
**ANSI/NEMA OS 1-2013**

American National Standard

# Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports

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## Foreword

The purpose of this standards publication is to provide a guide to the types and sizes of metal outlet boxes, and supports for general use or suggested for future design or both. The standards present dimensional data needed for the safety and convenience of interchangeability with associated equipment. All items when properly installed and properly used contribute to safety.

Properly manufactured boxes and covers are, however, only one factor in minimizing the hazards, which may be associated with the use of electricity. The reduction of hazard involves the joint efforts of the various equipment manufacturers, the system designer, the installer, and user. Information is provided herein to assist users and others in the proper selection of boxes and covers.

The manufacturer has limited or no control over the following factors which are vital to a safe installation:

a. Environmental conditions
b. System design
c. Equipment selection and application
d. Installation
e. Operating practices
f. Maintenance

This publication is not intended to instruct the user of the boxes and covers with regard to these factors except insofar as suitable equipment to meet needs can be recognized in this publication.

These standards are necessarily limited to defining the construction requirements for the products covered herein. The publication has been promulgated with a view towards reducing the hazard to persons and property when boxes and covers conforming to these standards are properly selected and installed in accordance with the *National Electrical Code*®.

This standards publication has been reviewed with input obtained from independent testing laboratories and major consumer representatives.

OS 1-2013 revises and supersedes OS 1-2008 and its revision OS 1-2008 (R2010).

This standard is reviewed with input obtained from independent testing laboratories and major consumer representatives. It is also reviewed periodically by the Outlet and Switch Box Section of NEMA so that it will be kept up to date with advancing technology. Comments are welcomed and should be sent to:

**Senior Technical Director, Operations**
**National Electrical Manufacturers Association**
**1300 North 17th Street, Suite 900**
**Rosslyn, Virginia 22209**

This standard was developed by the Outlet and Switch Box Section. Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time this standard was approved, the Outlet and Switch Box Section was composed of the following members:

| | |
|---|---|
| 2D2C, Inc. | Kitchener, ON Canada |
| Allied Moulded Products, Inc. | Bryan, OH |
| Arlington Industries, Inc. | Scranton, PA |
| Eaton Cooper B-Line | Highland, IL |
| Eaton Cooper Crouse-Hinds | Syracuse, NY |
| EGS Electrical Group | Skokie, IL |
| ERICO | Solon, OH |
| Hubbell Incorporated | Shelton, CT |
| IPEX USA LLC | Mississauga, ON Canada |
| Legrand/Pass & Seymour | Syracuse, NY |
| Sigma Electric Manufacturing Corporation | Garner, NC |
| Southwire Company | Carrollton, GA |
| Thomas & Betts | Memphis, TN |
| Wiremold/Legrand | West Hartford, CT |

# Section 1
# GENERAL

## 1.1 SCOPE

This standards publication covers those general-purpose metal outlet boxes, device boxes, covers, and supports that are widely used by the consumer. These items (covered by UL 514A) are designed to facilitate the pulling of wires, to protect and facilitate wiring splices and taps, to provide a means of mounting and protecting wiring devices, and to provide a connection for rigid conduit, electrical metallic tubing, armored cable, metal clad cable, nonmetallic sheathed cable, flexible metallic conduit and knob-and-tube wiring systems.

This standard provides useful guidance for design and performance of certain aspects of metallic floor boxes.

Excluded from this standards publication are the following: "conduit bodies" and similar types of boxes; cabinets or cutout boxes; pull boxes; floor boxes; flush device plates; boxes, plates and covers designed for use with surface metal raceway systems only; and boxes larger than 1650 cubic cm (100 cubic in.) in volume except multiple gang device boxes.

## 1.2 REFERENCES

The following publications are adopted in part, by reference in this publication, and are available from the organizations below. Unless otherwise noted, references are to the most recent edition.

**National Electrical Manufacturers Association**
1300 N. 17th Street, Suite 900
Rosslyn, VA 22209

NEMA OS 3 *Selection and Installation Guidelines for Electrical Outlet Boxes*

**National Fire Protection Association**
1 Batterymarch Park
Quincy, MA 02169

ANSI/NFPA 70 *National Electrical Code®*

**Underwriters Laboratories LLC**
333 Pfingsten Road
Northbrook, IL 60062

ANSI/UL 514A *Metallic Outlet Boxes*

## 1.3 DEFINITIONS

**blank cover:** an outlet box cover having no knockouts or openings, other than those used to mount to a box. These covers complete the enclosure.

**blank/knockout cover:** an outlet box cover that contains a knockout which can be removed to accommodate a fitting for a pendant cord, etc. When left in place it may serve as a blank cover.

**box (electrical):** a part of an enclosure provided with means for mounting a cover, cover-plate, accessory, etc.