

SECTION 164XX
BUSWAY AND FUSED BUSPLUGS

PART 1 GENERAL

1.1 SUMMARY

- A. Furnish and install busway and busplugs as shown on the drawings.

1.2 Related Sections:

- A. Section 16491 - Fuses.

1.3 REFERENCES

- A. NEMA FU 1
- B. NEMA KS 1
- C. NEMA BU 1
- D. UL 98
- E. UL857

1.4 SUBMITTALS

- A. Submit ten copies of items B-D below.
- B. Detail busway construction drawings including:
 - 1. Layout with floor and wall penetrations with dimensional information.
 - 2. Section, fittings, and supports with dimensional information.
 - 3. Termination and adjoining equipment connection information as needed.
- C. Assembly ratings including:
 - 1. Voltage, ampacity, and short-circuit current (bracing) ratings
 - 2. Overcurrent protection device requirements for short-circuit current ratings
- D. Component device ratings including:
 - 1. Voltage, ampacity, and interrupting ratings
 - 2. Switch and fuse type for busplugs where utilized
 - 3. Product data sheets or bulletins

1.5 CLOSEOUT SUBMITTALS

- A. Submit ten copies of final as-built drawings, assembly, and component device ratings as required with Section 1.4 as well as operation and maintenance manuals including replacement parts list.

1.6 QUALIFICATIONS

- A. The equipment manufacture shall have a minimum five years experience in producing electrical distribution equipment.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver equipment in sections as indicated on approved submittals.
- B. Inspect equipment for possible damage during delivery and prior to installation.
- C. Handle equipment in accordance with NEMA BU 1.1 and manufacturer's written instructions.
- D. Store equipment in clean, dry space and protect from dirt, water, debris and damage.

1.8 MAINTENANCE MATERIALS

- A. Furnish operating and maintenance tools/key(s) and fuse pullers where needed or supplied by manufacturer.

1.9 ADDITIONAL MATERIALS

- A. Furnish three sets of each rating and type of fuse installed and spare fuse cabinet where not already provided.

PART 2 PRODUCTS

2.1 GENERAL

- A. Manufacturers:
 - 1. Square D Model – I-Line
 - 2. Cutler-Hammer Model – POW-R-WAY III
 - 3. GE Electrical Model – Spectra Series
 - 4. Siemens Model – Sentron
- B. Ratings
 - 1. Busway shall have a voltage and current rating as indicated on the drawings.
 - 2. Busway shall have a short-circuit current (bracing) rating of 200,000A rms symmetrical at the voltage specified on the drawings.
 - 3. Overcurrent protective device to achieve the required short-circuit current rating must be indicated and documented with manufacturers literature.

2.2 CONSTRUCTION

- A. Busway shall contain phase(s), neutral, and ground bus bars as indicated on the drawings.

- B. Busway shall consist of insulated, copper plated, bus bars contained within a steel and/or aluminum enclosure. The insulating method shall prevent insulation air-gaps.
- C. Busway shall carry rated current with a temperature rise in accordance with listing standards.
- D. Busway joints shall be of single-bolt design and provide indication that the joint bolt has been properly torqued.
- E. Busway enclosure shall be rated for indoor or outdoor application as indicated on drawings.
- F. Busway shall have all exterior surfaces painted with manufacturer's standard painting process.
- G. All types of Busway (indoor, outdoor, plug-in, feeder) and fittings shall be interchangeable.
- H. Busway shall be adequately supported with vertical and/or horizontal hangers in accordance with manufacturer's recommendations.

2.3 PLUG-IN BUSWAY/UNITS

- A. Plug-in busway shall have plug-in openings on both sides every 2 feet.
- B. Plug-in openings shall have covers to protect against dirt and debris from entering.
- C. All plug-in openings shall be capable of being used simultaneously.
- D. Plug-in units shall be fusible switch type.
- E. Fusible switch blades shall be visible and quick-make, quick-break.
- F. Plug-in units shall have an interrupting rating of 200,000A.
- G. Plug-in units shall make positive ground connection prior to connection of the phase bus during installation.
- H. Plug-in units shall be designed to prevent installation or removal with the switch in the "on" position.
- I. Plug-in units shall be capable of being locked in the "off" position.
- J. Plug-in units shall be completely interchangeable.
- K. Plug-in units shall be hook-stick operable.
- L. Provide engraved nameplate that indicates load served and fuse type/size for each fusible switch plug-in unit.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install in accordance with NEMA BU1.1 and manufacturers recommendations.
- B. Install all fittings, accessories, seals (for wall and floor penetrations), and additional protective materials/items needed for proper busway installation.
- C. Install vertical and/or horizontal hangers to adequately support busway in accordance with manufacturer's recommendations.
- D. Verify connected load(s) and selection of all fuse sizes prior to selection and installation in fusible switch plug-in units.
- E. Install fuses in fusible switch plug-in units. Install fuses in accordance with Section 16941.
- F. Install engraved nameplate that identifies load, fuse type/class and size.
- G. Inspect completed installation for physical damage, alignment and support.

3.2 FIELD ADJUSTMENTS

- A. Tighten busway joints to manufacturer's specified values.

END OF SECTION