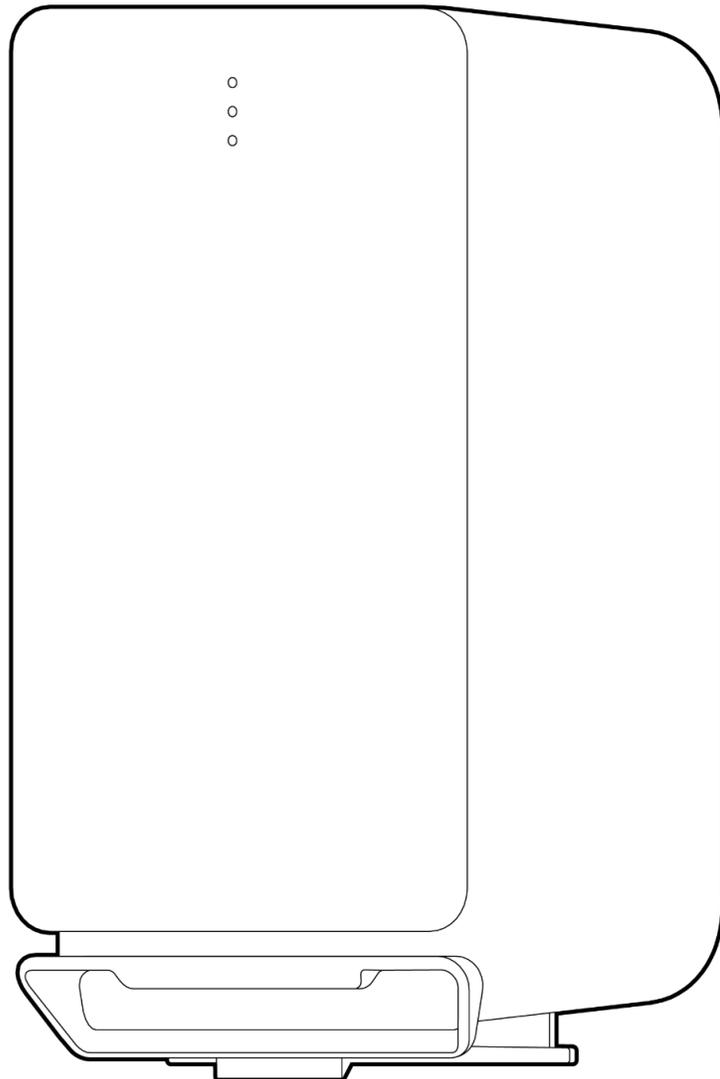


ACC-VBX-200WH

VBX 200Wh LiFePO4 Battery



Document

Document Details

Version

VI.1 20241111

(VI.0 published 20240924)

Product Models

This install guide pertains to models
ACC-VBX-200WH.

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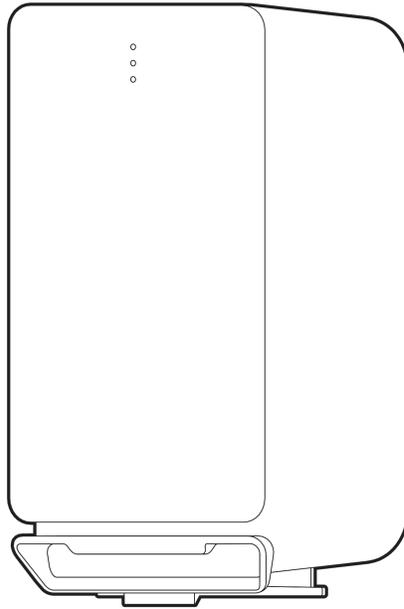
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What's in the box



ACC-VBX-200WH

What you'll need

- BP52 Alarm Panel and/or ACC-VBX-ENC VBX Dual Battery Enclosure

LED Behavior

On AC Power

	AC Power LED (BP52)	Battery LED
Battery Level (67-100%)		
Battery Level (34-66%)		
Battery Level (1-33%)		
Charging Battery		 <small>0-33% 34-66% 67-99%</small>
Battery error		
Battery not connected		OFF

On Battery Backup

	AC Power LED (BP52)	Battery LED
Battery Level (67-100%)		
Battery Level (34-66%)		
Battery Level (1-33%)		
Charging Battery	N/A	N/A
Battery error		
Battery not connected	OFF	OFF

Technical Specifications

Output Voltage	20V - 28.8V, 25.6V Nominal
Rated Capacity	7.9 Ah, 202.24 Wh
Charge Current	1.58A Nominal 0.4A Minimum 4.2A Maximum
Discharge Current	7.5A Maximum (Continuous)
Dimensions	103mm.0 (L) x 91.0mm (W) x 186.0mm (H)
Weight	2.1kg / 4.6lb
Operating Temp. & Humidity	0°C-50°C / 32°F-122°, 0-90% RH non-condensing
Storage Temp. & Humidity	-20°C - 35°C (3 months) -20°C - 25°C (12 months) 0 - 65% Relative Humidity Storage duration: 1 year
Shipment Capacity	1.26Ah - 2.52Ah (15% - 30% State of Charge)
Compliance	CP65, Rohs, Battery Directive, CE,, RCM, IEC 62133, UL 2054, UL/IEC 62368-1, CSA NO22.2 62368-1

Installation

Batteries Installed via BP52

Warning

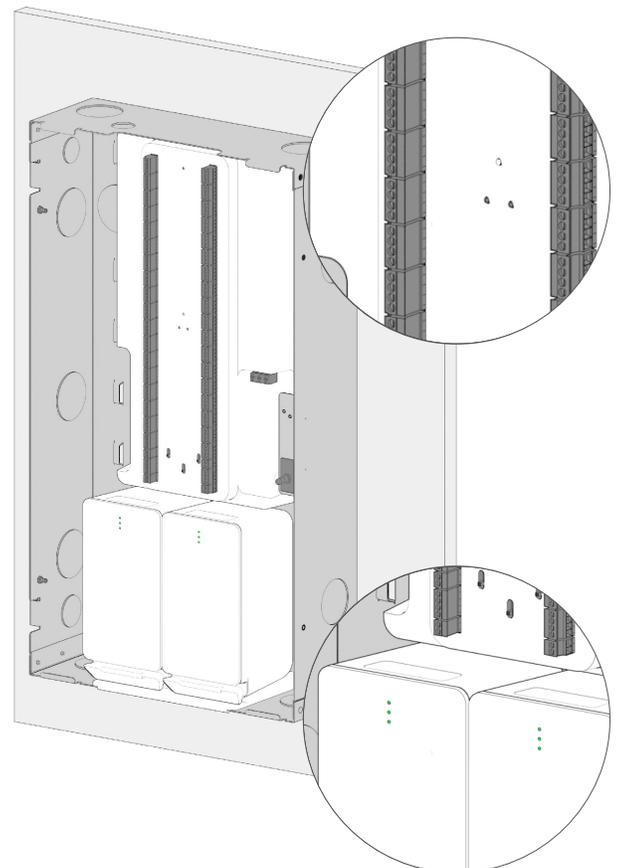
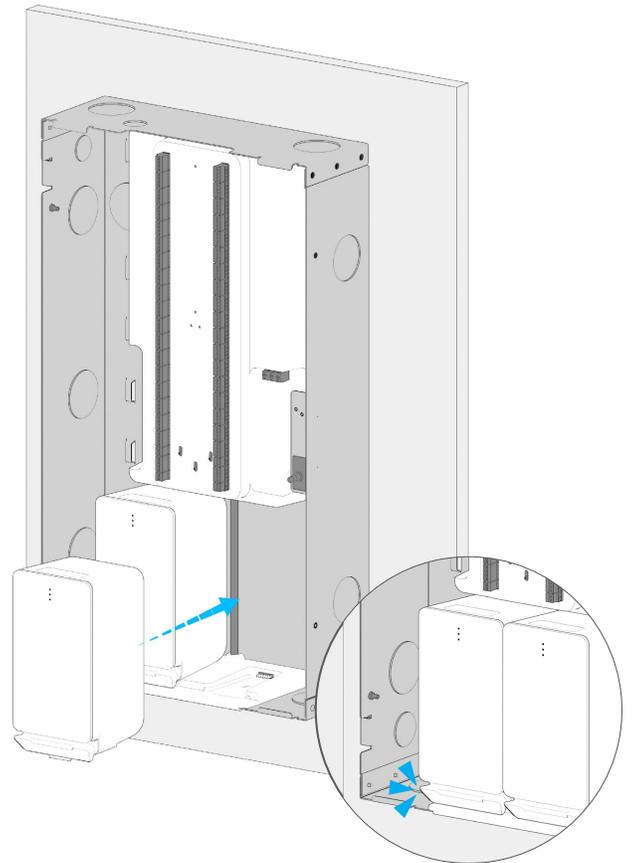
Do not install batteries until all wiring and servicing complete.

BP52 readiness is indicated when the status LED turns blue.

Remove all packaging material from the battery ACC-VBX-200WH.

Slide battery into BP52 until audible “click” is heard.

Correct installation is confirmed when charging begins as indicated by a flashing green LED. See the LED Behavior page for further details.



Installation

Batteries Installed via ACC-VBX-ENC

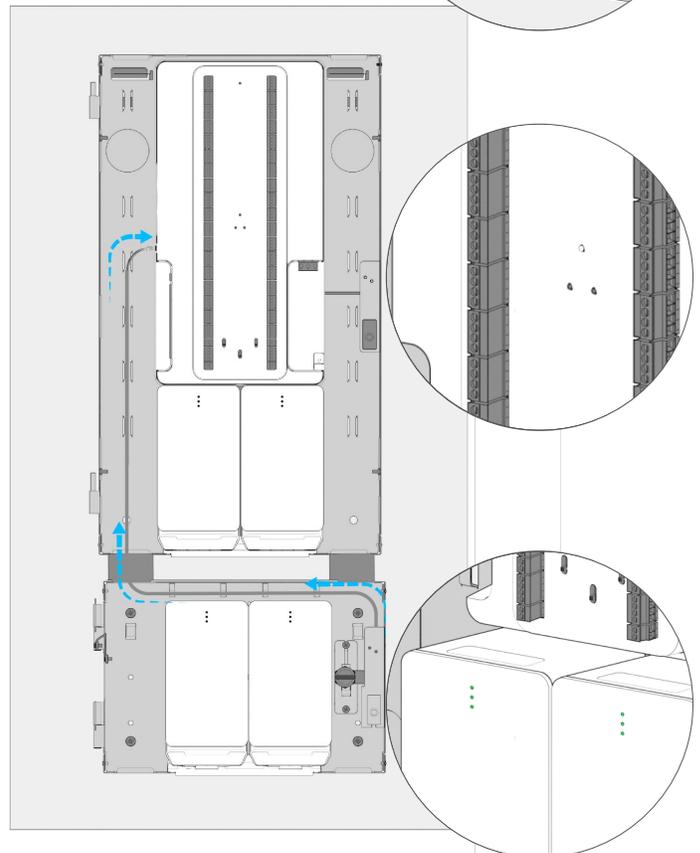
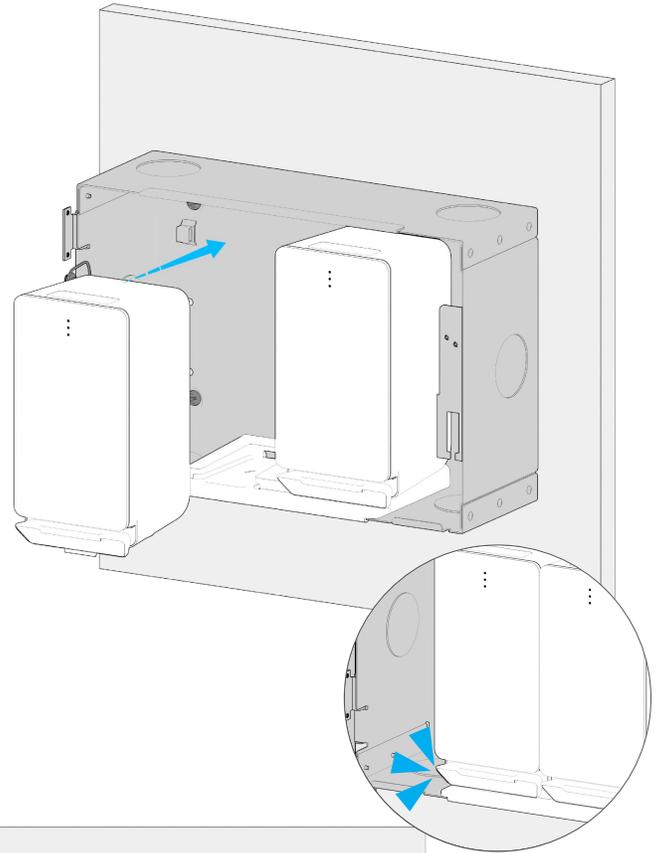
Mount ACC-VBX-ENC by referring to the ACC-VBX-ENC Install Guide.

Connect battery wire to BP52 "Battery Expander" port.

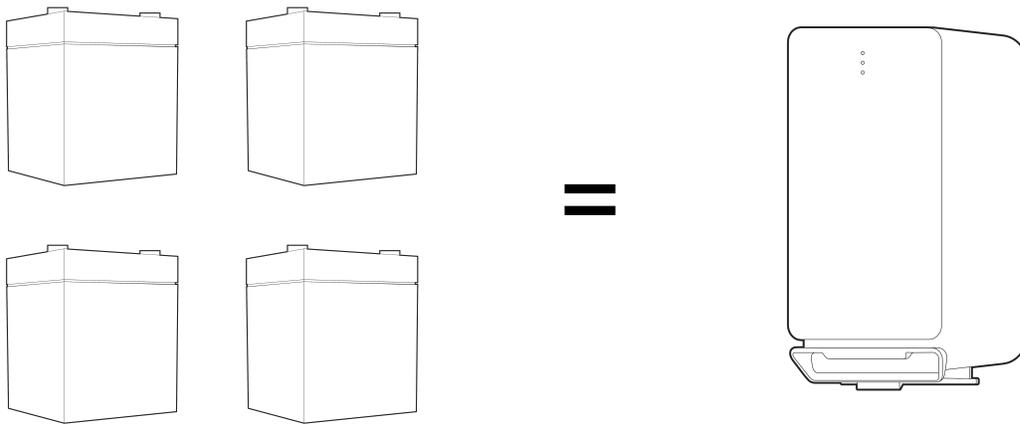
Slide battery into chassis until audible "click" is heard.

Correct installation is confirmed when charging begins as indicated by a flashing green LED. See the LED Behavior page for further details.

Note: Up to 4 additional batteries in two external chassis can be connected to BP52.



Calculate Number of Batteries needed



4 Standard Alarm Batteries (12V, 48Wh)

1 ACC-VBX-200Wh

To calculate the backup capacity needed for your system, add the power of all high load devices connected to your system and multiply this number by the number of hours of backup time required.

Divide the battery capacity needed by the power the ACC-VBX-200WH battery pack provides to determine the number of packs needed:

$$\text{\# of Battery Packs Needed} = K / 200\text{Wh}$$

Examples of connected devices and their power consumption are provided below:

A = 8.5W (panel idle mode)

B = 0.5W (cellular backup average power consumption)

C = 3W (expander average power consumption)

D = 4W (keypad average power consumption)

E = 6W (Security Camera - day mode average power consumption)

F = 10W (Security Camera - night mode average power consumption)

G = 8W (Intercom average power consumption)

H (Total power) = A + B + C*(# expanders) + D*(# keypads) + E*(# Cameras) + F*(# Cameras) + G*(# intercoms)

J = hours of backup you need

K (battery capacity needed) = H*J

Note: The above calculator considers normal operation only and does not include added loads during an alarm state. Please consider additional battery storage if alarm support is required.

Battery Capacity vs Temperature

Batteries capacity is not impacted by higher operating temperature, but batteries operating at lower ambient temperatures have reduced capacity.

Subtract 1% capacity for every degree operating ambient temperature below 20°C

Example: Operating temperature is 10°C

Battery capacity is $100\% - (20-10)\% * 200\text{Wh}$

= $90\% * 200\text{Wh}$

= 180Wh

Recharge Time

A minimum system power of 20W is allocated to battery charging - though more power is made available to charge batteries if system loading allows.

Assuming a minimum charge power of 20W, a fully depleted battery will recharge in approximately 10 hours. Multiply 10 hours by the number of installed batteries for the time to completely recharge all batteries.

Example: The panel is operating at maximum load and only 20W is available for charging. Mains power is restored just before the four connected batteries are completely depleted.

Recharge time = $10\text{h} * 4$ batteries

= 40h

A maximum system power of 90W is allocated to battery charging which may be divided between all connected batteries up to a maximum of 40W per connected pack

At maximum charge power, a fully depleted battery will recharge in approximately 5 hours.

Warning

Safety (as translated from the Pack specification)

- Do not dispose of in fire
- Do not expose to temperatures above 70C
- Use only in a dry environment
- Do not strike, crush, drop, pierce or otherwise damage the pack
- Do not short the battery terminals
- Use only in genuine Verkada equipment in the manner defined in the User's Manual

Appendix

Support

Thank you for purchasing this Verkada product. If for any reason you're experiencing issues or need assistance, please contact our 24/7 Technical Support Team immediately.

Sincerely,
The Verkada Team
verkada.com/support

