

Lightning-protected outdoor communication cabinet for photovoltaic power plants

How important is lightning protection in a photovoltaic power plant?

Abstract: The aim of this paper is to analyze the lightning protection model of a photovoltaic power plant, which is of great importance, in order to guarantee the smooth work of the system and avoid errors and damage to the equipment.

Can lightning damage a photovoltaic plant?

Cloud-to-cloud lightning and nearby lightning strikes (up to 1 km distance) cause transitory surges capable of damaging equipment. Protection against surges of photovoltaic plants is custom-designed for every installation in order to protect photovoltaic cells and all the integrated elements as much as possible.

Why is the communication capability of photovoltaic plants important?

The communication capability of photovoltaic plants is of great importance due to increasing energy industry requirements and the resulting increase in interconnections. It must be possible to monitor their functions and performance. In addition, it must be possible to control and analyse the plant remotely from different bodies at any time.

Why is lightning protection a high-risk installation?

They are high-cost equipment and when damaged can cause losses to energy supply, especially if they are connected to the distribution network. Its operation is controlled by sensitive electronic devices that can be highly damaged by transient surges. Therefore, from the point of view of lightning protection they are high-risk installations.

Avoiding security risks - PV plants as critical infrastructure Not only the photovoltaic industry has changed dramatically in recent years - the field of IT, data communication and digitalisation is also ...

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Do free-standing photovoltaic power plants have lightning and surge protection? Since a free-standing photovoltaic power plant is a specific facility due to its geometry, function, and location on the surface of a ...

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Lightning protection systems in photovoltaic power plants Introduction Photovoltaic power plants are always located in huge and isolated areas or on roofs due to their functions. They are high-cost ...

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