



# SLOVENSKI STANDARD

## SIST EN 61347-2-2:2002

01-december-2002

Nadomešča:

SIST EN 61046:2000

SIST EN 61046:2000/A1:2001

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**Regulatorji žarnic - 2-2. del: Posebne zahteve za enosmerno ali izmenično napajane elektronske pretvornike za žarnice (IEC 61347-2-2:2000)**

Lamp controlgear - Part 2-2: Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps

**iTeh STANDARD PREVIEW**

Geräte für Lampen - Teil 2-2: Besondere Anforderungen an gleich- oder wechselstromversorgte elektronische Konverter für Glühlampen

[SIST EN 61347-2-2:2002](https://standards.it-eu-api.com/standards/sist/2cbca398-6570-4d9c-a7b7-4db41e0335cd/sist-en-61347-2-2-2002)

Appareillages de lampes - Partie 2-2: Prescriptions particulières pour les convertisseurs abaisseurs électroniques alimentés en courant continu ou alternatif pour lampes à incandescence

**Ta slovenski standard je istoveten z: EN 61347-2-2:2001**

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**ICS:**

29.130.01	Stikalne in krmilne naprave na splošno	Switchgear and controlgear in general
29.140.99	Drugi standardi v zvezi z žarnicami	Other standards related to lamps

**SIST EN 61347-2-2:2002**

**en**

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English version

**Lamp controlgear**  
**Part 2-2: Particular requirements for d.c. or a.c. supplied**  
**electronic step-down convertors for filament lamps**  
(IEC 61347-2-2:2000)

Appareillages de lampes  
Partie 2-2: Prescriptions particulières  
pour les convertisseurs abaisseurs  
électroniques alimentés en courant  
continu ou alternatif pour lampes à  
incandescence  
(CEI 61347-2-2:2000)

Geräte für Lampen  
Teil 2-2: Besondere Anforderungen an  
gleich- oder wechselstromversorgte  
elektronische Konverter für Glühlampen  
(IEC 61347-2-2:2000)

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This European Standard was approved by CENELEC on 2000-11-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

## Foreword

The text of document 34C/499/FDIS, future edition 1 of IEC 61347-2-2, prepared by SC 34C, Auxiliaries for lamps, of IEC TC 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61347-2-2 on 2000-11-01.

This European Standard, together with EN 61347-1, supersedes EN 61046:1994 + A1:1996.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-11-01

This standard shall be used in conjunction with EN 61347-1:2001.

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

- requirements : in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Annexes designated "normative" are part of the body of the standard.

In this standard, annexes A to F, H, I and ZA are normative and annex G is informative. Annex ZA has been added by CENELEC.

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**Endorsement notice**

The text of the International Standard IEC 61347-2-2:2000 was approved by CENELEC as a European Standard without any modification.

**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60051-1	Series	Direct acting indicating analogue electrical measuring instruments and their accessories	EN 60051	Series
IEC 60065 (mod)	<sup>1)</sup>	Audio, video and similar electronic apparatus - Safety requirements	EN 60065 + corr. June	1998 <sup>2)</sup> 1999
IEC 60083	<sup>1)</sup>	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	<sup>1)</sup>	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990 <sup>2)</sup>
IEC 60127	Series	Miniature fuses	EN 60127	Series
IEC 60269-2	<sup>1)</sup>	Low-voltage fuses Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)	EN 60269-2	1995 <sup>2)</sup>
IEC 60269-2-1 (mod)	<sup>1)</sup>	Part 2-1: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) -- Sections I to V: Examples of types of standardized fuses	HD 630.2.1 S4	2000 <sup>2)</sup>
IEC 60269-3	1987	Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)	EN 60269-3	1995

<sup>1)</sup> undated reference.

<sup>2)</sup> valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60269-3-1 (mod)	1 <sup>1)</sup>	Part 3-1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) -- Sections I to IV	HD 630.3.1 S2	1997 <sup>2)</sup>
IEC 60357 (mod)	1 <sup>1)</sup>	Tungsten halogen lamps (non-vehicle)	EN 60357	1988 <sup>2)</sup>
IEC 60364-4-41 (mod)	1 <sup>1)</sup>	Electrical installations of buildings Part 4: Protection for safety -- Chapter 41: Protection against electric shock	HD 384.4.41 S2	1996 <sup>2)</sup>
IEC 60449	1 <sup>1)</sup>	Voltage bands for electrical installations of buildings	HD 193 S2	1982 <sup>2)</sup>
IEC 60454	Series	Specifications for pressure-sensitive adhesive tapes for electrical purposes	EN 60454	Series
IEC 60598-2-6	1 <sup>1)</sup>	Luminaires Part 2: Particular requirements -- Section 6: Luminaires with built-in transformers or convertors for filament lamps	EN 60598-2-6	1994 <sup>2)</sup>
IEC 60742 (mod) + A1 (mod)	1983 1992	Isolating transformers and safety isolating transformers - Requirements	EN 60742	1995
IEC 60906	Series	IEC System of plugs and socket outlets for household and similar purposes	-	-
IEC 60906-1	1 <sup>1)</sup>	IEC System of plugs and socket-outlets for household and similar purposes Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-
IEC 61047	1 <sup>1)</sup>	D.C. or a.c. supplied electronic step-down convertors for filament lamps - Performance requirements	EN 61047	1992 <sup>2)</sup>
IEC 61347-1	2000	Lamp controlgear Part 1: General and safety requirements	EN 61347-1	2001

NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC

61347-2-2

Première édition  
First edition  
2000-10

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Appareillages de lampes –

Partie 2-2:  
Prescriptions particulières pour  
les convertisseurs abaisseurs électroniques  
alimentés en courant continu ou alternatif  
pour lampes à incandescence

ITALIAN STANDARD PREVIEW  
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Lamp controlgear –

Part 2-2:  
Particular requirements for d.c.  
or a.c. supplied electronic step-down  
convertors for filament lamps

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
PRICE CODE

V

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For price, see current catalogue

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LAMP CONTROLGEAR –

**Part 2-2: Particular requirements for d.c. or a.c. supplied  
electronic step-down convertors for filament lamps**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61347-2-2 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lamps and related equipment.

This first edition of IEC 61347-2-2, together with IEC 61347-1, cancels and replaces the second edition of IEC 61046, published in 1993, and constitutes a minor revision.

This standard shall be used in conjunction with IEC 61347-1. It was established on the basis of the first edition (2000) of that edition.

This part 2 supplements or modifies the corresponding clauses in IEC 61347-1, so as to convert that publication into the IEC Standard: Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps.

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.

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

FDIS	Report on voting
34C/499/FDIS	34C/513/RVD

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

Annexes A, B, C, D, E, F, H and I form an integral part of this standard.

Annex G is for information only.

IEC 61347 consists of the following parts, under the general title *Lamp controlgear*:

- Part 1: General and safety requirements
- Part 2-1: Particular requirements for starting devices (other than glow starters)
- Part 2-2: Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps
- Part 2-3: Particular requirements for a.c. supplied electronic ballasts for fluorescent lamps
- Part 2-4: Particular requirements for d.c. electronic ballasts for general lighting
- Part 2-5: Particular requirements for d.c. supplied electronic ballasts for public transport lighting
- Part 2-6: Particular requirements for d.c. supplied electronic ballasts for aircraft lighting
- Part 2-7: Particular requirements for d.c. supplied electronic ballasts for emergency lighting
- Part 2-8: Particular requirements for ballasts for fluorescent lamps
- Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps)
- Part 2-10: Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes)
- Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires<sup>1)</sup>

The committee has decided that the contents of this publication will remain unchanged until 2003. At this date, the publication will be

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

<sup>1)</sup> To be published.

## INTRODUCTION

This first edition of IEC 61347-2-2, published in conjunction with IEC 61347-1, represents an editorial review of IEC 61046. The formatting into separately published parts provides for ease of future amendments and revisions. Additional requirements will be added as and when a need for them is recognized.

This standard, and the parts which make up IEC 61347-2, in referring to any of the clauses of IEC 61347-1, 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. All parts which make up IEC 61347-2 are self-contained and, therefore, do not include references to each other.

Where the requirements of any of the clauses of IEC 61347-1 are referred to in this standard by the phrase "The requirements of clause n of IEC 61347-1 apply", this phrase is interpreted as meaning that all requirements of the clause in question of part 1 apply, except any which are clearly inapplicable to the specific type of lamp controlgear covered by this particular part of IEC 61347-2.

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## LAMP CONTROLGEAR –

### Part 2-2: Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps

#### 1 Scope

This part of IEC 61347 specifies particular safety requirements for electronic step-down convertors for use on d.c. supplies up to 250 V or a.c. supplies up to 1 000 V at 50 Hz or 60 Hz and rated output voltage  $\leq 50$  V r.m.s. at a frequency deviating from the supply frequency or  $\leq 50\sqrt{2}$  V unsmoothed d.c. between conductors or between any conductor and earth, associated with tungsten-halogen lamps as specified in IEC 60357 and other filament lamps.

NOTE The limit of 50 V rated output voltage is in accordance with band I of IEC 60449.

Particular requirements for electronic step-down convertors with means of protection against overheating are given in annex C.

Particular requirements for stationary independent SELV convertors, which are part of the wiring in installations, are given in annex I.

Performance requirements are covered by IEC 61047.

Plug-in convertors, being part of the luminaire, are covered as for built-in convertors by the additional requirements of the luminaire standard.

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#### 2 Normative references

For the purpose of this part of IEC 61347, the normative references given in clause 2 of IEC 61347-1 which are mentioned in this standard apply, together with the following normative references.

IEC 60051 (all parts), *Direct acting indicating analogue electrical measuring instruments and their accessories*

IEC 60065, *Safety requirements for mains operated electronic and related apparatus for household and similar general use*

IEC 60083, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60085, *Thermal evaluation and classification of electrical insulation*

IEC 60127 (all parts), *Miniature fuses*

IEC 60269-2, *Low-voltage fuses – Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)*

IEC 60269-2-1, *Low-voltage fuses – Part 2-1: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Sections I to V: Examples of types of standardized fuses*

IEC 60269-3:1987, *Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)*

IEC 60269-3-1, *Low-voltage fuses – Part 3-1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Sections I to IV*

IEC 60357, *Tungsten-halogen lamps (non-vehicle)*

IEC 60364-4-41, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 41: Protection against electric shock*

IEC 60449, *Voltage bands for electrical installations of buildings*

IEC 60454 (all parts), *Specifications for pressure-sensitive adhesive tapes for electrical purposes*

IEC 60598-2-6, *Luminaires – Part 2: Particular requirements – Section 6: Luminaires with built-in transformers for filament lamps*

IEC 60742:1983, *Isolating transformers and safety isolating transformers – Requirements Amendment 1 (1992)*

IEC 60906 (all parts), *IEC system of plugs and socket-outlets for household and similar purposes*

<https://standards.iteh.ai/catalog/standards/sist/2cbca298-5f70-4dbc-a7b2-4db41e0335cd/sist-en-61347-2-2-2002>

IEC 60906-1, *IEC system of plugs and socket-outlets for household and similar purposes – Part 1: Plugs and socket-outlets 16 A 250 V a.c.*

IEC 61047, *DC or a.c. supplied electronic step-down convertors for filament lamps – Performance requirements*

IEC 61347-1, *Lamp controlgear – Part 1: General and safety requirements*

### 3 Definitions

For the purpose of this part of IEC 61347, the definitions given in clause 3 of IEC 61347-1 apply, together with the following:

#### 3.1

##### **electronic step-down convertor** (convertor)

unit inserted between the supply and one or more tungsten-halogen or other filament lamps which serves to supply the lamp(s) with its (their) rated voltage, generally at high frequency. The unit may consist of one or more separate components and may include means for dimming, correcting the power factor and suppressing radio interference