MODERNIZATION SOLAR

The role of interference sources in solar container communication station inverters

Overview

How to avoid interference by PV systems at airports?

To avoid interference by PV systems at airports, the following measures are suggested . The PV installations should be located at least 200–250 ft away from the communication systems. PVI should be avoided where they might cause interference to navigational aids. Radar absorbing material could be used to reduce unwanted signal reflections.

Can solar inverters interfere with amateur radio?

Keyer et al. compared emissions from two commercially available solar PV inverters at the actual PV installations and reported that solar PV installations can interfere with amateur radio operation particularly in the frequency range of 10 MHz to 50 MHz. They proposed that the DC cables can act as a tuned antenna.

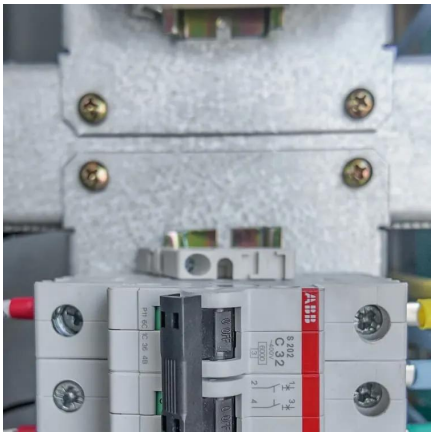
What is the induced voltage of a solar inverter?

The induced voltage ranges from 5 V to 30 V and it varies with distance between the solar PV plant and the pipelines. Singh et al. reported conducted interference to telephone systems located near a 17 MVA PV inverter in the frequency range of 2.5 kHz to 4.5 kHz, which corresponded to the switching frequency of the inverters.

Which power line communication options are implemented in different solar installations?

Figure 1 shows typical power line communication options implemented in different solar installations. These installations can be divided into communication on DC lines (red) and communication on AC lines (blue).

The role of interference sources in solar container communication s



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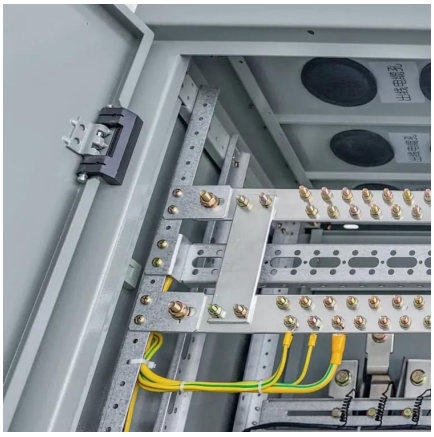

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