



**NSAI**  
Standards

Irish Standard  
I.S. EN 62811:2015

AC and/or DC-supplied electronic controlgear  
for discharge lamps (excluding fluorescent  
lamps) - Performance requirements for low  
frequency squarewave operation

**I.S. EN 62811:2015**

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EUROPEAN STANDARD

**EN 62811**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2015

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English Version

**AC and/or DC-supplied electronic controlgear for discharge lamps (excluding fluorescent lamps) - Performance requirements for low frequency squarewave operation (IEC 62811:2015)**

Appareillage électronique alimenté en courant alternatif et/ou continu pour lampes à décharge (à l'exclusion des lampes fluorescentes) - Exigences de performance pour le fonctionnement en onde carrée de basse fréquence (IEC 62811:2015)

Gleich- und/oder wechsellspannungsversorgtes elektronisches Betriebsgerät für Entladungslampen (ausgenommen Leuchtstofflampen) - Anforderungen an die Arbeitsweise für Niederfrequenz-Rechteckbetrieb (IEC 62811:2015)

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Comité Européen de Normalisation Electrotechnique  
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## Foreword

The text of document 34C/1132/FDIS, future edition 1 of IEC 62811, prepared by SC 34C, "Auxiliaries for lamps", of IEC TC 34, "Lamps and related equipment", was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62811:2015.

The following dates are fixed:

- latest date by which the document has to be (dop) 2016-02-14  
implemented at national level by  
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

|                     |      |                                   |
|---------------------|------|-----------------------------------|
| IEC 61000-3-2:2000  | NOTE | Harmonized as EN 61000-3-2:2000.  |
| IEC 61000-4-30:2003 | NOTE | Harmonized as EN 61000-4-30:2003. |
| IEC 61547           | NOTE | Harmonized as EN 61547.           |

## Annex ZA (normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u>  | <u>Year</u> |
|--------------------|-------------|---|---------------|-------------|
| IEC 60050          | series      | International Electrotechnical Vocabulary   | -             | series      |
| IEC 61000-4-14     | 1999        | Electromagnetic compatibility (EMC) -- Part 4-14: Testing and measurement techniques - Voltage fluctuation immunity test                              | EN 61000-4-14 | 1999        |
| +A1                | 2001        |   | +A1           | 2004        |
| +A2                | 2009        |   | +A2           | 2009        |
| IEC 61167          | -           |   | -             | -           |
| IEC 61347-1        | -           | Lamp controlgear - Part 1: General and safety requirement   | EN 61347-1    | -           |
| IEC 61347-2-12     | -           | Lamp controlgear - Part 2-12: Particular requirements for d.c. or a.c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps) | -             | -           |
| IEC 62386          | series      | Digital addressable lighting interface  | EN 62386      | series      |

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**IEC 62811**

Edition 1.0 2015-04

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



**AC and/or DC-supplied electronic controlgear for discharge lamps (excluding fluorescent lamps) – Performance requirements for low frequency square wave operation**

**Appareillage électronique alimenté en courant alternatif et/ou continu pour lampes à décharge (à l'exclusion des lampes fluorescentes) – Exigences de performance pour le fonctionnement en onde carrée de basse fréquence**



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**IEC 62811**

Edition 1.0 2015-04

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**AC and/or DC-supplied electronic controlgear for discharge lamps (excluding fluorescent lamps) – Performance requirements for low frequency square wave operation**

**Appareillage électronique alimenté en courant alternatif et/ou continu pour lampes à décharge (à l'exclusion des lampes fluorescentes) – Exigences de performance pour le fonctionnement en onde carrée de basse fréquence**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**AC AND/OR DC-SUPPLIED ELECTRONIC CONTROLGEAR  
FOR DISCHARGE LAMPS (EXCLUDING FLUORESCENT LAMPS) –  
PERFORMANCE REQUIREMENTS FOR  
LOW FREQUENCY SQUARE WAVE OPERATION**

## FOREWORD

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International Standard IEC 62811 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lamps and related equipment.

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

|               |                  |
|---------------|------------------|
| FDIS          | Report on voting |
| 34C/1132/FDIS | 34C/1149/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.

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

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

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## INTRODUCTION

This International Standard covers performance requirements for electronic controlgear for use on a.c., at 50 Hz or 60 Hz and/or d.c. supplies up to 1 000 V associated with discharge lamps as specified in IEC 61167 for low frequency square wave operation.

In order to obtain satisfactory performance of discharge lamps and electronic controlgears, it is necessary that certain features of their design be properly coordinated. It is essential, therefore, that specifications for them be written in terms of measurement made against some common baseline of reference, permanent and reproducible.

These conditions may be fulfilled by reference ballasts. Moreover, the testing of controlgear for discharge lamps will, in general, be made with reference lamps and, in particular, by comparing the results obtained using these lamps on the controlgear to be tested and on the reference ballast. Whereas the reference ballast for frequencies of 50 Hz or 60 Hz is a self-inductive coil, the low frequency square wave reference ballast is a resistor because of its independence of frequency and the lack of influence of parasitic capacitance.

# AC AND/OR DC-SUPPLIED ELECTRONIC CONTROLGEAR FOR DISCHARGE LAMPS (EXCLUDING FLUORESCENT LAMPS) – PERFORMANCE REQUIREMENTS FOR LOW FREQUENCY SQUARE WAVE OPERATION

## 1 Scope

This International Standard specifies performance requirements for electronic controlgear for use on a.c. and/or d.c. supplies up to 1 000 V and/or a.c. supplies up to 1 000 V at 50 Hz or 60 Hz, associated with discharge lamps, as specified in IEC 61167, which have information for low frequency square wave operation, where the frequency range of the low frequency is from 70 Hz to 400 Hz.

Tests in this standard are type tests. Requirements for testing individual controlgear during production are not included.

There are regional standards regarding the regulation of mains current harmonics and immunity for end products like luminaires and independent controlgear. In a luminaire, the controlgear is dominant in this respect. Controlgear, together with other components, should comply with these standards.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), *International Electrotechnical Vocabulary*

IEC 61000-4-14:1999, *Electromagnetic compatibility (EMC) – Part 4-14: Testing and measurement techniques – Voltage fluctuation immunity test*

IEC 61000-4-14:1999/AMD1:2001

IEC 61000-4-14:1999/AMD2:2009

IEC 61167, *Metal Halide lamps – Performance specifications*

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

IEC 61347-2-12, *Lamp controlgear – Part 2-12: Particular requirements for d.c. or a.c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps)*

IEC 62386 (all parts), *Digital addressable lighting interface*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-845 as well as the following apply.



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