

Australian/New Zealand Standard™

Lamp controlgear

**Part 2.13: Particular requirements for
d.c. or a.c. supplied electronic
controlgear for LED modules
(IEC 61347-2-13, Ed.1.0 (2006) MOD)**



AS/NZS IEC 61347.2.13:2013

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Consumers Federation of Australia
Department of Resources, Energy and Tourism
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
Energy Efficiency and Conservation Authority of New Zealand
Fair Trading, NSW
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment. This Standard is the first edition of AS/NZS IEC 61347.2.13 and it is applicable on publication.

The objective of this Standard is to specify particular minimum safety requirements for d.c. or a.c. supplied electronic controlgear associated with LED modules.

This Standard is an adoption with national modifications and has been reproduced from IEC 61347-2-13, Ed.1.0 (2006), *Lamp controlgear, Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules*, and has been varied as indicated to take account of Australian/New Zealand conditions. The modifications are specified in Appendix ZZ.

This Standard is to be read in conjunction with AS/NZS 61347.1:2002.

It is to be noted that AS/NZS 61347.1 has Australian and New Zealand variations from IEC 61347-1 and hence product complying with IEC 61347-2-13 and IEC 61347-1 may not comply with AS/NZS 61347.2.13 and AS/NZS 61347.1.

This Standard is structured in the following layout:

- (a) Preface (including Australian and New Zealand references).
- (b) IEC 61347-2-13 (unedited from the contents page to the final clause of the IEC Standard).
- (c) Appendix ZZ—Australian/New Zealand variations to the IEC Standard.

The variations listed in Appendix ZZ form the Australian and New Zealand variations for the purposes of the IECEE CB Scheme for the recognition of testing to standards for safety of electrical equipment.

The variations include the following:

- (i) Clarifying requirements for controlgear with accessible output terminals.
- (ii) Adding requirements for plug-in controlgear to comply with AS/NZS 3112.
- (iii) Adding an additional test for overloading of outputs.
- (iv) Clarifying SELV limits.

The essential safety requirements in AS/NZS 3820, *Essential safety requirements for electrical equipment*, that could be applicable to d.c. or a.c. supplied electronic controlgear for LED modules are covered by this Standard.

In this Standard, the following print types are used:

- (A) Requirements: in roman type
- (B) *Test specifications: in italic type*
- (C) Notes: in small roman type.

This Standard is a Part 2 of the AS/NZS 61347, *Lamp controlgear*, series. Currently this series consists of the following parts. Additional parts will be added from time to time.

AS/NZS

- 61347.1 General and safety requirements (IEC 61347-1:2000, MOD)
- 61347.2.1 Particular requirements for starting devices (other than glow starters)
- 61347.2.2 Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps (IEC 61347-2-2, Ed. 1.2 (2006) MOD)
- 61347.2.3 Particular requirements for a.c. supplied electronic ballasts for fluorescent lamps (IEC 61347-2-3:2000, MOD)
- 61347.2.4 Particular requirements for d.c. supplied electronic ballasts for general lighting
- 61347.2.5 Particular requirements for d.c. supplied electronic ballasts for public transport
- 61347.2.6 Particular requirements for d.c. supplied electronic ballasts for aircraft lighting
- 61347.2.8 Particular requirements for ballasts for fluorescent lamps (IEC 61347-2-8:2000, MOD)
- 61347.2.9 Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps) (IEC 61347-2-9:2000 MOD)
- 61347.2.10 Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes) (IEC 61347-2-10:2000 MOD)
- 61347.2.11 Particular requirements for miscellaneous electronic circuits used with luminaires (IEC 61347-2-11:2001, MOD)
- 61347.2.13 Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (IEC 61347-2-13, Ed. 1.0 (2006) MOD) (this Standard)

As this Standard is reproduced from an International Standard, the following applies:

- (i) In the source text ‘this part of IEC 61347’ should read ‘this Australian/New Zealand Standard’.
- (ii) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian/New Zealand Standard</i>
IEC	AS
60417-DB* Graphical symbols for use on equipment	60417 Graphical symbols for use on equipment (series)
60269 Low-voltage fuses	60269 Low-voltage fuses
60269-2 Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)—Examples of standardized systems of fuses A to J	60269.2.0 Part 2.0: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)
60269-2.1 Part 2-1: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)—Sections I to VI: Examples of types of standardized fuses	60269.2.1 Part 2.1: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)—Sections I to VI: Examples of types of standardized fuses

* ‘DB’ refers to the IEC online database.

60269-3	Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)—Examples of standardized systems of fuses A to F	60269.3.0	Part 3.0: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)
IEC		AS/NZS	
60065	Audio, video and similar electronic apparatus—Safety requirements	60065	Audio, video and similar electronic apparatus—Safety requirements (IEC 60065, Ed.7.2 (2011) MOD)
60269-3-1	Part 3-1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)—Sections I to IV: Examples of types of standardized fuses	60269.3.1	Part 3.1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)—Sections I to IV: Examples of types of standardized fuses
60598	Luminaires	60598	Luminaires
60598-1	Part 1: General requirements and tests	60598.1	Part 1: General requirements and tests
60598-2-6	Part 2: Particular requirements—Section 6: Luminaires with built-in transformers for filament lamps	60598.2.6	Part 2.6: Particular requirements—Luminaires with built-in transformers or convertors for filament lamps
60950	Information technology equipment—Safety	60950	Information technology equipment—Safety
60950-1	Part 1: General requirements	60950.1	Part 1: General requirements (IEC 60950-1, Ed.2.0 (2005), MOD)
61347	Lamp controlgear	61347	Lamp controlgear
61347-1	Part 1: General and safety requirements	61347.1	Part 1: General and safety requirements (IEC 61347-1:2000, MOD)
61558	Safety of power transformers, power supplies, reactors and similar products	61558	Safety of power transformers, power supplies, reactors and similar products
61558-1	Part 1: General requirements and tests	61558.1	Part 1: General requirements and tests (IEC 61558-1 Ed.2.1, MOD)

Only international normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The term ‘normative’ has been used in this Standard to define the application of the annex or appendix to which it applies. A ‘normative’ annex or appendix is an integral part of a Standard.

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INTRODUCTION

This standard, and the parts which make up IEC 61347-1, 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.

AUSTRALIAN/NEW ZEALAND STANDARD

Lamp controlgear

Part 2.13:

Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (IEC 61347-2-13, Ed.1.0 (2006) MOD)

1 Scope

This part of IEC 61347 specifies particular safety requirements for electronic controlgear for use on d.c. supplies up to 250 V and a.c. supplies up to 1 000 V at 50 Hz or 60 Hz and at an output frequency which can deviate from the supply frequency, associated with LED modules.

Controlgear for LED modules specified in this standard are designed to provide constant voltage or current at SELV or SELV equivalent or higher voltages. Deviations from the pure voltage and current types do not exclude the gear from this standard.

The annexes of IEC 61347-1 which are applicable according to this Part 2-13 and using the word "lamp" are understood to also comprise LED modules.

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

Performance requirements will be covered by IEC 62384¹.

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

2 Normative references

For the purpose of this Part 2 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:

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

IEC 60065:1985, *Audio, video and similar electronic apparatus – Safety requirements*

IEC 60083:2004, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60085:2004, *Electrical insulation – Thermal classification*

IEC 60127 (all parts), *Miniature fuses*

¹ To be published.