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Hybrid energy lightning protection for rooftop solar container communication station





Overview

Which lightning protection standards are available for PV and wind systems?

Many lightning protection standards are available for PV and wind systems. However, standards for hybrid systems remain unavailable. In this section, the CENELEC standard, which is available for PV systems with an integrated external LPS when separation distance is not maintained, is applied to the hybrid system.

Do rooftop photovoltaic systems need a lightning protection system?

This guideline also requires that LPL III and thus a lightning protection system according to class of LPS III be installed for rooftop PV systems ($> 10 \text{ kWp}$) and that surge protection measures be taken. As a general rule, rooftop photovoltaic systems must not interfere with the existing lightning protection measures.

Why is a mounting system connected to an external lightning protection system?

If the mounting system is directly connected to the external lightning protection system due to the fact that the separation distance cannot be maintained, these conductors become part of the lightning equipotential bonding system. Consequently, these elements must be capable of carrying lightning currents.

How do you protect a solar system from lightning?

A proper protection measure based on SPDs should be applied to mitigate transient overvoltage under the withstand voltage of the system to be protected. Many lightning protection standards are available for PV and wind systems. However, standards for hybrid systems remain unavailable.



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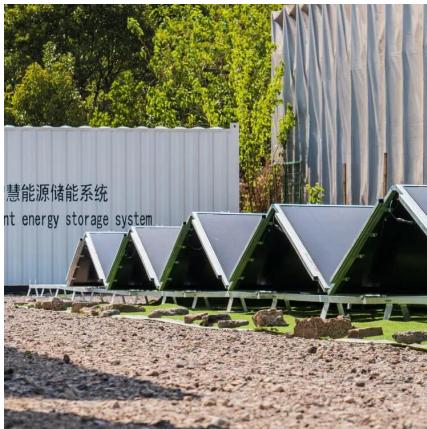
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