

## SolarTech Power Solutions

# Wind power lightning protection level B for communication base stations



## Overview

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Are wind turbine blades protected at LPL1 level?

According to IEC 61400-24, wind turbine blades are protected at LPL1 level if there is a 99% probability that lightning current parameters will be within the range 3 kA - 200 kA, and the protection system is adequate to withstand that range of current. Lightning can be classified as upward initiated or downward initiated.

Does a lightning arrester protect a telecommunication station?

Lightning protection (strikes with indirect effects) for telecommunication stations by lightning arresters, is applicable for all electrical networks. It is also compulsory to provide protection against lightning strikes with direct effects by placing a lightning arrester (near the top of the).

How to protect a UHV substation from a lightning strike?

The direct lightning strike protection is usually achieved using lightning rods or wires. The calculation of the protection range of lightning rods or wires for UHV substations and converter stations may be performed using the same method as that for 500-kV substations.

How should a lightning protection System (RBS) be formed?

The earthing network of an RBS should be formed by a ring loop surrounding the tower, equipment room and fence, at a minimum. The mean radius  $r_e$  of this ring loop should be not less than  $I_1$ , as indicated in Figure 1 and this value depends on the lightning protection system (LPS) class and on the soil resistivity.

Who needs lightning protection?

or a large private subscriber / consumer (tertiary industry, others). Lightning protection (strikes with indirect effects) for telecommunication stations by lightning arresters, is applicable for all electrical networks.

How to protect electrical equipments and signal transmission systems from lightning?

The lightning protection of electrical equipments and signal transmission systems should be carried out using the following methods. 1. Shielding: air termination system such as a shielding wire or a lightning rod catches a lightning discharge.

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