

AS/NZS 62386.207:2020



Australian/New Zealand Standard™

Digital addressable lighting interface

**Part 207: Particular requirements for control gear — LED modules
(device type 6) (IEC 62386-207:2018 (ED. 2.0) MOD)**



AS/NZS 62386.207:2020

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee EL-041, Lamps and Related Equipment. It was approved on behalf of the Council of Standards Australia on 4 November 2020 and by the New Zealand Standards Approval Board on 4 November 2020.

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- Australian Industry Group
- Better Regulation Division
- CHOICE
- Consumer Electronics Suppliers Association
- Consumers' Federation of Australia
- Department of Industry, Science, Energy and Resources
- Electrical Compliance Testing Association of Australia
- Electrical Regulatory Authorities Council
- Energy Efficiency & Conservation Authority of New Zealand
- IES: The Lighting Society
- Joint Accreditation System of Australia and New Zealand
- Joint Accreditation System of Australia and New Zealand — New Zealand
- Lighting Council Australia
- Lighting Council New Zealand
- Master Electricians Australia
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**Part 207: Particular requirements for control
gear — LED modules (device type 6) (IEC 62386-
207:2018 (ED. 2.0) MOD)**

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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment.

The objective of this document is to specify a bus system for control by digital signals of electronic lighting equipment, with the addition of DC supplies.

This document is only applicable to AS/NZS 62386.102:2020 control gear associated with LED modules.

Requirements for testing individual products during production are not included.

This document is an adoption with national modifications, and has been reproduced from, IEC 62386-207:2018 (ED. 2.0), *Digital addressable lighting interface — Part 207: Particular requirements for control gear — LED modules (device type 6)*. The modifications are additional requirements and are set out in [Appendix ZZ](#), which has been added at the end of the source text.

[Appendix ZZ](#) lists the variations to IEC 62386-207:2018 (ED. 2.0), for the application of this document in Australia and New Zealand.

As this document has been reproduced from an International Standard, the following applies:

- (a) In the source text “this part of IEC 62386” should read “this document”.
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The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

DIGITAL ADDRESSABLE LIGHTING INTERFACE –

Part 207: Particular requirements for control gear – LED modules (device type 6)

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62386-207 has been prepared by 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) fast fade time has been redefined;
- b) short circuit and open circuit have been deleted;
- c) physical selection has been deleted;
- d) dimming curve selection has been moved to a separate part;

- e) load increase, load decrease and reference measurement have been moved to a separate part;
- f) thermal gear and lamp protection have been moved to separate parts;
- g) LED module integrated has been moved to a separate part;
- h) link to IEC 62386-102 error bits has been clarified;
- i) the following commands have been deleted:
 - ENABLE CURRENT PROTECTOR
 - DISABLE CURRENT PROTECTOR
 - QUERY POSSIBLE OPERATING MODES
 - QUERY SHORT CIRCUIT
 - QUERY OPEN CIRCUIT
 - QUERY CURRENT PROTECTOR ACTIVE
 - QUERY CURRENT PROTECTOR ENABLED
 - QUERY OPERATING MODE

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

FDIS	Report on voting
34/483/FDIS	34/504/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

This Part 207 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 “<http://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 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 62386-207 is intended to be used in conjunction with IEC 62386-101:2014, IEC 62386-101:2014/AMD1:—, IEC 62386-102:2014 and IEC 62386-102:2014/AMD1:—, and with the various parts that make up the IEC 62386-2xx series for control gear. 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.

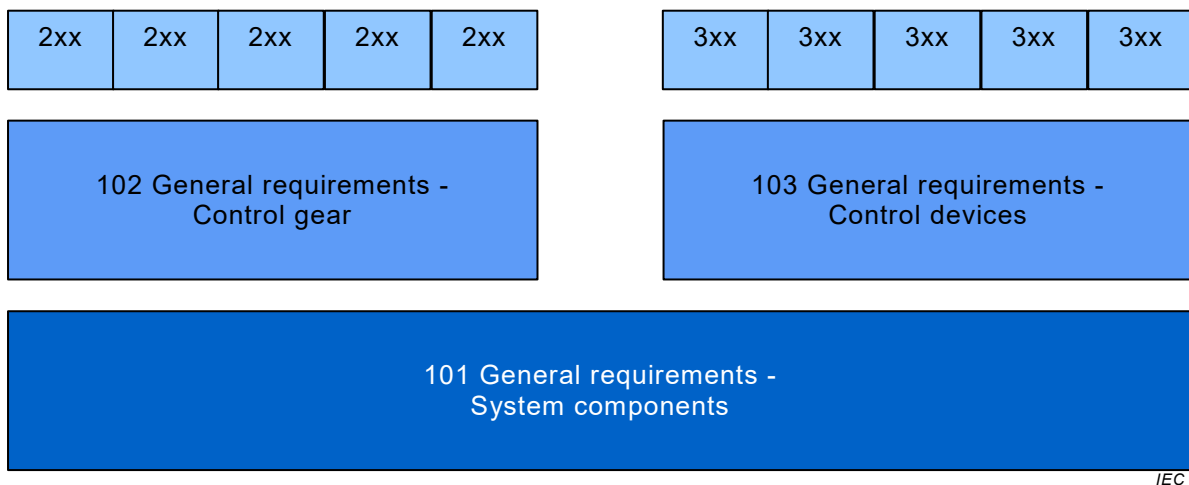


Figure 1 – IEC 62386 graphical overview

This document, and the other parts that make up the IEC 62386-200 series, in referring to any of the clauses of IEC 62386-1XX, specifies the extent to which such a clause is applicable; the parts also include additional requirements, as necessary.

Where the requirements of any of the clauses of IEC 62386-1XX are referred to in this document by the sentence “The requirements of IEC 62386-1XX, Clause “n” apply”, this sentence is to be interpreted as meaning that all requirements of the clause in question of Part 1XX apply, except any which are clearly inapplicable.

The standardization of the control interface for control gear is intended to achieve compatible co-existence between electronic control gear and lighting control devices, below the level of building management systems. This document describes a method of implementing control gear.

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 207: Particular requirements for control gear – LED modules (device type 6)

1 Scope

This part of IEC 62386 specifies a bus system for control by digital signals of electronic lighting equipment which is in line with the requirements of IEC 61347 (all parts), with the addition of DC supplies.

This document is only applicable to IEC 62386-102:2014 and IEC 62386-102:2014/AMD1:— control gear associated with LED modules.

NOTE Requirements for testing individual products during production are not included.

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 62386-101:2014, *Digital addressable lighting interface – Part 101: General requirements – System components*
IEC 62386-101:2014/AMD1:—¹

IEC 62386-102:2014, *Digital addressable lighting interface – Part 102: General requirements – Control gear*
IEC 62386-102:2014/AMD1:—²

IEC 62386-216:—³, *Digital addressable lighting interface – Part 216: Particular requirements for control gear – Load referencing (device type 15)*

IEC 62386-217:2018, *Digital addressable lighting interface – Part 217: Particular requirements for control gear – Thermal gear protection (device type 16)*

IEC 62386-218:2018, *Digital addressable lighting interface – Part 218: Particular requirements for control gear – Dimming curve selection (device type 17)*

IEC 62386-222:2018, *Digital addressable lighting interface – Part 222: Particular requirements for control gear – Thermal lamp protection (device type 21)*

IEC 62386-224:2018, *Digital addressable lighting interface – Part 224: Particular requirements for control gear – Non-replaceable light source (device type 23)*

¹ Under preparation. Stage at the time of publication: IEC TPUB 62386-101/AMD1:2018.

² Under preparation. Stage at the time of publication: IEC TFDIS 62386-102/AMD1:2018.

³ Under preparation. Stage at the time of publication: IEC BPUB 62386-216:2018.