

INTERNATIONAL STANDARD



Digital addressable lighting interface –
Part 201: Particular requirements for control gear – Fluorescent lamps
(device type 0)

Document Preview

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

DIGITAL ADDRESSABLE LIGHTING INTERFACE –**Part 201: Particular requirements for control gear –
Fluorescent lamps (device type 0)**

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International Standard IEC 62386-201 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 and constitutes a technical revision. The essential changes with respect to the first edition are:

- references to subclauses in IEC 62386-101 and IEC 62386-102 updated to the new structure of the standard;
- test sequence reworked and description of the test sequences in form of a pseudo code instead of flow charts.

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

CDV	Report on voting
34C/1082/CDV	34C/1103/RVC

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 201 of IEC 62386 is intended to be used in conjunction with:

- IEC 62386-101, which contains general requirements for system components;
- IEC 62386-102, which contains general requirements for the control gear.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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.

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

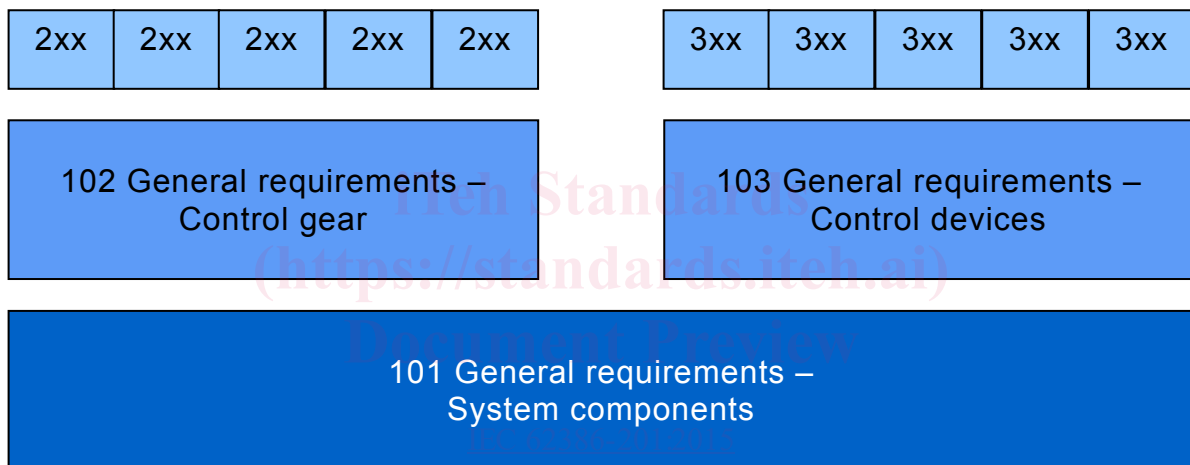


Figure 1 – IEC 62386 graphical overview

This second edition of IEC 62386-201 is published in conjunction with the second edition of IEC 62386-101 and the second edition of IEC 62386-102. The division of IEC 62386 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 recognized.

This International Standard, and the other parts that make up the IEC 62386-200 series, in referring to any of the clauses of IEC 62386-101 or IEC 62386-102, specify the extent to which such a clause is applicable and the order in which the tests are to be performed; the parts also include additional requirements, as necessary. ~~All parts that make up the IEC 62386-200 series are self-contained and therefore do not include references to each other.~~

Where the requirements of any of the clauses of IEC 62386-101 or IEC 62386-102 are referred to in this International Standard by the sentence "The requirements of fluorescent lamp control gear (device type 0) shall conform to IEC 62386-1xx, Clause "n", this sentence is to be interpreted as meaning that all requirements of the clause in question of Part 101 or Part 102 apply, except any which are inapplicable to the specific type of lamp control gear covered by Part 201.

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".

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DIGITAL ADDRESSABLE LIGHTING INTERFACE –

Part 201: Particular requirements for control gear – Fluorescent lamps (device type 0)

1 Scope

This part of IEC 62386 specifies a ~~protocol and methods of test bus system~~ for control by digital signals of electronic ~~control gear for use on a.c. or d.c. supplies, associated with fluorescent lamps~~ lighting equipment. This electronic lighting equipment should be in line with the requirements of IEC 61347.

This document is applicable to control gear associated with fluorescent lamps.

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 control gear*

IEC 62386-101:2009 2014, *Digital addressable lighting interface – Part 101: General requirements – System components*

IEC 62386-102:2009 2014, *Digital addressable lighting interface – Part 102: General requirements – Control gear*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in Clause 3 of IEC 62386-101:2009 2014 and Clause 3 of IEC 62386-102:2009 2014 apply.

4 General

The requirements of ~~Clause 4 of IEC 62386-101:2009 and of~~ IEC 62386-102:2009 2014, Clause 4 apply, with the following exception:

Replace Subclause 4.2 by the following:

4.2 Extended version number

The extended version number of this document shall be in the format "x.y", where the major extended version number x is in the range of 0 to 62 and the minor extended version number y is in the range of 0 to 2. When the extended version number is encoded into a byte, the major extended version number x shall be placed in bits 7 to 2 and the minor extended version number y shall be placed in bits 1 to 0.

At each amendment to an edition of IEC 62386-201, the minor extended version number shall be incremented by one.

At a new edition of IEC 62386-201, the major extended version number shall be incremented by one and the minor extended version number shall be set to 0.

The current extended version number is "2.0" and is encoded in *extendedVersionNumber*.

NOTE IEC allows normally for 2 amendments before a new edition is created.

5 Electrical specification

The requirements of IEC 62386-101:~~2009~~ 2014, Clause 5, ~~and Clause 5 of IEC 62386-102:2009~~ apply.

6 Interface power supply

If a power supply is integrated ~~with~~ into a control gear, the requirements of IEC 62386-101:~~2009~~ 2014, Clause 6, ~~and Clause 6 of IEC 62386-102:2009~~ apply.

7 Transmission protocol structure

~~The requirements of Clause 7 of IEC 62386-101:2009 and Clause 7 of IEC 62386-102:2009 apply.~~

7.1 General

The requirements of Subclause 7.1 of IEC 62386-101:2014 apply.

7.2 Bit encoding

The requirements of Subclause 7.2 of IEC 62386-101:2014 apply.

7.3 Frame description

The requirements of Subclause 7.3 of IEC 62386-101:2014 apply.

7.4 Frame types

The requirements of Subclause 7.4 of IEC 62386-101:2014 apply.

7.5 16 bit forward frame encoding

The requirements of Subclause 7.2 of IEC 62386-102:2014 apply.

8 Timing

The requirements of IEC 62386-101:~~2009~~ 2014, Clause 8, ~~and Clause 8 of IEC 62386-102~~ apply.

9 Method of operation

The requirements of ~~Clause 9 of IEC 62386-101:2009 and of~~ IEC 62386-102:~~2009~~ 2014, Clause 9, apply.

10 Declaration of variables

The requirements of ~~Clause 10 of IEC 62386-101:2009 and of~~ IEC 62386-102:2009, Clause 10, apply, with the following additional variables for this device type, as indicated in Table 1.

Table 1 – Declaration of additional variables

Variable	Default value (factory)	Reset value	Power-on value	Range of validity	Memory type *
"extendedVersionNumber"	4 2.0	no change	no change	0–255 00001000b	1 byte ROM
"deviceType"	0	no change	no change	0–254, 255 (mask) 0	1 byte ROM

* Persistent memory (storage time indefinite) if not stated otherwise.

11 Definition of commands

The requirements of ~~Clause 11 of IEC 62386-101:2009 and of~~ IEC 62386-102:2009 2014, Clause 11, ~~shall~~ apply, with the following exceptions:

Amendment of Subclause 11.6 of IEC 62386-102:2009 2014 as follows:

11.3.1 ~~Queries related to status information~~

Amendment:

~~Command 153: YAAA AAA1 1001 1001 "QUERY DEVICE TYPE"~~

~~The answer shall be 0.~~

11.3.4 ~~Application extended commands~~

Replacement:

~~Application extended commands shall be preceded by command 272, "ENABLE DEVICE TYPE 0". For device types other than 0, these commands may be used in a different way.~~

~~A fluorescent lamp control gear shall not react to application extended commands preceded by command 272 "ENABLE DEVICE TYPE X" with X ≠ 0.~~

~~Commands 224 – 239: YAAA AAA1 1110 XXXX~~

~~Reserved for future needs. The fluorescent lamp control gear shall not react in any way.~~

~~Commands 240 – 247: YAAA AAA1 1111 0XXX~~

~~Reserved for future needs. The fluorescent lamp control gear shall not react in any way.~~

~~Commands 248 – 251: YAAA AAA1 1111 10XX~~

~~Reserved for future needs. The fluorescent lamp control gear shall not react in any way.~~

~~Commands 252 – 253: YAAA AAA1 1111 110X~~

~~Reserved for future needs. The fluorescent lamp control gear shall not react in any way.~~