



NECA 230-2016

Standard for Selecting, Installing, and Maintaining

Electric Motors and Motor Controllers (1000 Volts and Less)

AN AMERICAN NATIONAL STANDARD

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National Standard



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(This foreword is not a part of the standard)

Foreword

National Electrical Installation Standards™ (NEIS™) are intended to improve communication among specifiers, purchasers, and suppliers of electrical construction services. They define a minimum baseline of quality and workmanship for installing electrical products and systems. *NEIS* are intended to be referenced in contract documents for electrical construction projects. The following language is recommended:

Wiring devices should be installed and maintained in accordance with NECA 230-2016, *Standard for Selecting, Installing, and Maintaining Electric Motors and Motor Controllers (1000 Volts and Less)* (ANSI).

Use of *NEIS* is voluntary, and the National Electrical Contractors Association assumes no obligation of liability to users of this publication. Existence of this standard shall not preclude any member or non-member of NECA from specifying or using alternate construction methods permitted by applicable regulations.

This publication is intended to comply with the edition of the National Electrical Code (NEC) in effect at the time of publication. Because they are quality standards, *NEIS* may, in some instances go beyond the minimum requirements of the NEC. It is the responsibility of users of this publication to comply with state and local electrical codes when installing electrical products and systems.

Suggestions for revisions and improvements to this standard are welcome. They should be addressed to:

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1. Scope

1.1 Products and Applications Included

This standard describes recommended procedures for selecting and installing stationary electric motors and motor controllers rated 1000 volts or less. It also covers routine maintenance procedures to be followed after the installation is complete.

1.2 Regulatory and Other Requirements

All information in this publication is intended to conform to the NEC (ANSI/NFPA 70), and, in general, the typical recommendations of electric motor and motor controller manufacturers. Installers shall follow the NEC, applicable state and local codes, manufacturer instructions, and contract documents when installing motors and motor controllers.

Only qualified persons familiar with the construction and operation of motors and motor controllers should perform the work described in this publication. Administrative functions such as receiving, handling, and storing required in Section 4, and other tasks may be performed under the supervision of a qualified person. All work shall be performed in accordance with NFPA 70E, *Standard for Electrical Safety in the Workplace*.

General requirements for installing electrical products and systems are described in NECA 1, *Standard for Good Workmanship in Electrical Construction*, (ANSI). Other *NEIS* provide additional guidance for installing particular types of electrical products and systems. A complete list of *NEIS* is provided in Annex D.

1.3 Mandatory Requirements, Permissive Requirements, Quality and Performance Recommendations, Explanatory Material, and Informative Annexes

Mandatory Requirements. Mandatory requirements in manufacturer instructions, or of Codes or other mandatory Standards that may or not be adopted into law, are those that identify actions that are specifically required or prohibited and are characterized by the use of the terms must or must not, shall or shall not, or may not, or are not permitted, or are required, or by the use of positive phrasing of mandatory requirements. Examples of mandatory requirements may equally take the form of, “equipment must be protected . . .,” “equipment shall be protected . . .,” or “protect equipment . . .,” with the latter interpreted (understood) as “(it is necessary to, or, it is required to) protect equipment . . .”

Permissive Requirements. Permissive requirements of manufacturer instructions, or of Codes or other mandatory Standards that may or not be adopted into law, are those that identify actions that that are allowed but not required, or are normally used to describe options or alternative means and methods, and are characterized in this Standard by the use of the terms may, or are permitted, or are not required.

Quality and Performance Recommendations. Quality and performance recommendations identify actions that are recommended or not recommended to improve the overall quality or performance of the installation and are characterized by the use of the term should or should not.