



Certificate of Compliance

Certificate: 80016043

Master Contract: 272687

Project: 80038687

Date Issued: 2020-06-15

Issued to: SolaX Power Network Technology (Zhe jiang) Co., Ltd.
No 288, Shizhu Road, Tonglu Economic Development Zone
310000 Tonglu City, Zhejiang Province
CHINA

Attention: Mr. Song Su

The products listed below are eligible to bear the CSA Mark shown with adjacent indicator 'US'



Issued by: Giggle Pei

PRODUCTS

CLASS C370182 - Battery System for use in Stationary Applications - Certified to US Standards

Battery System for use in Stationary Electrical Energy Storage Application, Lithium-ion, the Model name and Electrical Ratings are noted as below:

Electrical Ratings:

Battery System Model	Battery System Consist Elements	Battery System Ratings			
		Normal Voltage, Vdc	Normal Capacity, Ah/Wh	Battery Pack System Configuration	Enclosure IP Rating
T-BAT H 5.8	T-BAT H 5.8	115.2	50Ah/5760Wh	1P36S	IP55
T-BAT H 11.5	1 T-BAT H5.8 + 1 HV115 50	230.4	50Ah/11520Wh	1P72S	IP55
T-BAT H 17.3	1 T-BAT H 5.8 + 2 HV11550	345.6	50Ah/17280Wh	1P108S	IP55
T-BAT H 23.0	1 T-BAT H 5.8 + 3 HV11550	460.8	50Ah/23040Wh	1P144S	IP55



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Manufacturer's Specified Charging Parameters for Battery Pack

Battery System Model	Temperature Range, °C	Normal Charging Voltage, Vdc	Normal Charging Current, A	Maximum Charging Voltage, Vdc	Maximum Charging Current, A
T-BAT H 5.8	0~45	131	25	131	35
T-BAT H 11.5	0~45	262	25	262	35
T-BAT H 17.3	0~45	393	25	393	35
T-BAT H 23.0	0~45	524	25	524	35

Manufacturer's Specified Discharging Parameters for Battery Pack:

Battery System Model	Temperature Range, °C	Normal Discharging Current, A	Maximum Discharging Current, A	Discharging Endpoint voltage, Vdc
T-BAT H 5.8	0~45	25	35	90
T-BAT H 11.5	0~45	25	35	180
T-BAT H 17.3	0~45	25	35	270
T-BAT H 23.0	0~45	25	35	360

Notes:

- The battery system including its battery management system has been tested according to the functional-safety requirements of ANSI/UL 1973. Any change to the software and electronic controls of the BMS may require additional testing.
- The battery system charge/discharge current adjusted by BMS depending upon state of charge (SOC) of battery system and cell surface temperature of battery system. BMS parameter to allow charging and discharging at specific rate is listed in DESCRIPTION section in CSA report. Temperature and Operating Limits Check Test was tested with PCS model X1-AC-3.0, additional evaluation may be considered end installation when combined with different PCS model.
- Solid state circuits relied upon as the primary safety protection, have been evaluated to the Standard for Safety: Automatic Electrical Controls – Part 1, UL 60730-1.
- Corrosion due to electrochemical action is to be determined for conductive parts in contact with terminals when subjecting to the installation of the end products.
- Equipment Application Location: Stationary
- Access Location: Operator Accessible.
- The installation was not evaluated. The battery system shall be installed in accordance with NFPA 70 or other applicable installation code.
- Dielectric Voltage Withstand Test was performed with the test potential of 2500 Vdc, a higher test potential shall be considered in the end product if higher overvoltage category specified.
- Product is evaluated for use in indoor and outdoor application.
- Overvoltage Category (OVC): 2
- Pollution Degree (PD): 2
- Altitude for Operation: Up to 2000 m.



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APPLICABLE REQUIREMENTS

ANSI/CAN/UL-1973:2018, Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications – 2nd Edition, Dated February 7, 2018.

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.

Additional markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent 'US' indicator for US only (indicating that products have been manufactured to the requirements of U.S. Standards).

The markings shall be legibly and permanently marked with:

- Batteries are to be marked with the manufacturer's name, trade name, trademark, CSA master contract number "272687" or other descriptive marking which may identify the organization responsible for the product.
- Part number or Model number; as specified in product section above.
- Electrical ratings in volts dc and capacity in Ampere-hours or Watt-hours and chemistry; as specified in product section above.
- The electric energy storage system terminals shall be marked to indicate whether they are positive (+) or negative (-).
- Maximum short circuit current and duration (at maximum short circuit current) at the system output terminals.(Max 1440 Amp, 1.77 ms)
- Electric energy storage systems shall also be marked with the date of manufacture, which may be in the form of a code that does not repeat within 20 years.
- IP Code rating; as specified in product section above.
- Cautionary marking indicating to read all instructions before installation, operation and maintenance of the system.

Note: This marking may be in the form of the symbol(s) for example: the Standard for Graphical Symbols for Use on Equipment – Index and Synopsis, ISO 7000, "caution" Symbol No. 434 (exclamation point inside triangle) followed by the "read instruction manual" Symbol No. 790 (open book). If using symbols, their meaning shall be explained in the instruction manual.

- Warning marking indicating risk of electrocution near hazardous voltage battery terminals.
- The main ground terminal of the protective grounding system shall be identified by one of the following:
 - A green-colored, not readily removable terminal screw with a hexagonal head;
 - A green-colored, hexagonal, not readily removable terminal nut;
 - A green colored pressure wire connector; or
 - The word " Ground " or the letters " G " or " GR " or the grounding symbol (IEC 60417, No. 5019) or otherwise identified by a distinctive green color.



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80038687	2020-06-15	Revised charge/discharge parameters of certificated battery system models T-BAT H 5.8, T-BAT H 11.5, T-BAT H 17.3 and T-BAT H 23.0 to UL 1973 2nd Edition. Class No. 3701-82.
80016043	2020-01-21	Original certification of Battery System, Model T-BAT H 5.8, T-BAT H 11.5, T-BAT H 17.3, T-BAT H 23.0.