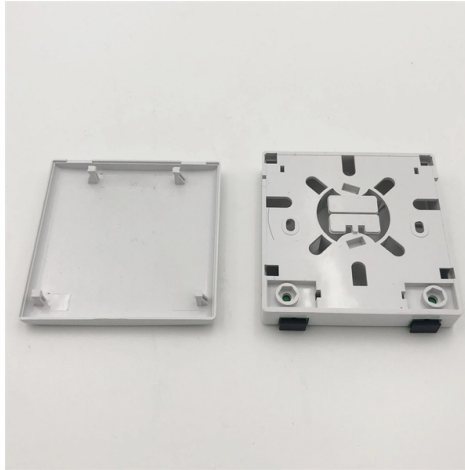


Installation and Wiring Method of Photovoltaic Combiner Box



Article Overview

Wiring a PV combiner box involves connecting each solar string through fuses or breakers to a common bus, grounding the system, and routing the combined output to the inverter safely and efficiently.

Step-by-Step Wiring Procedure

1. Mount the Combiner Box Select a sturdy, weatherproof location (NEMA 3 or 4 rated for outdoor use) with enough space for all PV strings. Secure the box to a wall or support structure, ensuring easy access for maintenance and inspection . 2. Run PV Wires into the Box Use strain relief connectors to protect incoming PV wires from mechanical stress and environmental exposure. Each string's positive and negative conductors should enter the box through appropriately sized openings . 3. Install Overcurrent Protection Devices

- Fuses or DC breakers are installed for each positive string conductor.
- Connect the string positive wire to the line side of the fuse or breaker, and the load side to the positive busbar .
- Negative conductors typically connect directly to the negative busbar without fusing, following NEC 690.9(B) guidelines . 4. Combine Conductors After fusing, combine all positive conductors into the positive busbar and all negative conductors into the negative busbar. This creates a single output for each polarity, which will feed the inverter . 5. Grounding and Bonding
- Connect the equipment grounding conductor (EGC) to the combiner box groundin...

Article Content

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