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Controlgear for electric light sources - Safety - Part 2-2: Particular requirements - Electronic step-down convertors for filament lamps

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61347-2-2:2024 sisaldab Euroopa standardi EN IEC 61347-2-2:2024 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61347-2-2:2024 consists of the English text of the European standard EN IEC 61347-2-2:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.12.2024.	Date of Availability of the European standard is 13.12.2024.
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Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EN IEC 61347-2-2

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Controlgear for electric light sources - Safety - Part 2-2: Particular requirements - Electronic step-down convertors for filament lamps (IEC 61347-2-2:2024)

Appareillages de commande pour les sources de lumière électriques - Sécurité - Partie 2-2: Exigences particulières - Convertisseurs abaisseurs électroniques pour lampes à incandescence
(IEC 61347-2-2:2024)

Geräte für elektrische Lichtquellen - Sicherheit - Teil 2-2: Besondere Anforderungen - elektronische Konverter für Glühlampen
(IEC 61347-2-2:2024)

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European foreword

The text of document 34C/1597/FDIS, future edition 3 of IEC 61347-2-2, prepared by SC 34C "Auxiliaries for lamps" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61347-2-2:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2025-12-31
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IEC 60357	NOTE	Approved as EN 60357
IEC 61140:2016	NOTE	Approved as EN 61140:2016 (not modified)
IEC 61047	NOTE	Approved as EN 61047
IEC 61347-2-2:2011	NOTE	Approved as EN 61347-2-2:2012 (not modified)

IEC 61347-2-2

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NORME INTERNATIONALE

Controlgear for electric light sources – Safety – Part 2-2: Particular requirements – Electronic step-down convertors for filament lamps

Appareillages de commande pour les sources de lumière électriques – Sécurité – Partie 2-2: Exigences particulières – Convertisseurs abaisseurs électroniques pour lampes à incandescence

IEC 61347-2-2:2024-06(en-fr)

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IEC 61347-2-2

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CONTROLGEAR FOR ELECTRIC LIGHT SOURCES – SAFETY –

Part 2-2: Particular requirements – Electronic step-down convertors for filament lamps

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 61347-2-2 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lighting. It is an International Standard.

This third edition cancels and replaces the second edition published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) alignment with respect to the fourth edition of IEC 61347-1;
   – introduction of dated references to the fourth edition of IEC 61347-1 as appropriate;
   – deletion of the clauses and subclauses which are either no longer relevant or now covered in IEC 61347-1;

b) scope extension to 1 500 V for direct current;

c) scope clarification;

d) deletion of unused definitions;

e) revision of information and marking requirements;

f) revision of compliance conditions for the measurement of the output voltage during fault condition testing and during thermal testing.

The text of this International Standard is based on the following documents:

Draft	Report on voting
34C/1597/FDIS	34C/1602/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is intended to be used in conjunction with IEC 61347-1:2024. Where the requirements of any of the clauses of IEC 61347-1:2024 are referred to in this document by the phrase "IEC 61347-1:2024, Clause n applies", this phrase is interpreted as meaning that all the requirements of the clause in question of IEC 61347-1:2024 apply, except any which are clearly inapplicable to the specific type of controlgear covered by this document.

A list of all parts in the IEC 61347, published under the general title *Controlgear for electric light sources – Safety,* can be found on the IEC website.

Future documents in this series will carry the new general title as cited above. Titles of existing documents in this series will be updated at the time of the next edition.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

This document specifies safety requirements for filament lamp controlgear. All general requirements, which apply to controlgear for electric light sources in general, regardless of the specific type of light source in question, are contained in IEC 61347-1. The corresponding general requirements apply to filament lamp controlgear by clause-wise reference in this document to any of the clauses of IEC 61347-1, thereby specifying the extent to which such a clause is applicable and the order in which the tests are performed.

In the same way, further documents exist specifying individual safety requirements for different types of controlgear related to different types of electric light sources which, together with this document, constitute the IEC 61347-2 series.

Any such parts of the IEC 61347-2 series are the leading documents for the safety assessment of the corresponding type of controlgear; it is not IEC 61347-1.

Also, all parts of the IEC 61347-2 series are self-contained and therefore typically do not include references to each other.

CONTROLGEAR FOR ELECTRIC LIGHT SOURCES – SAFETY –

Part 2-2: Particular requirements – Electronic step-down convertors for filament lamps

1 Scope

This part of IEC 61347 specifies safety requirements for electronic step-down convertors for use on DC supplies of up to 1 500 V or AC supplies of up to 1 000 V at 50 Hz or 60 Hz, and with a rated output voltage ≤ 50 V (RMS) at a frequency deviating from the supply frequency, or 120 V ripple free DC between conductors and between any conductor and earth, associated with tungsten-halogen lamps as specified in IEC 60357, and other filament lamps.

NOTE 1 The limits of 50 V (alternating current) and 120 V (direct current) are in accordance with the extra-low-voltage (ELV) band of IEC 61140:2016.

NOTE 2 Performance requirements are covered by IEC 61047.

NOTE 3 Such step-down convertors can also be used for electric sources producing optical radiation with the same technology used for purposes different than illumination and producing radiation other than visible spectrum.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61347-1:2024, *Controlgear for electric light sources – Safety – Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61347-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

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

Note 1 to entry: The unit can consist of one or more separate components and can include means for dimming, correcting the power factor and suppressing radio interference.

Note 2 to entry: Whenever the term "controlgear" is used in IEC 61347-1, this includes convertors, being a specific type of controlgear.