CMA 230020349729

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检科院网站

检 测 报 告

TEST REPORT

检科院公众号

报告编号 Report No.	STL/R2407527-2
样品名称 Sample Name	储能电池系统 Lithium Iron Phosphate Battery Energy Storage System
委托单位 Consignor	上海派能能源科技股份有限公司 Pylon Technologies Co., Ltd.

浙江省检验检疫科学技术研究院 检验检测专用章

浙江省检验检疫科学技术研究院

Zhejiang Academy of Science and Technology for Inspection and Quarantine

检 测 报 告
TEST REPORT

样品名称 Name	储能电池系统 Lithium Iron Phosphate Battery Energy Storage System
型号规格 Type/Model	PowerCube-20H-M7A200C5.015-EU-05 / 1331.2V 3768Ah 5.015MWh
委托单位 Consignor	上海派能能源科技股份有限公司 Pylon Technologies Co., Ltd.
地　　址 Address	上海市浦东新区康桥镇苗桥路 300 号 No.300, Miaoqiao Road, Kangqiao Town, Pudong New Area, Shanghai, China
制造商 Manufacture	上海派能能源科技股份有限公司 Pylon Technologies Co., Ltd.
地　　址 Address	上海市浦东新区康桥镇苗桥路 300 号 No.300, Miaoqiao Road, Kangqiao Town, Pudong New Area, Shanghai, China
生产厂 Factory	安徽派能能源科技有限公司 Anhui Pylon Technologies Co., Ltd.
地　　址 Address	安徽省合肥市肥西县经济开发区大潜山路与皋城路交口路 Intersection of Daqianshan Road and Gaocheng Road, Economic Development Zone, Feixi County, Hefei, Anhui Province, China
样品数量 Quantity	1 个集成电池组 1 assembled battery
样品编号 Sample No.	2407527-1-1
接样日期 Accepted Date	2024-08-09
试验日期 Test Date	2024-08-13 至 2024-08-16
试验依据 Criterion	联合国《试验和标准手册》第八修订版 38.3 节 ST/SG/AC.10/11/Rev.8/Section 38.3
试验结论 Conclusion	经检测，该样品符合联合国《试验和标准手册》第八修订版 38.3 节标准要求。 The sample has passed the test items of UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8/Section 38.3
备　　注 Comment	/

编制 ： 沈元林 审核： 李镇 批准：
Compiler: Reviewer: Approver:

样品说明及描述 Description and illustration of Samples

样品外观：良好
Appearance：Good
样品颜色：白色
Color：White
样品形状：棱柱形
Shape：Prismatic
电池组状态：
Status of battery:

样品编号 Sample No.	型号 Type	能量 Watt-hour	类别 Category	组成结构 Composition
2407527-1-1	PowerCube-20H-M7A200C5.015-EU-05	5.015MWh	Assembled battery	由 12 个锂离子电池模组 PowerCube-M7A-200-166.4/1331.2V-E15 组成 Consists of 12 Lithium-ion battery modules PowerCube-M7A-200-166.4/1331.2V-E15

备注：

样品为型号 PowerCube-20H-M7A200C5.015-EU-05 的电池系统，其额定瓦时为 5.015MWh，大于 6200Wh。组成电池系统的电池模组型号为 PowerCube-M7A-200-166.4/1331.2V-E15，已通过 UN38.3 测试，报告编号为 STL/R2407528-2。根据 ST/SG/AC.10/11/Rev.8/Section 38.3.3.1(g)条款要求，电池系统经过验证可防止下列状况，即无需进行试验:

(一)过度充电；
(二)短路；
(三)电池组之间过度放电。

Note:

The Sample (Type: PowerCube-20H-M7A200C5.015-EU-05) is a battery system. The rated Watt-hour is 5.015MWh, which is larger than 6200Wh. The modules (Type: PowerCube-M7A-200-166.4/1331.2V-E15) that assembled in the battery system have passed UN38.3 tests (Report No. STL/R2407528-2). According to ST/SG/AC.10/11/Rev.8/Section 38.3.3.1(g), the battery system does not need to be tested if it of a type that has been verified as preventing:

(i) Overcharge;
(ii) Short circuits;
(iii) Over discharge between the batteries.

样品照片及标识 Photos of Samples and Labels

外观（PowerCube-20H-M7A200C5.015-EU-05 电池系统）
Appearance (PowerCube-20H-M7A200C5.015-EU-05 battery system)

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样品照片及标识 Photos of Samples and Labels

内部（PowerCube-20H-M7A200C5.015-EU-05 电池系统）
Interior (PowerCube-20H-M7A200C5.015-EU-05 battery system)

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样品照片及标识 Photos of Samples and Labels

内部（PowerCube-20H-M7A200C5.015-EU-05 电池系统）

Interior (PowerCube-20H-M7A200C5.015-EU-05 battery system)

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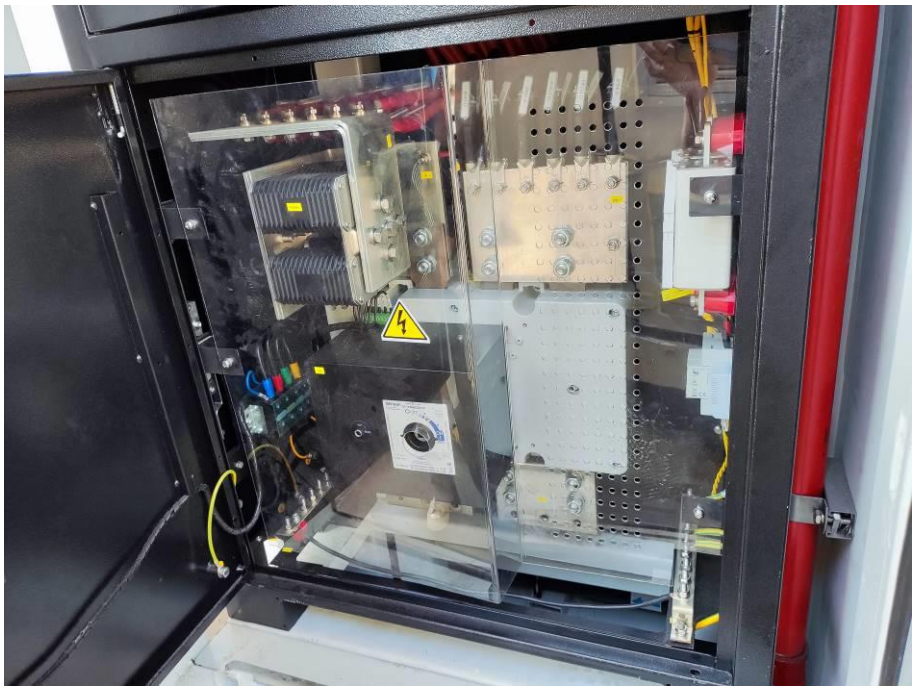
Interior (PowerCube-20H-M7A200C5.015-EU-05 battery system)

样品照片及标识 Photos of Samples and Labels



内部（PowerCube-20H-M7A200C5.015-EU-05 电池系统）

Interior (PowerCube-20H-M7A200C5.015-EU-05 battery system)

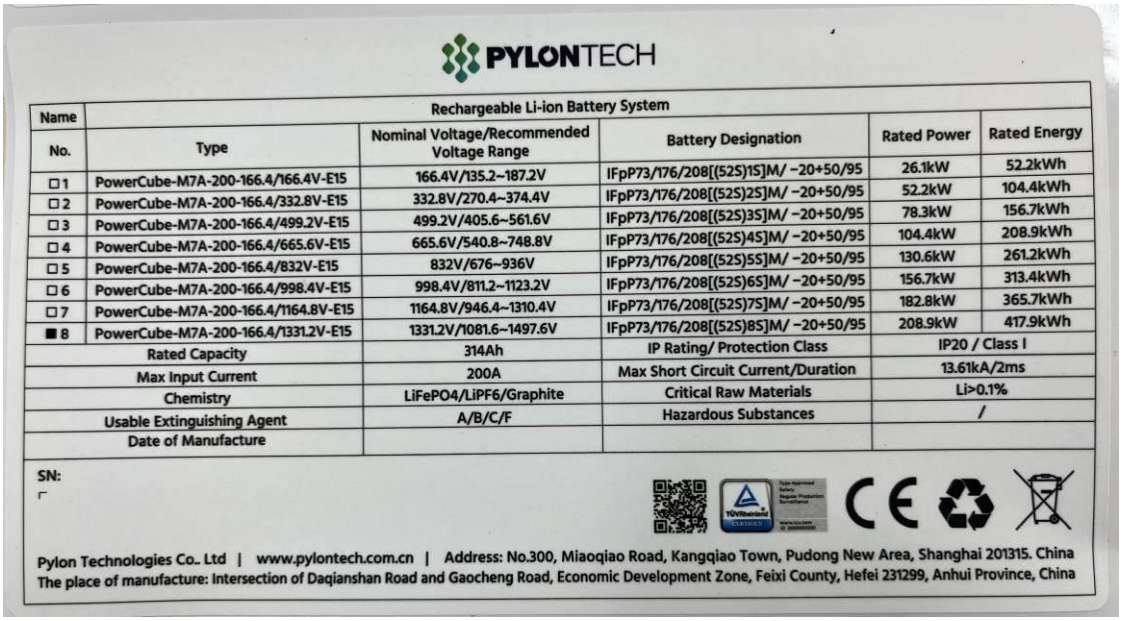
铭牌（PowerCube-20H-M7A200C5.015-EU-05 电池系统）

Label (PowerCube-20H-M7A200C5.015-EU-05 battery system)

样品照片及标识 Photos of Samples and Labels

外观（PowerCube-M7A-200-166.4/1331.2V-E15 锂离子电池模组）

Appearance (PowerCube-M7A-200-166.4/1331.2V-E15 Lithium-ion battery module)



PYLONTECH

Name	Rechargeable Li-ion Battery System				
No.	Type	Nominal Voltage/Recommended Voltage Range	Battery Designation	Rated Power	Rated Energy
□1	PowerCube-M7A-200-166.4/166.4V-E15	166.4V/135.2~187.2V	IFpP73/176/208[(52S)1S]M/ -20+50/95	26.1kW	52.2kWh
□2	PowerCube-M7A-200-166.4/332.8V-E15	332.8V/270.4~374.4V	IFpP73/176/208[(52S)2S]M/ -20+50/95	52.2kW	104.4kWh
□3	PowerCube-M7A-200-166.4/499.2V-E15	499.2V/405.6~561.6V	IFpP73/176/208[(52S)3S]M/ -20+50/95	78.3kW	156.7kWh
□4	PowerCube-M7A-200-166.4/665.6V-E15	665.6V/540.8~748.8V	IFpP73/176/208[(52S)4S]M/ -20+50/95	104.4kW	208.9kWh
□5	PowerCube-M7A-200-166.4/832V-E15	832V/676~936V	IFpP73/176/208[(52S)5S]M/ -20+50/95	130.6kW	261.2kWh
□6	PowerCube-M7A-200-166.4/998.4V-E15	998.4V/811.2~1123.2V	IFpP73/176/208[(52S)6S]M/ -20+50/95	156.7kW	313.4kWh
□7	PowerCube-M7A-200-166.4/1164.8V-E15	1164.8V/946.4~1310.4V	IFpP73/176/208[(52S)7S]M/ -20+50/95	182.8kW	365.7kWh
■8	PowerCube-M7A-200-166.4/1331.2V-E15	1331.2V/1081.6~1497.6V	IFpP73/176/208[(52S)8S]M/ -20+50/95	208.9kW	417.9kWh
Rated Capacity		314Ah	IP Rating/ Protection Class	IP20 / Class I	
Max Input Current		200A	Max Short Circuit Current/Duration	13.61kA/2ms	
Chemistry		LiFePO4/LiPF6/Graphite	Critical Raw Materials	Li>0.1%	
Usable Extinguishing Agent		A/B/C/F	Hazardous Substances	/	
Date of Manufacture					

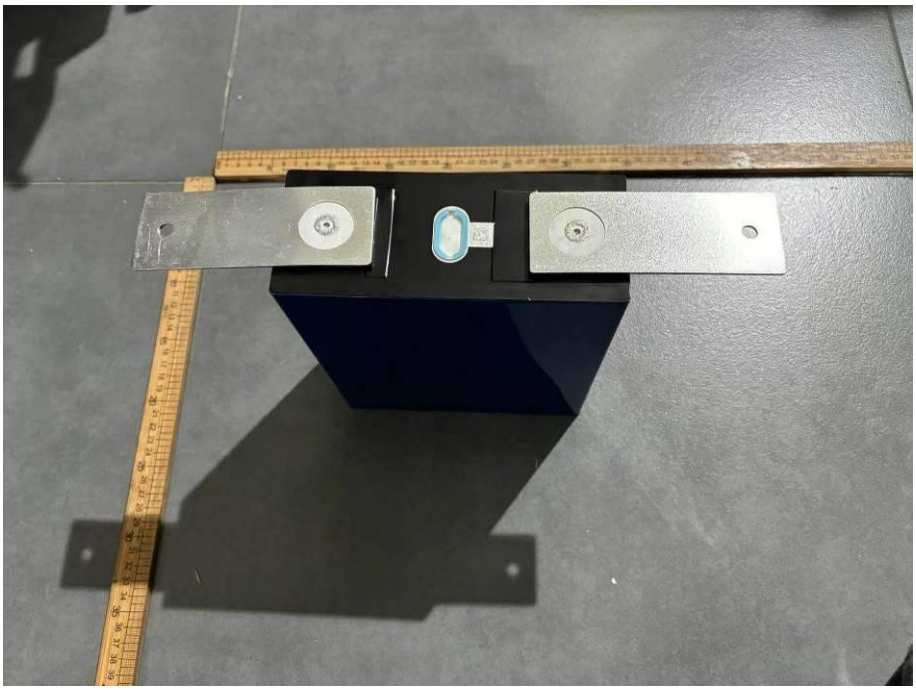
SN:

Pylon Technologies Co.. Ltd | www.pylontech.com.cn | Address: No.300, Miaoqiao Road, Kangqiao Town, Pudong New Area, Shanghai 201315. China
The place of manufacture: Intersection of Daqianshan Road and Gaocheng Road, Economic Development Zone, Feixi County, Hefei 231299, Anhui Province, China

铭牌（PowerCube-M7A-200-166.4/1331.2V-E15 锂离子电池模组）

Label (PowerCube-M7A-200-166.4/1331.2V-E15 Lithium-ion battery module)

样品照片及标识 Photos of Samples and Labels



电芯元件外观 Appearance of a cell

检测结果 Test Results

条款 No.	试验项目及试验要求 Test item and requirements	试验结果 Result	判定 Conclusion
38.3.3.1(g)	要求：对于已通过所有适用试验的若干电池组以电路连接而成的集成电池组，如在完全充电时所有正极的合计锂含量大于 500g，或在锂离子电池组的情况下，如额定的瓦时数超过 6200wh，该集成电池组如经过验证属于可防止下列状况，即无需进行试验 T.1 - T.8 测试项目: (一) 过度充电； (二) 短路； (三) 电池组之间过度放电。 Requirements: When batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content of all anodes, when fully charged, is more than 500g, or in the case of a lithium ion battery, with a Watt-hour rating of more than 6200Wh, the assembled battery does not need to be tested if it of a type that has been verified as preventing: (i) Overcharge; (ii) Short circuits; (iii) Over discharge between the batteries.	依据《ZAIQ-WI(DQ)-523 集成电池组符合 UN38.3.3.1(g)条款验证流程作业指导书》验证，样品具有防止过度充电、短路、电池组之间过度放电能力，详见评估表 1-3。 According to the verification specified in file ZAIQ-WI(DQ)-523, the sample has the ability to prevent overcharging, short circuiting and over discharging between batteries. Detailed information is shown in evaluation form 1-3.	合格 Passed

评估表 Evaluation Form 1

评估项目 Evaluation Item		过充电保护功能 Overcharge protection	
序号 No.	类型 Type	保护功能详情 Details of the protection function	佐证资料 Proof materials
1	软件保护 Software protection	样品具有电芯过压保护、电池簇总压过压保护等保护功能，各级保护功能中又分为一级报警、二级报警、三级报警保护等三种等级保护状态。 在过压三级报警保护状态下可控制高压箱继电器切断样品充电回路。 The sample has functions such as cell overvoltage protection and battery cluster total overvoltage protection. The functions are divided into three levels: first-level alarm protection, second-level alarm protection and third-level alarm protection. The relay in the high voltage box can be controlled to cut off the sample charging circuit in the protection state of third-level overvoltage alarm.	1. 储能电池系统产品用户手册 User Manual for Lithium Iron Phosphate Battery Energy Storage System 2. 储能电池系统电气原理图 Electrical schematic diagram of Lithium Iron Phosphate Battery Energy Storage System 3. 锂离子电池系统电气原理图 Electrical schematic diagram of Rechargeable Li-ion Battery System 4. 高压箱正负继电器（GPR-H350-A WUXI/1500V/400A）CE 认证证书 CE certification for positive and negative relays (GPR-H350-A WUXI/1500V/400A)
评估结论 Evaluation conclusion		样品具有该保护功能 The sample has this protection function.	

评估表 Evaluation Form 2

评估项目 Evaluation Item		短路保护验证 Short circuit protection verification	
序号 No.	类型 Type	保护功能详情 Details of the protection function	佐证资料 Proof materials
1	硬件保护 Hardware protection	样品具有锂离子电池模块熔断器（A372102-400 DY/DC250V/400A）、高压盒熔断器（ESH5582/DC1500V/400A）、汇流柜熔断器（8060873.3300/1500V/3300A）等三种外部短路保护装置，在外部短路状态下，保护装置动作，可切断短路回路。 The sample has three external short circuit protection fixtures: Rechargeable Li-ion Battery fuse(A372102-400 DY/DC250V/400A), High voltage box fuse (ESH5582/DC1500V/400A), Battery Collection Panel fuse(8060873.3300/1500V/3300A), etc. In the external short circuit state, protective device action, which can cut off the short circuit current.	1. 储能电池系统电气原理图 Electrical schematic diagram of Lithium Iron Phosphate Battery Energy Storage System 2. 锂离子电池系统电气原理图 Electrical schematic diagram of Rechargeable Li-ion Battery System 3. 锂离子电池模块熔断器（A372102-400 DY/DC250V/400A）规格书 Specification for Rechargeable Li-ion Battery (A372102-400 DY/DC250V/400A) 4. 锂离子电池模块熔断器（A372102-400 DY/DC250V/400A）IEC 认证证书 IEC certification for Rechargeable Li-ion Battery fuse (A372102-400 DY/DC250V/400A) 5. 高压盒熔断器（ESH5582/DC1500V/400A）规格书 Specification for High voltage box fuse (ESH5582/DC1500V/400A) 6. 高压盒熔断器（ESH5582/DC1500V/400A）CE 认证证书 CE certification for High voltage box fuse (ESH5582/DC1500V/400A) 7. 汇流柜熔断器（8060873.3300/1500V/3300A）规格书 Specification for Battery Collection Panel fuses (8060873.3300/1500V/3300A) 8. 汇流柜熔断器（8060873.3300/1500V/3300A）CE 认证证书 CE certification for Battery Collection Panel fuses (8060873.3300/1500V/3300A)
评估结论 Evaluation conclusion		样品具有该保护功能 The sample has this protection function.	

评估表 Evaluation Form 3

评估项目 Evaluation Item		电池组间过度放电保护验证 Protection verification of over discharge between the batteries	
序号 No.	类型 Type	保护功能详情 Details of the protection function	佐证资料 Proof materials
1	软件保护 Software protection	样品具有电芯欠压保护、电池簇总压欠压保护等保护功能，各级保护功能中又分为一级报警、二级报警、三级报警保护等三种等级保护状态。 在欠压三级报警保护状态下可控制高压箱继电器切断样品放电回路，可有效防止模组间/电芯间过度放电情况。 The sample has functions such as cell under-voltage protection and battery cluster total voltage under-voltage protection. The functions are divided into three levels: first-level alarm protection, second-level alarm protection and third-level alarm protection. The relay in the high pressure box can be controlled to cut off the sample discharge circuit under the under-voltage third-level alarm protection state, effectively preventing excessive discharge between modules/cells.	1. 储能电池系统产品用户手册 User Manual for Lithium Iron Phosphate Battery Energy Storage System 2. 储能电池系统电气原理图 Electrical schematic diagram of Lithium Iron Phosphate Battery Energy Storage System 3. 锂离子电池系统电气原理图 Electrical schematic diagram of Rechargeable Li-ion Battery System 4. 高压箱正负继电器（GPR-H350-A WUXI/1500V/400A）CE 认证证书 CE certification for positive and negative relays (GPR-H350-A WUXI/1500V/400A)
评估结论 Evaluation conclusion		样品具有该保护功能 The sample has this protection function.	

*****报告结束*****
***** END *****

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4. This report is invalid without the signature of the approver (authorized signatory).
5. Test report is invalid if altered.
6. The duplicate report without the "dedicated seal for inspection and testing" of the institution is invalid.
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浙江省检科院实验室及业务联系方式

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机场综合实验室： 检测地址：杭州萧山国际机场海关大楼（311207） 业务范围：食品、饮用水、空气微生物检测。 联系电话（传真）：0571-86661795 电子邮件：226724760@qq.com	**机电产品检测研究所（校准实验室）：** 检测地址：杭州市萧山区建设三路 398 号（311215） 业务范围：设备校准服务。 联系电话：0571-83527137 电子邮件：jyq@zaiq.org.cn