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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Withdrawn

AMENDMENT 2
AMENDEMENT 2

Lamp controlgear –
Part 1: General and safety requirements

Appareillages de lampes –
Partie 1: Exigences générales et exigences de sécurité

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FOREWORD

This amendment has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lamps and related equipment.

The text of this amendment is based on the following documents:

FDIS	Report on voting
34C/1023/FDIS	34C/1029/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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Add, after the Foreword, the following new text:

Introduction

Work is currently underway to modify creepage distances and clearances requirements regarding:

- working voltages with operating frequencies up to 30 kHz and with higher operating frequencies then 30 kHz;
- impulse and resonance ignition;
- basic, supplementary and reinforced insulation;
- insulation between circuits;
- coated or potted controlgear.

This information is expected to be incorporated into the future Edition 3 of IEC 61347-1.

1 Scope

Replace the fifth, sixth and seventh paragraphs by the following new paragraph:

Particular requirements for controlgears providing safety extra low voltage (from now on SELV) are given in Annex L.

2 Normative references

Add the following new references:

IEC 60065:2001, *Audio, video and similar electronic apparatus – Safety requirements*

IEC 60085:1987, *Electrical insulation – Thermal classification and designation*

IEC 60216 (all parts), *Electrical insulating materials – Properties of thermal endurance*

IEC 60598-2 (all Parts 2), *Luminaires – Part 2: Particular requirements*.

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60884-2-4, *Plugs and socket-outlets for household and similar purposes – Part 2-4: Particular requirements for plugs and socket outlets for SELV*

IEC 60906-3, *IEC System of plugs and socket-outlets for household and similar purposes – Part 3: SELV plugs and socket-outlets, 16 A 6 V, 12 V, 24 V, 48 V, a.c. and d.c.*

IEC 60950-1, *Information technology equipment – Safety – Part 1: General requirements*

IEC 61558-1:2005, *Safety of power transformers, power supplies, reactors and similar products – Part 1: General requirements and tests*

IEC 61558-2-6:2009, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers*

IEC 61558-2-16:2009, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units*

Replace the references to IEC 60317-0-1:1997 and IEC 60598-1:2003 by the following:

IEC 60317-0-1:2008, *Specifications for particular types of windings wires – Part 0-1: General requirements – Enamelled round copper wire*

IEC 60598-1:2008, *Luminaires – Part 1: General requirements and tests*

3 Terms and definitions

3.23
functional earthing (ground)

Replace the existing Notes 1 and 2 of the existing definition by the following Note to entry:

Note 1 to entry: In some cases, functional earthing may be necessary to facilitate starting and/or to avoid radio interference.

Add, after Definition 3.26, the following new definitions:

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3.27
extra-low voltage
ELV
voltage which does not exceed 50 V a.c. or 120 V ripple free d.c. between conductors, or between any conductor and earth (voltage band 1 of IEC 60449:1973)

Note 1 to entry: "Ripple free" is conventionally defined for sinusoidal ripple voltage as a ripple content of not more than 10 % r.m.s. The maximum peak value does not exceed 140 V for a nominal 120 V ripple-free d.c. system.

3.28
safety extra low voltage
SELV
ELV in a circuit which is isolated from the mains supply by insulation not less than that between the primary and secondary circuits of a safety isolating transformer according to IEC 61558-2-6

Note 1 to entry: Maximum voltage lower than 50 V a.c. r.m.s. or 120 V ripple free d.c. may be specified in particular requirements, especially when direct contact with current-carrying parts is allowed.

Note 2 to entry: The voltage limit should not be exceeded at any load between full loads and no-load when the source is a safety isolation transformer.

Note 3 to entry: "Ripple free" is conventionally an r.m.s. ripple voltage not more than 10 % of the d.c. component: the maximum peak value does not exceed 140 V for a nominal 120 V ripple free d.c. system and 70 V for a nominal 60 V ripple free system.

3.29
body
term used in this standard as a general term which includes all accessible metal parts, shafts, handles, knobs, grips and the like, accessible metal fixing screws and metal foil applied on accessible surfaces of insulating material and does not include non-accessible metal parts

3.30
impulse withstand category
DEPRECATED: overvoltage category
numeral defining a transient overvoltage condition

Note 1 to entry: Impulse withstand categories I, II, III and IV are used. For detailed information, see IEC 60664-1 and IEC 60598-1.

3.31
class I lamp controlgear
independent controlgear in which protection against electric shock does not rely on basic insulation only, but which includes an additional safety precaution in such a way that means are provided for the connection of accessible conductive parts to the protective (earthing) conductor in the fixed wiring of the installation in such a way that accessible conductive parts cannot become live in the event of a failure of the basic insulation

Note 1 to entry: Class I lamp independent controlgear may have parts with double or reinforced insulation.

Note 2 to entry: Class I lamp independent controlgear may have parts in which protection against shock relies on operation at safety extra-low voltage (SELV)

3.32
class II lamp controlgear
independent controlgear in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as double insulation or reinforced insulation are provided, there being no provision for protective earthing or reliance upon installation conditions

3.33
class III lamp controlgear
independent controlgear in which protection against electric shock relies on supply at safety extra-low voltage (SELV) and in which voltages higher than those of SELV are not generated

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3.34
protective impedance device
component or assembly of components the impedance and construction of which are such as to ensure that steady state touch current and charge are limited to a non-hazardous level

3.35
maximum working voltage
U_{out}
maximum occurring working voltage (r.m.s.) between the output terminals or between the output terminals and earth, during normal or abnormal operating condition

Note 1 to entry: Transients and ignition voltages have to be neglected.

3.36
basic insulation
insulation of parts which provide protection against electrical shock under fault-free conditions

3.37
double insulation
insulation of parts with two layers of insulation which provide protection against electrical shock under single fault condition

3.38
reinforced insulation
Insulation of parts which provide a degree of protection as double insulation

4 General requirements

Add, after the second paragraph, the following new paragraph:

Requirements for insulation materials used for double or reinforced insulation of controlgear are specified in Annex N of this standard.

Add, after the third paragraph, the following new paragraph:

Built-in electronic controlgear with double or reinforced insulation shall comply additionally with the requirements of Annex O.

Add, at the end of Clause 4, the following new paragraph:

Controlgears providing SELV shall comply with the additional requirements given in Annex L. This includes especially insulation resistance, electric strength, creepage distances and clearances between the primary and secondary circuit.

5 General notes on tests

Add, at the end of Subclause 5.3, the following new paragraph:

If the tests of 14.3 or 15.5 of IEC 61558-1:2005 have to made, three additional samples are needed. These samples are used only for the test of 14.3 or 15.5 of IEC 61558-1:2005, respectively.

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