

SECTION 27 11 16

COMMS RACKS, FRAMES, & ENCLOSURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. 19-inch equipment racks.
 - 2. Server, IDF and DAS equipment cabinets.
 - 3. Grounding.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of rack and enclosure.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS:

- A. Refer to equipment schedule on drawings for approved manufacturers.

2.2 PERFORMANCE REQUIREMENTS

- A. UL listed.
- B. RoHS compliant.
 - 1. Minimum height of two rack units each.
- C. Comply with seismic criteria defined in Section 260548 "Vibration and Seismic Controls for Electrical Systems."

2.3 SERVER, IDF AND DAS EQUIPMENT CABINETS.

- A. Description: Manufacturer-assembled four-post frame enclosed by side and top panels and front and rear doors, designed for mounting telecommunications equipment. Width is compatible with EIA/ECIA 310-E, 19-inch equipment mounting with an opening of 17.72 inches between rails.
- B. General Cabinet Requirements:
 - 1. Modular units designed for telecommunications terminal support and coordinated with dimensions of units to be supported.
 - 2. Material: Extruded steel
 - 3. Finish: Manufacturer's standard, baked-polyester powder coat.
 - 4. Color: Black
 - 5. Engraved Rack Unit Numbering
 - 6. NEMA 1 AND 4

- C. Modular Freestanding Cabinets:
 - 1. Acceptable equipment indicated on drawings.
- D. Temperature Controlled, Outdoor Rated Wall Cabinets
 - 1. Acceptable equipment indicated on drawings.
- E. Cable Management:
 - 1. Must include integral wire retaining fingers.
 - 2. Baked-polyester powder coat finish.
 - 3. Vertical cable management panels shall have front and rear channels, with covers.

2.4 GROUNDING

- A. Comply with requirements in Section 270526 "Grounding and Bonding for Communications Systems" for grounding conductors and connectors.
- B. Rack and Cabinet TGBs: Rectangular bars of hard-drawn solid copper, accepting conductors ranging from No. 14 to No. 2/0 AWG, NRTL listed as complying with UL 467, and complying with TIA-606-B. Predrilling shall be with holes for use with lugs specified in this Section.
 - 1. Cabinet-Mounted TGB: Terminal block, with stainless-steel or copper-plated hardware for attachment to cabinet.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with NFPA-70
- B. Comply with BICSI TDMM for layout of communications equipment spaces.
- C. Comply with BICSI ITSIMM for installation of communications equipment spaces.
- D. Coordinate location of power raceways and receptacles with locations of communications equipment requiring electrical power to operate.

3.2 GROUNDING

- A. Comply with NECA/BICSI 607.
- B. Install grounding according to BICSI ITSIMM, "Bonding, Grounding (Earthing) and Electrical Protection" Ch.
- C. Locate TGB to minimize length of bonding conductors. Fasten to wall, allowing at least 2 inches (50 mm) of clearance behind TGB. Connect TGB with a minimum No. 4 AWG grounding electrode conductor from TGB to suitable electrical building ground. Connect rack TGB to near TGB or the TMGB.

3.3 IDENTIFICATION

- A. Coordinate system components, wiring, and cabling complying with TIA-606-B.
- B. Comply with requirements in Section 270553 "Identification for Communications Systems."

END OF SECTION 27 11 16