

SH5/10T

Hybrid Three Phase Inverter



FULL BACKUP

- Built-in 63A bypass for whole home backup
- 10ms seamless switch
- Peak output up to 15000VA(10s) in backup mode(SH10T)



FLEXIBLE APPLICATION

- Support 100% unbalance output in backup and on grid mode
- Max. 16A DC input current per string
- 50A fast charge/ discharge current



FRIENDLY INSTALLATION

- Plug & Play installation
- Quiet operation for indoor or outdoor installation



SAFE AND DURABLE

- Support precise AFCI
- IP65/C5



Type designation	SH5T	SH10T
Input (DC)		
Max. PV input power	10000 Wp	20000 Wp
Max. PV input voltage *	1000 V	
Min. PV input voltage / Startup input voltage	150 V / 180 V	
Rated PV input voltage	600 V	
MPPT operating voltage range **	150 V - 950 V	
No. of independent MPP trackers	2	
No. of PV strings per MPPT	1 / 1	2 / 1
Max. PV input current	32 A (16 A / 16 A)	48 A (32 A / 16 A)
Max. DC short-circuit current	40 A (20 A / 20 A)	60 A (40 A / 20 A)
Max. current for input connector	30 A	
Battery data		
Battery type	Li-ion battery	
Battery voltage	100 V - 700 V	
Max. charge / discharge current ***	50 A / 50 A	
Max. charge / discharge power	15000 W / 5000 W	15000 W / 10000 W
Input and Output (AC)		
Max. AC power from grid ****	43000 VA	
Rated AC output power	5000 W	9999 W
Max. AC output apparent power	5000 VA	9999 VA
Max. AC output current	7.6 A	15.2 A
Rated AC voltage	3 / N / PE , 220 V / 380 V ; 230 V / 400 V ; 240 V / 415 V	
AC voltage range	270 V - 480 V	
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45Hz - 55 Hz / 55 Hz - 65 Hz	
Harmonic (THD)	< 3 % (of rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading to 0.8 lagging	
Feed-in phases / connection phases	3 / 3-N-PE	
Backup data (on grid mode)		
Max. output power for backup load ****	43000 W	
Max. output current for backup load	3 * 63 A	
Backup data (off-grid mode)		
Rated voltage	3 / N / PE, 220 V / 380 V; 230 V / 400 V; 240 V / 415 V (± 2 %)	
Rated frequency	50 Hz / 60 Hz (± 0.2 %)	
THDV(@Linear load)	< 2 %	
Backup switch time	< 10 ms	
Rated output power	5000 W / 5000 VA	10000 W / 10000 VA
Peak output power *****	10000 W / 10000 VA , 10 s	15000 W / 15000 VA , 10 s
Efficiency		
Max. efficiency / European efficiency	97.9 % / 97.2 %	98.0 % / 97.5 %
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
DC switch (solar)	Yes	
Surge protection	DC Type II / AC Type II	
PID zero	Yes	
Battery input reverse polarity protection	Yes	
General data		
Topology (solar / battery)	Transformerless / Transformerless	
Degree of protection	IP65	
Protective class	Protective class I	
Overvoltage category	III[AC]; II[PV]; [BATTERY]	
Active anti-islanding method	Frequency shift	
Dimensions (W * H * D)	620 mm * 480 mm * 195 mm	
Weight	32 kg	
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-25 °C - 60 °C	
Allowable relative humidity range(Non-condensing)	0 % - 100 %	
Cooling method	Natural convection	
Max. operating altitude	2000	
Noise(Typical)	35 dB (A)	
Display	LED	
Communication	RS485, WLAN, Ethernet, CAN	
DI / DO	DI * 4 / DO * 2 / DRM0	
DC connection type	Plug and play connector (PV, Max.6 mm ² / battery, Max.10 mm ²)	
AC connection type	Plug and play connector (Max.16 mm ²)	
Compliance	IEC / EN 62109, IEC 61000-6, EN 62477-1, IEC 61727, IEC62116, IEC62920, EN55011, CISPR 11, VDE-AR-N-4105, EN50549-1, AS/NZS 4777.2:2020, TOR Type A, R25, NC RFG, PSE 2018, NTS V2.1 Type A, UNE217001, UNE 217002, RD, CEI 0-21	
Country of manufacture	China	

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection ** Please refer to the user manual for the full load MPPT voltage range *** Depending on the connected battery **** Please refer to the user manual and modify the settings based on actual load power ***** Can be reached only if PV and battery power is sufficient



SH8.0 - 10RS

Residential Hybrid Single Phase Inverter



FLEXIBLE APPLICATION

- 200% DC/AC PV input 16A*4MPPTs
- Ideal for both new installation and retrofit scenario
- Built-in smart PID recovery function



SMART MANAGEMENT

- Real time data (10 seconds refresh sample)
- 24 / 7 live monitoring both online and with integrated display
- Online IV curve scan and diagnosis



ENERGY INDEPENDENCE

- Seamless transition to backup mode, for protection against power outages
- Fast Charging or discharging, enabling higher self-consumption results
- Built-in EMS with advanced customization



USER FRIENDLY

- Plug and play installation
- iSolarCloud monitoring available on App and Web
- Whole home backup available



Type designation	SH8.0RS	SH10RS
Input (DC)		
Recommended max. PV input power	16000 Wp	20000 Wp
Max. PV input voltage *	600 V	
Min. PV input voltage / Startup input voltage	40 V / 50 V	
Rated PV input voltage	360 V	
MPPT operating voltage range **	40 V – 560 V	
No. of independent MPP inputs	4	
No. of PV strings per MPPT	1 / 1 / 1 / 1	
Max. PV input current	64 A (16 A / 16 A / 16 A / 16 A)	
Max. DC short-circuit current	80 A (20 A / 20 A / 20 A / 20 A)	
Max. current for input connector	20 A	
Battery data		
Battery type	Li-ion battery	
Battery voltage range	80 V – 460 V	
Max. charge / discharge current	50 A *** / 50 A ***	
Max. charge / discharge power	10000 W / 10000 W	
Input and Output (AC)		
Max. AC power from grid	14500 VA	
Rated AC output power	8000 W	9999 W
Max. AC output apparent power	8000 VA	9999 VA
Max. AC output current	36.4 A	45.5 A
Rated AC voltage	1 / N / PE, 220 V / 230 V / 240V	
AC voltage range	154 V – 276 V	
Rated grid frequency	50 Hz / 60Hz	
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz	
Harmonic (THD)	< 3 % (at rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / connection phases	1 / 1-N-PE	
Backup data (on grid mode)		
Rated output power for backup load	14500 W	
Rated output current for backup load	63 A	
Backup data(off-grid mode)		
Rated voltage	1 / N / PE, 220 V / 230 V / 240 V (± 2 %)	
Rated grid frequency	50 Hz / 60 Hz (± 2 %)	
Output voltage harmonic (THD)	< 2 %	
Switch time to emergency mode	< 10 ms	
Rated output power	8000 W / 8000 VA	9999 W / 9999 VA
Peak output power	13680 VA, 10 s	
Efficiency		
Max. efficiency / European efficiency	97.4 % / 96.8 %	97.5 % / 97.1 %
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short - circuit protection	Yes	
Leakage current protection	Yes	
DC switch (solar)	Yes	
Surge protection	DC type II / AC type II	
PID Zero	Yes	
Battery input reverse polarity protection	Yes	
AFCI	Yes	
IV scan aand diagnosis	Yes	
General data		
Topology (solar / battery)	Transformerless / Transformerless	
Degree of protection	IP65	
Dimensions (W * H * D)	605 mm * 435 mm * 181 mm	
Weight	29 kg	
Mounting method	Wall-mounting bracket	

Type designation	SH8.0RS	SH10RS
Operating ambient temperature range	- 25 °C – 60 °C	
Allowable relative humidity range (non-condensing)	0 % – 100 %	
Cooling method	Natural cooling	
Max. operating altitude	4000 m	
Noise (typical)	45 dB (A)	
Display	LED digital display and LED indicator	
Communication	RS485, WLAN, Ethernet, CAN	
DI / DO	DI * 1 / DO * 2 / DRM	
DC connection type	MC4 (PV) / Plug and play connector (battery)	
AC connection type	Plug and play connector	
Grid compliance	IEC 62109-1:2010, IEC 62109-2, IEC 62477-1, IEC 61000-6-1/-2/-3/-4, IEC 62920 EN 55011, CISPR 11, AS/NZS 4777.2:2020	
Country of manufacture	China	

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection

** Please refer to the user manual for the full load MPPT voltage range

*** Depending on the connected battery



SH3.0/3.6/4.0/5.0/6.0RS

Residential Hybrid Single Phase Inverter

NEW



FLEXIBLE APPLICATION

- 80~460 V wide battery voltage range
- Ideal for both retrofitting and new installations
- Built-in smart PID recovery function



ENERGY INDEPENDENCE

- Seamless transition to backup mode, for protection against power outages
- Fast Charging or discharging, enabling higher self-consumption results
- Built-in EMS with advanced customization



USER FRIENDLY SETUP

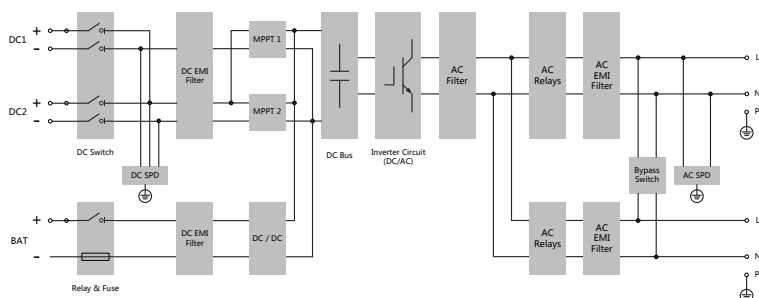
- Plug and play installation
- iSolarCloud monitoring available on App and Web
- Lightweight and compact, optimized for heat-dissipation



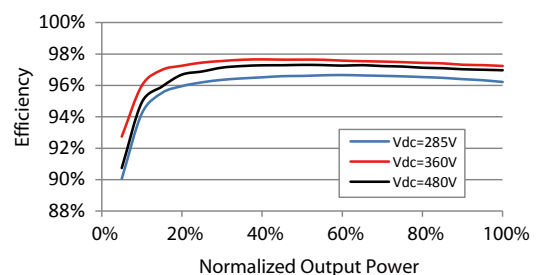
SMART MANAGEMENT

- Real time data (10 seconds refresh sample)
- 24/7 live monitoring both online and with integrated display
- Online IV curve scan and diagnosis

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SH3.0RS	SH3.6RS	SH4.0RS	SH5.0RS	SH6.0RS
Input (DC)					
Recommended max. PV input power	10000 Wp	10700 Wp	11000 Wp	12000 Wp	13000 Wp
Max. PV input voltage			600 V		
Min. operating PV voltage / Start-up input voltage			40 V / 50 V		
Rated PV input voltage			360 V		
MPP voltage range			40V – 560 V		
No. of independent MPP inputs			2		
Default No. of PV strings per MPPT			1		
Max. PV input current			32 A (16 A/16 A)		
Max. DC short-circuit current			40 A (20 A/20 A)		
Input / Output (AC)					
Max. AC input power from grid	10000 VA	10700 VA	11000 VA	12000 VA	13000 VA
Rated AC output power	3000 W	3680 W	4000 W	5000 W*	6000 W
Max. AC output power	3000 VA	3680 VA	4000 VA	5000 VA*	6000 VA
Rated AC output current (at 230 V)	13.1 A	16 A	17.4 A	21.8 A**	26.1 A
Max. AC output current	13.7 A	16 A	18.2 A	22.8 A**	27.3 A
Rated AC voltage			220 / 230 / 240 V		
AC voltage range			154 V – 276 V		
Rated grid frequency /			50 Hz / 45 – 55 Hz		
Grid frequency range			60 Hz / 55 – 65 Hz		
Harmonic (THD)			<3 % (of rated power)		
Power factor at rated power /			>0.99 at default value at rated power		
Adjustable power factor			(adj. 0.8 overexcited/leading to 0.8 underexcited/lagging)		
Feed-in phases / connection phases			1 / 1		
Efficiency					
Max. efficiency / European efficiency	97.4 % / 97.0 %	97.5 % / 97.1 %	97.6 % / 97.2 %	97.7 % / 97.3 %	97.7 % / 97.3 %
Protection & Function					
Grid monitoring			Yes		
DC reverse polarity protection			Yes		
AC short circuit protection			Yes		
Leakage current protection			Yes		
Surge Protection			DC Type II /AC Type II		
DC switch(solar)			Yes		
DC fuse(battery)			Yes		
PID recovery function			Yes		
Battery input reverse polarity protection			Yes		
Battery Data					
Battery type			Li-ion battery		
Battery voltage			80 V – 460 V		
Max charge / discharge current			30 A / 30 A		
Max charge / discharge power			6600 W		
General Data					
Dimensions (W * H * D)			490 * 340 * 170 mm		
Weight			18.5 kg		
Mounting method			Wall-mounting bracket		
Topology (Solar / Battery)			Transformerless / Transformerless		
Degree of protection			IP65		
Operating ambient temperature range			-25 °C to 60 °C		
Allowable relative humidity range			0 % – 100 %		
Cooling method			Natural convection		
Max. operating altitude			4000 m		
Display			LED digital display & LED indicator		
Communication			RS485 / Ethernet / WLAN / CAN		
DI / DO			DI * 4 / DO *1 / DRM		
DC connection type			MC4 (PV) / Sunclix (Battery)		
AC connection type			Plug and Play		
Grid compliance	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-3-11, IEC/EN 61000-3-12, EN 62477-1, AS/NZS 4777.2, EN 50549-1, CEI 0-21, G98 / G99				
Backup Data (on grid mode)					
Rated output power for backup load			6000 W		
Rated output current for backup load			27.3 A		
Backup Data (off-grid mode)					
Rated voltage			220 V / 230 V / 240 V (±2 %)		
Frequency range			50 Hz / 60 Hz (±0.2 %)		
Total output THDv for linear load			< 2 %		
Switch time to emergency mode			< 10 ms		
Rated output power	3000 W / 3000 VA	3680 W / 3680 VA	4000 W / 4000 VA	5000 W / 5000 VA	6000 W / 6000 VA
Peak output power			8400 VA, 10s		

* AS4777.2 4999W, 4999VA ** AS 4777.2 :Rated and Max. AC current is 21.7A

材料安全数据表

Material Safety Data Sheet

样 品 名 称:

锂离子电池模组

Name of Sample:

Lithium Battery Module

委 托 单 位:

阳光电源股份有限公司

Commissioner:

SUNGROW POWER SUPPLY Co., Ltd.



材料安全数据表

Material Safety Data Sheet

1. 化学品及企业标识 Chemical product and company identification	
样品名称 Name of Sample	锂离子电池模组 Lithium Battery Module
样品型号 Type/Mode	SMR032 64V 50Ah 3.2kWh
委托单位 Commissioned by	阳光电源股份有限公司 SUNGROW POWER SUPPLY Co., Ltd.
委托单位地址 Commissioner address	合肥市高新技术开发区习友路 1699 号 No.1699 Xiyu Rd., New & High Technology Industrial Development Zone, Hefei, P. R. China.
制造商 Manufacturer	阳光电源股份有限公司 SUNGROW POWER SUPPLY Co., Ltd.
制造商地址 Manufacturer address	合肥市高新技术开发区习友路 1699 号 No.1699 Xiyu Rd., New & High Technology Industrial Development Zone, Hefei, P. R. China.
鉴定依据 Inspection according to	联合国《关于危险品货物运输的建议书》 UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"
应急电话 Emergency telephone call	+86-13956977521
-	接样日期: 2020-08-21 Receiving date:  签发日期: 2020-09-25 Date of Issue:

Approved by:

Reviewed by:

Tested by:

批准:

Huangkun

审核:

zhang siyao

检测:

Wei Guohua

2. 成分/组成信息 Composition information			
化学名称 Common Chemical Name	化学式 Chemical Formula	CAS 号 CAS No.	重量含量 Wt %
铝箔 Aluminum Foil	Al	7429-90-5	3.5
铜箔 Copper Foil	Cu	7440-50-8	7.8
磷酸铁锂 Lithium Iron Phosphate	LiFePO ₄	15365-14-7	34.1
碳（专有） Carbon (proprietary)	C	7782-42-5	16.7
隔膜（专有） Separator (proprietary)	(C ₃ H ₆) _n	9003-07-0	3
电解液（专有） Electrolyte (proprietary)	LiPF ₆ /EC+DEC	/	20.3
铝合金 Aluminum Alloy	Al	7429-90-5	14.6
铅 Lead	Pb	7439-92-1	Not Detected
镉 Cadmium	Cd	7440-43-9	Not Detected
汞 Mercury	Hg	7439-97-6	Not Detected

3. 危险性概述 Hazards identification	
爆炸危险性 Explosive risk	该物品不属于爆炸危险品 This article does not belong to the explosion dangerous goods
易燃危险性 Flammable risk	该物品不属于易燃危险品 This article does not belong to the flammable material
氧化危险性 Oxidation risk	该物品不属于氧化危险品 This article does not belong to the oxidation of dangerous goods
毒害危险性 Toxic risk	该物品不属于毒害危险品 This article does not belong to the toxic dangerous goods
放射危险性 Radioactive risk	该物品不属于放射危险品 This article does not belong to the radiation of dangerous goods
腐蚀危险性 Mordant risk	该物品不属于腐蚀危险品 This article does not belong to the corrosion of dangerous goods
其他危险性	该电池瓦时率为 3.2kWh，属于第九类危险品。

other risk	The watt-hour rate of the battery is 3.2kWh, which belongs to the Class 9 dangerous goods.
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4. 急救措施

First aid measures

电池外壳破裂，内容物接触人体产生危害，一旦发生接触，应采取以下应急措施：

Once battery shell ruptures, content contact with the human body will produce harm, once contact, should take the following emergency measures:

眼睛：万一接触，立即用大量的清水冲洗至少 15 分钟，翻起上下眼睑，直到化学的残留物消失为止，迅速就医。

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

皮肤：万一接触，用大量水冲洗至少 15 分钟，同时除去污染的衣物和鞋子，迅速就医。

Skin: Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

吸入：立即从暴露处移至空气清新处，如果呼吸困难给予输氧，立即就医。

Inhalation: Remove from exposure and move to fresh air immediately. Use oxygen if available.

食入：饮用两杯牛奶或水。如果当事人仍然清醒可以采取催吐的方法，并且立即就医。

Ingestion: Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician

5. 消防措施

Fire-fighting measures

燃点：不适用

Flash Point: N/A.

自燃温度：不适用

Auto-Ignition Temperature: N/A.

灭火介质：大量水（降温），二氧化碳

Extinguishing Media: Water, CO₂.

特殊灭火程序：自给式呼吸器

Special Fire-Fighting Procedures

Self-contained breathing apparatus.

异常火灾或爆炸：当电芯暴露于过热的环境中时，安全阀可能会打开。

Unusual Fire and Explosion Hazards

Cell may vent when subjected to excessive heat-exposing battery contents.

燃烧产生的危险物品：一氧化碳，二氧化碳，锂氧化物烟气

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

6. 泄露应急处理

Accidental release measures

为防止电池材料泄露或释放采取的措施

如果电池内部材料泄露，操作人员应立刻撤离事故区直到烟气消散。将通风设备打开吹散危险性气体。用抹布擦净试验区，清除溢出的液体，将泄露电池放进塑料袋中，然后放进钢制容器。避免皮肤和眼睛接触或吸入有害气体。

Steps to be taken in case Material is Released or Spilled

If the battery material is released, remove operators from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

废弃物处置方法

建议将电池完全放电，锂金属电池消耗完电池内部的金属锂，并且交付给专业机构处理。

Waste Disposal Method

It is recommended to discharge the battery to the end. Use up the metal lithium inside the lithium metal battery, and delivered to professional institutions for further treatment.

7. 操作处置和储存 Handling and storage

禁止打开、毁坏或焚烧电池，因为电池有可能在这些处理过程中发生爆炸、破裂或泄露等事故。

禁止将电池短路、过充、强制放电或扔入火中。禁止挤压刺穿电池或将电池浸入溶液中。

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

操作处置和储存中的防范措施

禁止物理或电滥用，禁止高温储存，最好将电池储存在阴凉、干燥、通风及温度变化较小的环境中。禁止将电池接触加热设备或将电池直接暴露于阳光中。

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

其他要注意的防范措施

拆解、挤压、直接放入火中或高温条件下，电池可能发生爆炸和燃烧。禁止短接或将电池正负极错误的安装在设备中。

Other Precautions

The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. 接触控制/个人防护 Exposure controls/personal protection

呼吸防护：

当电池排气阀打开时，应尽量使通风设备开至最大，避免将打开排气阀的电芯局限在某一狭窄空

间内。正常操作条件下，呼吸保护是不必要的。

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.

通风条件

正常使用条件下不必考虑。

Ventilation

Not necessary under conditions of normal use.

防护手套

正常使用条件下不必考虑。

Protective Gloves

Not necessary under conditions of normal use.

其他防护服装或设备

正常使用条件下不必考虑。

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

电池开阀试验时应做好个人防护

呼吸防护，防护手套，防护服装和有护边的安全玻璃罩都是要准备的。

Personal Protection is recommended for venting battery

Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

9. 物理和化学特性

Physical and chemical properties

外形: 不规则形状

Appearance: Irregular shape

认证编号: RZUN2020-3789

Ref, No.: RZUN2020-3789

气味: 泄漏时，有醚的气味。

Odour: If leaking, smells of medical ether.

酸碱度: 不适用

pH: Not applicable as supplied.

闪点: 针对单个组分暴露情况，其他不适用。

Flash Point: Not applicable unless individual components exposed.

易燃度: 针对单个组分暴露情况，其他不适用。

Flammability: Not applicable unless individual components exposed.

相对密度: 针对单个组分暴露情况，其他不适用。

Relative density: Not applicable unless individual components exposed.

溶解性（水溶性）: 针对单个组分暴露情况，其他不适用。

Solubility (water): Not applicable unless individual components exposed.

溶解性（其他）: 针对单个组分暴露情况，其他不适用。

Solubility (other): Not applicable unless individual components exposed.

10. 稳定性和反应活性

Stability and reactivity

稳定性: 产品在第 7 节所述的条件下稳定。

Stability: Product is stable under conditions described in Section 7.

应避免的条件: 加热 70°C 以上或焚烧、变形、毁坏、粉碎、拆卸、过充电、短路, 长时间暴露在潮湿的条件下。

Conditions to Avoid : Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.

应避免的材料: 氧化剂, 碱, 水。

Materials to avoid: Oxidising agents, alkalis, water.

危险分解物: 有毒烟雾, 并可能形成过氧化物。

Hazardous Decomposition Products : Toxic Fumes, and may form peroxides.

聚合危害: 不适用

Hazardous Polymerization : N/A.

如果发生泄露, 避免与强氧化剂, 无机酸, 强碱, 卤代烃接触。

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

11. 毒理学资料

Toxicological information

标志及症状: 无, 除非电池破裂。

Signs & symptoms: None, unless battery ruptures.

内部物质暴露的情况下, 蒸汽烟雾可能对眼睛和皮肤的刺激性。

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

吸入: 对肺有刺激性。

Inhalation: Lung irritant.

皮肤接触: 对皮肤刺激性。

Skin contact: Skin irritant.

眼睛接触: 对眼睛有刺激性。

Eye contact: Eye irritant

食入: 吞下中毒。

Ingestion: Poisoning if swallowed.

下列情况下会危害人员身体健康: 如果与电池内部材料直接接触, 皮肤可能会出现干燥、灼烧等轻微或严重的刺激, 并且损坏靶器官的神经, 肝脏和肾脏。

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to severe irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

12. 生态学资料

Ecological information

对哺乳动物的影响: 目前未知。

Mammalian effects: None known at present.

生态毒性: 目前未知。

Eco-toxicity: None known at present.

生物体内积累: 慢慢地生物降解。

Bioaccumulation potential: Slowly Bio-degradable.

环境危害: 目前没有已知的环境危害。

Environmental fate: None known environmental hazards at present.

13. 废弃处置 Disposal consideration

禁止焚烧, 或使电池温度超过 70°C, 这种滥用可导致泄漏和/或电池爆炸。应按照相应的地方性法规处理。

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

14. 运输信息 Transport information

运输标签: 第 9 类锂电池危险品标签, 仅限货机标签

Label for conveyance: class 9 lithium battery hazard label, Cargo Aircraft Only Label

UN 编号: UN3480

UN Number: UN3480

包装等级: II

Packaging Group: II

EmS 编号: F-A,S-I

EmS No: F-A,S-I

海洋污染物: 无

Marine pollutant: No

正确的装运名称: 锂离子电池 (包括锂离子聚合物电池)

Proper Shipping name: Lithium-ion batteries (Including lithium-ion polymer batteries)

危害分类: 货物符合《国际海运危险货物规则》包装导则 P903 (Amdt. 39-18) (2018 年版), 包括通过 UN38.3 测试手册要求。

Hazard Classification: The goods are complied with Packing Instruction P903 of IMDG CODE (Amdt. 39-18) (2018 Edition), including the passing of the UN38.3 test.

15. 法规信息 Regulation information

法律信息

Law information

《危险品规则》

《Dangerous Goods Regulations》

《对危险货物运输的有关规定的建议》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《国际海运危险货物规则》

《International Maritime Dangerous Goods》

《危险货物物品名表》

《List of dangerous goods》

《欧洲道路危险货物国际运输协议》

《European Agreement concerning the International Carriage of Dangerous Goods by Road》

《危险品安全运输技术指令》

《Technical Instructions for the Safe Transport of Dangerous Goods》
《危险货物分类和品名编号》
《Classification and code of dangerous goods》
《职业安全卫生法》
《Occupational Safety and Health Act》(OSHA)
《有毒物质控制法》
《Toxic Substance Control Act》(TSCA)
《消费产品安全法》
《Consumer Product Safety Act》(CPSA)
《联邦环境污染控制法》
《Federal Environmental Pollution Control Act》(FEPCA)
《石油污染法案》
《The Oil Pollution Act》(OPA)
《超级基金修正案和再授权法案Ⅲ(302/311/312/313)》
《Superfund Amendments and Reauthorization Act TitleⅢ (302/311/312/313)》(SARA)
《资源保护及恢复法案》
《Resource Conservation and Recovery Act》(RCRA)
《安全饮用水法》
《Safety Drinking Water Act》(CWA)
《加州 65 提案》
《California Proposition 65》
《美国联邦法规》
《Code of Federal Regulations》(CFR)
根据所有联邦、州和地方法律。
In accordance with all Federal, State and local laws.

16. 其他信息 Other information

本文件仅对由委托方阳光电源股份有限公司提供的，并由阳光电源股份有限公司生产的电池（SMR032）有效。该电池的成分信息由委托方提供并承诺其完整性和准确性。用户应仔细阅读此文件，并按照正确的方法使用电池，如因电池使用不当造成的损害或损失，威凯检测技术有限公司（CVC）不承担任何责任。

This file is only effective to the batteries（SMR032） provided by commissioner SUNGROW POWER SUPPLY Co., Ltd., which manufactured by SUNGROW POWER SUPPLY Co., Ltd.. The commissioner provides the composition information of batteries, and promises its integrity and accuracy. Users should read this file carefully, and use the batteries in correct method. Vkan Certification & Testing Co., Ltd. (CVC) doesn't assume responsibility for any damage or loss because of misuse of batteries.

注 意 事 项

Important

1. 本报告无检测单位印章无效。

The test report is invalid without the official stamp of CVC.

2. 未经本试验室书面同意，不得部分地复制本报告。

Nobody is allowed to photocopy or partly photocopy this test report without written permission of CVC.

3. 本报告无批准人、审核人及检测人签名无效。

The test report is invalid without the signatures of Ratifier, Reviewer and Testing engineer.

4. 本报告涂改无效。

The test report is invalid if altered.

5. 对检测报告若有异议，应于收到报告之日起十五天内向检测单位提出。

Objections to the test report must be submitted to CVC within 15 days.

6. 本报告仅对送检样品负责。

The test report is valid for the tested samples only.

报告中未加 CMA 标志时，检测数据和结果仅供科研、教学或内部质量控制之用。

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