ANSI C136.50-2021

American National Standard for Roadway and Area Lighting Equipment— Energy Measurement for a Network Lighting Control (NLC) Device with a Locking-Type Receptacle

Secretariat:

National Electrical Manufacturers Association

Approved: July 20, 2021

American National Standards Institute, Inc.

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Foreword

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American Electric Power
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1 Scope

This Standard describes methods and requirements for the measurement of energy consumption and the reporting of the consumption for a network lighting control (NLC) device in an outdoor lighting application to meet metering accuracy requirements using a locking-type receptacle in a two-wire power supply installation. This Standard does not address the communication of the data captured from the point of measurement. This Standard only addresses power delivered; it does not address two-way (bidirectional) metering.

2 Normative References

This Standard incorporates by reference provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed below. For undated references, the latest edition of the publication referred to applies (including amendments).

ANSI C12.20 *American National Standard for Electricity Meters—0.1, 0.2, and 0.5 Accuracy Classes*

ANSI C136.2 *American National Standard for Roadway and Area Lighting Equipment—Dielectric Withstand and Electrical Transient Immunity Requirements*

ANSI C136.48 *American National Standard for Roadway and Area Lighting Equipment—Wireless Networked Lighting Controllers*

IEC 61000-4-2 *Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test*

3 Informative References

This Standard is intended to be used in conjunction with the following publications. The latest edition of the publication applies (including amendments).

ANSI C12.1 *American National Standard for Electric Meters—Code for Electricity Metering*

ANSI C12.18 *American National Standard for Protocol Specification for ANSI Type 2 Optical Port*

ANSI C136.52 *American National Standard for Roadway and Area Lighting Equipment—Metering Performance Requirements for LED Drivers with Integral Energy Measurement*

4 Definitions

Accuracy: The extent to which a given measurement agrees with the defined value.

Accuracy Class: Class of measuring instruments or measuring systems that meet stated metrological requirements (a specific maximum permissible error) that are intended to keep measurement errors or instrumental uncertainties within specified limits. For the devices covered by this specification, the NLC Metering Accuracy Classes are 0.5%, 1.0%, and 2.0%.

Ballast: Stabilizes the current through an electrical load. Generally, refers to HID luminaires such as HPS and metal halide.

Basic Accuracy: The results of a reference performance test on the metering device under reference conditions that must fall within a certain tolerance of the manufacturer’s stated specification and that are used for comparison with results from testing done under other conditions.