IEC 62386-252

Edition 1.0 2023-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Digital addressable lighting interface – Part 252: Particular requirements – Energy reporting (device type 51)

Interface d'éclairage adressable numérique – Partie 252: Exigences particulières – Collecte des données d'énergie (type de dispositif 51)



IEC 62386-252:2023-04(en-fr)



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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DIGITAL ADDRESSABLE LIGHTING INTERFACE –

Part 252: Particular requirements – Energy reporting (device type 51)

FOREWORD

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IEC 62386-252 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
34/1020/FDIS	34/1041/RVD

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/standardsdev/publications.

This Part 252 of IEC 62386 is intended to be used in conjunction with:

- Part 101, which contains general requirements for system components;
- Part 102, which contains general requirements for control gear.

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- withdrawn,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

IMPORTANT – The "colour inside" logo on the cover page of this document 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 IEC 62386 series specifies a bus system for control by digital signals of electronic lighting equipment. The IEC 62386-1xx 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. Part 104 and Part 105 can be applied to control gear or control devices. Part 104 gives requirements for wireless and alternative wired system components. Part 105 describes firmware transfer. Part 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 (mainly for backward compatibility with Edition 1 of IEC 62386) 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 multiple instance types.

This first edition of IEC 62386-252 is intended to be used in conjunction with IEC 62386-101:2022 and IEC 62386-102:2022. 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.

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

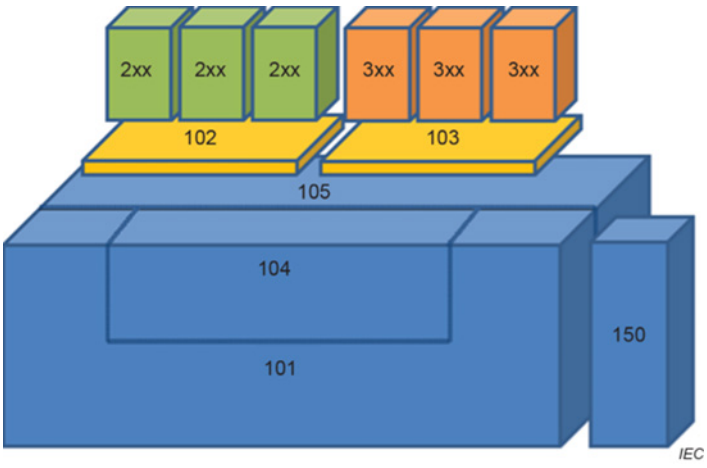


Figure 1 – IEC 62386 graphical overview

When this part of IEC 62386 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 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".

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".

DIGITAL ADDRESSABLE LIGHTING INTERFACE –

Part 252: Particular requirements – Energy reporting (device type 51)

1 Scope

This part of IEC 62386 specifies the information related to energy reporting accessible through memory banks in control gear. This document builds on the digital addressable lighting interface as specified in the IEC 62386 series, by adding specific requirements for data exchange.

This document is only applicable to control gear complying with IEC 62386-102.

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 62386-102:2022, *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 IEC 62386-102 and the following apply.

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

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

3.1
active power
mean power over one period

Note 1 to entry: Active power is expressed in watt (W).

3.2
active energy
integral of power over a time interval

Note 1 to entry: Active energy is expressed in watt hour (Wh).

3.3
apparent power
product of the RMS voltage between the terminals of a two-terminal element or two-terminal circuit and the RMS electric current in the element or circuit

Note 1 to entry: Apparent power is expressed in volt ampere (VA).

[SOURCE: IEC 60050-131:2013, 131-11-41, modified – The notes to entry have been replaced by a new Note 1 to entry.]

3.4
apparent energy
integral of apparent power over a time interval

Note 1 to entry: Apparent energy is expressed in volt ampere hour (VAh)

3.5
load side power
power supplied to the lamps connected to the logical unit, including corresponding conversion losses

Note 1 to entry: Load side power is expressed in watt (W).

3.6
load side energy
integral of load side power over a time interval

Note 1 to entry: Load side energy is expressed in watt hour (Wh).

4 General

4.1 General

The requirements of IEC 62386-102:2022, Clause 4 apply, with the restrictions, changes and additions identified below.

4.2 Version number

In IEC 62386-102:2022, 4.2, "102" shall be replaced by "252", "version number" shall be replaced by "extended version number" and "*versionNumber*" shall be replaced by "*extendedVersionNumber*".

5 Electrical specification

The requirements of IEC 62386-102:2022, Clause 5 apply.

6 Bus power supply

The requirements of IEC 62386-102:2022, Clause 6 apply.

7 Transmission protocol structure

The requirements of IEC 62386-102:2022, Clause 7 apply.