

## SolarInnovate Energy Solutions

# Energy storage cabinet grounding arrangement



**51.2V 150AH, 7.68KWH**

## Overview

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Do I need a grounding cable if my cabinet is painted?

If the cabinet is painted, all components and installation plates should be grounded via a cable to the grounding busbar. Body grounding does not replace a protective earth connection. PE conductors are always required from the PE terminal of the device to the PE busbar if there is body grounding or not.

Should a cabinet be grounded if it is not painted?

If the cabinet is not painted, zinc coating treatment inside ensures that all mechanical joints conduct properly. If the cabinet is painted, all components and installation plates should be grounded via a cable to the grounding busbar. Body grounding does not replace a protective earth connection.

How should a power cable be connected to a grounding busbar?

Run signal and data cables between different cubicles close to the grounding busbar. Keep power cables separate from other cables. There should be at least 50cm of distance between power cables and signal/control cables. There should not be any long parallel runs.

How do you ground a cable with a screen?

Cables equipped with a screen must be connected to ground. The screen connection should be designed in such a way that grounding is possible. The best EMC suppression is achieved by a 360° grounding of the cable shield. The grounding distance and impedance should be as short and low as possible. See the pictures for different alternatives.

Does body grounding replace a protective earth connection?

Body grounding does not replace a protective earth connection. PE conductors are always required from the PE terminal of the device to the PE busbar if there is body grounding or not. The cross section of the grounding busbar or

cable has to be at least half of the cross sectional area of the supply cable.

Why is EMC grounding important?

Grounding is an essential part of cabinet assembly. ensures that installation is safe. That means protection and safety design according to short circuit capability. and improves immunity against electromagnetic interference. Note: EMC grounding reduces reactance for high frequency currents!

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