

## **SECTION 26 05 33.16 - BOXES FOR ELECTRICAL SYSTEMS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Outlet and device boxes up to 100 cubic inches (1,650 cu cm), including those used as junction and pull boxes.
- B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches (1,650 cu cm).

#### **1.2 RELATED REQUIREMENTS**

- A. Section 26 05 26.01 - Grounding and Bonding for Electrical Systems.
- B. Section 33 52 43.31 - Fuel System Conduit for Electrical Systems:
  - 1. Conduit bodies and other fittings.
- C. Section 33 52 43.33 - Fuel System Identification for Electrical Systems: Identification products and requirements.

#### **1.3 REFERENCE STANDARDS**

- A. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2020.
- B. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable 2014.
- C. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports 2013 (Reaffirmed 2020).
- D. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations Current Edition, Including All Revisions.
- F. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations Current Edition, Including All Revisions.
- G. UL 508A - Industrial Control Panels Current Edition, Including All Revisions.
- H. UL 514A - Metallic Outlet Boxes Current Edition, Including All Revisions.

## **PART 2 PRODUCTS**

### **2.1 BOXES**

#### **A. General Requirements:**

1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
3. Provide products listed, classified, and labeled as suitable for the purpose intended.
4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
5. Provide grounding terminals within boxes where equipment grounding conductors terminate.

#### **B. Outlet and Device Boxes Up to 100 cubic inches (1,650 cu cm), Including Those Used as Junction and Pull Boxes:**

1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
3. Use suitable concrete type boxes where flush-mounted in concrete.
4. Use suitable masonry type boxes where flush-mounted in masonry walls.
5. Use raised covers suitable for the type of wall construction and device configuration where required.
6. Use shallow boxes where required by the type of wall construction.
7. Do not use "through-wall" boxes designed for access from both sides of wall.
8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
11. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.

#### **C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):**

1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
2. NEMA 250 Environment Type, Unless Otherwise Indicated:
3. Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
  - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.
4. Finish for Painted Steel Enclosures: Manufacturer's standard grey unless otherwise indicated.

### **END OF SECTION 26 05 33.16**