



中国认可
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CNAS IB0071



NO.2623050130

安全技术说明书 (SDS)

储能电池模块 SigenStor BAT 8. 0

Output Voltage 300~900V 30V 8. 06kWh

Sigen Battery SigenStor BAT 8. 0 Output Voltage
300~900V 30V 8. 06kWh

生效日期: 2023年05月18日

编制人: 陈雨霜

审核人: 刘婉莹

批准人: 董宇佳



上海化工院检测有限公司



上海思格新能源技术有限公司

安全技术说明书

SDS

储能电池模块 SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh

第一部分 化学品及企业标识

中文名称: 储能电池模块 SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh
英文名称: Sigen Battery SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh
企业名称: 上海思格新能源技术有限公司
地址: 中国（上海）自由贸易试验区临港新片区伟展路175号5层514室
邮编: 201304
E-mail: qixiaobo@sigenpower.com
传真号码: /
应急咨询电话: 86-21-61000956
化学品的推荐用途和限制用途: /

技术说明书编码: 2623050130
生效日期: 2023年05月18日

第二部分 危险性概述

本品不在GHS体系涵盖的范围内。

主要危险性:

火灾或爆炸危险:

当锂离子电池损坏或处理不当（机械损伤或过度充电），其内部的易燃液态电解质在温度高于150℃时会泄露、着火和产生火花；该类物品可能迅速燃烧并伴有閃燃；可能会引燃邻近的其他电池。

健康危害:

电池的电解质会刺激皮肤、眼睛和黏膜组织。燃烧可能产生刺激性、腐蚀性和/或毒性气体。烟雾可能导致头晕或窒息。

第三部分 成分/组成信息

化学品名称: 储能电池模块 SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh

成份	含量	CAS NO.	EC NO.
磷酸铁锂	15~40%	15365-14-7	476-700-9
石墨	7-25%	7782-42-5	231-955-3
氟丙烯亚乙烯基氟聚合物	3-15%	9011-17-0	618-470-6
碳酸二甲酯	0-15%	616-38-6	210-478-4

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碳酸乙烯酯	0-15%	96-49-1	202-510-0
碳酸：乙酯	0-15%	105-58-8	203-311-1
碳酸甲乙酯	0-15%	623-53-0	/
铜	10-12%	7440-50-8	231-159-6
铝	3-5%	7429-90-5	231-072-3
六氟磷酸锂	0-5%	21324-40-3	244-334-7
乙炔炭黑	0-2%	1333-86-4	215-609-9

第四部分 急救措施

皮肤接触: 若接触到电池内的物质，脱去受污染的衣物和鞋袜，立即用流动清水冲洗20分钟以上。如刺激持续，就医。

眼睛接触: 若接触到电池内的物质，立即提起眼睑，立即用流动清水冲洗20分钟以上。如刺激持续，就医。

吸入: 若吸入电池内的物质，立即脱离现场至空气新鲜处。若呼吸困难，给氧；若呼吸停止，人工呼吸。就医。

食入: 若食入电池内的物质，禁止催吐，立即就医。
无资料。

最重要的急性和延迟症状/影响: 无资料。
必要时注明立即就医及所需的特殊治疗: 无资料。

第五部分 消防措施

适当的灭火剂: 可用水幕和普通泡沫灭火剂灭火。

化学品产生的具体危险: 燃烧可能产生刺激性、腐蚀性和或毒性气体。烟雾可能导致头晕或窒息。

消防人员的特别防护行动: 消防员应戴自给正压式呼吸器，穿消防防护服以防止皮肤和眼睛接触。在上风处灭火。不相关人员疏散至安全区域。

第六部分 泄漏应急处理

个人防护措施、防护设备和应急程序: 使用个人防护设备。确保足够的通风。确保人群远离泄露区或处于泄漏区上风向。不相关人员禁止进入。移除所有点火源。

环境保护措施: 避免泄露物进入地表、沟渠或水域。清洗废水避免直接释放至环境中。

控制和清洁的方法和材料: 如电解液泄漏，用土、沙或其他不可燃材料吸附，漏损的电池和污浊的吸附物应放入金属容器。

第七部分 操作处置与储存

安全操作的防护措施:

操作人员应经过培训，严格遵守操作规程。建议操作人员穿一般作业防护服，戴安全手套。远离火种、热源。避免高温。工作场所严禁吸烟。工作场所应有通风系统和设备。避免随意拆卸电池和弄错正负极。须牢固固定在包装中，以有效防止短路和防止可导致短路的移动。万一电池内的物质泄漏，避免眼睛、皮肤直接接触，避免吸入。应与强氧化剂、易燃物和腐蚀品分开存放。

安全储存的条件，包括一切不相容性: 储存于阴凉、通风及干燥的库房内。远离火种、热源。避免高温。应与强氧化剂、易燃物和腐蚀品分开存放。须牢固在包装中，以有效防止短路和防止可导致短路的移动。储存区配备相应品种和数量的消防器材、泄漏应急处理设备和合适的收容材料。

第八部分 接触控制/个人防护

控制参数:

GBZ 2.1-2019 《工作场所所有害因素职业接触限值 化学有害因素》：
 石墨粉尘：PC-TWA 4 mg/m³ (总尘)；PC-TWA 2 mg/m³ (呼吸尘)
 铜（按Cu计）：铜尘 PC-TWA 1 mg/m³；铜烟 PC-TWA 0.2 mg/m³
 铝金属、铝合金粉尘：PC-TWA 3 mg/m³ (总尘)
 炭黑粉尘：PC-TWA 4mg/m³ (总尘)（备注：G2B）
 ACGIH：
 石墨：TLV-TWA 2 mg/m³
 铜：TLV-TWA 1 mg (Cu) /m³，粉尘，烟雾；TLV-TWA 0.2 mg (Cu) /m³ 烟雾
 铝：TLV-TWA 1 mg/m³
 炭黑：TLV-TWA 0.01 mg (Cd)/m³
 有通风系统和设备。提供安全淋浴和洗眼设备。

适当的工程控制:

个人防护措施:

若需要，戴安全防护眼镜。

皮肤防护:

手防护：戴安全手套。身体防护：穿一般作业防护服。

呼吸系统防护:

若需要，戴管理部门认可的面罩。

高温危害:

无资料。

其他防护:

工作现场严禁吸烟、进食和饮水。工作后，淋浴更衣。

第九部分 理化特性

外观： 类白色塑胶及金属外壳

气味： 无臭

pH值： 8-9

溶解性： 部分溶于水

熔点/凝固点： >300℃

沸点、初始沸点和沸程： 无资料

闪点(闭杯)： 无资料

密度/相对密度： 无资料

运动黏度： 无资料

燃烧上下极限或爆炸极限： 无资料

蒸气压： 无资料

相对蒸气密度： 无资料

n-辛醇/水分配系数(对数(对数值))： 无资料

自燃温度： 无资料

分解温度： 无资料

颗粒特征： 无资料

易燃性(固体、气体)： 无资料

第十部分 稳定性与反应活性

- 反应性: 无资料。
- 化学稳定性: 常温常压下稳定。
- 危险反应的可能性: 无资料。
- 应避免的条件: 误操作，明火，高温，机械滥用，过充电，防止短路和防止可导致短路的移动。
- 不相容材料: 强氧化剂、易燃物和腐蚀性。
- 危险性分解产物: 碳的氧化物、金属氧化物等。

第十一部分 毒理学资料

- 急性毒性: 无资料。
- 皮肤腐蚀/刺激: 电池内的电解液对皮肤有刺激性。
- 严重眼损伤/眼刺激: 电池内的电解液对眼睛有刺激性。
- 呼吸致敏: 无资料。
- 皮肤致敏: 无资料。
- 生殖细胞致突变性: 无资料。
- 致癌性: 无资料。
- 生殖毒性: 无资料。
- 特定目标器官毒性-单次接触: 无资料。
- 特定目标器官毒性-重复接触: 无资料。
- 吸入危险: 无资料。

第十二部分 生态学资料

- 毒性: 无资料。
- 持久性和降解性: 无资料。
- 潜在的生物累积性: 无资料。
- 在土壤中的流动性: 无资料。
- 其他有害效应: 无资料。

第十三部分 废弃处理

废弃处置方法:

废弃电池的处置应符合《中华人民共和国固体废物污染环境防治法》、《废电池污染防治技术政策》等有关法律、法规、政策和标准的要求。建议交给具有资格的化学废物处理部门处置。对于用过的而且将被运送去销毁或回收的电池，在运输前应对其仔细检查，以确保每节电池都是完好无损而且适合运输的。

第十四部分 运输信息

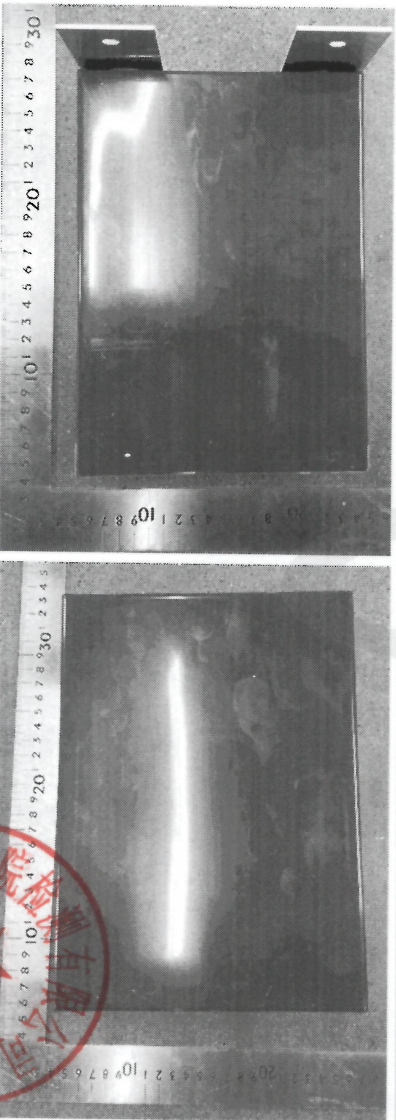
锂电池单独运输:

NO.2623050130



SIQENENERGY
Model: SigenStor BAT 8.0
Product Name: Sigen Battery

Battery Type: Li-ion
Total Energy Capacity: 8.06 kWh
Input/Output Voltage: 300 ~ 900 V
Max. Continuous Current: 12 A
Max. Continuous Power: 4 kW
Protective Class: I
Enclosure Type: IP66
Weight: 70 kg
Operating Temperature Range: -20 ~ +55°C



报告结束



SAFETY DATA SHEET

Product Name: Sigen Battery SigenStor BAT 8. 0
Output Voltage 300~900V 30V 8. 06kWh

Effective Date: 2023-05-18

Compiler: Chen Yushuang

Checker: Lu Wangping

Approver: Dongxuesheng

Shanghai Institute of Chemical Industry Testing Co., Ltd.



NO.2623050130

Shanghai SIGEN New Energy Technology Co., Ltd.

SAFETY DATA SHEET

Sigen Battery SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Sigen Battery SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh
Company: Shanghai SIGEN New Energy Technology Co., Ltd.
Address: Room 514, Floor 5, No. 175, Weizhan Road, Lingang New Zone, China (Shanghai)
Pilot Free Trade Zone, 201304, P. R. China
Email: qixiaobo@sigenpower.com
Fax: /
Emergency Phone: 86-21-61000956
Recommend use of the chemical and restrictions on use: /

SDS Number: 2623050130
Effective Date: 2023-05-18

SECTION2 HAZARDS IDENTIFICATION

The product is outside of the scope of GHS system.

Main Hazards:

Fire or Explosion Hazards:

Lithium ion battery contains flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (>150°C), when damaged or abused (e.g., mechanical damage or electrical overcharging). May burn rapidly with flare-burning effect. May ignite other batteries in close proximity.

Health Hazards:

Contact with the electrolyte of battery may be irritating to skin, eyes and mucous membranes. Fire will produce irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation.

SECTION3 INFORMATION ON INGREDIENTS

Product name:	Ingredient	Concentration	CAS No.	EC No.
Sigen Battery SigenStor BAT 8.0 Output Voltage 300~900V 30V 8.06kWh	Lithium iron phosphate	15-40%	15365-14-7	476-700-9

NO 2623050130

Graphite	7-25%	7782-42-5	231-955-3
Fluoropropylene vinyl-fluoropolymer	3-15%	9011-17-0	618-470-6
Dimethyl carbonate	0-15%	616-38-6	210-478-4
Ethylene carbonate	0-15%	96-49-1	202-510-0
Diethyl carbonate	0-15%	105-58-8	203-311-1
Methyl ethyl carbonate	0-15%	623-53-0	/
Copper	10-12%	7440-50-8	231-159-6
Aluminum	3-5%	7429-90-5	231-072-3
Lithium hexafluorophosphate	0-5%	21324-40-3	244-334-7
Acetylene black (Carbon black)	0-2%	1333-86-4	215-609-9

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If in contact with the internal materials of battery, remove the contaminated clothing, shoes and socks, immediately flush with plenty of water for at least 20 minutes. Call a physician.

Eye Exposure:

If in contact with the internal materials of battery, lift your eyelids immediately and rinse them with running water for more than 20 minutes. Call a physician.

Inhalation Exposure:

If the internal materials of battery are inhaled, immediately remove to fresh air. If breathing is difficult give oxygen. If not breathing, give artificial respiration. Call a physician.

Oral Exposure:

Do not induce vomiting if the internal materials of battery are swallowed. Call a physician immediately.

Most Important Symptoms/Effects, Acute and Delayed:

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

No data available.

SECTIONS FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Suitable:Water spray or regular foam.

Specific Hazards Arising from the Chemical:

May decompose upon combustion to generate irritating, corrosive or toxic fumes. Fumes may cause dizziness or suffocation.

Special Protective Action for Fire-fighters:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fire-extinguishing work is done from the windward. Uninvolved persons should evacuate to a safe place.

SECTION6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Entry to noninvolved personnel should be controlled around the leakage area by roping off. Remove all sources of ignition.

Environmental Precautions:

Avoid leakage getting into the earth, ditches or waters. Avoid directly releasing the washing waste-water into the environment.

Methods and Materials for Containment and Cleaning up:

If the electrolyte leaks, use soil, sand or other non-combustible materials to absorb. The leaked batteries and dirty adsorbents should be placed in metal containers.

SECTION7 HANDLING AND STORAGE

Precautions for Safe Handling:

Operators should be trained and strictly abide by operating procedures. Wear appropriate protective clothing and safety gloves. Keep away from ignition sources, heat and flame. No smoking at working site. Handling is performed in a well ventilated place. Avoid disassembling the battery at will and reversing battery polarity within the battery assembly. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. If the electrolyte leaks, avoid directly contacting with eyes and skin. Avoid inhalation. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in a cool, dry, and well-ventilated area. Keep away from ignition sources, heat and flame. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION8 EXPOSURE CONTROL/PPE

Control Parameters:

GBZ 2.1-2019 Occupational Exposure Limits for Hazardous Agents in the Workplace - Part 1: Chemical

Hazardous Agents:

Graphite dust: PC-TWA 4 mg/m³ (Total dust) ; PC-TWA 2 mg/m³ (Respirable dust)

Copper (calculated as Cu) : Copper dust PC-TWA 1 mg/m³; Copper smoke PC-TWA 0.2 mg/m³

Aluminum metal, aluminum alloy dust: PC-TWA 3 mg/m³ (Total dust)

Carbon black dust:PC-TWA 4mg/m³ (total dust) (Remarks:G2B)

ACGIH:

Graphite: TLV-TWA 2 mg/m³

Copper: TLV-TWA 1 mg (Cu) /m³ Dust, smoke; TLV-TWA 0.2 mg (Cu) /m³ Smoke

Aluminum: TLV-TWA 1 mg/m³

Carbon black: TLV-TWA: 3 mg/m³ (inhalable dust)

Appropriate Engineering Controls:

Mechanical exhaust required. Safety shower and eye bath.

Individual Protection Measures:

Eye/Face Protection:

Wear chemical safety glasses if needed.

Skin Protection:

Hand Protection: Wear safety gloves.

Body Protection: Wear appropriate protective clothing.

Respiratory Protection:

Wear government approved respirator if needed.

Thermal Hazards:

No data available.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Off-white plastics cement and metal shell
Odor:	Odorless
pH Value:	8-9
Solubility:	Partial soluble in water
Boiling Point, Initial Boiling Point and Boiling	No data available
Range: Melting	>300°C
Point/Freezing	
Point:	
Flash Point (Closed Cup):	No data available
Density/Relative	No data available
Density:	
Kinematic	No data available
Viscosity:	
Lower/Upper	No data available
Explosion	
Limit/Flammability	
Limit:	
Vapour Pressure:	No data available
Relative Vapor	No data available
Density:	
Partition	No data available
Coefficient	
N-Octanol/Water (Log Value):	
Autoignition	No data available
Temperature:	
Decomposition	No data available
Temperature:	
Particle	No data available
Characteristics:	
Flammability	No data available
(Solid, Gas):	

SECTION10 STABILITY AND REACTIVITY

Reactivity:

No data available.

Chemical Stability:

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions:

No data available.

Conditions to Avoid:

Avoid misoperation, exposure to heat and open flame. Avoid mechanical or electrical abuse and overcharge. Prevent short circuits and short circuits caused by movement.

Incompatible Materials:

Strong oxidizing agents, combustible materials and corrosives.

Hazardous Decomposition Products:

Carbon oxides, metal oxides, etc.

SECTION11 TOXICOLOGICAL INFORMATION**Acute Toxicity:**

No data available.

Skin Corrosion/Irritation:

The electrolyte in the battery causes skin irritation.

Serious Eye Damage/Irritation:

The electrolyte in the battery causes eye irritation.

Respiratory Sensitization:

No data available.

Carcinogenicity:

No data available.

Skin Sensitization:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Specific Target Organ Toxicity –Single Exposure:

No data available.

Specific Target Organ Toxicity –Repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

SECTION12 ECOLOGICAL INFORMATION**Toxicity:**

No data available.

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION13 DISPOSAL CONSIDERATION**Disposal Methods :**

The disposal of discarded battery shall comply with the requirements of relevant laws, regulations, policies and standards such as the "Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste" and "Technical Policy for the Prevention and Control of Waste Battery Pollution". Contact a licensed professional waste disposal service to dispose of wastes. Used battery being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport.

SECTION14 TRANSPORT INFORMATION

Only Lithium Battery during Transport:

The product has passed the test items of Manual of Tests and Criteria Section 38.3. The total net weight of the Lithium batteries is more than 35 kg.

RII/ADR (2023 Edition) :

Hazard Class: 9
UN Number: UN3480

Proper Shipping Name: Lithium ion batteries

According to 2.2.9.1.7(g), Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.
Forbidden for transport.

IATA DGR (64th Edition) :

IMO IMDG Code Hazard Class: 9
(2020 Edition) : UN Number: UN3480

Proper Shipping Name: Lithium ion batteries

EMS Number: F-A, S-I

According to 2.9.4.7, Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

SECTION15 REGULATORY INFORMATION

Domestic Regulations:

Only Lithium Battery during Transport:

Regulations Concerning Road Transportation of Dangerous Goods (JT/T 617-2018) :

UN Number: 3480 Name and Description: Lithium ion batteries

List of Dangerous Goods (GB 12268-2012) :

UN Number: UN3480 Shipping Name: Lithium ion batteries Packing Group: II

International Regulations:

Directive 2006/66/EC and 2013/56/EU:

The label, disposal and recycling of the battery shall meet the requirements of EU Directive 2006/66/EC and 2013/56/EU.

ICAO TT:

NO.2623050130

1. Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN 3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless be approved according to ICAO TI, lithium ion cells/batteries (UN 3480, PI 965) must be offered for transport at a state of charge (SOC) not exceeding 30% of their rated design capacity.

SECTION16 OTHER INFORMATION

Preparation Date:

2023-05-18

Preparation Department:

Shanghai Institute of Chemical Industry Testing Co., Ltd. Tel (Fax):+86-21-52815377/31765555

Revision:

0

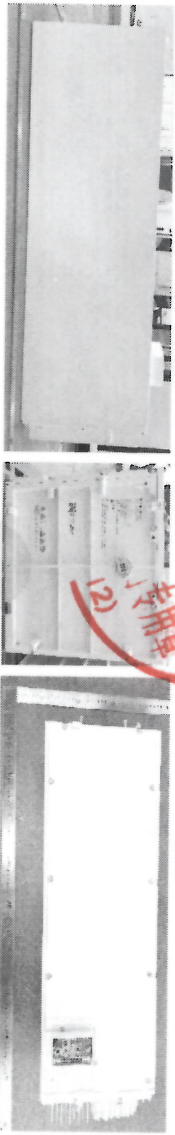
Abbreviations and Acronyms:

CAS: Chemical Abstracts Service EC: European Commission ACGIH: American Conference of Governmental Industrial Hygienists PC-TWA: Permissible concentration-time weighted average G2B: Possibly carcinogenic to humans TLV-TWA: Time weighted average threshold limit RID: Regulations concerning the International Carriage of Dangerous Goods by Rail IATA DGR: International Agreement concerning the International Carriage of Dangerous Goods by Road IATA DGR: International Air Transport Association Dangerous Goods Regulations IMO IMDG CODE: International Maritime Organization International Maritime Code for Dangerous Goods EMS: Emergency schedule EI: European Union ICAO TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air PI: Packaging Instruction

Other Information:

This SDS is only compiled for battery and based on the information such as ingredients provided by the applicant and our current knowledge. This SDS shall be used only as a guide. If the battery is used as a component in another product, the information in this SDS may not be applicable. The users of this SDS must make independent judgments on the correctness and completeness and then decide its suitability according to the actual situation. The users should take the relevant legal responsibilities for the consequences of use.

NO.2623050130



SIJENENERGY

Model: SigenStor BAT 8.0

Product Name: Sigen Battery

Battery Type: Li-ion

Total Energy Capacity: 8.06 kWh

Input/Output Voltage: 300 ~ 900 V

Max. Continuous Current: 12 A

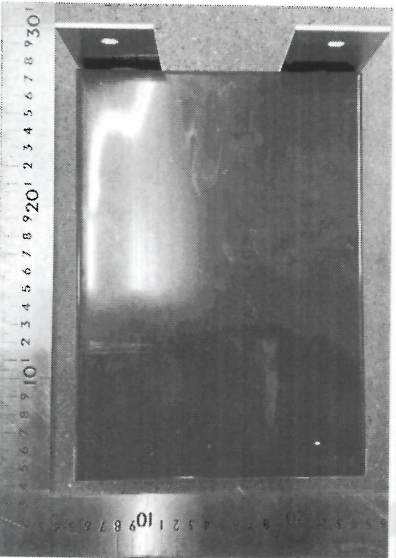
Max. Continuous Power: 4 kW

Protective Class: I

Enclosure Type: IP66

Weight: 70 kg

Operating Temperature Range: -20 ~ +55°C



END OF REPORT