

ICS 29.060.20

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

GB/T 3048.8-2025

Replacing GB/T 3048.8-2007

**Test methods for electrical properties of electric cables and
wires - Part 8: AC voltage test**

电线电缆电性能试验方法 第8部分：交流电压试验

Issued on: October 5, 2025

Implemented on: May 1, 2026

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

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 8 of GB/T 3048 "Test Methods for Electrical Properties of Wires and Cables". GB/T 3048 has already published the following parts.

- 1.General Provisions;
- 2.Resistivity Testing of Metallic Materials;
- 3.Volume Resistivity Tests for Semiconducting Rubber and Plastic Materials;
- 4.Conductor DC Resistance Test;
- 5.Insulation Resistance Test;
- 7.Tracking Resistance Test;
- Part 8: AC Voltage Test;
- 9.Spark Test of Insulated Wire Cores;
- 10.Extrusion Sheath Spark Test;
- 11.Dielectric Loss Tangent Test;
- 12.Partial Discharge Tests;
- 13.Impulse Voltage Test;

1 Scope

GB/T 3048.8-2025 is the Chinese national standard covering the AC withstand test on a cable - the voltage applied and for how long, the rate of rise, the immersion and the electrode arrangement, and what counts as a failure, on the test every length of cable passes before it leaves the works. Part 8 of the series. It replaces GB/T 3048.8-2007, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026, replacing GB/T 3048.8-2007.

This document describes the test methods for AC voltage of wires and cables, including test equipment, sample preparation, test procedures, test results, and evaluation. Determination, test safety, and test records. This document applies to AC voltage withstand tests on wire and cable products. This document does not apply to voltage testing of winding wire products.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 311.6 Standard air gap for high voltage measurement

GB/T 2900.19 Electrical Terminology. High Voltage Testing Techniques and Insulation Coordination

GB/T 3048.1 Test methods for electrical properties of wires and cables - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 2900.19 and GB/T 3048.1, as well as the following terms and definitions, apply to this document.

3.1 peak value The maximum voltage in a complete cycle, excluding minute high-frequency oscillations caused by non-destructive discharge.

3.2 The square root of the average of the squares of the voltage values in a complete cycle.

3.3 The peak voltage in the test was divided by 2.

Note. Relevant equipment standards may require measuring the root mean square (RMS) value of the test voltage, rather than the peak value. For example, when considering thermal effects, measuring the RMS value may be preferred. It's more meaningful.

4.1.1 Voltage Waveform

4.1.1.1 The test voltage should typically be an AC voltage with a frequency of 45Hz to 55Hz, commonly referred to as the power frequency test voltage. Due to the excessive length of the cable...

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