

Form



Product Service

Data form for critical components and material information

Applicant name and address..... :	Shenzhen Kstar New Energy Company Limited The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, 518107 Shenzhen, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA
Manufacturer name and address . :	Same as the applicant
Name and address of factory / factories..... :	Shenzhen KSTAR Science & Technology Co., Ltd. Guangming Branch Kstar Tech-Industrial Park, 7th Road, Western Area, Hi-Tech Industrial Zone, Tianliao Community, Yutang Street, Guangming District, 518107 Shenzhen City, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA
Project-No./Report-No. :	64.290.25.30778.01
Test item description..... :	Batteries (Rechargeable Li-ion Battery System)
Model/Type reference..... :	BP48100P1A-G2, BP48100P1A-G2-2P, BP48100P1A-G2-3P, BP48100P1A-G2-4P, BP48100P1A-G2-5P, BP48100P1A-G2-6P, BP48100P1A-G2-7P, BP48100P1A-G2-8P, BP48100PF1A-G2, BP48100PF1A-G2-2P, BP48100PF1A-G2-3P, BP48100PF1A-G2-4P, BP48100PF1A-G2-5P, BP48100PF1A-G2-6P, BP48100PF1A-G2-7P, BP48100PF1A-G2-8P
Device type..... :	<input type="checkbox"/> component / <input type="checkbox"/> sub-assembly / <input type="checkbox"/> equipment / <input checked="" type="checkbox"/> system

Ratings..... :	Refer to page 3-4
Connection to electrical supply..... :	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Permanent / <input type="checkbox"/> Detachable cord set / <input type="checkbox"/> Non detachable cord set / <input type="checkbox"/> Direct plug-in / <input type="checkbox"/> Battery operated / <input type="checkbox"/> Others:
Overvoltage category..... :	<input type="checkbox"/> I / <input checked="" type="checkbox"/> II / <input type="checkbox"/> III / <input type="checkbox"/> IV / <input type="checkbox"/> N/A
Pollution degree..... :	<input type="checkbox"/> 1 / <input checked="" type="checkbox"/> 2 (Internal) / <input checked="" type="checkbox"/> 3 (External) / <input type="checkbox"/> 4 / <input type="checkbox"/> N/A
Class of protection..... :	<input checked="" type="checkbox"/> Class I (PE connected)

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510656, P.R. China
Name of Project Handler: Joss Huang



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	<input type="checkbox"/> Class II (isolated) <input type="checkbox"/> Class III <input type="checkbox"/> Others: <input type="checkbox"/> N/A
Product with functional earthing :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
Environmental conditions / Maximum ambient temperature (°C)..... :	Outdoor use 0 to 50 °C for model without heat film (charging mode), -10 to 50 °C for model with heat film (charging mode), -10 to 50 °C (discharging mode). Derating above 45 °C
Equipment mobility / Classification of installation and use..... :	<input type="checkbox"/> transportable / <input type="checkbox"/> portable / <input checked="" type="checkbox"/> stationary / <input type="checkbox"/> mobile / <input checked="" type="checkbox"/> fixed / <input type="checkbox"/> permanently installed / <input type="checkbox"/> hand-held / <input type="checkbox"/> body-worn / <input type="checkbox"/> building-in / <input type="checkbox"/> Others:
Operating conditions :	<input checked="" type="checkbox"/> Continuous / <input type="checkbox"/> Short-time / <input type="checkbox"/> Intermittent
Overall size of equipment (mm) :	W*D*H: BP48100PF1A-G2, BP48100P1A-G2: 725 mm*245 mm*465.5 mm BP48100PF1A-G2-2P, BP48100P1A-G2-2P: 725 mm*245 mm*835.5 mm BP48100PF1A-G2-3P, BP48100P1A-G2-3P: 725 mm*245 mm*1205.5 mm BP48100PF1A-G2-4P, BP48100P1A-G2-4P: 725 mm*245 mm*1575.5 mm BP48100PF1A-G2-5P, BP48100P1A-G2-5P: 1450 mm*245 mm*1357 mm BP48100PF1A-G2-6P, BP48100P1A-G2-6P: 1450 mm*245 mm*1357 mm BP48100PF1A-G2-7P, BP48100P1A-G2-7P: 1450 mm*245 mm*1727 mm BP48100PF1A-G2-8P, BP48100P1A-G2-8P: 1450 mm*245 mm*1727 mm
Mass of equipment (kg)..... :	BP48100PF1A-G2, BP48100P1A-G2: Approx. (51±2) kg, BP48100PF1A-G2-2P, BP48100P1A-G2-2P: Approx. (102±4) kg, BP48100PF1A-G2-3P, BP48100P1A-G2-3P: Approx. (153±6) kg,

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	BP48100PF1A-G2-4P, BP48100P1A-G2-4P: Approx. (204±8) kg, BP48100PF1A-G2-5P, BP48100P1A-G2-5P: Approx. (255±10) kg, BP48100PF1A-G2-6P, BP48100P1A-G2-6P: Approx. (306±12) kg, BP48100PF1A-G2-7P, BP48100P1A-G2-7P: Approx. (357±14) kg, BP48100PF1A-G2-8P, BP48100P1A-G2-8P: Approx. (408±16) kg
Degree of ingress protection (IEC 60529, UL 50 / UL 50 E)	IP65
Noise emission [dB(A)].....	N/A
Vibration [m/s ²]	N/A
Connection to hydraulic power	N/A
Connection to pneumatic power ...	N/A
Connection to water installation ...	N/A
Description of special features	N/A
Data communication ports: <input type="checkbox"/> N/A	
Wired ports	<input type="checkbox"/> N/A <input type="checkbox"/> USB <input type="checkbox"/> LAN <input type="checkbox"/> DALI <input checked="" type="checkbox"/> other: CAN bus
Wireless ports	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Wifi <input type="checkbox"/> Bluetooth <input type="checkbox"/> NFC <input type="checkbox"/> 4G/LTE <input type="checkbox"/> 5G <input type="checkbox"/> Other:
Data Storage/ Processing	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local <input type="checkbox"/> Cloud
Software Version.....	3305-4760_V000B000D000

General product information and other remarks:	
Main label / Warning Markings:	Refer to TRF
Description of model differences:	Refer to TRF
General information / Intended use:	Refer to TRF
Protective earth connection:	Permanent connection
Drawing(s) / Picture(s):	Refer to photo documentation

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Ratings:

Model:	BP48100P1A-G2	BP48100P1A-G2-2P	BP48100P1A-G2-3P	BP48100P1A-G2-4P
Battery input/output terminal parameters				
Battery type	LiFePO4			
Rated capacity (Ah)	100	200	300	400
Rated energy capacity (kWh)	5.12	10.24	15.36	20.48
Nominal voltage (V d.c)	51.2			
Battery voltage range (V d.c.)	44.8 ~ 57.6			
Max. charging current (A d.c.)	80	160	240	240
Max. discharging current (A d.c.)	80	160	240	240
Rated charging/discharging power (kW)	4.096	8.192	12.288	12.288
General				
Ambient charging temperature range (°C)	0 to 50			
Ambient discharging temperature range (°C)	-10 to 50			
Protective class	I			
Ingress protection	IP65			

Model:	BP48100PF1A-G2	BP48100PF1A-G2-2P	BP48100PF1A-G2-3P	BP48100PF1A-G2-4P
Battery input/output terminal parameters				
Battery type	LiFePO4			
Rated capacity (Ah)	100	200	300	400
Rated energy capacity (kWh)	5.12	10.24	15.36	20.48
Nominal voltage (V d.c)	51.2			
Battery voltage range (V d.c.)	44.8 ~ 57.6			
Max. charging current (A d.c.)	80	160	240	240

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Max. discharging current (A d.c.)	80	160	240	240
Rated charging/discharging power (kW)	4.096	8.192	12.288	12.288
General				
Ambient charging temperature range (°C)	-10 to 50			
Ambient discharging temperature range (°C)	-10 to 50			
Protective class	I			
Ingress protection	IP65			

Model:	BP48100P1A-G2-5P	BP48100P1A-G2-6P	BP48100P1A-G2-7P	BP48100P1A-G2-8P
Battery input/output terminal parameters				
Battery type	LiFePO4			
Rated capacity (Ah)	500	600	700	800
Rated energy capacity (kWh)	25.6	30.72	35.84	40.96
Nominal voltage (V d.c)	51.2			
Battery voltage range (V d.c.)	44.8 ~ 57.6			
Max. charging current (A d.c.)	240	240	240	240
Max. discharging current (A d.c.)	240	240	240	240
Rated charging/discharging power (kW)	12.288	12.288	12.288	12.288
General				
Ambient charging temperature range (°C)	0 to 50			
Ambient discharging temperature range (°C)	-10 to 50			
Protective class	I			
Ingress protection	IP65			

Model:	BP48100PF1A-G2-5P	BP48100PF1A-G2-6P	BP48100PF1A-G2-7P	BP48100PF1A-G2-8P
Battery input/output terminal parameters				

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Battery type	LiFePO4			
Rated capacity (Ah)	500	600	700	800
Rated energy capacity (kWh)	25.6	30.72	35.84	40.96
Nominal voltage (V d.c)	51.2			
Battery voltage range (V d.c.)	44.8 ~ 57.6			
Max. charging current (A d.c.)	240	240	240	240
Max. discharging current (A d.c.)	240	240	240	240
Rated charging/discharging power (kW)	12.288	12.288	12.288	12.288
General				
Ambient charging temperature range (°C)	-10 to 50			
Ambient discharging temperature range (°C)	-10 to 50			
Protective class	I			
Ingress protection	IP65			

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Critical components and material information:

Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
For Rechargeable Li-ion Battery System					
Rechargeable Li-ion Battery System	Shenzhen Kstar New Energy Company Limited	BP48100PF1 A-G2, BP48100P1A -G2, BP48100PF1 A-G2-2P, BP48100P1A -G2-2P, BP48100PF1 A-G2-3P, BP48100P1A -G2-3P, BP48100PF1 A-G2-4P, BP48100P1A -G2-4P, BP48100PF1 A-G2-5P, BP48100P1A -G2-5P, BP48100PF1 A-G2-6P, BP48100P1A -G2-6P, BP48100PF1 A-G2-7P, BP48100P1A -G2-7P, BP48100PF1 A-G2-8P, BP48100P1A -G2-8P	51.2 V d.c., 100 Ah, 51.2 V d.c., 100 Ah, 51.2 V d.c., 200 Ah, 51.2 V d.c., 200 Ah, 51.2 V d.c., 300 Ah, 51.2 V d.c., 300 Ah, 51.2 V d.c., 400 Ah, 51.2 V d.c., 400 Ah, 51.2 V d.c., 500 Ah, 51.2 V d.c., 500 Ah, 51.2 V d.c., 600 Ah, 51.2 V d.c., 600 Ah, 51.2 V d.c., 700 Ah, 51.2 V d.c., 700 Ah, 51.2 V d.c., 800 Ah, 51.2 V d.c., 800 Ah	IEC 62619: 2022	TÜV SÜD B 075386 0313 Rev. 00 Report no. 64.280.25.60 664.01
Battery Parallel cord	GUANGZHOU PANYU CABLE GROUP CO LTD	10269	1/0 AWG, 1000 V, 105 °C	UL 758	UL E216775

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
- Alternative	Guangdong Biadi Electronics Co Ltd	10269	1/0 AWG, 1000 V, 105 °C	UL 758	UL E351618
Connector for Battery Parallel (only for models with 5 to 8 batteries)	Shenzhen GU Precision Industry Co Ltd	RF080MM06 ORBB-07 RF080MM06 BKAA-07 PA080C070 ORB PA080C070 BKA	1500 V, 250 A, 125 °C	UL 4128	UL E527779
Corrugated pipe (only for models with 5 to 8 batteries)	BASF SE	B40	V-0, 65 °C	UL 94	UL E41871
Top cover	Shenzhen Kstar New Energy Company Limited	-	Size: 725 mm*50 mm* 245 mm, Materials: AL5052-H32, Thickness: 1.5 mm	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
Metal base (only for models with 1 to 4 batteries)	Shenzhen Kstar New Energy Company Limited	-	Size: 725 mm*45.5 mm* 245 mm Materials: SUS201 (only for handler), SGCC Thickness: 1.5 mm, Outer side thickness: 2 mm	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
Metal base (only for models with 5 to 8 batteries)	Shenzhen Kstar New Energy Company Limited	-	Size: 725 mm*197 mm* 245 mm Materials: SUS201 (only for handler), SGCC Thickness: 1.5 mm	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance

For Rechargeable Li-ion Battery module

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
Rechargeable Li-ion Cell	EVE Power Co., Ltd.	LF100LA	3.2 V d.c., 102 Ah	IEC 62619: 2022	CB Cert. No.: SG PSB-BT- 03455M1 Report No.: 085- 282260325- 100
BMS	Shenzhen Kstar New Energy Company Limited	P16S100A- KSD1757- 10A Hardware version: For BMS main board: SST21-755- REV1.31, For current- limited board: SST21-511- REV1.21 Software model: 3305- 4760, Software version: V000B000D0 00	Overcharge detection voltage for each cell: 3.67 V, Overdischarge detection voltage for each cell: 2.50 V, Charge overcurrent detection current: 97 A, Discharge overcurrent detection current: 97 A, High temperature charging protection: 57 °C, Low temperature charging protection: 0 °C, High temperature discharge protection: 57 °C, Low temperature discharge protection: -20 °C	IEC EN 60730- 1:2013+A 1:2015+A 2:2020 Annex H	TÜV SÜD test report no. 64.280.25.60 663.01
For BMS main board: Blue-pack5.1-U01 board					
- PCB material	HUIZHOU TRUSTWIN ELECTRONICS DEVELOPME NT CO LTD	TW-8(ASP1)	130 °C, V-0, CTI: 175 V	UL 94 UL 796	UL E340729
- Alternative	NIPPON(BOLU O) ELECTRONICS CO LTD	D2	130 °C, V-0, CTI> 175 V	UL 94 UL 796	UL E56377

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
- IC for MCU (UM1)	ST	STM32F072 VBT6	Supply voltage: 1.65 V to 3.6 V, -40 °C to 85 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Watch dog (U20)	EXAR	SP706SEN- L/TR	Supply voltage: 1.0 V to 5.5 V, Reset threshold: 2.93 V, -40 °C to +85 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- IC for AFE (U7)	Nuvoton	KA49503A	Supply voltage: 5 V to 85 V, -40 °C to 105 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- MOSFET for charge (QP2, QP4, QP6, QP8, QP10, QP12, QP14, QP16, QP18, QP20, QP22, QP24)	China Resources Microelectroni s Limited	CRSS037N1 0N	V _{DS} : 100 V, V _{GS} : ±20 V, I _D : 120 A (T _A = 25 °C), T _J : -55 °C to 150 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Alternative	China Resources Microelectroni s Limited	CRSS028N1 0N	V _{DS} : 100 V, V _{GS} : ±20 V, I _D : 180 A (T _A =25 °C), T _J : -55 °C to 150 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- MOSFET for discharge (QP1, QP3, QP5, QP7, QP9, QP11, QP13, QP15, QP17, QP19, QP21, QP23)	China Resources Microelectroni s Limited	CRSS043N1 4N	V _{DS} : 135 V, V _{GS} : ± 20V, I _D : 160 A (T _A = 25 °C), T _J : -55 °C to 150 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Alternative	MAGNACHIP	MDP14N050 TH	V _{DS} : 135 V, V _{GS} : ±20 V, I _D : 120 A (T _A = 25 °C), T _J : -55 °C to 175 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Insulation Silicone	Shenzhen Anpin Silicone Material Co., LTD	Tc-Pad AP600	0.3 mm, V-0, 130 °C	UL 94	UL E257078

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
- Relay (SR1, SR2)	ANHUI MINGGUANG LIFE ELECTRIC CO LTD	BSC-SS- 112L	125 V d.c., Coil: 12 V d.c., 2 A	UL 508	UL E333244
- Supply source (UP5)	ATAZ Guangzhou Science & Technology Co., Ltd.	DS1-B1205	12 V d.c., 125 mA, T _{opr.} : -40 °C to 105 °C	UL 62368- 1	UL E541676
- Driver transformer (T3)	TIANCHANG FUAN ELECTRONIC CO LTD	EE8.3-9MH	9.0 mH±20%, 500 V a.c., Class E	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
-- Bobbin	CHANG CHUN PLASTICS CO LTD	T375J(G5)(G 6)	150 °C, V-0	UL 94 UL 746	UL E59481
-- Wire for T3 Copper wire	TAI-I ELECTRIC WIRE & CABLE CO LTD	UEWF	155 °C	UL 1446	UL E85640
-- Tape for T3 Duct tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO., LTD	CT	130 °C	UL 510A	UL E165111
- Current sampling resistor (RS3- RS8, RS14- RS17)	TA-I TECHNOLOGY CO., LTD	RLP25FER0 02	2 mΩ±1%, 100 ppm/°C, 3 W, 2512, -55 °C to 170 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- NTC for ambient (RT2)	Joyin Co Ltd	JSNB103F34 4FB	R ₂₅ = 10 kΩ±1%, B _{25/85} = 3435 K±1%, T _{opr.} : -40 °C to 125 °C	UL 1434	UL E171531
- NTC for MOSFET (RT1)	Nanjing Shiheng Electronics Co.,Ltd.	MF52C103Y 3435	R ₂₅ : 10 kΩ±1%, B _{25/85} : 3435K±1%, T _{opr.} : -55 °C to 200 °C	UL 1434	UL E240991

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
- Alternative	SHENZHEN SUNLORD ELECTRONICS CO LTD	SDNT1608X 103@3380% TF	R ₂₅ : 10 kΩ±1%, B _{25/85} : 3435 K±1%, T _{opr} : -40 °C to 125 °C	UL 1434	UL E352242
- PTC (R308/R468)	CYG Wayon Electronics Co., Ltd	LP- NSM005HF	V _{max} : 60 V, I _h : 50 mA, I _t : 150 mA, I _{max} : 100 A, -40 °C to 85 °C	EN 62319- 1:2005 EN 62319-1- 1:2005	TÜV Rheinland R 50318402
- Alternative	SPSEMI ELECTRONICS CO LTD	NSM005	V _{max} : 60 V, I _h : 50 mA, I _t : 150 mA, I _{max} : 100 A, -40 °C ~ 85 °C	UL 1434	UL E536814
- Fuse (FU1)	XC ELECTRONICS (SHENZHEN) CORP LTD	24T	7 A, 250 V, -40 °C to 125 °C	UL 248-1	UL E249609
- Alternative	SHENZHEN LANSON ELECTRONICS CO., LTD	24E	7 A, 250 V, T _{opr} : -40 °C to 125 °C	UL 1434	UL E221465
For current-limited board: Blue-pack5.1-M01 board					
- PCB material	HUIZHOU TRUSTWIN ELECTRONICS DEVELOPME NT CO LTD	TW-8(ASP1)	130 °C, V-0, CTI: 175 V	UL 94 UL 796	UL E340729
- Alternative	NIPPON(BOLU O) ELECTRONICS CO LTD	D2	130 °C, V-0, CTI> 175 V	UL 94 UL 796	UL E56327
- MOSFET for current limiting BUCK (QC1, QC2)	China Resources Microelectroni cs Limited	CRSS057N1 0N	V _{DS} : 100 V, V _{GS} : ±20 V, I _D : 120 A, T _J : -55 °C to 150 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- MOSFET for anti-back charging (Q70, Q77)	International Rectifier Corporation	IRF5210SPB F	V _{DS} : -100 V, V _{GS} : ±20 V, I _D : -38 A, T _J : -55 °C to 150 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
- Film capacitor (CBB6, CBB7)	DONGGUAN HONGFARAD ELECTRONICS CO., LTD	HMPP475J2 50MFAH-Y	4.7 μ F, 250 V, 105 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Alternative	DONGGUAN CHENG XI ELECTRONICS CO., LTD	CBB21	4.7 μ F, 250 V, 105 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Diode (D68)	YANGZHOU YANGJIE ELECTRONIC TECHNOLOGY CO.,LTD	MBRB20100 CT	20 A, 100 V, 175 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Alternative	PFC Device Corporation	PTR20100C TBH	20 A, 100 V, 150 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Inductor (L4)	TIANCHANG FUAN ELECTRONIC CO LTD	FAMD106- 200M-L1	20.4 μ H, 130 °C	UL 1446	UL E357090
- Alternative	SHENZHEN JINHAODE TECHNOLOGY CO.,LTD	GCNR6020- 101MC	T106060-20.4 μ H, 155 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
-- Core (L4)	ZHEJIANG NBTM KEDA MAGNETOELE CTRICITY CL., LTD	KS106-060A	130 °C, 600 VDC	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Alternative	DONGGUAN YINGCHONG ELECTRICAL INDUSTRIAL CO LTD	WS106060A	130 °C, 600 V d.c.	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
-- Wiring (L4)	TAI-I ELECTRIC WIRE & CABLE CO LTD	UEWB	130 °C, 600 V d.c.	UL 1446	UL E85640

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- Alternative	SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD	2UEW/155	155 °C, 600 V d.c.	UL 1446	UL E239508
For signal transform board: 3U-Pack 5.1-X01 board (Rev. 002)					
- PCB material	HUIZHOU TRUSTWIN ELECTRONICS DEVELOPME NT CO LTD	TW-8(ASP1)	130 °C, V-0, CTI: 175 V	UL 94 UL 796	UL E340729
- Alternative	NIPPON(BOLU O) ELECTRONICS CO LTD	D2	130°C, V-0, CTI> 175 V	UL 94 UL 796	UL E56377
NTC for cell (T1-T4) (4pcs)	Shenzhen Kemin Sensor Co., Ltd	KM10K3380 3435	R ₂₅ : 10 kΩ±1%, B _{25/50} : 3435 K±1%, T _{opr} : -40 °C to 125 °C	UL 1434	UL E356449
Circuit breaker	Shanghai Liangxin Electrical Co., Ltd.	NDB1-125	80 V d.c., 125 A, I _{cu} = 10 kA, 70 °C, U _{imp} = 4 kV	EN 60947- 2:2017+A 1	TÜV Rheinland R 50522424
- Alternative	NOARK Electrics (Shanghai) Co., Ltd	B1E	80 V d.c., 125 A, I _{cu} = 20 kA, U _{imp} = 4 kV	EN IEC 60947- 2:2025	Intertek 2506B0989S HA-V1
- Alternative	Zhejiang Chint Electrics Co., Ltd.	NXB-125E	80 V d.c., 125 A, I _{cu} = 20 kA, U _{imp} = 4 kV	EN 60947- 2:2017+A 1	TÜV Rheinland R 50620684
Plastic cover of circuit breaker	CHI MEI CORPORATIO N	PC- 6600(Y)(f1)(a)	Min. thickness 1.5 mm, V-0, 120 °C	UL 94 UL 746C	UL E56070
- Alternative	CHI MEI CORPORATIO N	PC- 6715VT(f1)(a)	Min. thickness 3 mm, 5VA, 120 °C	UL 94 UL 746C	UL E56070
- Alternative	ZHEN JIANG CHI MEI CHEMICAL CO LTD	PC- 681U(f1)(a)	Min. thickness 3 mm, 5VA, 120 °C	UL 94 UL 746C	UL E194560

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Name of Project Handler: Joss Huang

Data form for critical components and material information

Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
Connector	Suzhou Anlian Electronics Co., Ltd	AP15400A- FEMALE AP15400A- MALE	DC 1000 V, 150 A T _{opr.} : -40 °C to 125 °C	UL 4128 EN 61984 2PFG 2740/04.2 0	UL E537967 TÜV Rheinland R 50609154 R 50609157
Battery Lead wiring (internal)	3Q WIRE & CABLE CO LTD	10269	6 AWG, 1000 V, 105 °C	UL 758	UL E341104
Alternative	Guangdong Biadi Electronics Co Ltd	10269	6 AWG, 1000 V, 105 °C	UL 758	UL E351618
Earth lead wiring	Shenzhen Hongya Electronics CO.,LTD	1015	10 AWG, 600 V a.c., 105 °C	UL 758	UL E346933
Alternative	Dongguan Hichain Electronics CO.,LTD	1015	10 AWG, 600 V a.c., 105 °C	UL 758	UL E304337
Thermal shrink tube for battery wiring	DONGGUAN SALIPT CO LTD	S-901-DWT	600 V, 125 °C, VW-1	UL 224	UL E209436
Lead wiring for BMS	3Q WIRE & CABLE CO.,LTD	10269	6 AWG, 1000 V a.c., 105 °C	UL 758	UL E341104
Alternative	Dongguan Biadi Electronics CO.,LTD	10269	6 AWG, 1000 V a.c., 105 °C	UL 758	UL E351618
Wiring for voltage sampling	LINOYA ELECTRONIC TECHNOLOGY CO LTD	1430	24 AWG, 300 V, 105 °C	UL 758	UL E315619
- Alternative	WUXI SWELL ELECTRIC CO LTD	1430	24 AWG, 300 V, 105°C	UL 758	UL E484530
- Alternative	DONGGUAN ZHONGZHENG WIRE&CABLE TECH CO LTD	1430	24 AWG, 300 V, 105 °C	UL 758	UL E336285

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Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
Wiring for temperature sampling	DONGGUAN BOLI ELECTRONIC CO LTD	2651	24 AWG, 300 V, 105 °C	UL 758	UL E305164
- Alternative	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO LTD	2651	24 AWG, 300 V, 105°C	UL 758	UL E258239
- Alternative	DONGGUAN NISTAR TRANSMITTIN G TECHNOLOGY CO INC	2651	24 AWG, 300 V, 105°C	UL 758	UL E214184
Case	Shenzhen Kstar New Energy Company Limited	-	Galvanized plate, Min. Thickness: Top: 2.0 mm, Front, Bottom, Side: 1.2 mm	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
Aerosol Fire Extinguisher (optional)	Shenzhen HONGJIALI FIRE Technology Co. LTD	QRR0.06G/S /H600	60 g, -50 °C to 95 °C, 131.6 mm *94 mm *14 mm	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
- Alternative	Hubei Jiandun Fire protection Technology Co. Ltd	QRR0.04G/S -MC- U	40 g, -30 °C to 70 °C, 134.1 mm*12 mm*20.7 mm	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
Button	Yijia Industrial Electric Co.Ltd	YJ-GQ16BF- 11SE	Ui: 250 V I _{th} : 5 A, -30 °C to 70 °C	EN 60947	TÜV SÜD B 121522000 6 Rev.00
Thermal heater (only for series model BP48100PF1A- **)	Kuchi (Shenzhen) New Energy Technology Co., Ltd.	75W	50 V, 75 W, 33.3 Ω, -40 °C to 125 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance

Form



Product Service

Data form for critical components and material information

Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard No. and Edition year	Marks of Conformity
Alternative	GUANGDONG JONYOHTO ELECTROTHERMAL TECHNOLOGY CO.,LTD	75W	50 V, 75 W, 33.3 Ω, -40 °C to 125 °C	IEC/EN 62477-1 IEC/EN 62040-1	Tested with appliance
Insulation Bar	ZHEJIANG YUEQING RESIN FACTORY	DMC-1	V-0, 105 °C	UL 94 UL 746	UL E252110
Insulation tube for Aluminium bus	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-HFT	600 V, 125 °C, VW-1	UL 224	UL E180908
Insulating paper	CHENGDU KANGLONGXIN PLASTICS CO LTD	FRPC-1880B	T=0.43 mm, V-0, 125 °C	UL 94 UL 746	UL E315185
Harness isolation board	Shenzhen Pengjinhong Industrial Co., Ltd	ABS+PC30	UL 94, V-0	UL 94	UL E162823
Supplementary information: N/A					

Data form for critical components and material information

Routine Test (Safety, Security, ...):

Routine test requirements for production are described in IEC 62477-1:2012 + AMD1:2016, EN 62477-1:2012 + A11:2014 + A1:2017 + A12:2021, IEC 62040-1:2017 + AMD1:2021, EN IEC 62040-1:2019 + A11:2021.

Required

Not Required

Reason for non-requirement:

Class III product

Other: CE_LVD

Test Details:

Visual inspection

Dielectric Strength

Ground Continuity

Test Points:

To check features such as adequacy of labelling, warnings and other safety aspects

BI: Battery input/output port to PE

RI: Battery input/output port to communication port

The pressure increased to the maximum pressure rating of the

Test Values / Limit(s):

IP; labelling; warnings

110 V d.c.; 1 s; No breakdown

110 V d.c.; 1 s; No breakdown

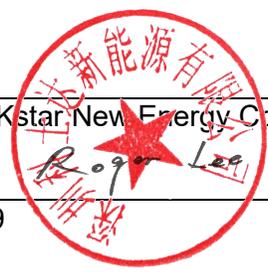
25 A; $t \geq 2$ s; $< 0.1 \Omega$

Test Report History:

Rev	Project No.	History
00	64.290.25.30778.01	Initial Version

Signature of the Certification Holder:

Name, seal and signature of Certificate Holder:	Shenzhen Kstar New Energy Company Limited
Date:	2025-12-29



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