

Proposed American National Standard For Lighting Systems  
Digital Interface with Auxiliary Power

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# Proposed American National Standard For Lighting Systems Digital Interface with Auxiliary Power

## Outline:

- Overview of American National Standards Institute (ANSI)
- Composition of the Accredited Standards Committee (ASC) C137 – Lighting Systems
- Overview of Proposed ANSI C137.4
  - Memory Banks
  - Auxiliary Power Supply
- Adjunct ANSI C136 Activities

# The ANSI Process



- ANSI itself does not develop American National Standards.
- Rather, ANSI provides a neutral setting for stakeholders to develop standards.
- ANSI accredits the procedures of standards developing organizations (SDO).
- Accredited SDOs must comply with the ANSI Essential Requirements: Due process requirements for American National Standards.
- ANSI requirements principles provide guidelines regarding due process, consensus and openness.
- ANSI ensures that all that may be materially affected by a standard in development have access to the process, including an appeals mechanism.
- ANSI requires committee balance, typically at least the following stakeholders participate: producer, user and general interest.

# The ANSI Accredited Standards Committee (ASC) C137 – Lighting Systems Committee



- 73 (62.4%) Producer
- 20 (17.1%) General Interest
- 19 (16.2%) Users
- 4 (3.4%) Observers
- 1 (0.9%) Advisory

**ASC C137 Committee balance statistics – Spring 2019**

# Proposed ANSI C137.4

- Proposed American National Standard For Lighting Systems— Digital Interface with Auxiliary Power – ANSI C137.4.
  - Developed by the ASC C137.
  - Administrator & Publisher – The National Electrical Manufacturers Association (NEMA).
  - The Digital Illumination Interface Alliance (DiiA) is a member of ASC C137.



# Digital Interface with Auxiliary Power

## Proposed ANSI C137.4

- The standard specifies a digital interface between drivers and devices such as sensors or controllers.
- Based on IEC 62386 – Digital Addressable Lighting Interface.
- The IEC 62386 Bus Power Supply (BPS) is included.
- Additionally, the standard contains a specification for an optional, separate, auxiliary power supply (AUX)



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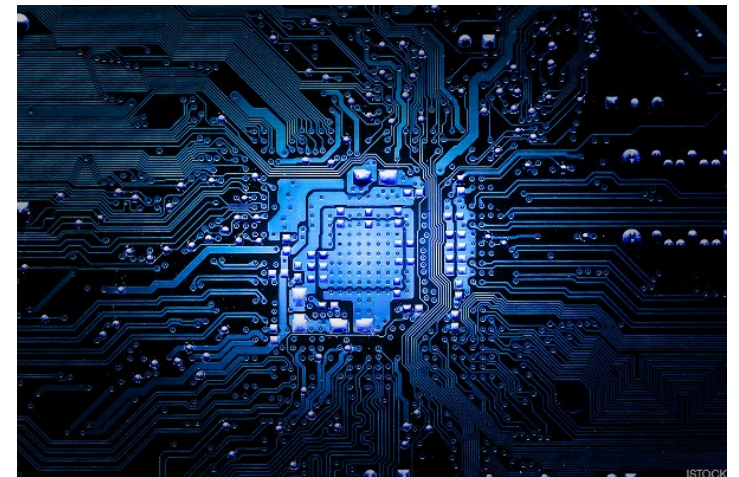
# Digital Interface with Auxiliary Power

## Proposed ANSI C137.4

- IEC 62386 specifies information exchange using a concept of memory banks.
- Memory banks are memory locations in a IEC 62386 compliant device that may be accessed by compatible connected devices.
- IEC 62386 does not standardize the contents of the memory banks.
- ANSI C137.4 defines a data model representing certain data elements and the memory banks in which the elements are stored.

# Digital Interface with Auxiliary Power Memory Bank Specifications

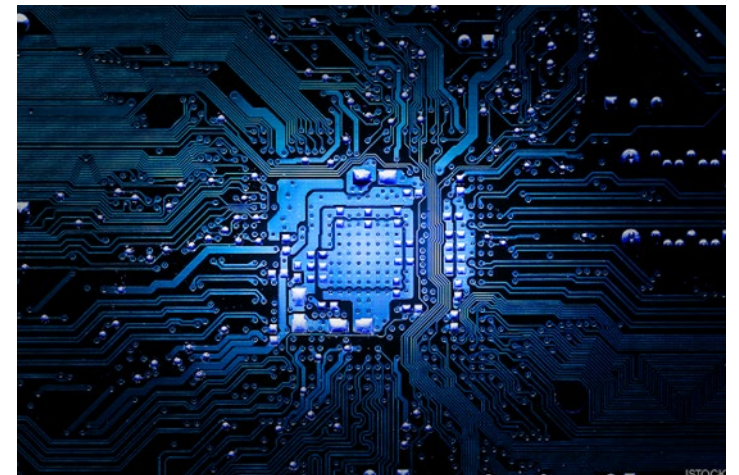
- Memory Bank 1
  - OEM information that is provided by luminaire manufacturers:
    - Luminaire identification
    - Input power
    - Mains voltage
    - Light output
    - CRI
    - CCT
    - Light distribution
    - Housing color





# Digital Interface with Auxiliary Power Memory Bank Specifications

- Memory Bank 201
  - Mandatory device identification:
    - Address of last memory location
    - Indicator byte
    - Lock byte
    - Version of the memory bank
    - Bus supply current
    - Bus supply status

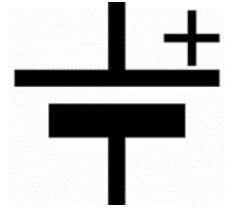


# Digital Interface with Auxiliary Power Memory Bank Specifications

- C137.4 specifies default values and reset values for the memory banks addressed by the standard
- C137 also specifies the memory type:
  - Read only
  - Random access
  - Non volatile (write protectable)

# Digital Interface with Auxiliary Power

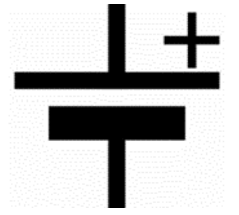
## Auxiliary Power Specifications



- In addition to the bus power supply, an optional, separate AUX supply may be provided to power connected devices.
- A 3 Watt, 24V, AUX supply is specified.
- The specifications include electrical characteristics for both the AUX supply and connected loads.
- Safety ratings for the AUX supply are addressed, as are grounding & overload protection.
- Connection of multiple AUX power supplies are also addressed.

# Digital Interface with Auxiliary Power

## Auxiliary Power Specifications

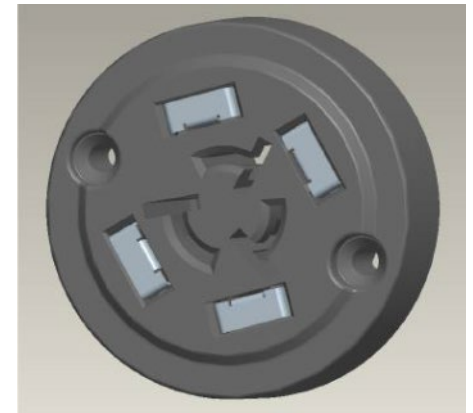


- Electrical characteristics of the AUX power supply and connected load, include specifications for:
  - Rated values
  - Minimum and maximum values
  - Conditions
- Connection of multiple AUX power supplies are also addressed

# Digital Interface with Auxiliary Power Adjunct ANSI C136 Activities



- References to compatible electromechanical interface standards developed by ANSI and Zhaga are included in C137.4.
- C136.41 For Roadway and Area Lighting Equipment — Dimming Control Between an External Locking Type Photocontrol and Ballast or Driver



# Digital Interface with Auxiliary Power Adjunct ANSI C136 Activities



- Proposed ANSI C136.58. Luminaire Four-Pin Extension Module and Receptacle — Physical and Electrical Interchangeability and Testing
- Zhaga Book 18 Luminaire Extension Module and Receptacle

# The ANSI Accredited Standards Committee (ASC) C137 – Lighting Systems Committee

- As noted earlier, ANSI committees seek a balance of membership.
- ASC C137 is particularly interested in members of the underrepresented categories of “General Interest” and “User.”
- If you are interested in participating in the development of Lighting System Standards, you may wish to consider becoming an active participant of ASC C137.

If you are interested please reach out to:

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