

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Controlgear for electric light sources – Safety –
Part 2-11: Particular requirements – Miscellaneous electronic circuits used with
luminaire**

**Appareillages de commande pour les sources de lumière électriques – Sécurité –
Partie 2-11: Exigences particulières – Circuits électroniques divers utilisés avec
les luminaires**

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IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONTROLGEAR FOR ELECTRIC LIGHT SOURCES –
SAFETY –****Part 2-11: Particular requirements – Miscellaneous
electronic circuits used with luminaires**

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 61347-2-11 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lighting. It is an International Standard.

This second edition cancels and replaces the first edition published in 2001 and Amendment 1: 2017. 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 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) revision of information and marking requirements;
- e) addition of requirements for the determination of the output working voltage (new Clause 17).

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

Draft	Report on voting
34C/1598/FDIS	34C/1601/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.

NOTE In this document, the following print type is used:

- *compliance statements: in italic type.*

A list of all parts in the IEC 61347 series, 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 miscellaneous electronic circuits used with luminaires. 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 miscellaneous electronic circuits used with luminaires 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 do not include references to each other.

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CONTROLGEAR FOR ELECTRIC LIGHT SOURCES – SAFETY –

Part 2-11: Particular requirements – Miscellaneous electronic circuits used with luminaires

1 Scope

This part of IEC 61347 specifies safety requirements for miscellaneous electronic circuits used with luminaires for use on DC supplies up to 1 500 V or on AC supplies up to 1 000 V at 50 Hz or 60 Hz.

Miscellaneous electronic circuits used with luminaires covered by this document are

- control circuits of electronic controlgear (e.g. as specified in the IEC 62386 series, IEC 63128 or IEC 62756-1);
- circuits used in association with daylight or presence sensors, or both;
- circuits to assist EMC performance;
- intermittence and similar devices used with lighting chains;
- earth leakage or open-circuit protective devices used with neon transformers;
- other electronic circuits or devices within the scope of TC 34 not covered by a specific TC 34 standard.

NOTE 1 Such miscellaneous electronic circuits can also be used in luminaires producing optical radiation other than visible spectrum.

NOTE 2 The scope of TC 34 can be found on the relevant IEC webpage at the following address:
https://www.iec.ch/dyn/www/f?p=103:7:0:::FSP_ORG_ID:1235

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

miscellaneous electronic circuit

<used with luminaires> electronic circuit to assist the functioning of the controlgear or to provide additional functions to the luminaire

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

4 General requirements

IEC 61347-1:2024, Clause 4 applies with the following addition:

Miscellaneous electronic circuits shall be designed to meet the requirements of the declared overvoltage category (OVC) taking into account the intended applications. Miscellaneous electronic circuits classified as OVC III shall comply with IEC 61347-1:2024, Annex L, considering the annex as normative.

EXAMPLE Miscellaneous electronic circuits designed to be installed in distribution boards are classified as OVC III equipment.

5 General notes on tests

IEC 61347-1:2024, Clause 5 applies.

For information on requalification of products compliant with the previous edition of this document, i.e. IEC 61347-2-11:2001 and IEC 61347-2-11:2001/AMD1:2017, refer to Annex A.

6 Information and marking

6.1 Information and marking items

6.1.1 Mandatory marking

Miscellaneous electronic circuits, other than miscellaneous electronic circuits covered by 6.3, shall be marked with the following as applicable:

items a1), a2), b1), c2), e1), e2), f1), f3), f4), g2), g3), j2), j4), k1), l1) and n1) of IEC 61347-1:2024, 6.2; symbols according to item o) of IEC 61347-1:2024 shall be used as applicable.

For independent miscellaneous electronic circuits, the marking of the rated maximum ambient temperature t_a is considered an acceptable alternative to the marking of the rated case temperature t_c .

6.1.2 Information to be provided

The following information, if applicable, shall be given either on the miscellaneous electronic circuit, or be made available in the manufacturer's catalogue or the like:

- items b2), b3), c1), c3), c4), c5), c6), c7), e3), f2), g1), h), i), j1), j3), j5), k2), l2), m), n2) and n3) of IEC 61347-1:2024, 6.2;
- the overvoltage category (OVC) of the miscellaneous electronic circuit if other than OVC II.

6.2 Durability and legibility of marking

IEC 61347-1:2024, 6.3 applies.

6.3 Built-in miscellaneous electronic circuits without an enclosure and integral miscellaneous electronic circuits

IEC 61347-1:2024, 6.4 applies.

7 Terminals

IEC 61347-1:2024, Clause 7 applies.

8 Earthing

IEC 61347-1:2024, Clause 8 applies.

9 Protection against accidental contact with hazardous live parts

IEC 61347-1:2024, Clause 9 applies.

10 Insulation resistance and electric strength

IEC 61347-1:2024, Clause 10 applies.

11 Fault conditions

IEC 61347-1:2024, Clause 11 applies.

12 Construction

IEC 61347-1:2024, Clause 12 applies.

13 Creepage distances, clearances and distances through insulation

IEC 61347-1:2024, Clause 13 applies.

14 Screws, current-carrying parts and connections

IEC 61347-1:2024, Clause 14 applies.

15 Resistance to heat, fire and tracking

IEC 61347-1:2024, Clause 15 applies.

16 Thermal requirements

IEC 61347-1:2024, Clause 16 applies.

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