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**National Standard of the People's Republic of China**

**中华人民共和国国家标准**

**GB 14050–2008**

**Replace GB 14050–1993**

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**Types and Safety Technical Requirements of  
System Earthing**

**系统接地的形式及安全技术要求**

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China**

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## Foreword

All technical provisions herein are compulsory ones.

This standard replaces GB 14050—1993.

Compared with GB 14050—1993, this standard makes the following main revisions:

——Editing revisions are made according to GB/T 1.1 and normative references are added in Chapter 2 hereof.

——The following terms and definitions are amended and supplemented in Chapter 3 hereof:

3.2 Exposed conductive part;

3.3 Extraneous conductive part;

3.4 Protective conductor (symbol PE);

3.5 Earthing conductor;

3.10 System earthing;

3.11 Protective earthing;

3.12 Main equipotential bonding.

——“Main equipotential bonding conductor must comply with provisions of 544.1 in GB 16895.3—2004” and “supplementary equipotential bonding conductor must comply with provisions of 544.2 in GB 16895.3—2004” are added to the end of 5.1.2 and 5.1.3 hereof respectively.

——“If necessary, residual current protector and fire monitoring and control system of different grades can be installed according to provisions of GB 13955.” is added to 5.1.4 hereof.

——5.1.8 is amended to be “provisions on section of protective conductor are specified according to GB 16895.3—2004.”

——The first paragraph of 5.2.3 is amended to be:

Overcurrent protector is adopted to prevent and protect “TN” system from electric shock. Where adoption of overcurrent protector can not satisfy requirements of 5.2.2, main equipotential bonding or partial equipotential bonding measure shall be adopted, residual current behavior protector can be installed or other indirect touch protective measures, such as equipotential bonding and residual current behavior protector, can be adopted to satisfy relevant requirements.”

——Original Appendix A is deleted.

——Other editing amendments.

This standard is proposed by the national technical committee of standardization for electrical safety (SAC/TC 25).

This standard is under the jurisdiction of the national technical committee of standardization for electric safety, who is responsible for the explanation of this standard.

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Previous editions replaced hereby include:

——GB 14050—1993.

# **Types and Safety Technical Requirements of System Earthing**

## **1 Scope**

This standard specified the types and safety technical requirements of system earthing with the purpose to protect the safety of people and equipments.

This standard is applicable to the power grid whose system nominal voltage is AC 220/380.

## **2 Normative Reference**

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. For dated reference, subsequent amendments to, or revisions of (excluding corrigendum), any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 4776–2008 Electrical Safety Terminology

GB 13995 Installation and Operation of Residual Current Operated Protective Devices

GB 16895.3–2004 Electrical Installations of Buildings -- Part 5-54: Selection and Erection of Electrical Equipment -- Earthing Arrangements, Protective Conductors and Protective Bonding Conductors (IEC 60364-5-54: 2002, IDT)

## **3 Terms and Definitions**

The following terms and definitions are applicable hereto.

### **3.1 Electrical installation**

Combination of relevant electrical equipments for one or several special purposes.

### **3.2 Exposed conductive part**

Conductive parts that are easy to be touched and are not live parts but can become live part in failure.

[GB/T 4776–2008, definition 3.1.10]

### **3.3 Extraneous conductive part**

Conductive parts that are not the part of electrical installation and easy to introduce potential (earth potential in general).

[GB/T 4776–2008, definition 3.1.11]

### **3.4 Neutral conductor (symbol N)**

Conductor that is connected to the neutral point of a system and can conduct electric



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