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

GB/T 25890.1-2026

Replacing GB/T 25890.1-2010

**Railway applications - Fixed installations - DC switchgear - Part
1: General**

轨道交通 地面装置 直流开关设备 第1部分：总则

(English Translation)

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References

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 25890 "DC Switchgear for Ground Installations in Rail Transit". GB/T 25890 has been issued.

The following parts were laid out.

---Part 1: General Provisions;

---Part 2: DC Circuit Breakers;

---Part 3: Indoor DC disconnect switches, load switches and grounding switches;

---Part 4: Outdoor DC disconnect switches, load switches and grounding switches;

---Part 5: DC Switchgear Assemblies;

---Part 7-1.Application Guidelines for Dedicated Measurement, Control, and Protection Devices for DC Traction Power Supply Systems;

---Part 7-2.Dedicated Measurement, Control, and Protection Devices for DC Traction Power Supply Systems. Isolated Current Transmitters and Other Current Measurements equipment;

---Part 7-3.Dedicated Measurement, Control, and Protection Devices for DC Traction Power Supply Systems. Isolated Voltage Transmitters and Other Voltage Measurement Devices

equipment.

This document supersedes GB/T 25890.1-2010 "DC Switchgear for Ground Installations in Rail Transit - Part 1: General Rules" and is consistent with...

Compared with GB/T 25890.1-2010, apart from structural adjustments and editorial changes, the main technical changes are as follows.

a) Modified the following parameters. "Switchgear", "Grounding switch", "Rated short-time withstand current", and "(Rated ground fault current of switchgear assembly)".

Terms and definitions (see 3.1.3, 3.1.7, 3.2.6, 3.2.7; 3.1.3, 3.1.7, 3.2.7, 3.2.8 in the 2010 edition);

b) The following terms have been removed. "Low-voltage limiter," "Voltage of surge arrester and low-voltage limiter," "Current of surge arrester and low-voltage limiter," and "Breakdown discharge." Terms and definitions for "exposed conductive parts," "gas circuit breaker," and "trip unit auxiliary switch" (see 3.1.8 of the 2010 edition).

3.2.1.6, 3.2.6, 3.2.25, 3.3.3, 3.4.2, 3.4.17);

c) Added the terms and definitions for "initial rise rate", "cutoff current limiting circuit breaker", and "hybrid DC circuit breaker" (see 3.2.25).

3.4.6.3, 3.4.22);

d) The standard characteristics of the auxiliary and control circuits have been changed (see 5.2, 2010 version 5.2);

e) The requirements for the power frequency withstand voltage test voltage frequency have been changed (see 7.5.2, 2010 version 7.5.2);

f) The determination of the critical current was added (see 7.9);

g) The environmental conditions for outdoor surge arresters and low-voltage limiters have been removed (see B.1 of the 2010 edition).

This document is modified to adopt IEC 61992-1:2014 "DC switchgear for ground installations on rail transport - Part 1: General".

Compared with IEC 61992-1:2014, this document has undergone the following structural adjustments.

---Appendix A corresponds to Appendix C in IEC 61992-1:2014;

---Appendix C corresponds to Appendix D in IEC 61992-1:2014;

---Appendix D corresponds to Appendix E in IEC 61992-1:2014;

---Appendix E corresponds to Appendix A in IEC 61992-1:2014.

The technical differences between this document and IEC 61992-1:2014, and the reasons therefor, are as follows.

---IEC 60050-446:1983 and GB/T 2900.36-2021 have been replaced by the normatively referenced GB/T 2900.17-2024.

The standards IEC 60050-811:1991, GB/T 14048.1-2023, and GB/T 14048.5-2017 have replaced IEC 60947.

(Some parts) (see Chapter 3), GB/T 32350.1-2025 replaces EN50124-1:2001 and IEC 62271-200:2024 it replaces IEC 62271-200:2002 (see Chapter 3, 4.2, 7.5.2) to adapt to my country's technical conditions and increase operability;

---Due to the removal of content related to DC surge arresters and low-voltage limiters, the normative reference IEC 60099-1:1999 (see [link to IEC 60099-1:1999]) has also been removed.

Chapter 3, B.1 of IEC 61992-1:2014 and IEC 60099-4:2004 (see Chapter 3 of IEC 61992-1:2014) 3.2.6.2, B.1), to adapt to the industry system architecture;

---The following sections have been removed from IEC 61992-1:2014.3.1.8 "Low-voltage limiter", 3.2.1.6 "Voltage of surge arresters and low-voltage limiters", and 3.2.6 "Current of surge arresters and low-voltage limiters", 3.2.25 "Breakdown discharge", 3.3.3 "Exposed conductive parts" and 3.4.17 "Trip block auxiliary" the terminology and definition of "auxiliary switch" have been revised, and the terminology and definition of "operation" in section 3.1.13 have been modified for ease of use.

---The sections 3.1, 4.1, Chapter 6, and B.6 of IEC 61992-2:2014 that could be agreed upon by the "manufacturer" and "user" have been deleted, explicitly requiring...

Please make it easy to use;

---Added normative reference to GB/T 25890.2-2026 (see 4.2, Chapter 6, A.2) to enhance operability;

---Added normative references to GB/T 25890.3-2026, GB/T 25890.4-2026, and GB/T 25890.5-2026.

(See 4.2 and Chapter 6) to increase operability;

---IEC 60850:2000 (see 5.1.3) has been replaced with the normatively referenced GB/T 1402-2025 to adapt to my country's technical conditions;

---The standard rated operating current of the main circuit has been changed (see 5.1.4) to suit my country's technical conditions;

---The standard characteristics of the auxiliary and control circuits have been changed, replacing the normative reference GB/T 13539.1-2015.