



ANSI C137.4-2019

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# American National Standard for Lighting Systems— Digital Interface with Auxiliary Power



**National Electrical Manufacturers Association**  
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**ANSI C137.4-2019**

*American National Standard for Lighting Systems—  
Digital Interface with Auxiliary Power*

Secretariat:

**National Electrical Manufacturers Association**

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**American National Standards Institute, Inc.**

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## **Foreword (This foreword is not a part of ANSI C137.4-2019)**

This Standard specifies a digital interface between a driver and other devices, such as a sensor or a controller, based on a wired digital interface according to IEC 62386 (Digital Addressable Lighting Interface) with the following additional characteristics:

- In addition to the IEC 62386 BPS (Bus Power Supply) capability, the interface specified in this document provides an optional additional, separate source of power to connected device(s). This Standard specifies the electrical requirements for this AUX (auxiliary) power supply, which may be provided by a driver or other device.
- The IEC 62386 Standard specifies the exchange of information, such as status and measurement information, through a concept of memory banks. However, the content of the memory banks is not standardized in IEC 62386. This Standard improves the interoperability between devices by defining a data model to be used to represent certain data elements as well as the memory banks (and locations) in which they shall be stored.

By specifying both the power characteristics as well as memory banks interoperability between drivers and nodes (such as sensors and communication devices), a fully operational digital interface can be successfully achieved.

This is a new Standard and not a revision of a previous Standard.  
Suggestions for improvement of this Standard are welcomed. They should be sent to;

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This Standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Lighting Systems, C137. Approval of the Standard is not meant to imply that all Committee members voted to approve it.

## 1 Scope

This Standard specifies the minimum requirements for devices such as drivers, controls, sensors, and communication devices supporting a digital interface between devices. It includes the electrical requirements and the data model. This Standard builds on the Digital Addressable Lighting Interface as specified in the IEC62386 series of Standards. This Standard also specifies the electrical requirements for an auxiliary (AUX) power supply.

## 2 References

### 2.1 Normative References

The following normative documents contain provisions, which through reference in this text constitute provisions of this Standards Publication. By reference herein, these publications are adopted, in whole or in part as indicated, in this Standards Publication.

All Standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the Standards indicated below.

Digital Illumination Interface Alliance (DiiA) Specifications:

--*Aux Power Supply*  
--*DALI Part 250 – Power Supply*  
--*DALI Part 251 – Memory bank 1 extension*

ANSI/IES RP-8            *Roadway Lighting; Annex E, Classification of Luminaire Distribution*

NFPA-70                *National Electrical Code*

### 2.2 Informative References

The following informative documents are referenced, in whole or in part as indicated, in this Standards Publication.

All Standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the Standards indicated below.

ANSI C136.41           *For Roadway and Area Lighting Equipment—Dimming Control Between an External Locking Type Photocontrol and Ballast or Driver*

IEC 62386-101        *Digital addressable lighting interface – Part 101: General requirements – System components*

IEC 62386-102        *Digital addressable lighting interface – Part 102: General requirements – control gear*