

BME2500/120VRLA48 Battery

48VDC Intelligent Battery for Edge Power Architecture



ABB's BME2500 VRLA battery for Edge Power Architecture is an intelligent battery intended to simplify the installation and operation in data center power solutions. The Edge system controller communicates with the battery to provide a seamless integration into the overall power solution. The battery provides real-time data to the system controller including the current state of the battery and any potential alarms that may prevent the battery from operating as needed when AC power is lost to the bay. It's modularity allows the specific amount of reserve capacity required to back up the equipment in only the

the enclosure the battery and power is installed. This allows strategic back up power configurations for specific application needs, while not relying on a centralized battery solution. The battery is hot pluggable allowing for simple, toolless installation. Each battery is automatically identified and configured by the system controller, thus eliminating potential installation and operation issues.

A True System Solution

- The BME2500 batteries are an integral part of the Edge Power Architecture, providing localized battery backup close to the load equipment.
- Monitoring/Control – The integrated Low Voltage / Emergency Power Disconnect, battery shunt and thermal monitors allow management and monitoring of critical battery functions thru communication with the system controller using its integrated isolated RS485 serial interface and proprietary Galaxy Protocol.
- Designed and qualified in the Edge Power Architecture with integrated power and distribution to be a safe, reliable and low cost way to provide five nines data center reliability.

Features

- Compact – 1RU x 19" form factor provides high rate discharge battery for short term discharges.
- Flexible Output – Provides 2.5kW of backup for 2 minutes, up to 4kW for 30 second, and up to 865W for 15 minute discharges.
- Thermal Management – System Slope Thermal Management to help prevent thermal runaway protecting the battery and equipment.
- Capacity Management – Operates in concert with the system controller to indicate health and capacity rating of each module.
- Wide Temperature Range– Operates 0°C to 40°C
- Fail-Safe Performance – Hot insertion capabilities allow for battery replacement without system shutdown.
- Touch-Safe – Integrated LVD disconnects power from output terminals until battery is plugged into shelf and communicates with controller; protects output connections from accidental shorts and user from hazardous voltages.
- Plug and Play – installation of the battery in a shelf connected to a system controller automatically initializes set-up parameters.

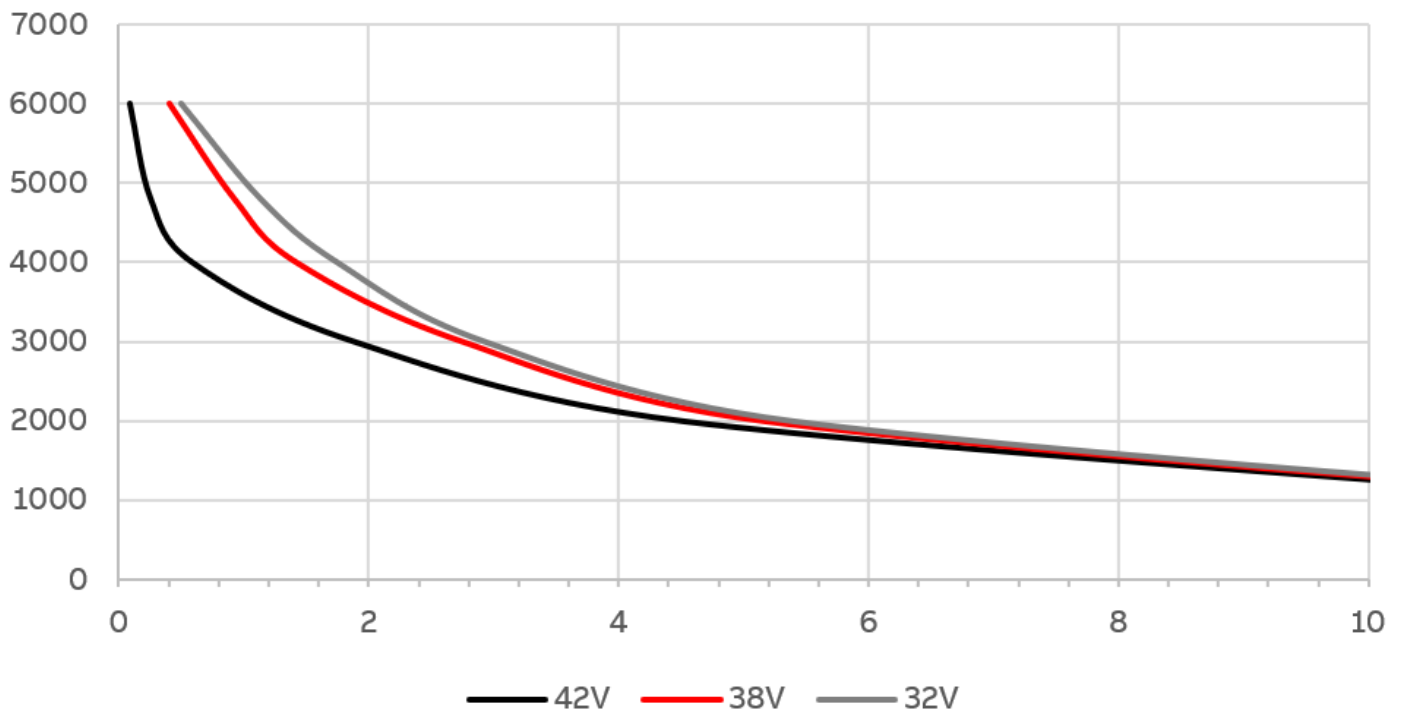
Electrical Specifications for System Design

Electrical Performance

Nominal Voltage	48 Volts (24 cells) Float/Standby: 54.5 Volts nom (54.0 to 55.2 Volts) Cyclic: 57.6 to 60.0 Volts (2.4A max, float <90mA)
Nominal Capacity	1-Min Rate: 3810W 1.6Ah
End Cell Voltage — 38.4V	2-Min Rate : 3177W 2.8 Ah 5-Min Rate 1863W 4 Ah 10-Min Rate 1167W 5.1 Ah 15-Min Rate 815W 5.3 Ah
Max Discharge Current (5 min)	45A
Internal Resistance (approx.)	60mΩ
Shelf Life	<3% per month (25°C)

Note: Due to Self-Discharge, it is necessary that batteries are charged within 6 months of storage. Permanent loss of capacity may result if this procedure is not kept.

Output to End Cell Voltage @25C (Watts/Minutes)



Electrical Specifications for System Design

Environmental, Compliance & Physical

Operating Temperature	Charge: 0 to +40°C Discharge: -20 to +50°C
Storage Temperature	-20 to +50°C (Transportation -50 to +60°C)
Operating Relative Humidity	0 - 95% (non-condensing) for use in a controlled environment
Heat Release	11 Watts, or 37.5 BTU/hr at maximum recharge
Height x Width x Depth	1.72 x19x23.6in (43.7x483x600mm)
Weight (Battery Only; Packaged)	42.9 Lbs. (19.5kg); 47.4 Lbs. (21.5kG)
Sulfuric Acid Content	4.9 Lbs. (2.22kg) Non-Spillable absorbed content
Electromagnetic Compatibility	FCC Part 15, EN 55032 (CISPR32), EN 55035 (CISPR 35), Level A, GR-1089
Agency Certifications	CAN/CSA C22.2 No. 60950-1-03, UL 60950-1, 1ST Edition. Battery: UL1989, UL 94 V0

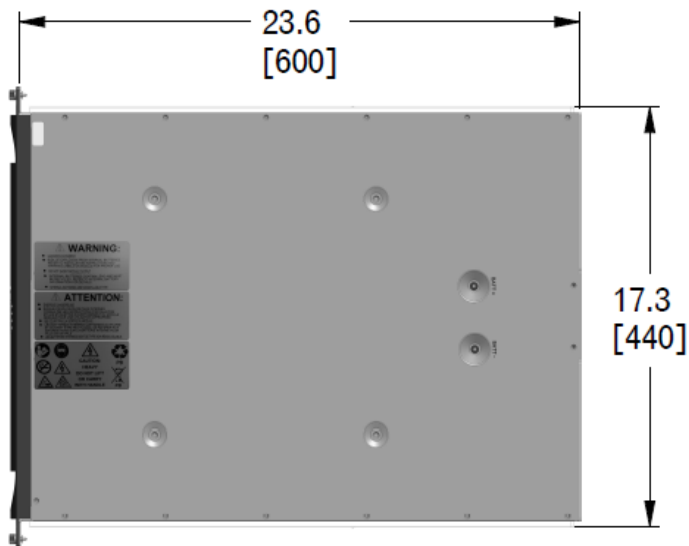
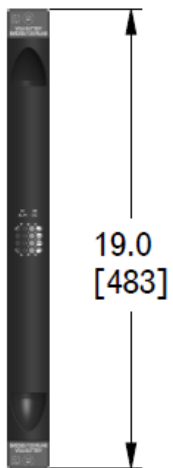
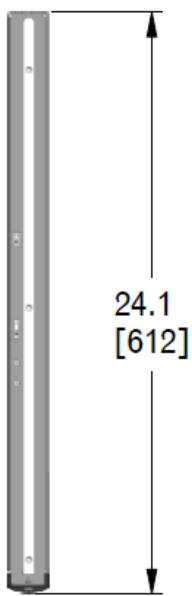
LED Reporting Table



		LED State	
	Battery Condition	ALM OK Green	DC OK Green
1	OK	Green	Green
2	GP Communication Fail	Red	Blink Red
3	Interlock	Red	Red
4	LVD Fail Open	Red	Red
5	LVD Fail Close	Red	Red
6	Output Fuse Open	Red	Red
7	EPO Activated	Amber	Red
8	Very High Battery Temperature	Amber	Red
9	Imbalance Alarm	Amber	Red
10	Cycle Count Threshold Initially Exceeded	Green	Amber
11	State of Charge (During Charge)	Blink Green	Green
12	State of Charge (During Discharge)	Blink Amber	Red

Item	Description	Comcode
VRLA Battery	BME2500/120VRLA48 VRLA Hot Pluggable Battery for Edge Architecture	1600283228A

Overall Dimensions



BME2500/120VRLA48 BATTERY [1600283228A]



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