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

GB/T 19510.1-2023

Replacing GB 19510.1-2009

**Controlgear for electric light sources - Part 1: General and
safety requirements**

光源控制装置 第 1 部分:一般要求和安全要求

(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 19510 "Light Source Control Device". GB/T 19510 has published the following parts.

---Part 1. General requirements and safety requirements;

---Part 2-1. Special requirements for starting devices (except glow starters);

---Part 2-2. Special requirements for DC/AC electronic buck converters for tungsten lamps;

---Part 2-3. Special requirements for AC and/or DC electronic control devices for fluorescent lamps;

---Part 2-7. Special requirements for electronic control devices powered by safety service power supply (ESSS) for emergency lighting (self-contained);

- Part 2-8. Special requirements for ballasts for fluorescent lamps;
- Part 2-9. Special requirements for electromagnetic control devices for discharge lamps (except fluorescent lamps);
- Part 2-10. Special requirements for electronic inverters and frequency converters for high-frequency cold start tubular discharge lamps (neon lamps);
- Part 2-11. Special requirements for miscellaneous electronic circuits used with lamps;
- Part 2-12. Special requirements for DC or AC electronic ballasts for discharge lamps (except fluorescent lamps);
- Part 2-13. Special requirements for DC or AC electronic control devices for LED modules.

This document replaces GB 19510.1-2009 "Lamp control devices Part 1: General requirements and safety requirements" and is consistent with GB 19510.1- Compared with 2009, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- Changed the scope of application of this document (see Chapter 1, Chapter 1 of the 2009 edition);
- Added some terms and definitions (see 3.27~3.49);
- Changed the requirements for marking items (see 7.1, 2009 version of 7.1);
- Added relevant requirements for non-integrated terminal blocks (see Chapter 8);
- Added requirements for functional grounding devices (see 9.2);
- Changed the grounding requirements via independent control devices (see 9.5, Chapter 9 of the 2009 edition);
- Added requirements for bridging components in double insulation or reinforced insulation (see 10.4);
- Changed the test requirements for insulation resistance (see Chapter 11, Chapter 11 of the 2009 edition);
- Changed the requirements for electrical strength testing (see Chapter 12, Chapter 12 of the 2009 edition);
- Changed the requirements for fault status (see Chapter 14, Chapter 14 of the 2009 edition);
- Deleted the requirement that fully enclosed control devices or components should not be opened for inspection, nor should internal fault conditions be imposed (see the 2009 edition of Chapter 14);
- Added requirements for plugs and sockets in SELV or ELV circuits (see 15.3);

---Added insulation requirements between circuits and accessible parts and between circuits (see 15.4);

---Changed the requirements for creepage distances and clearances (see Chapter 16, Chapter 16 of the 2009 edition);

---Deleted the control that parts are sealed in a self-setting compound and the compound is bonded to the corresponding surface without leaving any gaps.

For control devices, the requirements for inspection of creepage distances and electrical clearances are not required (see Chapter 16 of the 2009 edition);

---Changed the requirements for marking resistance (see 18.5, 2009 version of 18.5);

---Changed the requirements for no-load output voltage (see Chapter 20, Chapter 20 of the 2009 edition);

---Changed the test requirements for determining whether a conductive part is a live part that may cause electric shock (see Appendix A, 2009 version Appendix A);

---Changed the requirements for fixed-temperature thermal protection control devices specified in GB/T 19510.209 (see B 9.5, 2009 version of B 9.5);

---Changed the qualification test requirements during manufacturing (see Appendix K, Appendix K of the 2009 version);

---Added special requirements for control devices that provide safety extra low voltage (SELV) (see Chapter 1, Chapter 4, 10.3, 16.1, Appendix L);

---Added material requirements for double insulation or reinforced insulation in control devices (see Chapter 4, Chapter 12, Appendix N);

--- Added additional requirements for built-in control devices with double insulation or reinforced insulation (see Chapter 4, Appendix O);

---Increased the creepage distance, electrical clearance and through-insulation distance (DTI) of control devices that prevent contamination through coating or potting requirements (see Appendix P).

This document is modified to adopt IEC 61347-1:2017 "Lamp control devices - Part 1. General requirements and safety requirements".

The technical differences between this document and IEC 61347-1:2017 and their reasons are as follows:

---Modify the term "light control device" to "light source control device" or "control device" for short, and improve the application of corresponding words in the full text.

Modifications have been made (see Chapter 3). The reason for the modification is to revise its meaning and make this document more accurate in application.