

ICS 29.140.50
CCS K 74



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 30104.102-2025

Replacing GB/T 30104.102-2021

**Digital addressable lighting interface - Part 102: General
requirements - Control gear
(English Translation)**

Issued on: August 1, 2025

Implemented on: February 1, 2026

**Issued by: State Administration for Market Regulation, Standardization
Administration of China**

Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 General Requirements
5 Electrical Specifications
6 Bus power
7 Transmission Protocol Framework Structure
8 Timing
9 Operation Method
10 Variable Declaration
11 Instruction Definition
Appendix A (Informative) Algorithm Example
Appendix B (Normative) High Resolution Dimmer
Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 102 of GB/T 30104 Digital Addressable Lighting Interface. GB/T 30104 has been published in the following parts.

- Part 101: General requirements for system components;
- Part 102: General requirements for control devices;
- Part 103: General requirements for control equipment;
- Part 104: General requirements for wireless and other wired system components;
- Part.201.Particular requirements for control gear for fluorescent lamps (equipment type 0);
- Part 202: Particular requirements for control devices Self-contained emergency lighting

(equipment type 1);

--- Part 203: Particular requirements for control gear for discharge lamps (other than fluorescent lamps) (equipment type 2);

--- Part 204: Particular requirements for control gear for low-pressure tungsten halogen lamps (equipment type 3);

--- Part 205: Particular requirements for control gear for incandescent lamp supply voltage controllers (equipment type 4);

--- Part 206: Particular requirements for control devices converting digital signals into DC voltage (equipment type 5);

--- Part 207: Particular requirements for control gear LED modules (equipment type 6);

--- Part 208: Particular requirements for control devices switching functions (equipment type 7);

--- Part 209: Particular requirements for control devices Color control (equipment type 8);

--- Part 220: Particular requirements for control devices - Central power supply emergency operation (device type 19);

--- Part 222: Particular requirements for control devices heat lamp protection (device type 21);

--- Part 301: Special requirements for input device buttons;

--- Part 302: Special requirements for input devices, absolute input devices;

--- Part 303: Special requirements for input device occupancy sensors;

--- Part 304: Special requirements for input devices light sensors.

This document replaces GB/T 30104.102-2021 "Digital addressable lighting interface Part 102: General requirements control devices".

Compared with GB/T 30104.102-2021, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) The scope has been changed (see Chapter 1, Chapter 1 of the 2021 edition);

b) The version number has been changed (see 4.2, 2021 version 4.2);

c) Added support for block reads of multi-byte values (see 9.10.5.2);

d) Changed the requirements for memory block 0 and memory blocks for general use (see 9.10.7, 9.10.6 of the 2021 edition);

e) The reserved memory blocks have been changed (see 9.10.10, 9.10.9 of the 2021 edition);

f) Increased the non-volatile memory (NVM) save time and deleted the save permanent variables (see 9.17, 2021 version 9.17 and 11.4.4);

g) Added bus unit configuration (see 9.20).

This document is equivalent to IEC 62386-102:2022 "Digital addressable lighting interface Part 102: General requirements controlgear".

The following minimal editorial changes have been made to this document.

--- Corrected the reference clause (see 9.8.1).

Introduction

GB/T 30104 (all parts) specifies a bus system for controlling electronic lighting equipment through digital signals, which is intended to consist of the following Partial composition.

Part 103 specifies the general requirements for control devices, Part 104 and Part 105 specify the general requirements for control devices, Part 104 specifies requirements for wireless and other wired system components.

Part 105 describes the firmware transfer. Part 150 gives the requirements for the auxiliary power supply, which can be independent or can be built into the control device or control equipment.

The purpose of this standard is to specify the special requirements for control devices for specific types of light sources.

The purpose of this standard is to specify the special requirements for various types of input devices.

Part 1 can be used together with GB/T 30104.103 for control equipment.

GB/T 30104 is published as a series of standards divided into several parts to facilitate future revision and amendment, and to add new parts when necessary.

Other requirements.

The structure of the series of standards is shown in Figure 1 as follows.

Figure 1 Overview of GB/T 30104

Other sections also include additional requirements.

Unless otherwise specified, all numbers used in this document are decimal. Hexadecimal numbers are given in the format 0xVV.

The "x" in the number means "any value".

Use the following typographical expressions.

Variable. "variable name" or "variable name [3.0]", only gives the 3rd to 0th digits of the variable name;

Value range. [minimum, maximum];

Command. "command name".

Digital Addressable Lighting Interface Part 102: General requirements for control devices

1 Scope

This document specifies the general requirements, electrical specifications, bus power supply, transmission protocol frame structure, timing, operation method, variables, etc. of the control device.

Declarations and directive definitions.

This document applies to control gear controlled by digital signals from electronic lighting equipment.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 30104.101-2025 Digital addressable lighting interface Part 101: General requirements System components (IEC 62386-101:2022, IDT) IEC 62386-101 Digital addressable lighting interface Part 101: General requirements System components (Digitaladdressable IEC 62386-103:2022 Digital addressable lighting interface Part 103: Particular requirements for control equipment (Digital Note. GB/T 30104.103-2017 Digital Addressable Lighting Interface Part 103: Particular Requirements Control Equipment (IEC 62386-103:2014, IDT) (all sections)]

3 Terms and Definitions

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

For standardized use, ISO and IEC maintain terminology databases at the following addresses.

Actual power levelactuallevel Indicates the current light output value.

Arc power