

SECTION 260533.16 - BOXES AND COVERS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Metallic outlet boxes, device boxes, rings, and covers.
2. Junction boxes and pull boxes.
3. Cover plates for device boxes.
4. Hoods for outlet boxes.

B. Products Installed, but Not Furnished, under This Section:

1. See Section 260553 "Identification for Electrical Systems" for electrical equipment labels.

1.02 BUY AMERICAN REQUIREMENTS

A. Provide certificates to show that all products meet the following requirements.

1. American Iron and Steel (AIS)
2. Build America, Buy America Act

B. See Supplementary Conditions for details.

1.03 ACTION SUBMITTALS

A. Product Data:

1. Metallic outlet boxes, device boxes, rings, and covers.
2. Junction boxes and pull boxes.
3. Cover plates for device boxes.
4. Hoods for outlet boxes.

PART 2 - PRODUCTS

2.01 METALLIC OUTLET BOXES, DEVICE BOXES, RINGS, AND COVERS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction and marked for intended location and application.
2. Listing Criteria: UL CCN QCIT; including UL 514A.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

C. UL QCIT - Metallic Outlet Boxes and Covers:

1. Description: Box having pryout openings, knockouts, threaded entries, or hubs in either the sides of the back, or both, for entrance of conduit, conduit or cable fittings, or cables, with provisions for mounting outlet box cover, but without provisions for mounting wiring device directly to box.
2. Options:
 - a. Material: Sheet steel Cast metal.
 - b. Sheet Metal Depth: Minimum 2 inch.
 - c. Cast-Metal Depth: Minimum 1.8 inch.
 - d. Luminaire Outlet Boxes and Covers: Nonadjustable, listed and labeled for attachment of luminaire weighing up to 50 lb. Outlet boxes designed for attachment of luminaires weighing more than 50 lb and marked with maximum allowable weight.

D. UL QCIT - Metallic Conduit Bodies:

1. Description: Means for providing access to interior of conduit or tubing system through one or more removable covers at junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.

E. UL QCIT - Metallic Device Boxes:

1. Description: Box with provisions for mounting wiring device directly to box.
2. Options:
 - a. Material: Sheet steel or Cast metal.
 - b. Sheet Metal Depth: minimum 2 inch.
 - c. Cast-Metal Depth: minimum 1.8 inch.

2.02 JUNCTION BOXES AND PULL BOXES

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. Listing Criteria: UL CCN BGUZ; including UL 50 and UL 50E.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

C. UL BGUZ - Indoor Sheet Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

- a. Options: Degree of Protection: Type 1.

D. UL BGUZ - Outdoor Sheet Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

- a. Options: Degree of Protection: Type 3SX and Type 4X.

E. UL BGUZ - Outdoor Cast-Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

- a. Options: Degree of Protection: Type 4.

2.03 COVER PLATES FOR DEVICES BOXES

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. Listing Criteria: UL CCN QCIT or UL CCN QCMZ; including UL 514D.
3. Wallplate-Securing Screws: Metal with head color to match wallplate finish.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

C. UL QCIT or QCMZ - Metallic Cover Plates for Device Boxes:

1. Options:
 - a. Damp and Wet Locations: Listed, labeled, and marked for location and use. Provide gaskets and accessories necessary for compliance with listing.
 - b. Wallplate Material: Galvanized steel.

2.04 HOODS FOR OUTLET BOXES

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. Listing Criteria:
 - a. UL CCN QCIT or UL CCN QCMZ; including UL 514D.

- b. Receptacle, Hood, Cover Plate, Gaskets, and Seals: UL 498 Supplement SA when mated with box or enclosure complying with UL 514A, UL 514C, or UL 50E.
 - 3. Mounts to box using fasteners different from wiring device.
- B. Source Quality Control:
 - 1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
 - 2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.
- C. UL QCIT or QCMZ - Extra-Duty, While-in-Use Hoods for Outlet Boxes:
 - 1. Additional Characteristics: Marked "Extra-Duty" in accordance with UL 514D.
 - 2. Options:
 - a. Provides gray, weatherproof, "while-in-use" cover.
 - b. Manufacturer may combine nonmetallic device box with hood as extra-duty rated assembly.

PART 3 - EXECUTION

3.01 SELECTION OF BOXES AND COVERS FOR ELECTRICAL SYSTEMS

- A. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NFPA 70 for selection of boxes and enclosures. Consult Architect for resolution of conflicting requirements.
- B. Degree of Protection:
 - 1. Outdoors:
 - a. Type 3SX or 4X unless otherwise indicated.
 - 2. Indoors:
 - a. Type 1 unless otherwise indicated.
 - b. Damp or Dusty Locations: Type 12.
 - c. Locations Exposed to Corrosive Agents: Type 4X.

3.02 INSTALLATION OF BOXES AND COVERS FOR ELECTRICAL SYSTEMS

- A. Comply with manufacturer's published instructions.
- B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:

1. Outlet, Device, Pull, and Junction Boxes: Article 314 of NFPA 70.
2. Consult Owner for resolution of conflicting requirements.

C. Special Installation Techniques:

1. Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures.
2. Mount boxes at heights indicated on Drawings. Install boxes with height measured to center of box unless otherwise indicated.
3. Fasten junction and pull boxes to, or support from, building structure. Do not support boxes by conduits.
4. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to ensure a continuous ground path.
5. Identification: Provide labels for boxes and associated electrical equipment.
 - a. Identify field-installed conductors, interconnecting wiring, and components.
 - b. Provide warning signs.
 - c. Label each box with engraved metal or laminated-plastic nameplate.

3.03 CLEANING

- A. Remove construction dust and debris from boxes before installing wallplates, covers, and hoods.

3.04 PROTECTION

- A. After installation, protect boxes from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION

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