

EU-Type Examination Certificate

No. E6A 090762 0040 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

Product:

Batteries
(Rechargeable Li-ion Battery)

This EU-Type Examination Certificate is issued according to the Directive 2014/30/EU relating to electromagnetic compatibility. It confirms that the listed apparatus complies with such aspects of the requirements of the EMC directive as specified by the manufacturer or his authorized representative in the European Community and applies only to the sample and its technical documentation submitted for testing and certification. This Type Examination does not contain any statements pertaining to the EMC protection requirements governed by other laws which serve to implement EU Directives other than the aforementioned Directive 2014/30/EU. For details see: www.tuvsud.com/ps-cert

Evaluation Report No.: 64.771.21.60091.01-(T)

Date, 2021-07-08



(Volker Albrecht)

EU-Type Examination Certificate

No. E6A 090762 0040 Rev. 00

Model(s): US5000, US5000-B

Description of Object:

Basic Parameters	
Rated Energy/Capacity	4.8kWh/100Ah
Nominal Voltage	48V
Charge Voltage	52.5V~ 53.5V
Nominal Current	50A
Maximum Current	100A

Remark: All aspects of the essential requirements were assessed

**Tested
according to:** EN IEC 61000-6-2:2019
EN 61000-6-3:2007/A1:2011

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TÜV SÜD Product Service GmbH is notified Body to the Directive 2014/30/EU relating to electromagnetic compatibility with the identification number 0123.

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Batteries (Rechargeable Li-ion Battery)
Name and address of the applicant	Pylon Technologies Co., Ltd. No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park 201203 Pudong, Shanghai PEOPLE'S REPUBLIC OF CHINA
Name and address of the manufacturer	Pylon Technologies Co., Ltd. No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park, 201203 Pudong, Shanghai, PEOPLE'S REPUBLIC OF CHINA
Name and address of the factory	Pylon Technologies Co., Ltd. Plant 8, No.505 Kunkai Road, JinXi Town, 215324 Kunshan City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	Nominal voltage: 48Vd.c. Rated capacity: 100Ah
Model/type Ref.	US5000; US5000-B
A sample of the product was tested and found to be in conformity with	IEC 62619:2017
as shown in the Test Report Ref. No. which forms part of this certificate	211-282160090-000

Page 1 of 2

This CB Test Certificate is issued by the National Certification Body

CBS 090762 0045 Rev. 00
Date, 2021-09-09

(Harry Zhang)





Ref. Certif. No.

SG PSB-BT-02751

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

Trade mark (Image)



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This CB Test Certificate is issued by the National Certification Body

CBS 090762 0045 Rev. 00
Date, 2021-09-09

(Harry Zhang)



TÜV SÜD PSB Pte Ltd 15 International Business Park TÜV SÜD @ IBP Singapore 609937 PSB Singapore

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Batteries (Rechargeable Li-ion Battery)
Name and address of the applicant	Pylon Technologies Co., Ltd. No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park 201203 Pudong, Shanghai PEOPLE'S REPUBLIC OF CHINA
Name and address of the manufacturer	Pylon Technologies Co., Ltd. No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park, 201203 Pudong, Shanghai, PEOPLE'S REPUBLIC OF CHINA
Name and address of the factory	Pylon Technologies Co., Ltd. Plant 8, No.505 Kunkai Road, JinXi Town, 215324 Kunshan City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	Nominal voltage: 48Vd.c. Rated capacity: 100Ah
Model/type Ref.	US5000; US5000-B
A sample of the product was tested and found to be in conformity with	IEC 63056:2020
as shown in the Test Report Ref. No. which forms part of this certificate	085-282160384-000

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This CB Test Certificate is issued by the National Certification Body

CBS 090762 0046 Rev. 00
Date, 2022-02-24

(Harry Zhang)





Ref. Certif. No.

SG PSB-BT-03076

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

Trade mark (Image)



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This CB Test Certificate is issued by the National Certification Body

CBS 090762 0046 Rev. 00

Date, 2022-02-24

(Harry Zhang)



TÜV SÜD PSB Pte Ltd 15 International Business Park TÜV SÜD @ IBP Singapore 609937 PSB Singapore

Attestation of Conformity

No. E8AUK 090762 0042 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

Name of Object: **Batteries**
(Rechargeable Li-ion Battery)

This Attestation of Conformity is issued on a voluntary basis according to the Electromagnetic Compatibility Regulations 2016 relating to electromagnetic compatibility. It confirms that the listed apparatus complies with all essential requirements of the regulation and is based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. For details see: www.tuvsud.com/ps-cert

Test report no.: 64771216009101UK

Date, 2021-07-09



(Tony Liu)

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After preparation of the necessary UK regulation technical documentation as well as the UK declaration of conformity the required UKCA marking can be affixed on the product. Other applicable UK regulations have to be observed.

Attestation of Conformity

No. E8AUK 090762 0042 Rev. 00

Model(s): US5000, US5000-B

**Description of
Object:**

Rated Energy/Capacity:	4.8kWh/100Ah
Nominal Voltage:	48V
Charge Voltage:	52.5 ~ 53.5V
Nominal Current:	50A
Maximum Current:	100A

**Tested
according to:** EN IEC 61000-6-2:2019
EN 61000-6-3:2007/A1:2011

Page 2 of 2

After preparation of the necessary UK regulation technical documentation as well as the UK declaration of conformity the required UKCA marking can be affixed on the product. Other applicable UK regulations have to be observed.



Certificate of Compliance

Certificate: 80075844

Master Contract: 274187

Project: 80075844

Date Issued: 2022-01-13

Issued To: Pylon Technologies Co., Ltd.
No. 73, Lane 887, Zu Chongzhi Road,
Zhangjiang Hi-Tech Park,
Pudong District, Shanghai, 201203
China

Attention: Min Xu

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

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



PRODUCTS

CLASS - C370182 - BATTERY SYSTEM FOR USE IN STATIONARY APPLICATIONS Certified to US Standards

CLASS - C370112 - BATTERY SYSTEM for use in Stationary Applications

Rechargeable Lithium ion Battery for use in stationary application, Model US5000 and US5000-B.

Electrical Ratings:



Certificate: 80075844
Project: 80075844

Master Contract: 274187
Date Issued: 2022-01-13

Battery Pack Model	Battery Pack Ratings				Battery Module	BMS Model
	Normal Voltage, Vdc	Normal Capacity, Ah/Wh	Battery Pack Configuration*	Enclosure IP Rating		
US5000, US5000-B	48	100Ah/4800Wh	15S	IP20	--	MMCB_U1 50

Model difference: US5000-B is identical to US5000, expect that US5000-B has the additional circuit breaker and busbar.

Manufacturer's Specified Charging Parameters for Battery Pack

Battery Pack Model	Temperature Range, °C	Normal Charging Voltage, Vdc	Normal Charging Current, A	Maximum Charging Voltage, Vdc	Maximum Charging Current, A
US5000, US5000-B	-10~55	53.5	50	54	25 (-10~0 °C) 100 (0~45 °C) 50 (45~50 °C) 25 (50~55 °C)

Manufacturer's Specified Discharging Parameters for Battery Pack:

Battery Pack Model	Temperature Range, °C	Normal Discharging Current, A	End-of-discharge voltage, Vdc	Maximum Discharging Power, W	Maximum Discharging Current, A
US5000, US5000-B	-10~55	50	40.5	--	25 (-10~0 °C) 100 (0~45 °C) 50 (45~50 °C) 25 (50~55 °C)

Conditions of Acceptability:

1. The battery pack including its battery management system has been tested according to the functional-safety requirements of ANSI/CAN/UL-1973:2018, Second Edition. Solid state circuits and software controls relied upon as the primary safety protection, have been evaluated to the Standard for Safety: Automatic Electrical Controls – Part 1, CSA/UL 60730-1. Any change to the software and electronic controls of the BMS may require additional testing.
2. The enclosure was evaluated only to establish an IP rating of IP20 with the Standard for Degrees of Protection Provided by Enclosure (IP Code) IEC 60529.
3. Product is evaluated for indoor use and shall avoid being used in moisture environment, and not being used near marine environments.
4. Further evaluation for Resistance of Moisture and/or Salt Fog shall be required for the battery pack intended to be used in the end product where moisture and/or salt fog condition were applied.



Certificate: 80075844
Project: 80075844

Master Contract: 274187
Date Issued: 2022-01-13

- 5. For US5000, manual disconnect device shall be required during the installation of the end products.
- 6. Corrosion due to electrochemical action is to be determined for conductive parts in contact with terminals when subjecting to the installation of the end products.
- 7. Equipment Application Location: Stationary
- 8. Access Location: Operator Accessible.
- 9. The installation was not evaluated. The battery system shall be installed in accordance with NFPA 70 or other applicable installation code.
- 10. Dielectric Voltage Withstand Test was performed with the test potential of 1000Vac/1414 Vdc, a higher test potential shall be considered in the end product if higher overvoltage category specified.
- 11. Overvoltage Category(OVC): 2
- 12. Pollution Degree(PD): 2
- 13. Altitude for Operation: Up to 4000 m.

APPLICABLE REQUIREMENTS

ANSI/CAN/UL-1973:2018, Second Edition - Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications.

MARKINGS

See CSA report.

Notes:

Products certified under Class C370112, C370182 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 80075844

Master Contract: 274187

*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
80075844	2022-01-13	Original certification of Rechargeable Lithium ion Battery for use in stationary application, Models US5000, US5000-B. (cCSAus Mark) WMTC_ Initial Qualification Assessment to Dongguan BALUN Testing Technology Co., Ltd.