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

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**Electrical interface specification for phase-cut dimmer in
phase-cut dimmed lighting systems**

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Standardization Administration**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document is modified to adopt IEC TR63036:2016 "Specification for the electrical interface of phase-cut dimmers in phase-cut dimming lighting systems", document category

The type is adjusted from the IEC technical report to the national standard of our country:

The technical differences between this document and IEC TR63036:2016 and their reasons are as follows:

--- Replaced IEC 60050-845 with GB/T 2900:65 referenced normatively to adapt to my country's technical conditions and increase operability

(see Chapter 3);

--- Replaced IEC 60038 with the normatively quoted GB/T 156 to adapt to my country's technical conditions and increase operability (see 5:1,

5:2);

--- Replaced IEC 60364 (all parts) with the normatively quoted GB/T 16895 (all parts) to adapt to my country's technical regulations

components, increase operability (see 6:1);

--- Replaced IEC 62504 with the normatively quoted GB/T 24826 to adapt to my country's technical conditions and increase operability (see Section 3

chapter):

The following editorial changes have been made to this document:

--- Added "This document applies to the electrical interface of phase-cut dimmers in phase-cut dimming lighting systems" in "Scope" (see Chapter 1);

--- Changed Figure 2 of the editorial error in IEC TR63036:2016 (see Figure 2):

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

The purpose of this document is to establish the technical requirements for phase-cut dimmers for control equipment and self-ballasts: For a full picture of the technical requirements see

IEC TR63037, which contains technical requirements and test methods for control equipment and self-ballasted lamps:

Phase-cut dimmer in phase-cut dimming lighting system

Electrical Interface Specification

1 Scope

This document specifies the electrical interface and test procedures for controlling the brightness of mains-powered electronic lighting equipment using mains voltage phase-cut dimmers

These devices are intended to be controlled by mains voltage phase-cut dimmers, such as LED integrated lamps and light sources with external control gear:

This document applies to the electrical interface of phase-cut dimmers in phase-cut dimming lighting systems:

A similar circuit using a phase-cut dimmer but not including an electronic switch with adjustable phase-cut angle is implemented with reference to the same phase-cut dimmer:

Safety requirements are not included in this document, but are included in the respective product standards:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is

applicable to

this document:

GB/T 156 standard voltage (GB/T 156-2017, IEC 60038:2009, MOD)

GB/T 2900:65 Electrotechnical term lighting (GB/T 2900:65-2004, IEC 60050(845):1987, MOD)

GB/T 16895 (all parts) Low-voltage electrical installations [IEC 60364 (all parts)]

Note: GB/T 16895:1-2008 Low-voltage electrical installations Part 1: Basic principles, general characteristic evaluation and definitions (IEC 60364-1:2005, IDT)

GB/T 16895:2-2017 Low-voltage electrical installations Part 4-42: Safety protection Thermal effect protection (IEC 60364-4-42:

2010, IDT)

GB/T 16895:3-2017 Low-voltage electrical installations Part 5-54: Selection and installation of electrical equipment Grounding configuration and protective conductors

Body (IEC 60364-5-54:2011, IDT)

GB/T 16895:4-1997 Electrical installations for buildings - Part 5: Selection and installation of electrical equipment Chapter 53: Switchgear

and control equipment (IEC 364-5-53:1994, IDT)

GB/T 16895:5-2012 Low-voltage electrical installations Part 4-43: Safety protection Overcurrent protection (IEC 60364-4-43:

2008, IDT)

GB/T 16895:6-2014 Low-voltage electrical installations Part 5-52: Selection and installation of electrical equipment and wiring systems

(IEC 60364-5-52:2009, IDT)

GB/T 16895:7-2021 Low-voltage electrical installations Part 7-704: Requirements for special installations or locations Construction and demolition locations

Electrical installations (IEC 60364-7-704:2017, IDT)

GB/T 16895:8-2010 Low-voltage electrical installations Part 7-706: Requirements for special installations or places where activities are restricted

Conductive places (IEC 60364-7-706:2005, IDT)

GB/T 16895:9-2000 Electrical installations of buildings - Part 7: Requirements for special installations or places Section 707: Data office

Grounding requirements for electrical installations for management equipment (IEC

60364-7-707:1984, IDT)

GB/T 16895.10-2021 Low-voltage electrical installations Part 4-44: Safety protection against voltage disturbance and electromagnetic disturbance protection

(IEC 60364-4-44:2018, IDT)

GB/T 16895.13-2012 Low-voltage electrical installations Part 7-701: Requirements for special installations or places equipped with bathtubs and showers

places (IEC 60364-7-701:2006, IDT)