

ICS 29.280

CCS S 35



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

GB/T 32589-2025

Replacing GB/T 32589-2016

Railway applications - Conductor rail current collectors

轨道交通 导电轨受流器

Issued on: December 31, 2025

Implemented on: July 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 replaces GB/T 32589-2016 "Third Rail Current Collector for Rail Transit". Compared with GB/T 32589-2016, except for the structure... Aside from adjustments and editorial changes, the main technical changes are as follows:

- a) The scope has been changed (see Chapter 1, Chapter 1 of the.2016 edition);
- b) Terms and definitions have been changed (see Chapter 3, Chapter 3 of the.2016 edition);
- c) Environmental conditions, wiring and vehicle conditions, and power supply conditions have been changed (see 4.1, 4.2, 4.3; 4.1, 4.2, 4.3 in the.2016 version);
- d) The requirements and test methods for shock and vibration, and insulation performance have been revised (see 5.2, 5.4, 6.6, 6.7, 6.14, and 5.2 in the.2016 edition). 5.4, 6.6, 6.7, 6.14);
- e) The current collection characteristics, temperature rise requirements, and recovery protection requirements have been modified (see 5.3, 5.5, 5.8.1; 5.3, 5.5, 5.8.1 in the.2016 version);
- f) Requirements and test methods for weak connection protection and durability have been added (see 5.8.3, 5.11, 6.15, and 6.16);
- g) The technical requirements for mechanical stops, flow receiving slides, cables and seals, and cylinders have been changed (see 5.9.1, 5.9.2, 5.9.4, 5.9.5,.2016). Versions 5.9.1,

5.9.2, 5.9.4, and 5.9.5).

h) The technical requirements for the motor of the reciprocating mechanism have been added (see 5.9.6);

i) The configuration and installation requirements for fuses and fuse boxes have been changed (see 5.9.8,

1 Scope

GB/T 32589-2025 is the Chinese national standard covering the shoe that slides along a third rail - the contact force that must stay within a narrow band over the gaps and ramps, the wear of the shoe and the rail, the current it carries and the arcing when contact is lost. It replaces GB/T 32589-2016, under the National Railway Administration. It was issued on 31 December 2025 and has been in force since 1 July 2026, replacing GB/T 32589-2016. The document is under the responsibility of the National Railway Administration. This page is published from the official record of the 2025 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, technical requirements, inspection rules, reliability, availability, and maintainability of the conductive rail current collector for rail transit. The requirements for safety (RAMS) and marking, packaging, transportation and storage are described, along with the corresponding test methods. This document applies to current collectors that receive current from the top, bottom, or side; return current collectors should be handled in the same manner.

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 1239.1-2009 Technical conditions for cold-rolled cylindrical helical springs - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

5 Electrical Components and High-Voltage Fuses

GB/T 21414 Regulations for the Protection of Electrical Hazards in Rail Transit Locomotives and Rolling Stock

GB/T 21562 Standards and Examples for Reliability, Availability, Maintainability and Safety of Rail Transit

GB/T 21563-2018 Shock and Vibration Tests for Rail Transit Locomotives and Rolling Stock

GB/T 32347.1-2015 Environmental conditions for rail transit equipment - Part

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