Certificate of Compliance

Certificate: 80201267 **Master Contract:** 605129

Project: 80201267 **Date Issued:** 2024-03-05

Issued To: **PANASONIC CORPORATION OF NORTH AMERICA**
2 Riverfront Plaza
Newark , New Jersey 07102
United States

Attention: Tom Juliano

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Judy Guo*
Judy Guo

C US

PRODUCTS

CLASS - C370182 - Battery System for use in Stationary Applications certified to US Standards
CLASS - C370112 - Battery System for use in Stationary Applications

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

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Electrical Ratings:

Battery System Model	Battery System Consist Elements	Battery System Ratings			
		Normal Voltage, Vdc	Normal Capacity, Ah/kWh	Battery Pack System Configuration	Enclosure IP Rating
EV-X10	EV-BMS + 2* EV-B5	102.4	100Ah/10.0 kWh	1P32S	IP65
EV-X15	EV-BMS + 3* EV-B5	153.6	100Ah/15.0 kWh	1P48S	IP65
EV-X20	EV-BMS + 4* EV-B5	204.8	100Ah/20.0 kWh	1P64S	IP65

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
EV-X10	0~53	116	50	116.8	54
EV-X15	0~53	174	50	175.2	54
EV-X20	0~53	232	50	233.6	54

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
EV-X10	-10~53	50	54	90
EV-X15	-10~53	50	54	135
EV-X20	-10~53	50	54	180

Notes:

1. The battery pack including its battery management system has been tested according to the functional-safety requirements of ANSI/CAN/UL-1973:2022, Second Edition. Solid state circuits and software controls relied upon as the primary safety protection, have been evaluated to the Standard for Safety: Automatic Electrical Controls – Part 1, CSA/UL 60730-1. Any change to the software and electronic controls of the BMS may require additional testing
2. The heating plate in battery module is a reserved for back up use, it's not used in real application, the safety for the heater and its heating mechanism was not evaluated.
3. The enclosure was evaluated to establish an IP rating of IP65 with the Standard for Degrees of Protection Provided by Enclosure (IP Code) IEC 60529.
4. Product shall avoid being used near marine environments.
5. 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.
6. Equipment Application Location: Stationary
7. Access Location: Operator Accessible.

8. Manual disconnect device shall be required during the installation of the end products.
9. The installation was not evaluated. The battery system shall be installed in accordance with NFPA 70 or other applicable installation code.
10. Dielectric Voltage Withstand Test was performed with the test potential of 3300 Vdc, a higher test potential shall be considered in the end product if higher overvoltage category specified.
11. Overvoltage Category (OVC): 2
12. Pollution Degree (PD): 2
13. Altitude for Operation: Up to 3000 m.

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APPLICABLE REQUIREMENTS

ANSI/CAN/UL-1973:2022, Batteries for Use in Stationary and Motive Auxiliary Power Applications – 3rd Edition, Dated February 25, 2022.

MARKINGS

See CSA report.

Notes:

Products certified under Class C370182, C370112 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca