carbon footprint of product changes by more than 10% within the validity period of the carbon footprint study report, this certificate will automatically become invalid without SGS reverification.

Appendix

Product category for 1 kWh Force-L2	Carbon footprint of product / kg CO ₂ eq.
One BMS & Three batteries	106.61
One BMS & Four batteries	103.94

Note: This Statement is issued, on behalf of Client, by SGS-CSTC Standards Technical Services Co., Ltd. ("SGS") under its General Conditions for Green Gas Verification Services available at http://www.sgs.com/terms_and_conditions.htm. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting GHG Assertion may be consulted at Pylon Technologies Co., Ltd., 71-72, 5th Floor, Lane 887, Zuchongzhi Road, China (Shanghai) Free Trade Area, Shanghai. This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.