

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Interface d'éclairage adressable numérique –
Partie 201: Exigences particulières pour les appareillages de commande –
Lampes fluorescentes (dispositifs de type 0)**



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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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International Standard IEC 62386-201 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:

CDV	Report on voting
34C/784/CDV	34C/812/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.

IEC 62386-101, IEC 62386-102 and IEC 62386-201 replace IEC 60929 Edition 3, Clause E.4 "Control by digital signals" and Annex G "Test procedures for ballasts with digital control interface according to Clause E.4".

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

This part 201 is intended to be used in conjunction with IEC 62386-101 and IEC 62386-102, which contain general requirements for the relevant product type (control gear or control devices).

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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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- withdrawn,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.

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INTRODUCTION

This first edition of IEC 62386-201 is published in conjunction with IEC 62386-101 and 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 International Standard specifies a protocol and methods of test for the control by digital signals of electronic control gear for use on a.c. or d.c. supplies, associated with fluorescent lamps.

2 Normative references

The following referenced documents are indispensable for the application 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 62386-101:2009, *Digital addressable lighting interface – Part 101: General requirements – System*

IEC 62386-102:2009, *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 and Clause 3 of IEC 62386-102:2009 apply.

4 General

The requirements of Clause 4 of IEC 62386-101:2009 and Clause 4 of IEC 62386-102:2009 apply.

5 Electrical specification

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

6 Interface power supply

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

7 Transmission protocol structure

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

8 Timing

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

9 Method of operation

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

10 Declaration of variables

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

Table 1 – Declaration of variables

Variable	Default value	Reset value	Range of validity	Memory ^a
"EXTENDED VERSION NUMBER"	1	No change	0 – 255	1 byte ROM
"DEVICE TYPE"	0	No change	0 – 254, 255 (mask)	1 byte ROM
^a Persistent memory (storage time indefinite) if not stated otherwise.				

11 Definition of commands

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

Amendment of Clause 11 of IEC 62386-102:2009:

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.

Command 254: YAAA AAA1 1111 1110

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

Command 255: YAAA AAA1 1111 1111 "QUERY EXTENDED VERSION NUMBER"

The answer shall be 1.

11.4.4 Extended special commands

Amendment:

Command 272: 1100 0001 0000 0000 "ENABLE DEVICE TYPE 0"

The device type for fluorescent lamp control gear is 0.

11.5 Summary of the command set

The commands listed in 11.5 of IEC 62386-101:2009 and 11.5 of IEC 62386-102:2009 apply with the following additional commands for device type 0 listed in Table 2.

Table 2 – Summary of the application extended command set

Command number	Command code	Command name
224 – 239	YAAA AAA1 1110 XXXX	^a
240 – 247	YAAA AAA1 1111 0XXX	^a
248 – 251	YAAA AAA1 1111 10XX	^a
252 – 253	YAAA AAA1 1111 110X	^a
254	YAAA AAA1 1111 1110	^a
255	YAAA AAA1 1111 1111	QUERY EXTENDED VERSION NUMBER
272	1100 0001 0000 0000	ENABLE DEVICE TYPE 0

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

12 Test procedures

The requirements of Clause 12 of IEC 62386-102:2009 apply, with the following exceptions:

Additional subclause:

12.7 Test sequences for "Application extended commands for device type 0"

12.7.1 Test sequences for standard application extended commands

12.7.1.1 Test sequence for "QUERY EXTENDED VERSION NUMBER"

Command 255, "QUERY EXTENDED VERSION NUMBER", shall be tested for all possible values of X in command 272, "ENABLE DEVICE TYPE X". The test sequence "QUERY EXTENDED VERSION NUMBER" is shown in Figure 1.