

Certificate No. AN 50585188_0001

Our Reference CN23F6VN001

Appendix No. 1.0

Constructional Data Form (CDF) for Electrical Appliances

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License holder	:	SolaX Power Network Technology (Zhe jiang) Co., Ltd. No. 288, Shizhu Road, Tonglu Economic Development Zone, Tonglu City, Zhejiang Province 310000, P. R. China
Factory	:	Same as License holder
Type of Appliance	:	Secondary (Rechargeable) Lithium ion Battery System
Type Designation	:	T-BAT HS7.2,T-BAT HS10.8,T-BAT HS14.4,T-BAT HS18.0,T-BAT HS21.6, T-BAT HS25.2,T-BAT HS28.8,T-BAT HS32.4,T-BAT HS36.0,T-BAT HS39.6, T-BAT HS43.2,T-BAT HS46.8
Rating	:	See model list
Protection Class	:	Class I
Supply connection	:	<input type="checkbox"/> fixed power cord <input checked="" type="checkbox"/> permanent connection <input type="checkbox"/> appliance inlet <input type="checkbox"/> direct plug in <input type="checkbox"/> Special Connector

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2022.05.04



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T-BAT-SYS-HV-S3.6												
Type/model	T-BAT HS7.2	T-BAT HS10.8	T-BAT HS14.4	T-BAT HS18.0	T-BAT HS21.6	T-BAT HS25.2	T-BAT HS28.8	T-BAT HS32.4	T-BAT HS36.0	T-BAT HS39.6	T-BAT HS43.2	T-BAT HS46.8
Battery Type	72 Ah (LFP) Cell											
Component	TBMS-MCS0800*1 + TP-HS36 *2	TBMS-MCS0800*1 + TP-HS36 *3	TBMS-MCS0800*1 + TP-HS36 *4	TBMS-MCS0800*1 + TP-HS36 *5	TBMS-MCS0800*1 + TP-HS36 *6	TBMS-MCS0800*1 + TP-HS36 *7	TBMS-MCS0800*1 + TP-HS36 *8	TBMS-MCS0800*1 + TP-HS36 *9	TBMS-MCS0800*1 + TP-HS36 *10	TBMS-MCS0800*1 + TP-HS36 *11	TBMS-MCS0800*1 + TP-HS36 *12	TBMS-MCS0800*1 + TP-HS36 *13
Nominal Voltage [V]	102.4	153.6	204.8	256	307.2	358.4	409.6	460.8	512.0	563.2	614.4	665.6
Operating Voltage Range [V]	90-116	135-174	180-232	225-290	270-349	315-406	360-465	405-522	450-580	495-636	540-695	585-750
Battery Module ((8S)2S = 1 Module)	2	3	4	5	6	7	8	9	10	11	12	13
Rated Capacity [Ah]	72											
Total Storage Energy [kWh]	7.37	11.06	14.75	18.43	22.12	25.08	29.49	33.18	36.86	40.55	44.24	47.92
Usable Energy (90%DOD) [kWh]	6.6	10.0	13.3	16.6	19.9	23.2	26.5	29.9	33.2	36.5	39.8	43.1
Standard Power [kW]	3.58	5.38	7.17	8.96	10.75	12.54	14.34	16.13	17.92	19.71	21.50	23.30
Max. Power [kW]	5.12	7.68	10.24	12.80	15.36	17.92	20.48	23.04	25.60	28.16	30.72	33.28
Nominal Current [A]	35											
Maximum Charging Current [A]	50											

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Maximum Discharging Current [A]	50											
Cycle Life [90% DOD]	6000 Cycles											
Available Charge/discharge Temperature Range [°C]	0°C to 53°C (charge) -20°C to 53°C (discharge) -30 ° C to 53 ° C (charge/discharge)(Build-in heating function)											
Storage Temperature [°C]	-20°C to 50°C (3 months) 10°C to 40°C (1 year)											
Dimension (L x W x H) [mm]	TBMS-MCS0800: 510*365*157 TP-HS25: 510*365*152 Pedestal:510*365*90 SeriesBox:510*365*157											
Weight [kg]	13kg+34kg* 2+9kg	13kg+34kg* 3+9kg	13kg+34kg* 4+9kg	13kg+34kg* 5+9kg	13kg+34kg* 6+9kg	13kg+34kg* 7+9kg	13kg+34kg* 8+9kg	13kg+34kg* 9+9kg	13kg+34kg*1 0+10kg+18kg	13kg+34kg*1 1+10kg+18kg	13kg+34kg*1 2+10kg+18kg	13kg+34kg*1 3+10kg+18kg
Installation	stackable level package											
Enclosure Protection (IP)	IP65											
Cooling Type	Natural cooling											
Altitude [m]	up to 3000											

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Critical Components

Material: e.g. external enclosure, PCB, closed-end connector, sleeves, cord anchorage etc.

Components with winding: e.g. motor, transformer, magnetic coil etc.

Other components: e.g. switch, thermostat, heater, plug, internal wire, capacitor, relay, varistor etc.

Object/part No.	Manufacturer/ Trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
TBMS-MCS0800					
Connector for connecting with inverter	Suzhou Exceedconn Technology Co., Ltd.	910051500	120A/1000VDC Orange IP67 -40°C to +125°C	UL4128 PPP 51090A	UL E524748 TÜV B 0770460065
Connector for connecting with inverter.	Suzhou Exceedconn Technology Co., Ltd.	910051900	120A/1000VDC Black IP67 -40°C to +125°C	UL4128 PPP 51090A	UL E524748 TÜV B 0770460065
Connector for connecting with inverter	ZHEJIANG BSB ELECTRICAL CO, LTD	B-E57-S01-00-NM5	120A/1000VDC Orange IP67 -40°C to +125°C	2PFG 2740	TÜV R 50572194
Connector for connecting with inverter.	ZHEJIANG BSB ELECTRICAL CO, LTD	B-E57-S01-00-AM5	120A/1000VDC Black IP67 -40°C to +125°C	2PFG 2740	TÜV R 50572194
Connector For connecting with module1	ZHEJIANG BSB ELECTRICAL CO, LTD	B-E36-S01-00-N04-B	70A/1500VDC Orange IP67 -40°C to +125°C	2PFG 2740	TÜV R 50571513
Connector For connecting with module1	ZHEJIANG BSB ELECTRICAL CO, LTD	B-E36-S01-00-A04-B	70A/1500VDC Black IP67 -40°C to +125°C	2PFG 2740	TÜV R 50571513
Connector For connecting with module1	Amphenol	C10-754727-0101	70A/1500VDC Orange IP67 -40°C to +125°C	EN 50521	TÜV R 60029159
Connector For connecting with module1	Amphenol	C10-754727-1102	70A/1500VDC Black IP67 -40°C to +125°C	EN 50521	TÜV R 60029159
Connector For connecting with module2-1	TYCO Electronics Corp	HMN-002-MC	70A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
Connector For connecting with module2-1	TYCO Electronics Corp	HMN-002-FC	70A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012

Object/part No.	Manufacturer/ Trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
Connector For connecting with module2-2	TYCO Electronics Corp	HMN-006-PM	16A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
Connector For connecting with module2-2	TYCO Electronics Corp	HMN-006-PF	16A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
PV Switch-disconnector	ZHEJIANG BENYI ELECTRICAL CO.,LTD	BYSS.1-50h/T-2P	number of poles=2P Ue=DC1100V Ui=1000V, In=60A -40°C to +85°C	IEC 60947-3	TÜV R 50425301
Fuse	Guangdong Zhongbei Energy Technology Co., Ltd.	EV88-750-80A EVB1064-750-80A	80A/750VDC 20kA -40°C to +125°C	UL 248 EN 60269	UL:E479415 ISETC.000220210807
Magnetic Contactor (KM1, KM2)	ZHEJIANG BSB ELECTRICAL CO, LTD	BSBC7-100H-12	voltage=12V Coil power=5.5w Ue=12-1000V DC Ie=100A, Continuous current=45A -40°C to +85°C	EN 60947-4-1:2001+A1+A2 UL 60947-1	TÜV R 50415219 TÜV R 50415335 UL E499520
BMS MAIN CONTROL Board					
Connector (J8)	Molex	76829-0002	23A, 600Vdc -40°C to +105°C	IEC 61984	E29179
Connector (J1)	Molex	76829-0006	23A, 600Vdc -40 to +105°C	IEC 61984	E29179
Fuse (F1)	BUSSMANN	PV-4A10-1P	4A, 1000Vdc -40 to +90°C	EN 60269-1 EN 60269-6 EN IEC 63000 UL 248-19	UKCA UK2100281 UL E335324
Y Capacitor (CY1, CY3, CY5, CY7)	TDK	CD45-B2GA471K-NKA	470pF Y1/400Vac ±10% 10mm -25 to + 125°C	UL 60384-14 EN 60384-14	UL E37861 IEC ENEC-01048
Film capacitor (CX1, CX2)	Faratronic	C3D3L105KB00382	1uF±10% 1200VDC -40 to +105°C	EN 61071 EN 61881-1	TÜV R 50266108
IC for Digital isolation (U33,	Texas Instruments	ISO7731FDWR	Operating	UL1577	UL E181974

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Object/part No.	Manufacturer/ Trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
U34)	Incorporated		Temperature: -55°C to +125°C Isolation voltage: 5000Vrms	EN 61010-1, EN 60950-1 EN 62368-1	TÜV:77311
IC for Digital isolation (U33, U34)	NOVOSENSE	NSI8231W0- DSWR	Operating Temperature: -55°C to +125°C Isolation voltage: 5000Vrms	DIN VDE V 0884- 11:2017-01 UL1577	VDE 40052820 UL E500602
Isolated CAN transceiver (U21)	Texas Instruments Incorporated	ISO1042B	Operating Temperature: -40°C to +125°C Isolation voltage: 5000Vrms	DIN VDE V 0884- 11:2017-01 EN 61010-1, EN 60950-1 EN 62368-1 UL1577	VDE 40047657 TÜV:77311 UL E181974
Isolated CAN transceiver (U21)	Chipanalog	CA-IS3052G	Operating Temperature: -40°C to +125°C Isolation voltage: 5000Vrms	DIN VDE V 0884- 11:2017-01 EN 61010-1:2010, EN 62368- 1:2014+A11, IEC 61010-1 UL 1577	VDE 40052786 TÜV AK 50476727 0001 TÜV AK 50476720 0001 CB DE 2-028117 UL E511334
IC for Digital isolation (U10)	Texas Instruments Incorporated	ISO7741FDWR	Operating Temperature: -55°C to +125°C Isolation voltage : 5000Vrms	DIN EN IEC 60747-17 (VDE 0884-17):2021- 10; EN IEC 60747- 17:2020+AC:2021 EN 61010-1, EN 60950-1 EN 62368-1 UL1577	VDE 40040142 TÜV 77311 UL E181974
IC for Digital isolation (U10)	NOVOSENSE	NSI8241W0- DSWR	Operating Temperature: -55°C to +125°C Isolation voltage: 5000Vrms	DIN VDE V 0884- 11:2017-01 UL1577	VDE 40052820 UL E500602
Transformer (TX1)	NANJING ZHONGCE E.T ELECTRONICS	NET21257RO	Isolation voltage: N1-N2N4N5 AC2200V/3mA/60	--	--

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Object/part No.	Manufacturer/ Trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
	CO., LTD.		SEC N1-N3 AC4400V/3mA/60 SEC		
DC Relay (RY2, RY3, RY4, RY5, RY6)	HF	HFD3-VI/12-2H- 3SR	10mA/1500VDC -40°C to +85°C Isolation voltage: 4000VAC	EN 61810-1 IEC 61810-1	TÜV:R 50433438
DC Relay (RY1)	HF	HF115F/012- 2HS4	8A/250VAC Isolation voltage: 5000Vrms	DIN EN 61810-1 EN 61810-1 IEC 61810-1	VDE:116934
Photo coupler (U5,U6,U15,U16, U18,U19,U23, U26,U27,U28)	LITEON	LTV816S2TPC-V- G	Operating Temperature: -55°C to 110°C Isolation voltage: 5000Vrms	IEC 60747-5- 5:2007, IEC 60747-5- 5:2007/AMD1:201 3, DIN EN 60747-5- 5 (VDE 0884- 5):2015-11, EN 60747-5- 5:2011+A1:2015 UL1577	VDE 40015248 UL E113898
Current Transducer	LEM	CASR 50-NP	Operating Temperature: -40°C to +85°C Isolation voltage: 4.1KVrms	UL 508 EN 50178 IEC 61010-1	UL E189713
Transformer (TX2)	WE	74942300	Operating Temperature: -40°C to +125°C Isolation voltage: 4300VDC	--	--
Master MCU(U1)	GigaDevice	GD32F427VET6	Operating Temperature: -40°C to +125°C Operating voltage: 1.8V~3.6V	--	--
PCB material	KUNSHAN DAYANG PRINTED CIRCUIT BOARD	--	150°C, UL 94 V-0	ISO 9773 IEC 60695-11-10	UL E123995

Object/part No.	Manufacturer/ Trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
	CO.,LTD				
TP-HS36					
Lithium ion battery module	REPT BATTERO Energy Co., Ltd.	AL108B050EA21 AL108B050EB21	LiFePO4, 1P8S, Voltage: 25.6Vd.c. Capacity: 72Ah	--	--
Lithium ion battery cell	REPT BATTERO Energy Co., Ltd.	CB59	LiFePO4, Voltage: 3.2Vd.c. Capacity: 72Ah	IEC 62619	TÜV: JPTUV-137109
Fuse	Guangdong Zhongbei Energy Technology Co., Ltd.	EV88-750-80A EVB1064-750-80A	80A/750VDC 20kA -40°C to +125°C	UL 248 EN 60269	UL:E479415 ISETC.000220210807
Heating film	Guangdong Dingfeng Precision Technology Co., Ltd	AL108062PI050E A AL108062PI050E B	25.6V/61.6W Isolation voltage: DC3500V	UL-94	A222038394510100202C A222038394510100202C
Connector For connecting with module2-1	TYCO Electronics Corp	HMN-002-MC	70A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
Connector For connecting with module2-1	TYCO Electronics Corp	HMN-002-FC	70A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
Connector For connecting with module2-2	TYCO Electronics Corp	HMN-006-PM	16A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
Connector For connecting with module2-2	TYCO Electronics Corp	HMN-006-PF	16A/1000VDC -45°C to +125°C	EN 61984:2009	TÜV B150947175012
BSCU 16S UV Board					
Transformer (TX1)	WE	74942300	Operating Temperature: -40°C to +125°C Isolation voltage: 4300VDC	--	--
MCU (U3)	ADI	ADBMS6830	Operating Temperature: -40°C to +125°C	--	--
Note(s):					