



# Photovoltaic inverter AC relay

What is a relay and why is it important for solar inverters?

A solar inverter is a crucial component of a solar photovoltaic (PV) system - more commonly known to your everyday user as a solar panel system. Solar inverters are responsible for the task of changing the direct current (DC) into alternating current (AC) through solar energy.

How do I use AC relay control in a SolarEdge inverter?

To use the AC Relay Control feature in inverters with LCD and buttons, the inverter communication board firmware (CPU) version must be 3.18xx and above. For an upgrade file and instructions, contact SolarEdge support. When AC Relay Control is enabled, all inverters in the system need to be configured to AC Relay Control mode.

What if there is no relay inside a solar PV inverter?

If there is no relay inside the inverter, then there must be an external relay to ensure safety. Even if the solar PV system inverter has a preinstalled isolation switch, the electrical wiring connected to the inverter still carries live and potentially lethal amounts of DC electricity.

How does a relay work in an inverter?

However, relays are electrically operated switches that are placed at the output side of an inverter. So, unlike our manually operated switches, a relay uses an electrical signal to control an electromagnet, which in turn connects or disconnects another circuit.

Do inverters need a relay?

Because of this, many countries have made relays compulsory for inverters within their PV standards and regulations. Europe's IEC 62109-1 standard now states that components such as motors, relays, other electromagnetic devices, and heaters, which are normally operated only intermittently, shall be operated continuously.

What happens if AC relay control is enabled?

When AC Relay Control is enabled, all inverters in the system need to be configured to AC Relay Control mode. If a Commercial Gateway is installed, it should not be configured to AC Relay Control mode. AC Relay Control is disabled by default and should be enabled from the inverter menus.

Anti-islanding protection is a commonly required safety feature which disables PV inverters when the grid enters an islanded condition. Anti-islanding protection is required for UL1741 / IEEE 1547. Knowledge of how this protection method ...

Relays in solar inverters. One of the key components that can help improve the safety and effectiveness of a solar inverter is a simple electromechanical switch, known as a relay. Similarly to how we would manually



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use normal switches to ...

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