

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



**Registration No.:** AK 50458818 0001

**Report No.:** 50338641 001

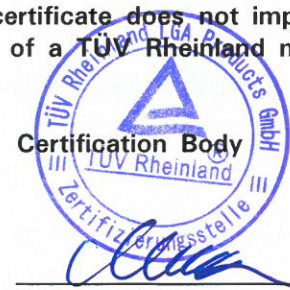
**Holder:** Pylon Technologies Co., Ltd.  
No. 73, Lane 887, Zu Chongzhi Road,  
Zhangjiang Hi-Tech Park, Pudong  
Shanghai 201203  
P. R. China

**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](http://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







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	--	--	--

<b>Applied non-harmonised standards</b>			
<b>Article</b>	<b>Standard</b>	<b>Test Report No.</b>	<b>Issued by</b>
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	--	--	--

<b>Other solutions, adopted to meet the essential requirements</b>			
<b>Article</b>	<b>Standard</b>	<b>Test Report No.</b>	<b>Issued by</b>
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.

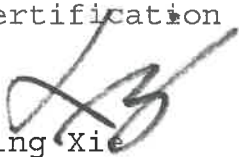
If cancellation of the certificate is submitted by November 15 in a given year, no fee will be charged for the following year.

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](http://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

A handwritten signature in black ink, appearing to be 'Ying Xie', written over a horizontal line.

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](http://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 *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)

Type designation : 1) Force-L1-48-zzz 9  
(zzz=148-592, in step of 74)  
2) Force-L2-48-zzz  
(zzz=148-370, in step of 74)  
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

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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.



Bruce Li

Bruce Li

**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



# 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	/

