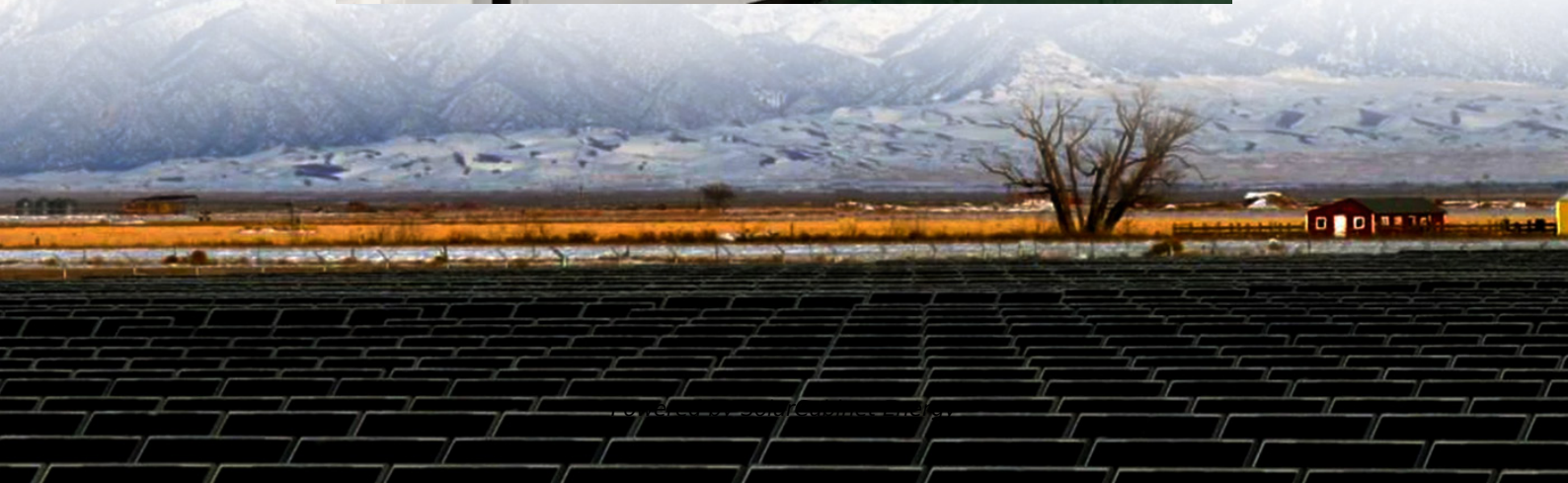


# **Lightning protection standards for communication base station inverters**





## Overview

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The installation of a lightning arrester needs to be carried out according to the requirements of IEC 61312. Protected lines should not be parallelly protected with unprotected lines during wiring to avoid the reoccurrence of induction phenomena on the protected lines. Can radio communication sites be protected from lightning?

The protection from lightning of radio communication sites can be achieved and protection from even direct lightning strikes is possible. The author is familiar with many examples where direct strikes have occurred and full protection has been achieved. The mechanism of a lightning strike must first be fully understood.

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 against indirect lightning strikes on electrical networks?

Protection against indirect lightning strikes on electrical networks must be treated globally. ABB Soulé offers a complete range of lightning arresters adapted to this approach. They must be used in accordance with standard practice with a ground network optimized by earthing (low impedance).

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  $l_1$ , 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.

What is a lightning protection system (LPS)?

3.2.3 lightning protection system (LPS): Complete system used to reduce physical damage due to lightning flashes to a structure. NOTE - An LPS consists of both external and internal lightning protection system.



## Lightning protection standards for communication base station inve

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### [Lightning protection for Telecommunication Stations](#)

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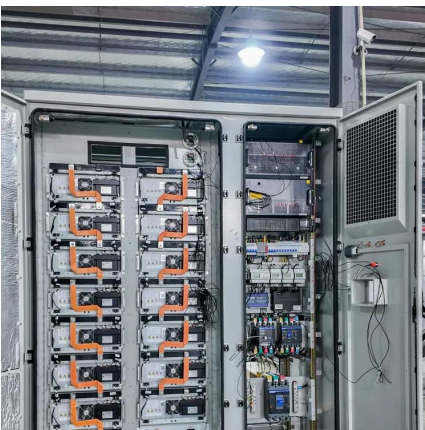
### [Lightning protection regulations for solar power stations](#)

Upon considering these aims, earthing systems, surge protection devices and air termination networks play a crucial role in providing lightning protection for solar power systems in line with ...



### [Overvoltage Protection of Electric Vehicle \(EV\) Charging](#)

This four part series details how an assessment can be performed and shows the different types and means of applying external and internal lightning protection to mitigate risk. The lightning ...



### [ITU-T Rec. K.112 \(07/2019\) Lightning protection, earthing ...](#)

The purpose of this Recommendation is to give detailed guidance on protection procedures, so that an engineer who is not a lightning protection



expert can accomplish the design of the ...



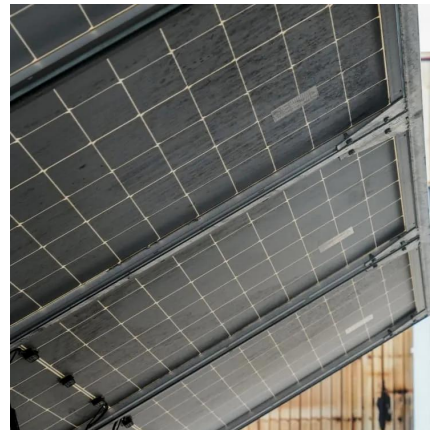
### [Communication Network GSM-Base Stations and Lightning Effect](#)

The protection of GSM and base station towers from lightning and overvoltage is provided by integrating external lightning systems, internal lightning systems, earthing, equipotential ...



### [Lightning protection solution for telecom communication base stations](#)

The first level lightning arrester is used to discharge most of the lightning current, and subsequent lightning arresters further limit residual voltage to protect power equipment ...



### [The Lightning Protection of Mobile Communication Base Station](#)

Through investigating the records of new stations struck by lightning, a solution for the problem is proposed and a problem is analyzed in detail. Lightning protection of mobile communication ...





[ITU-T Rec. K.97 \(02/2014\) Lightning protection of distributed ...](#)

Protection of these interfaces is achieved by installing a protection module. Possible protection schemes for such installations are also described. This Recommendation indicates when ...



[Lightning protection solution for telecom communication base ...](#)

The first level lightning arrester is used to discharge most of the lightning current, and subsequent lightning arresters further limit residual voltage to protect power equipment ...



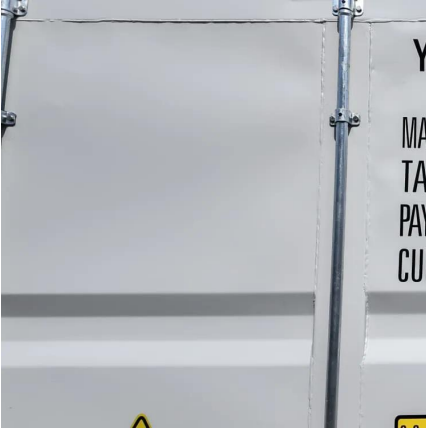
[Lightning and surge protection for battery storage systems](#)

Damage to battery storage systems Power storage systems are one of the key technologies of the energy revolution as they make it possible to store locally produced electricity on site. The ...



**YD 5068-1998 English Version, YD 5068-1998 Specifications on Lightning**

YD 5068-1998 English Version - YD 5068-1998 Specifications on Lightning Protection and Earthing Desing for Mobile Communication Base Stations (English Version): YD 5068-1998, ...



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