

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Digital addressable lighting interface-
Part 351: Particular requirements - Control devices - Luminaire-mounted control
devices**

**Interface d'éclairage adressable numérique -
Partie 351: Exigences particulières - Dispositifs de commande - Dispositifs de
commande montés sur un luminaire**



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CONTENTS

FOREWORD.....	2
INTRODUCTION.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 General.....	7
4.1 General.....	7
4.2 Version number.....	7
4.3 Insulation.....	7
5 Electrical specification	7
5.1 General.....	7
5.2 Bus voltage polarity.....	7
5.3 Switched-supply output	7
6 Integrated bus power supply and AUX power supply.....	8
6.1 General.....	8
6.2 Integrated bus power supply.....	8
6.3 Integrated AUX power supply	8
6.4 Bus power supply automatic detection and enablement.....	9
6.5 AUX power supply automatic detection and enablement.....	9
7 Transmission protocol structure	10
8 Timing.....	10
9 Method of operation.....	10
9.1 General.....	10
9.2 Types of luminaire-mounted control devices.....	10
9.3 Feature type	11
9.4 Electrical specification of AUX power supply consumption.....	11
9.5 Application controller arbitration	12
9.6 Product markings and literature	12
9.7 Memory bank	13
10 Declaration of variables	14
11 Definition of commands	15
Figure 1 – IEC 62386 graphical overview	4
Table 1 – Bus power supply current rating.....	8
Table 2 – Types of luminaire-mounted control devices.....	10
Table 3 – AUX power supply consumption requirements for type A control device	11
Table 4 – AUX power supply consumption requirements for type B control device	11
Table 5 – Memory bank 201.....	13
Table 6 – Declaration of device variables	14

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Digital addressable lighting interface -
Part 351: Particular requirements –
Control devices –
Luminaire-mounted control devices**

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IEC 62386-351 has been prepared by IEC technical committee 34: Lighting. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
34/1294/CDV	34/1324/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is intended to be used in conjunction with:

- IEC 62386-101, which contains general requirements for system components; and
- IEC 62386-103, which contains general requirements for control devices.

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

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

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The IEC 62386 series specifies a bus system for control by digital signals of electronic lighting equipment and contains several parts, referred to as a series. The IEC 62386-1xx series includes the basic specifications. IEC 62386-101 contains general requirements for system components, IEC 62386-102 extends this information with general requirements for control gear and IEC 62386-103 extends it further with general requirements for control devices. IEC 62386-104 gives requirements for wireless and alternative wired system components. IEC 62386-105 describes firmware transfer. IEC 62386-150 gives requirements for an auxiliary power supply which can be stand-alone, or built into control gear or control devices.

The IEC 62386-2xx series extends the general requirements for control gear with lamp specific extensions and with control gear specific features.

The IEC 62386-3xx series extends 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 application controllers and instance types.

This document is intended to be used in conjunction with IEC 62386-101 and IEC 62386-103 and with 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 recognized.

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

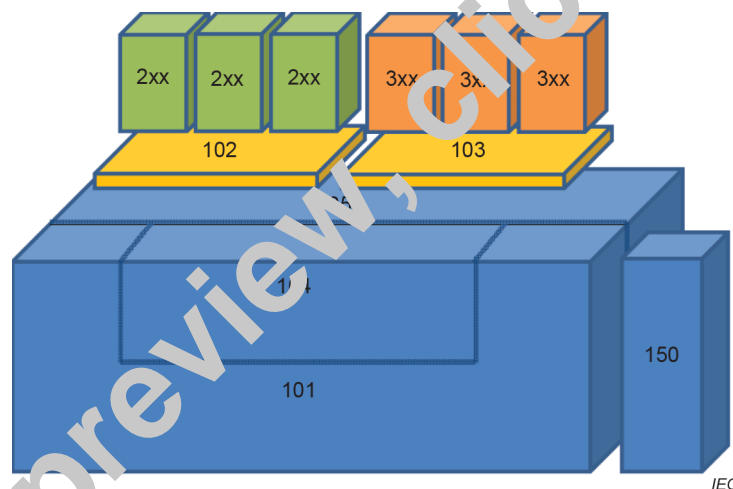


Figure 1 – IEC 62386 graphical overview

When this document refers to any of the clauses of the IEC 62386-1xx series, the extent to which such a clause is applicable is specified. The other parts also include additional requirements, as necessary.

All numbers used in this document are decimal numbers unless otherwise specified. 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". Where a variable is referred by a bit number, bit 0 is the least significant bit.

In this document, the following typographic expressions are used:

- variables: "*variableName*" or "*variableName*[3:0]", giving only bits 3 to 0 of "*variableName*";
- range of values: [lowest, highest];
- command: "COMMAND NAME".

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1 Scope

This part of IEC 62386 is applicable to control devices to be used in, on, or attached to, a luminaire. This document builds on the digital addressable lighting interface as specified in the IEC 62386 series of standards, by adding specific requirements for power consumption, integrated bus and AUX power supplies, a mechanism to arbitrate between multiple application controllers, and a memory bank definition for multi-master devices.

This document is only applicable to control devices complying with IEC 62386-103.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 62386-101:2022, *Digital addressable lighting interface - Part 101: General requirements - System components*

IEC 62386-103:2022, *Digital addressable lighting interface - Part 103: General requirements - Control devices*

IEC 62386-150:2023, *Digital addressable lighting interface - Part 150: Particular requirements - Auxiliary power supply*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62386-101, IEC 62386-103, IEC 62386-150 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

switched-supply output
optional output that connects to the external supply input via a switch

Note 1 to entry: A switched-supply output can be used to supply other devices in the luminaire, especially when mains voltage is the external supply input.

3.2

type A
externally powered control device with an integrated multi-master application controller

3.3

type B
control device with either an integrated multi-master application controller with arbitration algorithm or one or more input device instances, or both

3.4

type C
bus-powered control device with an integrated multi-master application controller