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Standard for
Installing and Maintaining
Uninterruptible Power
Supplies (UPS)

NEIS



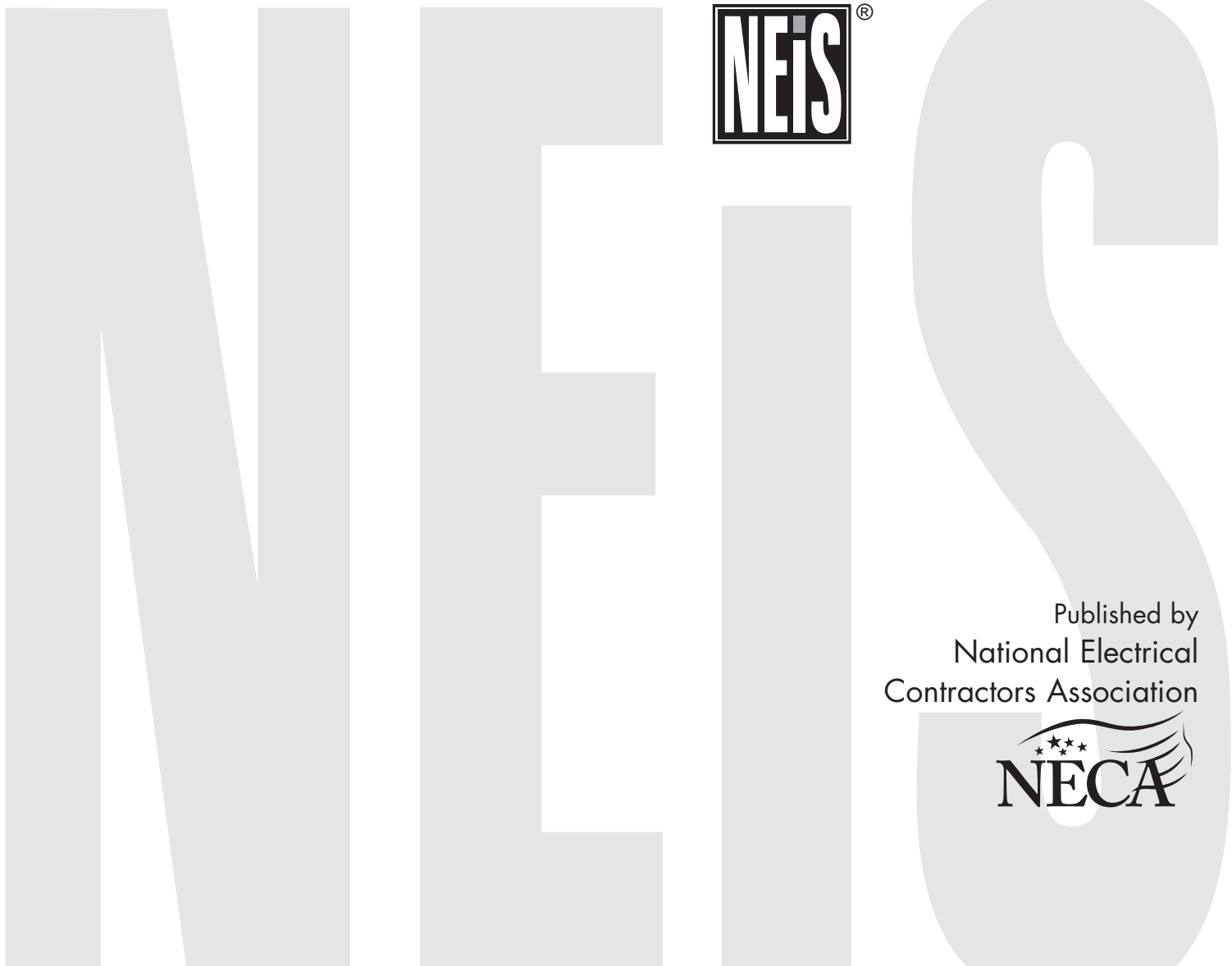
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Installing and Maintaining
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(UPS)

**An American
National Standard**



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(This foreword is not a part of the standard)

Foreword

National Electrical Installation Standards™ (NEIS®) are designed 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:

Uninterruptible Power Supplies (UPS) should be installed and maintained in accordance with NECA 411, *Standard for Installing and Maintaining Uninterruptible Power Supplies (UPS)* (ANSI).

Use of *NEIS* is voluntary, and neither the National Electrical Contractors Association nor the Steel Tube Institute of North America assume any obligation or liability to users of this publication. Existence of a standard shall not preclude any member or non-member of NECA or STI from specifying or using alternate construction methods permitted by applicable regulations.

The installation and maintenance practices recommended by this publication are intended to comply with the edition of the National Electrical Code (NEC) in effect at the time of publication. *NEIS* are not intended to duplicate NEC requirements nor to establish regulatory requirements for electrical construction. It is the responsibility of users of this standard 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

This standard describes installation and maintenance procedures for permanently installed, static, three-phase Uninterruptible Power Supplies (UPS) rated 30 kVA or more, and rated 600 Volts or less, and related battery systems installed indoors and outdoors for commercial, institutional and industrial applications. UPS described herein are solid state power systems which provide continuous regulated AC power at the output terminals, while operating from either an AC power source or from a battery system.

1.1 Products and Applications Included

Permanently-installed UPS rated 30 kVA or higher and 600 Volts or less, with related battery systems installed indoors or outdoors for commercial, institutional and industrial applications.

1.2 Products and Applications Excluded

1. Rotary UPS
2. Single-phase UPS
3. UPS rated less than 30 kVA
4. UPS rated greater than 600 Volts
5. Portable or temporary installations

1.3 Regulatory and Other Requirements

- a) All information in this publication is intended to conform to the National Electrical Code (ANSI/NFPA 70). Installers should always follow the NEC, applicable state and local codes, manufacturer's instructions, and contract documents when installing and maintaining uninterruptible power supplies.
- b) Only qualified persons familiar with the construction and operation of uninterruptible power supplies should perform the work described in this publication. It is recommended that all work be performed in accordance with NFPA 70E, *Standard for Electrical Safety in the Workplace*.
- c) General requirements for installing electrical products and systems are described in NECA 1, *Standard Practices for Good Workmanship in Electrical Contracting* (ANSI). Other NEIS provide additional guidance for installing particular types of electrical products and systems. A complete list of NEIS is provided in Annex C.