

ICS 07.060
CCS A47



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

GB/T 44954-2024

**Technical specification for lightning disaster prevention in
mountain areas**

山岳地区雷电灾害防御技术规范

Issued on: November 28, 2024

Implemented on: March 1, 2025

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

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	2
4 Basic Requirements	3
5 Direct Lightning Protection Measures	3
5.1 Buildings (Structures)	3
5.2 Mobile facilities	4
5.3 Other facilities	5
6 Lightning Electromagnetic Pulse Protection Measures	5
7 Lightning monitoring and early warning	7
7.1 Lightning monitoring	7
7.2 Lightning Warning	7
8 Lightning protection device testing	7
14 Reference	15

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 for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the China Meteorological Administration. This document is under the jurisdiction of the National Technical Committee for Standardization of Meteorological Disaster Prevention and Mitigation (SAC/TC345). This document was drafted by: Anhui Meteorological Disaster Prevention Technology Center, 63798th Unit of the Chinese People's Liberation Army, Hangzhou Tianhu Intelligent Technology Co., Ltd., Sichuan China Electronics Qimingxing Information Technology Co., Ltd., Yunnan Yutian Lightning Protection Materials Co., Ltd., Chinese People's Liberation Army Army Engineering University, Deep Space Exploration Technology Development (Hefei) Co., Ltd., National University of Defense Technology of the People's Liberation Army, China Science and Technology Tianji Technology Co., Ltd. Company, Huangshan Meteorological Management Office, Anhui Meteorological Bureau Financial Accounting Center, Beijing ABB Low Voltage Electrical Appliance Co., Ltd., Anhui Huayun Meteorological Disaster Risk Assessment

Center, Sichuan Zhongguang Lightning Protection Technology Co., Ltd., Schneider Wanco (Tianjin) Electrical Equipment Co., Ltd., Hangzhou Yizao Technology Co., Ltd., Nanjing Zhongke Ruitong Intelligent Technology Co., Ltd., Bengbu Meteorological Bureau, and Anhui Provincial Atmospheric Sounding Technology Support Center. The main drafters of this document are: Wang Kai, Ju Xiaoyu, Li Yu, Qiu Yangyang, Jin Kai, Qiu Shi, Zhang Xiaoming, Wang Xinlai, Tao Guoqing, Zhuang Daoquan, Zhong Xiangmin, Liu Lei, Wang Hongmin, Zhang Hongwen, Zhou Liya, Li Gen, Hu Yaxiong, Wang Jiaze, Liu Sumin, Zhang Guangyuan, Wu Dongqi, Gao Panliang, Guo Wenzhe, Guan Xiangshi and Wang Zhe.

Technical specification for lightning disaster prevention in mountainous areas

1 Scope

GB/T 44954-2024 is the Chinese technical specification for lightning protection in mountain areas. Mountain terrain changes the problem in ways that a standard lightning protection code does not address: the strike density is far higher on ridges and summits, the ground resistivity is high and often unmeasurable by ordinary methods in rock, earthing electrodes cannot be driven, the structures at risk are scattered, small and often unattended, communication masts, cableway stations, monitoring equipment, temples and viewing platforms, and the people at risk are visitors in the open with nowhere to shelter. The standard sets the basic requirements, then the direct lightning protection measures for buildings and structures, for masts and equipment, for cableways and for open areas, the earthing and equipotential bonding in high resistivity ground, the protection against surges on power and signal lines, the protection of people including warning and evacuation arrangements, and the inspection and maintenance of the installed protection. It takes effect on 1 March 2025.

This document specifies the basic requirements for lightning disaster prevention in mountainous areas, as well as direct lightning protection measures, lightning electromagnetic pulse protection measures, The requirements for lightning monitoring and early warning, and lightning protection device testing, describe the corresponding inspection, maintenance and archiving methods. This document applies to lightning disaster prevention in mountainous areas.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 16895.22 Low voltage electrical installations Part 5-

53. Selection and installation of electrical equipment for safety protection, isolation, ventilation and Electrical appliances for disconnection, control and monitoring

GB/T 18802.12 Low voltage surge protective devices (SPD) Part

12. Selection and use of surge protective devices for low voltage power supply systems
Guidelines

GB/T 18802.22 Low voltage surge protective devices Part

22. Guidelines for the selection and use of surge protective devices for telecommunication and signalling networks

GB/T 21431 Technical specification for testing lightning protection devices for buildings

GB/T 21714.4-2015 Lightning protection Part

3 Requirements for isolating spark gaps (ISG)

GB/T 33629 Lightning protection for wind turbines

GB/T 33678 VLF-LF three-dimensional lightning location network technical specification

GB/T 34312 Specification for emergency response to lightning disasters

GB/T 36742 Meteorological safety assurance specifications for key units in meteorological disaster prevention

GB/T 38121 Lightning protection and thunderstorm warning system

GB/T 44709 Technical specification for lightning disaster prevention in tourist attractions

GB/T 44953 Technical specification for lightning disaster investigation

GB 50057-2010 Code for Lightning Protection Design of Buildings

GB 50127-2020 Aerial ropeway engineering technical standard

GB 50650 Specification for lightning protection design of petrochemical plants

GB 50952-2013 Technical Specification for Lightning Protection Engineering for Rural Residential Buildings

GB 51017-2014 Technical Specification for Lightning Protection Engineering of Ancient Buildings

GB 51418-2020 General radar station design standard QX/T

79 Lightning monitoring and positioning system Part

4 Electrical and electronic systems in buildings

GB/T 32512 Technical requirements for lightning protection of photovoltaic power stations

GB /Z 33586 Safety measures to reduce the risk of outdoor lightning strikes

GB/T 33588.3 Lightning protection system components (LPSC) Part

chinastandards.org · PREVIEW