

ICS 91.120.40
CCS K49



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 41299-2022

**Performance requirements and testing methods for lightning
protection system of running telecommunication stations/sites**

通信局(站)在用防雷系统的技术要求和检测方法

Issued on: March 9, 2022

Implemented on: March 9, 2022

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms, Definitions and Abbreviations

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part

1. Structure and Drafting Rules of Standardization Documents" drafted. Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents. This document is proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This document is under the jurisdiction of the National Communication Standardization Technical Committee (SAC/TC485). This document is drafted by: China Telecom Posts and Telecommunications Consulting and Design Institute Co., Ltd., China Academy of Information and Communications Technology, China Telecom Group Corporation, China Railway Tower Co., Ltd. The main drafters of this document. Liu Jike, Chen Qiang, Niu Nianzeng, Qi Zheng, Meng Aili, Gao Jian, Liu Yucheng, Hua Jing, Hang Yifan, Wang Junyan, Shi Yuhai, Zhang Haipeng. Communication bureau (station) using lightning protection system Technical requirements and testing methods

1 Scope

GB/Z 41299-2022 is the Chinese national standard on performance requirements and testing methods for lightning protection system of running telecommunication stations/sites, in the field of construction materials and building. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 9 March 2022 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 91.120.40, CCS K49. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the terms, definitions and abbreviations, classifications, technical

requirements and inspection methods of the lightning protection system of the communications bureau (station). This document is applicable to lightning protection systems in use by various communication bureaus (stations).

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB 50057-2010 Design code for lightning protection of buildings

GB 50689 Design code for lightning protection and grounding engineering of communication bureaus (stations)

3 Terms, Definitions and Abbreviations

3.1 Terms and Definitions The following terms and definitions apply to this document.

3.1.1 grounding/grounding An intentional or unintentional conductive connection that enables a circuit or electrical device to be connected to earth or to some larger conductor in place of earth. Electric body.

3.1.2 joint ground commonearthing Different grounding methods (working grounding, protective grounding, shielding body grounding, anti-static The grounding, the logical ground of information equipment, etc. are connected with the protective grounding of the metal components of the building and various parts of the lightning protection device, lightning protection device), and are connected with the building. The lightning protection grounding of buildings shares the grounding method of the basic grounding body of the building and the peripheral grounding system.

3.1.3 Equipotential bonding Through reliable electrical connection, the potential difference between two conductors separated from each other tends to zero.

3.1.4 Lightning receptor lightningacceptset The lightning protection device used to undertake the lightning flash in the external space of the communication bureau (station) and discharge it to the ground through the lightning protection grounding system of the communication bureau (station).

3.1.5 A metallic device that connects the air-termination device to the grounding device.