

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Lamp controlgear –  
Part 1: General and safety requirements**

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



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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## CONTENTS

FOREWORD.....	4
<b>INTRODUCTION (to amendment 2) .....</b>	<b>6</b>
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references .....	8
3 Terms and definitions .....	10
4 General requirements .....	15
5 General notes on tests .....	15
6 Classification.....	16
7 Marking .....	16
8 Terminals .....	19
<b>9 <del>Provisions for protective</del> Earthing .....</b>	<b>19</b>
10 Protection against accidental contact with live parts .....	21
11 Moisture resistance and insulation.....	22
12 Electric strength .....	23
13 Thermal endurance test for windings of ballasts .....	24
14 Fault conditions .....	28
15 Construction.....	32
16 Creepage distances and clearances .....	33
17 Screws, current-carrying parts and connections.....	35
18 Resistance to heat, fire and tracking.....	36
19 Resistance to corrosion .....	36
20 No-load output voltage .....	37
Annex A (normative) Test to establish whether a conductive part is a live part which may cause an electric shock .....	38
Annex B (normative) Particular requirements for thermally protected lamp controlgear .....	39
Annex C (normative) Particular requirements for electronic lamp controlgear with means of protection against overheating.....	48
Annex D (normative) Requirements for carrying out the heating tests of thermally protected lamp controlgear .....	51
Annex E (normative) Use of constant S other than 4 500 in $t_w$ tests .....	54
Annex F (normative) Draught-proof enclosure.....	57
Annex G (normative) Explanation of the derivation of the values of pulse voltages .....	58
Annex H (normative) Tests .....	64
Annex I (normative) Additional requirements for built-in magnetic ballasts with double or reinforced insulation .....	70
Annex J (normative) Schedule of more onerous requirements.....	73
Annex K (informative) Conformity testing during manufacture .....	74
<b>Annex L (normative) Particular additional requirements for controlgears providing SELV .....</b>	<b>76</b>

Annex M (informative) Dielectric strength test voltages for controlgear intended for the use in impulse withstand Category III .....	86
Annex N (normative) Requirements for insulation materials used for double or reinforced insulation .....	87
Annex O (normative) Additional requirements for built-in electronic controlgear with double or reinforced insulation .....	91
Bibliography.....	94
Figure 1 – Relation between winding temperature and endurance test duration .....	26
Figure 2 – Creepage distances between conductors on printed boards not conductively connected to the supply mains.....	30
Figure 3 – Test circuit for controlgear .....	32
Figure B.1 – Test circuit for thermally protected lamp controlgear .....	46
Figure D.1 – Example of heating enclosure for thermally protected ballasts.....	53
Figure E.1 – Assessment of claimed value of S.....	56
Figure G.1 – Circuit for measuring short-duration pulse energy.....	61
Figure G.2 – Suitable circuit for producing and applying long-duration pulses.....	63
Figure H.1 – Test arrangement for heating test .....	69
Figure N.1a – Mandrel .....	90
Figure N.1b – Position of mandrel.....	90
Figure N.1c – Position of metal foil on paper.....	90
Figure N.1 – Test arrangement for checking mechanical withstanding of insulating materials in thin sheet layers .....	90
Table 1 – Electric strength test voltage .....	23
Table 2 – Theoretical test temperatures for ballasts subjected to an endurance test duration of 30 days .....	27
Table 3 – Minimum distances for a.c. (50/60 Hz) sinusoidal voltages .....	34
Table 4 – Minimum distances for non-sinusoidal pulse voltages.....	35
Table 5 – Working voltage and $U_{out}$ steps .....	18
Table B.1 – Thermal protection operation .....	43
Table B.2 – Thermal protection operation .....	44
Table G.1 – Component values for measurement of pulse energy.....	62
Table K.1 – Minimum values for electrical tests .....	75
Table L.1 – Symbols for marking if marking is used .....	78
Table L.2 – Values of temperatures in normal use .....	79
Table L.3 – Values of insulation resistances .....	80
Table L.4 – Table of dielectric strength test voltages for controlgears intended for use in impulse withstand Category II .....	81
Table L.5 – Creepage distances (cr), clearances (cl) and distances through insulation (dti) for the impulse withstand category II material group III a ( $175 < CTI < 400$ ) .....	83
Table M.1 – Table of dielectric strength test voltages for controlgears intended for use in impulse withstand Category III .....	86
Table N.1 – Electric strength test voltage required during the mandrel test .....	89

# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LAMP CONTROLGEAR –

### Part 1: General and safety requirements

#### FOREWORD

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**This consolidated version of IEC 61347-1 consists of the second edition (2007) [documents 34C/776/FDIS and 34C/779/RVD], its amendment 1 (2010) [documents 34C/916/FDIS and 34C/918/RVD] and its amendment 2 (2012) [documents 34C/1023/FDIS and 34C/1029/RVD]. It bears the edition number 2.2.**

**The technical content is therefore identical to the base edition and its amendments and has been prepared for user convenience. A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2. Additions and deletions are displayed in red, with deletions being struck through.**

International Standard IEC 61347-1 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lamps and related equipment.

The definition clause has been extended (rated no-load output voltage, controllable ballasts, control terminals, control signal). General requirements for lamp control gear which do not have their own enclosure have been added. The informative information (for ballasts in lamp standards) is now transformed into a normative requirement (in ballast standards). The test schedule has been minimised where possible, see 5.7 and Annex J. For printed circuit boards, the (non-) inflammability requirements have been specified. An Annex on conformity testing during manufacture has been added.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 1 is to be used in conjunction with the appropriate part 2, which contains clauses to supplement or modify the corresponding clauses in Part 1, to provide the relevant requirements for each type of product.

NOTE In this standard, the following print types are used:

- Requirements proper: in roman type.
- *Test specifications: in italic type.*
- Explanatory matter: in smaller roman type.

A list of all parts of the IEC 61347 series, published under the general title *Lamp controlgear*, can be found on the IEC website.

The committee has decided that the contents of the present publication and its amendments 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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## INTRODUCTION (to amendment 2)

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-

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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 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 (in preparation) as appropriate for the type of lamp controlgear.

**NOTE** 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.

**NOTE** 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.

1. 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 in individual lamp controlgear during production are not included.

Requirements for semi-luminaires are given in IEC 60598-1 (see definition 1.2.10).

~~In addition to the requirements given in this Part 1 of IEC 61347, Annex F sets out general and safety requirements applicable to thermally protected lamp controlgear.~~

~~Annex C sets out additional general and safety requirements, and they apply to electronic lamp controlgear with means of protection against overheating.~~

~~Additional requirements for built-in ballasts with double or reinforced insulation are given in Annex L.~~

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

NOTE 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 reference documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

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

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

IEC 60317-0-1:1997 2008, *Specifications for particular types of windings wires – Part 0-1: General requirements – Section 1: Enamelled round copper wire*<sup>1)</sup>

~~Amendment 1 (1999)~~

~~Amendment 2 (2005)~~

<sup>1)</sup> There exists a consolidated edition 2.2 (2005) including the base publication and its Amendments 1 and 2.