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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 32580.5-2026

Replacing GB/T 28428-2012

Railway applications - Fixed installations - AC high voltage switchgear and instrument transformers - Part 5: 27.5 kV and 2x27.5 kV metal-enclosed switchgear and controlgear

轨道交通 地面装置 高压交流开关设备及互感器 第5部分：27.5kV和2×27.5kV金属封闭开关设备和控制设备

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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 5 of GB/T 32580 "High-voltage AC switchgear and instrument transformers for ground installations in rail transit". The following sections have been released.

1.Circuit Breakers;

2.Disconnecting switches, grounding switches, and load switches;

3.Current Transformers;

4.Voltage Transformers;

---Part 5.27.5kV and 2x27.5kV metal-enclosed switchgear and controlgear. This document supersedes GB/T 28428-2012 "Metal-enclosed switchgear and control systems for 27.5kV and 2x27.5kV AC electrified railways". Compared with GB/T 28428-2012, the main technical changes in the "Manufacturing Equipment" standard, apart from structural adjustments and editorial modifications, are as follows:

a) The scope has been changed (see Chapter 1, Chapter 1 of the.2012 edition);

b) Functional units (assembly), multi-layered, program-based accessible compartments, tool-based accessible compartments, partitions, etc., have been removed. Class, separated (conductor) and LSC1 switchgear and controlgear (see 3.4, 3.5, 3.10, 3.11, 3.14,.2012 edition)

c) The amplitude requirement for electromagnetic interference has been removed [see 4.1g) in the.2012 edition];

d) The altitude correction factor and temperature have been changed (see 4.2.2, 4.2.4, and

4.2.3 in the.2012 version);

e) The term "rated current" in the ratings has been changed to "rated continuous current" (see 5.4.1,.2012 version 5.4.1);

f) The temperature and temperature rise limits for various components, materials, and insulating media of switchgear and controlgear have been revised in Table 4 (see 5.4.2). 5.4.3 (

1 Scope

GB/T 32580.5-2026 is the Chinese national standard covering the switchgear of a railway traction substation - 27.5 kV single phase and the 2x27.5 kV autotransformer arrangement used on Chinese high-speed lines, with the duty of a supply that is single phase, unbalanced and violently variable. Part 5 of the series. It replaces GB/T 28428-2012, renumbering it into GB/T 32580. It was issued on 28 January 2026 and has been in force since 1 August 2026, replacing GB/T 28428-2012. The document is under the responsibility of the National Railway Administration. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the operating conditions for 27.5kV and 2x27.5kV AC metal-enclosed switchgear and control equipment in electrified railways. Fixed values, design and structure, test methods, inspection rules, transportation and storage, safety, and the product's environmental impact. This document applies to air-insulated indoor metal-clad enclosed switchgear and control equipment, as well as equipment with air-filled compartments and design pressures not exceeding [a certain value]. Indoor metal-enclosed switchgear and control equipment with a pressure exceeding

0.3 MPa (relative pressure). All components in metal-enclosed switchgear and controlgear are designed and tested in accordance with relevant regulations.

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.