

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Digital addressable lighting interface –
Part 101: General requirements – System components**

**Interface d'éclairage adressable numérique –
Partie 101: Exigences générales – Composants de système**



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Part 101: General requirements – System components**

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Partie 101: Exigences générales – Composants de système**

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CONTENTS

FOREWORD.....	7
INTRODUCTION.....	9
1 Scope.....	10
2 Normative references	10
3 Terms and definitions	10
4 General	15
4.1 Purpose	15
4.2 Version number	15
4.3 System structure and architecture.....	15
4.4 System information flow	16
4.5 Command types	16
4.6 Bus units.....	17
4.6.1 Transmitters and receivers in bus units.....	17
4.6.2 Control gear	17
4.6.3 Input device.....	17
4.6.4 Single master application controller	17
4.6.5 Multi-master application controller	18
4.6.6 Sharing an interface	18
4.7 Bus power supply and load calculations.....	19
4.7.1 Current demand coverage	19
4.7.2 Maximum signal current compliance	19
4.7.3 Simplified system calculation	19
4.8 Wiring	19
4.8.1 Wiring structure	19
4.8.2 Wiring specification	19
4.9 Insulation	20
4.10 Earthing of the bus.....	20
4.11 Power interruptions at bus units	20
4.11.1 Different levels of power interruptions.....	20
4.11.2 Short power interruptions of external power supply.....	20
4.11.3 External power cycle	21
4.11.4 Short interruptions of bus power supply	21
4.11.5 Bus power down	21
4.11.6 System start-up timing	21
5 Electrical specification	23
5.1 General.....	23
5.2 Marking of the interface	23
5.3 Capacitors between the interface and earth	23
5.4 Signal voltage rating	23
5.5 Signal current rating.....	24
5.6 Marking of bus powered bus unit.....	24
5.7 Signal rise time and fall time	24
6 Bus power supply	26
6.1 General.....	26
6.2 Marking of the bus power supply terminals.....	26
6.3 Capacitors between the interface and earth	26

6.4	Voltage rating	26
6.5	Current rating.....	26
6.5.1	General current rating.....	26
6.5.2	Single bus power supply current rating	27
6.5.3	Integrated bus power supply current rating	27
6.5.4	Dynamic behaviour of the bus power supply	27
6.6	Bus power supply timing requirements	28
6.6.1	Short power supply interruptions.....	28
6.6.2	Short circuit behaviour	29
7	Transmission protocol structure	29
7.1	General.....	29
7.2	Bit encoding.....	29
7.2.1	Start bit and data bit encoding	29
7.2.2	Stop condition encoding	30
7.3	Frame description	30
7.4	Frame types.....	30
7.4.1	16 bit forward frame.....	30
7.4.2	24 bit forward frame.....	30
7.4.3	Reserved forward frame	30
7.4.4	Backward frame.....	30
7.4.5	Proprietary forward frames	30
8	Timing	31
8.1	Transmitter timing	31
8.1.1	Transmitter bit timing	31
8.1.2	Transmitter frame sequence timing.....	32
8.2	Receiver timing	32
8.2.1	Receiver bit timing	32
8.2.2	Receiver bit timing violation	34
8.2.3	Receiver frame size violation	34
8.2.4	Receiver frame sequence timing.....	34
8.2.5	Reception of backward frames.....	35
8.3	Multi-master transmitter timing.....	35
8.3.1	Multi-master transmitter bit timing.....	35
8.3.2	Multi-master transmitter frame sequence timing.....	36
9	Method of operation.....	36
9.1	Collision avoidance, collision detection and collision recovery	36
9.1.1	General	36
9.1.2	Collision avoidance.....	37
9.1.3	Collision detection	37
9.1.4	Collision recovery	38
9.2	Transactions	39
9.3	Send-twice forward frames and send-twice commands	40
9.4	Command iteration.....	40
9.5	Usage of a shared interface	41
9.5.1	General	41
9.5.2	Backward frames	41
9.5.3	Forward frames	41
9.6	Use of multiple bus power supplies	41

9.7	Command execution	42
10	Declaration of variables	42
11	Definition of commands	42
12	Test procedures	42
12.1	General notes on test.....	42
12.1.1	Abbreviations.....	42
12.1.2	Ambient temperature	42
12.1.3	External power supply voltage and frequency	43
12.1.4	Measurement requirements	43
12.1.5	Test signal generators and bus voltage sources	43
12.1.6	Deviation from documentation	43
12.1.7	Test setup	43
12.1.8	Notation.....	43
12.2	General interface tests.....	49
12.2.1	Label and literature check.....	49
12.2.2	Interface marking check.....	49
12.2.3	Bus powered bus unit marking check	50
12.2.4	Bus power supply marking check	52
12.2.5	Insulation test.....	54
12.2.6	Capacitor check.....	55
12.3	Bus power supply tests	55
12.3.1	Voltage rating test	55
12.3.2	Voltage rise time test.....	56
12.3.3	Current rating test.....	56
12.3.4	Dynamic behaviour test	58
12.3.5	Power-on open circuit test	60
12.3.6	Power-on timing test.....	61
12.3.7	Power supply short interruptions test	62
12.3.8	Power supply short circuit test.....	63
12.3.9	Power supply current consumption test.....	64
12.4	Control device tests	65
12.5	Control gear tests	65
Annex A	(informative) Background information for systems.....	66
A.1	Wiring information.....	66
A.2	System architectures	67
A.2.1	General	67
A.2.2	Single master architecture	67
A.2.3	Multi-master architecture with one application controller	68
A.2.4	Multi-master architecture with more than one application controller	69
A.2.5	Multi-master architecture with integrated input device.....	70
A.2.6	Multi-master architecture with integrated input device and power supply.....	71
A.3	Collision detection	72
A.4	Timing definition explanations	73
A.4.1	General	73
A.4.2	Receiver timing.....	73
A.4.3	Transmitter timing.....	73
A.4.4	Grey areas	74
A.5	Maximum current consumption calculation explanation	74

A.5.1	Single bus power supply	74
A.5.2	Multiple bus power supplies	75
A.5.3	Redundant bus power supplies	76
A.6	Communication layer overview	77
A.6.1	General	77
A.6.2	Physical layer	77
A.6.3	Data link layer	77
A.6.4	Network layer	77
A.6.5	Transport layer	78
A.6.6	Session layer	78
A.6.7	Presentation layer	78
A.6.8	Application layer	78
	Bibliography	79
	Figure 1 – IEC 62386 graphical overview	9
	Figure 2 – System structure example	16
	Figure 3 – Communication between bus units (example)	16
	Figure 4 – Example of a shared interface	18
	Figure 5 – Start up timing example	22
	Figure 6 – Maximum signal rise and fall time measurements	25
	Figure 7 – Minimum signal rise and fall time measurements	25
	Figure 8 – Bus power supply current behaviour	28
	Figure 9 – Bus power supply voltage behaviour	28
	Figure 10 – Frame example	29
	Figure 11 – Bi-phase encoded bits	30
	Figure 12 – Bit timing example	31
	Figure 13 – Settling time illustration	32
	Figure 14 – Receiver timing decision example	34
	Figure 15 – Collision detection timing decision example	38
	Figure 16 – Collision recovery example	39
	Figure 17 – Current rating test signal	57
	Figure 18 – Dynamic behaviour test setup	58
	Figure 19 – Dynamic behaviour test signal	59
	Figure A.1 – Single master architecture example	68
	Figure A.2 – Multi-master architecture example with one application controller	69
	Figure A.3 – Multi-master architecture example with two application controllers	70
	Figure A.4 – Multi-master architecture example with integrated input device	71
	Figure A.5 – Multi-master architecture example with integrate input device and bus power supply	72
	Figure A.6 – Collision detection timing diagram	73
	Figure A.7 – Transmitter and receiver timing illustration	74
	Figure A.8 – Bus power supply current values	75
	Figure A.9 – Current demand coverage	75
	Figure A.10 – Combination of 4 bus power supplies	76
	Figure A.11 – Redundant bus power supplies	76

Table 1 – System components	15
Table 2 – Transmitters and receivers in bus units	17
Table 3 – Power-interruption timing of external power	20
Table 4 – Power-interruption timing of bus power	20
Table 5 – Short power interruptions	21
Table 6 – Start-up timing	22
Table 7 – System voltage levels	23
Table 8 – Receiver voltage levels	23
Table 9 – Transmitter voltage levels	24
Table 10 – Current rating	24
Table 11 – Signal rise and fall times	25
Table 12 – Bus power supply output voltage	26
Table 13 – Bus power supply current rating	27
Table 14 – Bus power supply dynamic behaviour	27
Table 15 – Short circuit timing behaviour	29
Table 16 – Transmitter bit timing	32
Table 17 – Transmitter settling time values	32
Table 18 – Receiver timing starting at the beginning of a logical bit	33
Table 19 – Receiver timing starting at an edge inside of a logical bit	33
Table 20 – Receiver settling time values	35
Table 21 – Multi-master transmitter bit timing	35
Table 22 – Multi-master transmitter settling time values	36
Table 23 – Checking a logical bit, starting at an edge at the beginning of the bit	37
Table 24 – Checking a logical bit, starting at an edge inside the bit	38
Table 25 – Collision recovery timing	39
Table 26 – Transmitter command iteration timing	41
Table 27 – Receiver command iteration timing	41
Table 28 – Function call keywords	44
Table 29 – Defined operators	47
Table A.1 – Maximum cable length	67
Table A.2 – OSI layer model of IEC 62386	77

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DIGITAL ADDRESSABLE LIGHTING INTERFACE –**Part 101: General requirements –
System components****FOREWORD**

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International Standard IEC 62386-101 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. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) collection of all bus timing requirements defined in IEC 62386-101:2009 and IEC 62386-102:2009 and rework of the timing requirements to facilitate the preparation of a future control devices standard, taking particular account of the requirements for multi-master systems. The 10 % tolerances have been replaced by minimum and maximum timing values;
- b) integration of multi-master timing requirements;

- c) extension of the defined forward frames;
- d) addition of wiring requirements;
- e) improvement of the bus power supply requirements;
- f) improvement of test sequences and description of the test sequences in the form of pseudo code instead of flow charts.

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

FDIS	Report on voting
34C/1098/FDIS	34C/1111/RVD

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 101 is intended to be used in conjunction with:

- Part 102, which contains general requirements for the relevant product type (control gear), and with the appropriate Part 2xx (particular requirements for control gear);
- Part 103, which contains general requirements for the relevant product type (control devices), and the appropriate Part 3xx (particular requirements for control devices).

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

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

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INTRODUCTION

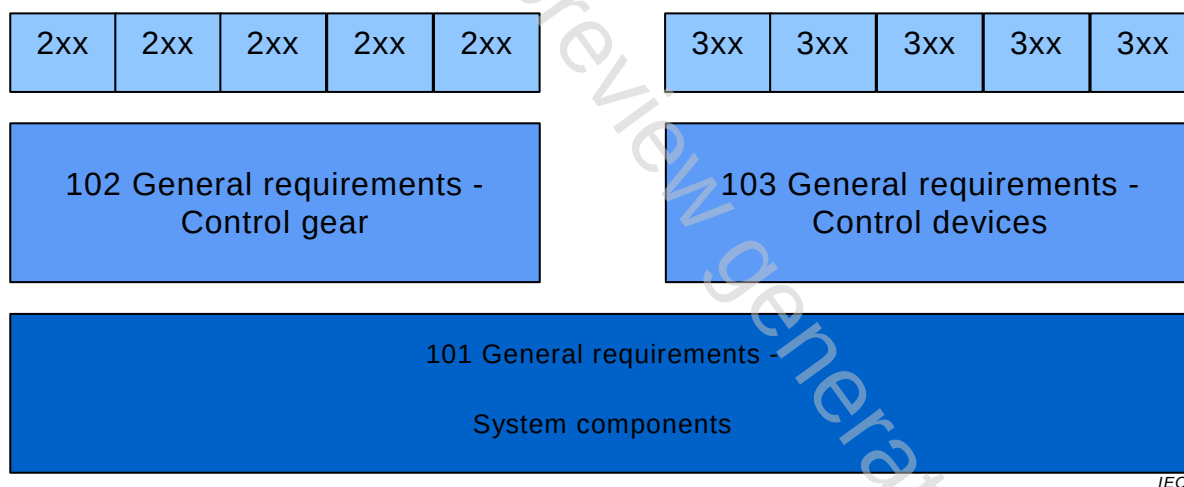
IEC 62386 contains several parts, referred to as series. The 1xx series includes the basic specifications. Part 101 contains general requirements for system components, Part 102 extends this information with general requirements for control gear and Part 103 extends it further with general requirements 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 62386-101 is published in conjunction with IEC 62386-102:2014 and with the various parts that make up the IEC 62386-2xx series for control gear, together with IEC 62386-103:2014 and 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 recognised.

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



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Figure 1 – IEC 62386 graphical overview

When this part of IEC 62386 refers to any of the clauses of the other two parts of the IEC 62386-1xx series, the extent to which such a clause is applicable and the order in which the tests are to be performed are specified. The other parts also include additional requirements, as necessary.

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".

DIGITAL ADDRESSABLE LIGHTING INTERFACE –

Part 101: General requirements – System components

1 Scope

This part of IEC 62386 is applicable to system components in a bus system for control by digital signals of electronic lighting equipment. This electronic lighting equipment should be in line with the requirements of IEC 61347, with the addition of d.c. supplies.

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 controlgear*

IEC 61347-1, *Lamp controlgear – Part 1: General and safety requirements*

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

IEC 62386-103:2014, *Digital addressable lighting interface – Part 103: General requirements – Control devices*

IEC 61000-4-11, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

active state

phase of low level voltage during a transmission

Note 1 to entry: Noise and short pulses may be ignored and therefore do not change the state.

3.2

advanced bus power supply

bus power supply capable of checking the bus for fault conditions before switching on its output continuously

Note 1 to entry: Examples of fault conditions are mains voltage connected to the bus or short circuit of the bus.