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Subject: Battery Spacing for SRB6 Battery Cabinet / Power Station Pro Units

The following document clarifies BESS (Battery Energy Storage System) spacing requirements for StackRack's SR5K-UL battery modules mounted inside an SRB6 battery cabinet. This also includes Power Station Pro configuration.

UL 9540 and UL 9540A are safety standards recognized by the American National Standards Institute (ANSI), focusing on Battery Energy Storage Systems (BESS) and associated fire safety risks, particularly regarding thermal runaway. Compliance with these standards is mandated by various codes, including the International Fire Code (IFC), International Residential Code (IRC), California Fire Code (CFC), California Residential Code (CRC), and California Electric Commission (CEC), which require all BESS to be certified to UL 9540.

UL 9540 specifies that batteries must be separated by a minimum distance of 3 feet (91.4 cm). However, if equipment is evaluated under UL 9540A and accompanied by a report from a nationally recognized testing laboratory (NRTL) like ETL, it may be allowed to be installed with less than 3 feet of separation based on UL 9540A test findings.

StackRack SR5K-UL battery modules with SRB6 battery cabinet have passed unit level testing in accordance with UL 9540A performed by ETL. The units can also be installed in different orientations based on project requirements.

When installed horizontally against a wall, the units were tested using the manufacturer's recommended spacing of 60 cm (24 inches). The 3 ft horizontal spacing requirement between units should therefore be reduced to 60 cm (24 inches), as per UL 9540 and UL 9540A.

When installed as stand-alone units, the units were tested using manufacture's recommended spacing of 5 cm (2 inches). The 3 ft horizontal spacing requirement between units should therefore be reduced to 5 cm (2 inches), as per UL 9540 and UL 9540A.

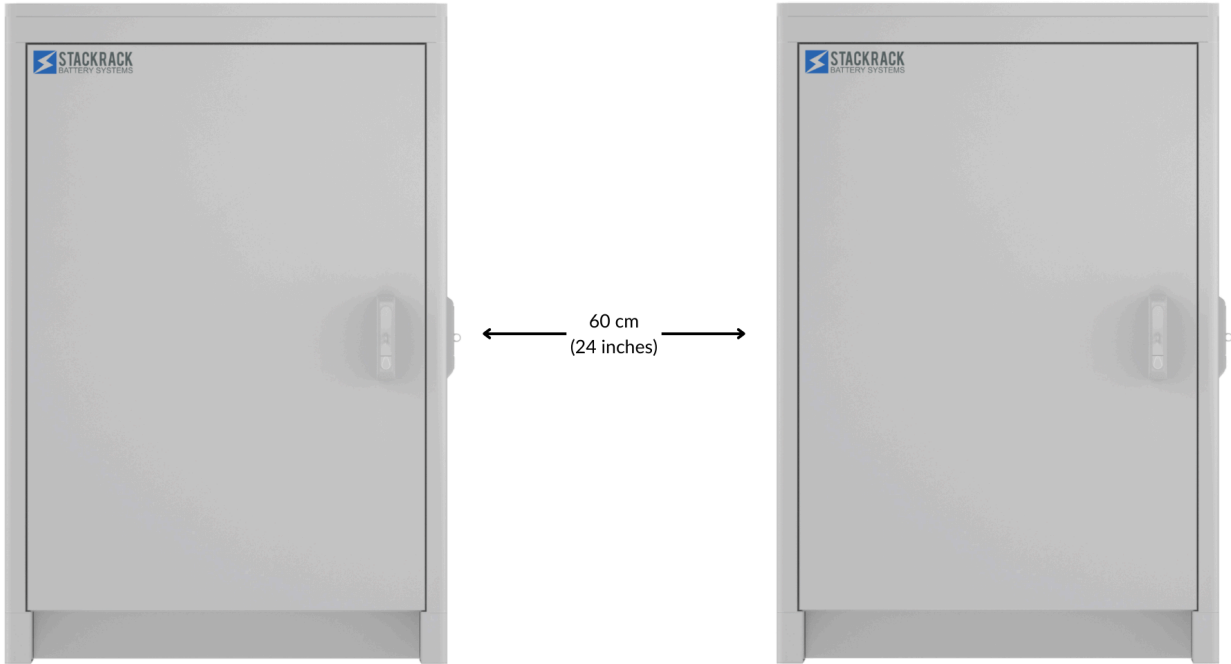


Figure 1 - SRB6 Battery Cabinet Horizontal Spacing

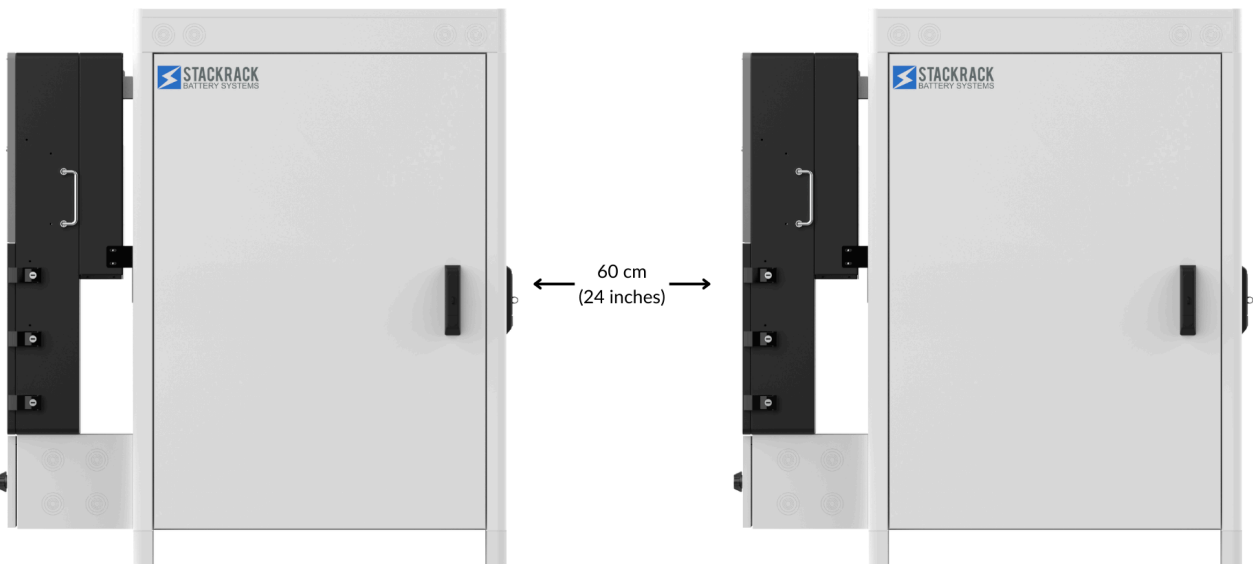


Figure 2 - Power Station Pro Horizontal Spacing



Figure 3 - SRB6 Battery Cabinet Stand-Alone Spacing

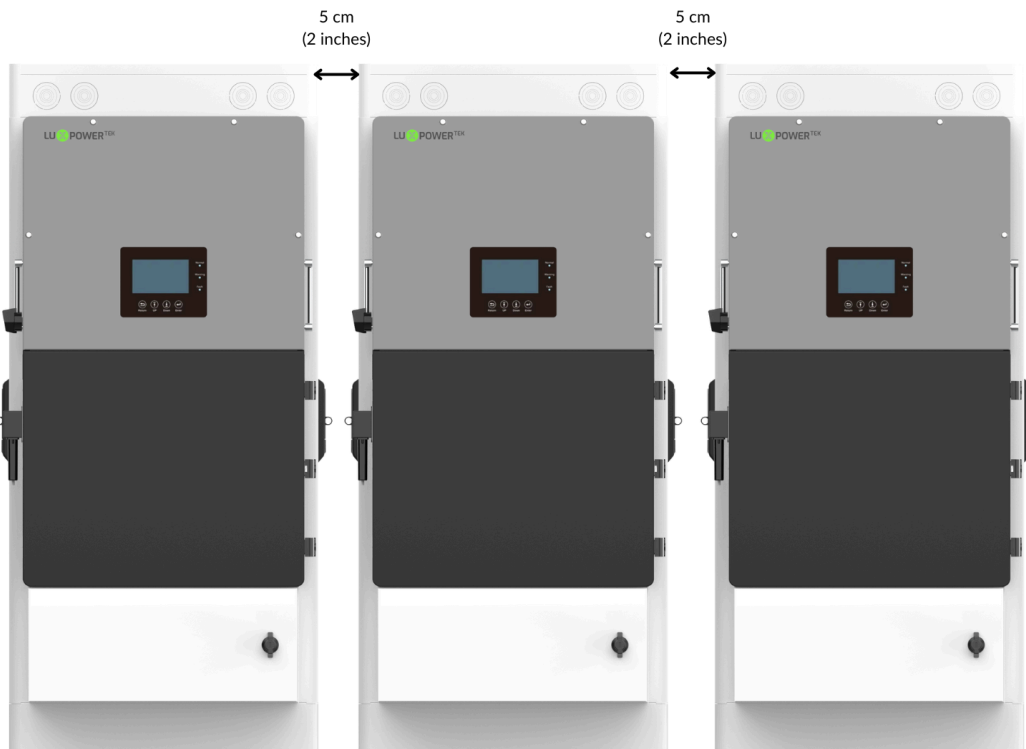


Figure 4 - Power Station Pro Stand-Alone Spacing

Conclusion

StackRack SR5K-UL battery modules with SRB6 battery cabinet, along with Power Station Pro, meet the requirements for these units to be exempted from the 3 ft unit spacing restriction, as per UL 9540A and UL 9540. The installation manual for SRB6 battery cabinet / Power Station Pro unit can be found [here](#).

Supporting Documents

Here are some key standards and codes related to energy storage systems:

UL 9540: Energy Storage Systems and Equipment

- This standard outlines the safety requirements for energy storage systems. [More details](#)

UL 9540A: Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems**

- This test method assesses fire risks related to thermal runaway in battery storage systems. [More details](#)

2021 International Residential Code (IRC), Chapter 3, Section R328: Energy Storage Systems

- This section covers building planning for energy storage systems in residential structures. [More details](#)

2021 International Fire Code (IFC), Chapter 12, Section 1207: Electrical Energy Storage Systems (ESS)

- This section addresses fire safety requirements for energy storage systems. [More details](#)

2022 California Residential Code, Chapter 3, Section R328: Energy Storage Systems**

- This section highlights the requirements for energy storage in California residential buildings. [More details](#)

2022 California Fire Code, Chapter 12, Section 1207: Electrical Energy Storage Systems (ESS)

- This section lays out fire safety guidelines for energy storage systems in California. [More details](#)

California Electric Commission (CEC) 2019, Joint Appendix JA12: Qualification Requirements for Battery Storage Systems

- This appendix provides qualification guidelines for battery storage systems in California. [More details](#)