



**NSAI**  
Standards

Irish Standard  
I.S. EN 62386-101:2014

# Digital addressable lighting interface - Part 101: General requirements - System components

**I.S. EN 62386-101:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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*This document is based on:*

EN 62386-101:2014

*Published:*

2014-12-19

*This document was published under the authority of the NSAI and comes into effect on:*

2015-01-21

ICS number:

29.140

29.140.50

NOTE: If blank see CEN/CENELEC cover page

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EUROPEAN STANDARD

**EN 62386-101**

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2014

ICS 29.140; 29.140.50

Supersedes EN 62386-101:2009

English Version

**Digital addressable lighting interface -  
Part 101: General requirements - System components  
(IEC 62386-101:2014)**

Interface d'éclairage adressable numérique -  
Partie 101: Exigences générales - Composants de système  
(CEI 62386-101:2014)

Digital adressierbare Schnittstelle für die Beleuchtung -  
Teil 101: Allgemeine Anforderungen - Systemkomponenten  
(IEC 62386-101:2014)

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## Foreword

The text of document 34C/1098/FDIS, future edition 2 of IEC 62386-101, 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 62386-101:2014.

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) 2015-09-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-12-12

This document supersedes EN 62386-101:2009.

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CISPR 15	NOTE	Harmonized as EN 55015.
IEC 61547	NOTE	Harmonized as EN 61547.
ISO/IEC 7498-1	NOTE	Harmonized as EN ISO/IEC 7498-1 <sup>1)</sup> .

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<sup>1)</sup> Withdrawn publication.

## 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 61347	Series	Lamp controlgear	EN 61347	Series
IEC 61347-1	-	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	-
IEC 62386-102	2014	Digital addressable lighting interface - Part 102: General requirements - Control gear	EN 62386-102	2014
IEC 62386-103	2014	Digital addressable lighting interface - Part 103: General requirements - Control devices	EN 62386-103	2014
IEC 61000-4-11	-	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	-

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**IEC 62386-101**

Edition 2.0 2014-11

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**Digital addressable lighting interface –  
Part 101: General requirements – System components**

**Interface d'éclairage adressable numérique –  
Partie 101: Exigences générales – Composants de système**





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**IEC 62386-101**

Edition 2.0 2014-11

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**Digital addressable lighting interface –  
Part 101: General requirements – System components**

**Interface d'éclairage adressable numérique –  
Partie 101: Exigences générales – Composants de système**

INTERNATIONAL  
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INTERNATIONALE

PRICE CODE **XC**  
CODE PRIX

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ICS 29.140, 29.140.50

ISBN 978-2-8322-1910-2

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIGITAL ADDRESSABLE LIGHTING INTERFACE –****Part 101: General requirements –  
System components**

## FOREWORD

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International Standard IEC 62386-101 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lamps and related equipment.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

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

- a) collection of all bus timing requirements defined in IEC 62386-101:2009 and IEC 62386-102:2009 and rework of the timing requirements to facilitate the preparation of a future control devices standard, taking particular account of the requirements for multi-master systems. The 10 % tolerances have been replaced by minimum and maximum timing values;
- b) integration of multi-master timing requirements;

- c) extension of the defined forward frames;
- d) addition of wiring requirements;
- e) improvement of the bus power supply requirements;
- f) improvement of test sequences and description of the test sequences in the form of pseudo code instead of flow charts.

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

FDIS	Report on voting
34C/1098/FDIS	34C/1111/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 Part 101 is intended to be used in conjunction with:

- Part 102, which contains general requirements for the relevant product type (control gear), and with the appropriate Part 2xx (particular requirements for control gear);
- Part 103, which contains general requirements for the relevant product type (control devices), and the appropriate Part 3xx (particular requirements for control devices).

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

A list of all parts of the IEC 62386 series, under the general title: *Digital addressable lighting interface*, can be found on the IEC website

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## INTRODUCTION

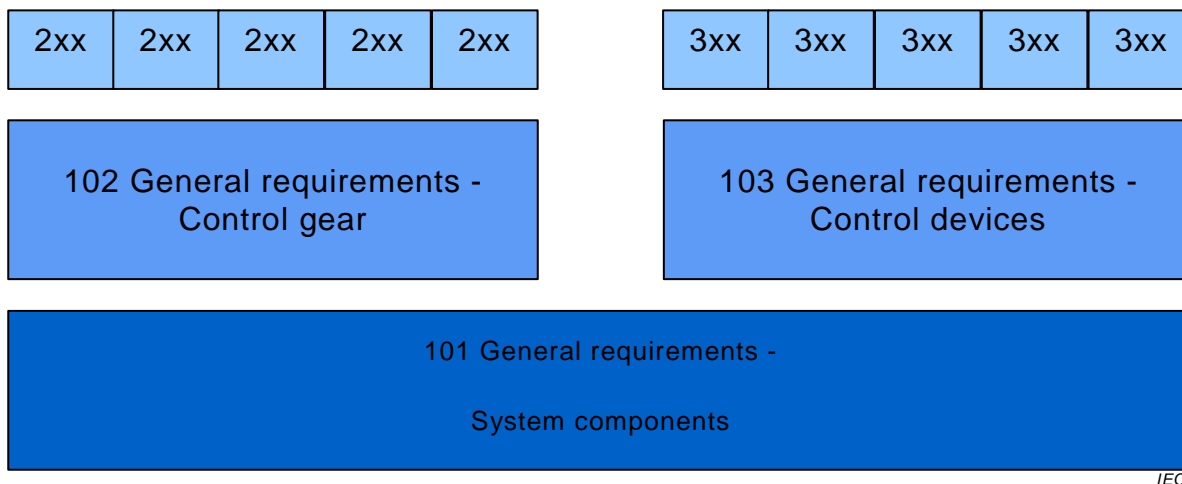
IEC 62386 contains several parts, referred to as series. The 1xx series includes the basic specifications. Part 101 contains general requirements for system components, Part 102 extends this information with general requirements for control gear and Part 103 extends it further with general requirements for control devices.

The 2xx parts extend the general requirements for control gear with lamp specific extensions (mainly for backward compatibility with Edition 1 of IEC 62386) and with control gear specific features.

The 3xx parts extend the general requirements for control devices with input device specific extensions describing the instance types as well as some common features that can be combined with multiple instance types.

This second edition of IEC 62386-101 is published in conjunction with IEC 62386-102:2014 and with the various parts that make up the IEC 62386-2xx series for control gear, together with IEC 62386-103:2014 and the various parts that make up the IEC 62386-3xx series of particular requirements for control devices. The division 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 recognised.

The setup of the standard is graphically represented in Figure 1 below.



IEC

**Figure 1 – IEC 62386 graphical overview**

When this part of IEC 62386 refers to any of the clauses of the other two parts of the IEC 62386-1xx series, the extent to which such a clause is applicable and the order in which the tests are to be performed are specified. The other parts also include additional requirements, as necessary.

All numbers used in this International Standard are decimal numbers unless otherwise noted. Hexadecimal numbers are given in the format 0xVV, where VV is the value. Binary numbers are given in the format XXXXXXXXb or in the format XXXX XXXX, where X is 0 or 1, "x" in binary numbers means "don't care".

## DIGITAL ADDRESSABLE LIGHTING INTERFACE –

### Part 101: General requirements – System components

#### 1 Scope

This part of IEC 62386 is applicable to system components in a bus system for control by digital signals of electronic lighting equipment. This electronic lighting equipment should be in line with the requirements of IEC 61347, with the addition of d.c. supplies.

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

#### 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 61347 (all parts), *Lamp controlgear*

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

IEC 62386-102:2014, *Digital addressable lighting interface – Part 102: General requirements – Control gear*

IEC 62386-103:2014, *Digital addressable lighting interface – Part 103: General requirements – Control devices*

IEC 61000-4-11, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

##### 3.1 active state

phase of low level voltage during a transmission

Note 1 to entry: Noise and short pulses may be ignored and therefore do not change the state.

##### 3.2 advanced bus power supply

bus power supply capable of checking the bus for fault conditions before switching on its output continuously

Note 1 to entry: Examples of fault conditions are mains voltage connected to the bus or short circuit of the bus.

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