NEMA Standards Publication

ANSI C136.24-2020

American National Standard For Roadway and Area Lighting Equipment — Nonlocking (Button) Type Photocontrols

National Electrical Manufacturers Association

National Electrical Manufacturers Association
1300 North 17th Street, Suite 900 • Rosslyn. VA 22209
www.NEMA.org

ANSI C136.24-2020
Revision of ANSI C136.24-2004 (R2010)

American National Standard For Roadway and Area Lighting Equipment— Nonlocking (Button) Type Photocontrols

Secretariat:

National Electrical Manufacturers Association

Approved: February 24, 2020

American National Standards Institute, Inc.

NOTICE AND DISCLAIMER

The information in this publication was considered technically sound by the consensus of persons engaged in the development and approval of the document at the time it was developed. Consensus does not necessarily mean that there is unanimous agreement among every person participating in the development of this document.

American National Standards Institute (ANSI) Standards and guideline publications, of which the document contained herein is one, are developed through a voluntary consensus Standards development process. This process brings together volunteers and/or seeks out the views of persons who have an interest in the topic covered by this publication. While NEMA administers the process and establishes rules to promote fairness in the development of consensus, it does not write the document, and it does not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgments contained in its Standards and guideline publications.

NEMA disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, application, or reliance on this document. NEMA disclaims and makes no guaranty or warranty, express or implied, as to the accuracy or completeness of any information published herein, and disclaims and makes no warranty that the information in this document will fulfill any of your particular purposes or needs. NEMA does not undertake to guarantee the performance of any individual manufacturer or seller's products or services by virtue of this Standard or guide.

In publishing and making this document available, NEMA is not undertaking to render professional or other services for or on behalf of any person or entity, nor is NEMA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. Information and other Standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication.

NEMA has no power, nor does it undertake to police or enforce compliance with the contents of this document. NEMA does not certify, test, or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of compliance with any health or safety–related information in this document shall not be attributable to NEMA and is solely the responsibility of the certifier or maker of the statement.

AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires verification by ANSI. ANSI states that the requirements for due process, consensus, and other criteria for approval have been met by the Standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means significantly more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether they have approved the Standards or not, from: manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the Standards.

The American National Standards Institute does not develop Standards, and will under no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this Standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this Standard. Purchasers of American National Standards may receive current information on all Standards by calling or writing the American National Standards Institute.

Published by

National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, VA 22209

<This page intentionally left blank.>

CONTENTS

Foreword

At the time this Standard was approved the ANSI C136 committee was composed of the following Members:

Acuity Brands
Alabama Power Company
American Electric Power
Amphenol Canada Corp.
Atlas Lighting Products, Inc.
California Lighting Technology Center, UC Davis
CIMCON Lighting
City of Kansas City, Missouri
City of Los Angeles, Bureau of Street Lighting
Comptek Technologies
Cooper Lighting Solutions
Cree Lighting
Dominion Energy
Duke Energy
Duke Energy Progress
EPRI
Excellence Opto Inc.
EYE Lighting International of N.A,, Inc.
Florida Power & Light Company.
Gateway International 360
GE Current, a Daintree Company
Georgia Power Company
Graeme Lister Consulting
Greenstar Products, Inc
Hancock Consulting
Hapco Aluminum Pose Products
Howard Lighting
Hubbell Lighting, Inc.
Intelligent Illuminations
Intrematic Incorporated
Intertek USA, Inc,
Itron Inc.
JEA
Kauffman Consulting, LLC
LED Roadway Lighting Ltd.
Legrand North America
Leotek Electronics USA, Inc.
Light Smart
Littlefuse, Inc.
Lumispec Consulting.
Mississippi Power
National Grid
NightSwitch LLC
OSRAM SYLVANIA Inc.
Pacific Northwest National Laboratory
Phoenix Lighting
PSEG Power
Radian Research, Inc.
Realterm Energy
Ripley Lighting Controls
ROAM/DTL
SELC Ireland Limited
Sensus, a Xylem Brand
Signify North America Corporation
Solais Lighting, Inc.
South Carolina Electric & Gas
Stresscrete/King Luminiare
Stresscrete/King Luminaire
Sunrise Technologies, Inc.
Tampa Electric Company
TE Connectivity
Telematics Wireless
Telensa
Valmont Industries, Inc.
Vandal Shields
Watthour Engineering Company, Inc.
Westire Technology Limited
Xcel Energy

.

1 Scope

This Standard covers the electrical and mechanical interchangeability of nonlocking type photocontrols for mounting within a roadway or off-roadway luminaire, herein called “controls.” These controls are commonly called “button” photocontrols.

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).

UL 773A, 6th Edition, 2016, *Standard for Nonindustrial Photoelectric Switches for Lighting Control*.

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

ANSI C136.25 *American National Standard for Roadway and Area Lighting Equipment—Ingress Protection (Resistance to Dust, Solid Objects, and Moisture) for Luminaire Enclosures and Devices.*

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/IEEE C62.1, *IEEE Standard for Gapped Silicon-carbide Surge Arresters for AC Power Circuits*.

ANSI/IEEE C62.41, *IEEE Recommended Practice for Surge Voltages in Low-voltage AC Power Circuits*.

ANSI C136.10 *American National Standard for Roadway and Area Lighting Equipment—Locking-type Photocontrol Devices and Mating Receptacles—Physical and Electrical Interchangeability and Testing*.

4 Mounting and Physical Considerations

4.1 Sealing

A sealing means shall be provided between the control and the luminaire or mounting enclosure to prevent the entrance of rain, dust, and vermin. The sealing method must allow replacement of the control.

4.2 Ingress Protection

The controls, when mounted in the enclosure, shall meet the suggested IP ratings per ANSI C136.25. The control has 2 separate IP ratings that are exclusive to the window portion of the control that resides in application outside a luminaire, and to the back cover of the node that resides in application inside the luminaire.

4.3 Mounting Screws

Mounting screws, if used, must be captive to the control.