

LAMPIDE JUHTIMISSEADISED
OSA 1: ÜLD- JA OHUTUSNÕUDED

Lamp controlgear
Part 1: General and safety requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Lamp controlgear - Part 1: General and safety requirements (IEC 61347-1:2015)

Appareillages de lampes - Partie 1: Exigences générales et exigences de sécurité
(IEC 61347-1:2015)

Geräte für Lampen - Teil 1: Allgemeine und Sicherheitsanforderungen
(IEC 61347-1:2015)

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Foreword

The text of document 34C/1118/FDIS, future edition 3 of IEC 61347-1, prepared by SC 34C, "Auxiliaries for lamps", of IEC TC 34, "Lamps and related equipment", was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61347-1:2015.

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This document supersedes EN 61347-1:2008

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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 61347-1:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60038	NOTE	Harmonized as EN 60038.
IEC 60155:1993	NOTE	Harmonized as EN 60155:1995.
IEC 60364-4-44	NOTE	Harmonized as HD 60364-4-444.
IEC 60598 (Series)	NOTE	Harmonized as EN 60598 (Series).
IEC 60664-3	NOTE	Harmonized as EN 60664-3.
IEC 60925:1989	NOTE	Harmonized as EN 60925:1991.
IEC 60925:1989/AMD1:1996	NOTE	Harmonized as EN 60925:1991/A1:1996.
IEC 60925:1989/AMD2:2001	NOTE	Harmonized as EN 60925:1991/A2:2001.
IEC 60927:2007	NOTE	Harmonized as EN 60927:2007.
IEC 60927:2007/AMD1:2013	NOTE	Harmonized as EN 60927:2007/A1:2013.

IEC 60929:2006	NOTE	Harmonized as EN 60929:2006.
IEC 60950-1	NOTE	Harmonized as EN 60950-1.
IEC 60990:1999	NOTE	Harmonized as EN 60990:1999.
IEC 61047:2004	NOTE	Harmonized as EN 61047:2004.
IEC 61347-2-1:2000	NOTE	Harmonized as EN 61347-2-1:2001.
IEC 61347-2-1:2000/AMD1:2005	NOTE	Harmonized as EN 61347-2-1:2001/A1:2006.
IEC 61347-2-2:2011	NOTE	Harmonized as EN 61347-2-2:2012.
IEC 62384	NOTE	Harmonized as EN 62384.

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INTRODUCTION

This part of IEC 61347 provides a set of general and safety requirements and tests which are considered to be generally applicable to most types of lamp controlgear and which can be called up as required by the different parts that make up IEC 61347-2. This Part 1 is thus not to be regarded as a specification in itself for any type of lamp controlgear, and its provisions apply only to particular types of lamp controlgear, to the extent determined by the appropriate Part 2 of IEC 61347.

The parts which make up IEC 61347-2, in referring to any of the clauses of this part, specify the extent to which such a clause is applicable and the order in which the tests are to be performed; they also include additional requirements as necessary. The order in which the clauses of this part are numbered has no particular significance, as the order in which their provisions apply is determined for each type of lamp controlgear by the appropriate Part 2 of the IEC 61347-2 series. All such parts are self-contained and therefore do not contain references to each other.

Where the requirements of any of the clauses of this part of IEC 61347 are referred to in the various parts that make up IEC 61347-2 by the phrase "The requirements of clause n of IEC 61347-1 apply", this phrase will be interpreted as meaning that all requirements of the clause in question of Part 1 apply, except any which are clearly inapplicable to the particular type of lamp controlgear covered by the Part 2 concerned.

Lamp controlgear which complies with the text of this standard will not necessarily be judged to comply with the safety principles of the standard if, when examined and tested, it is found to have other features which impair the level of safety covered by these requirements.

Lamp controlgear employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirement and, if found to be substantially equivalent, may be judged to comply with the safety principles of the standard.

Performance requirements for lamp controlgear are the subject of IEC 60921, IEC 60923, IEC 60925, IEC 60927, IEC 60929, IEC 61047 and IEC 62384 as appropriate for the type of lamp controlgear.

Safety requirements ensure that electrical equipment constructed in accordance with these requirements does not endanger the safety of persons, domestic animals or property when properly installed and maintained and used in applications for which it was intended.

Requirements for electronic lamp controlgear for other types of lamps will be the subject of a separate standard, as the need arises.

Controlgear can consist of a printed circuit board and may incorporate the following:

- controlgear;
- lampholder(s);
- switch(es);
- supply terminals.

The lamp controlgear should comply with this standard.

The lampholders(s), switch(es) and supply terminals should comply with their own standards.

LAMP CONTROLGEAR –

Part 1: General and safety requirements

1 Scope

This part of IEC 61347 specifies general and safety requirements for lamp controlgear for use on d.c. supplies up to 250 V and/or a.c. supplies up to 1 000 V at 50 Hz or 60 Hz.

This standard also covers lamp controlgear for lamps which are not yet standardized.

Tests dealt with in this standard are type tests. Requirements for testing individual lamp controlgear during production are not included.

Requirements for semi-luminaires are given in IEC 60598-1:2014 (see definition 1.2.60).

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

It can be expected that lamp control gear which comply with this standard will not compromise safety between 90 % and 110 % of their rated supply voltage in independent use and when operated in luminaires complying with the safety standard IEC 60598-1 and the relevant part IEC 60598-2-xx and with lamps complying with the relevant lamp standards. Performance requirements may require tighter limits.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60065:2001¹, *Audio, video and similar electronic apparatus – Safety requirements*

IEC 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60081, *Double-capped fluorescent lamps – Performance specifications*

IEC 60085:2007, *Electrical insulation – Thermal classification and designation*

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*
IEC 60112:2003/AMD1:2009

IEC 60216 (all parts), *Electrical insulating materials – Thermal endurance properties*

IEC 60317-0-1:2013, *Specifications for particular types of windings wires – Part 0-1: General requirements – Enamelled round copper wire*

¹ Seventh edition. This edition has been replaced in 2014 by IEC 60065:2014.

IEC 60384-14, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

IEC 60417, *Graphical symbols for use on equipment*. Available at <http://www.graphical-symbols.info/equipment>

IEC 60449:1973, *Voltage bands for electrical installations of buildings*
IEC 60449:1973/AMD1:1979

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
IEC 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013

IEC 60598-1:2014, *Luminaires – Part 1: General requirements and tests*

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

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

IEC 60664-4:2005, *Insulation coordination for equipment within low-voltage systems – Part 4: Consideration of high-frequency voltage stress*

IEC 60691:2002, *Thermal-links – Requirements and application guide*

IEC 60695-2-10, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60730-2-3, *Automatic electrical controls for household and similar use – Part 2: Particular requirements for thermal protectors for ballasts for tubular fluorescent lamps*

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 60901, *Single-capped fluorescent lamps – Performance specifications*

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 60921:2004, *Ballasts for tubular fluorescent lamps – Performance requirements*
IEC 60921:2004/AMD1:2006

IEC 60923:2005, *Auxiliaries for lamps – Ballasts for discharge lamps (excluding tubular fluorescent lamps) – Performance requirements*

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

IEC 61180-1:1992, *High-voltage test techniques for low voltage equipment – Part 1: Definitions, test and procedure requirements*

IEC 61189-2:2006, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 2: Test methods for materials for interconnection structures*

IEC 61249-2 (all parts), *Materials for printed boards and other interconnecting structures*

IEC 61347-2 (all parts), *Lamp controlgear – Part 2: Particular requirements*

IEC 61347-2-8, *Lamp controlgear – Part 2-8: Particular requirements for ballasts for fluorescent lamps*

IEC 61347-2-9:2012, *Lamp controlgear – Part 2-9: Particular requirements electromagnetic controlgear for discharge lamps (excluding fluorescent lamps)*

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*

ISO 4046-4:2002, *Paper, board, pulp and related terms – Vocabulary – Part 4: Paper and board grades and converted products*

3 Terms and definitions

For the purposes of document, the following terms and definitions apply.

3.1

lamp controlgear

one or more components between the supply and one or more lamps which may serve to transform the supply voltage, limit the current of the lamp(s) to the required value, provide starting voltage and preheating current, prevent cold starting, correct power factor or reduce radio interference

3.1.1

built-in lamp controlgear

lamp controlgear generally designed to be built into a luminaire, a box, an enclosure or the like and not intended to be mounted outside a luminaire, etc. without special precautions

Note 1 to entry: The controlgear compartment in the base of a road lighting column is considered to be an enclosure.

3.1.2

independent lamp controlgear

lamp controlgear consisting of one or more separate elements so designed that it can be mounted separately outside a luminaire, with protection according to the marking of the lamp controlgear and without any additional enclosure

Note 1 to entry: This may consist of a built-in lamp controlgear housed in a suitable enclosure which provides all the necessary protection according to its markings.