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

GB/T 32580.1-2026

Replacing GB/T 32580.1-2016

**Railway applications - Fixed installations - High voltage AC
switchgear and transformers - Part 1: Circuit-breakers**

轨道交通 地面装置 高压交流开关设备及互感器 第1部分：断路器

(English Translation)

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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 1 of GB/T 32580 "High-voltage AC switchgear and instrument transformers for ground installations in rail transit".

GB/T 32580 has published the following parts.

---Part 1: Circuit Breakers;

---Part 2: Disconnecting switches, grounding switches, and load switches;

---Part 3: Current Transformers;

---Part 4: Voltage Transformers;

---Part 5: 27.5kV and 2x27.5kV metal-enclosed switchgear and controlgear.

This document replaces GB/T 32580.1-2016 "Special Requirements for AC Switchgear for Ground Installations in Rail Transit - Part 1".

The standard for "Single-phase circuit breakers with voltage greater than 1kV" differs from

GB/T 32580.1-2016 in that, aside from structural adjustments and editorial changes, the main technical changes are as follows.

The following is a simplified version.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2016 edition);
- b) Changes have been made to the normal and special usage conditions (see Chapter 4, Chapter 4 of the 2016 edition);
- c) The ratings have been changed (see Chapter 5, Chapter 5 of the 2016 edition);
- d) The nominal voltage, rated insulation level, rated continuous current, rated short-time withstand current, rated peak withstand current, and rated...

Short circuit duration, rated power supply voltage of closing and opening devices and auxiliary circuits, rated short circuit breaking current, and the ratio of rated short circuit breaking current.

Current-related transient recovery voltage (see 5.3, 5.4, 5.6~5.10, 5.13 and 5.14, 2016 edition of 5.3, 5.4, 5.6~ 5.10, 5.13 and 5.14);

- e) The ITRV nominal value has been removed (see 5.15 in the 2016 edition);
- f) The rated short-circuit making current and number of interruptions, rated operating sequence, and rated out-of-step making and interrupting currents have been changed (see 5.15~).

(5.17, 2016 version 5.16~5.18)

- g) Changed the rated line charging breaking current, rated cable charging breaking current, rated single capacitor bank breaking current, and rated back charge breaking current.

The interrupting current of the back capacitor bank and the rated inrush current of a single capacitor bank are combined into the rated capacitive switching current (see 5.18).

(2016 edition, pp. 5.19-5.23)

- h) Increased the number of mechanical operations (see 5.19);
- i) The matching of the rated values has been removed (see 5.25 in the 2016 edition);
- j) The design and structure have been changed (see Chapter 6, Chapter 6 of the 2016 edition);
- k) Changed the gas requirements for circuit breakers, the grounding, auxiliary and control equipment and circuits of circuit breakers, power operation, energy storage operation, and disconnection.

Clamp operation, pressure/level indication, nameplate (see 6.2~6.9, 2016 version of 6.2~6.9);