SECTION 26 25 00

ENCLOSED BUS ASSEMBLIES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes busway and fittings including plug-in units.

B. Related Sections:

1. Division 26 - Grounding and Bonding for Electrical Systems.
2. Division 26 - Identification for Electrical Systems.
3. Division 26 - Fuses.

1.02 REFERENCES

A. Institute of Electrical and Electronics Engineers:

1. IEEE C62.41 - Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.

B. National Electrical Manufacturers Association:

1. NEMA AB 1 - Molded Case Circuit Breakers and Molded Case Switches.
2. NEMA BU 1 - Busways.
3. NEMA BU 1.1 - General Instructions for Proper Handling, Installation, Operation, and Maintenance of Busway Rated 600 Volts or Less.
4. NEMA FU 1 - Low Voltage Cartridge Fuses.
5. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contactors, and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC.
6. NEMA ICS 5 - Industrial Control and Systems: Control Circuit and Pilot Devices.
7. NEMA KS 1 - Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).

C. International Electrical Testing Association:

1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

1.03 SUBMITTALS

A. Division 01- Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate ratings, dimensions and finishes. Include dimensioned layout diagram; installation details; locations of supports and fittings; and firestops and weather seals at penetrations. Include details of wall and floor penetrations.

C. Product Data: Submit catalog data for components and plug-in units.

D. Coordination Drawings: Indicate busway layout and support locations.

1.04 CLOSEOUT SUBMITTALS

A. Division 01 - Execution and Closeout Requirements: Closeout procedures.

B. Project Record Documents: Record actual locations of busway routing and location of plug-in units.

C. Operation and Maintenance Data: Submit joint re-tightening schedule.

1.05 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Supplier: Authorized distributor of specified manufacturer with minimum five years documented experience.

1.06 PRE-INSTALLATION MEETINGS

A. Division 01 - Administrative Requirements: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this section.

C. Convene prior to performing field measurements for busway fabrication drawings.

D. Review proposed routing, sequence of installation, and protection requirements for installed busway.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Division 01 - Product Requirements: Product storage and handling requirements.

B. Handle in accordance with NEMA BU 1.1 and manufacturer's written instructions.

C. Protect from moisture by using appropriate coverings. Store in dry interior locations.

1.08 ENVIRONMENTAL REQUIREMENTS

A. Division 01 - Product Requirements.

B. Do not install indoor busway until building is closed in and suitable temperature conditions are controlled.

C. Conform to NEMA BU 1 service conditions during and after installation of busway.

1.09 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.10 SEQUENCING

A. Division 01 - Summary: Work sequence.

B. Sequence Work to avoid interferences with building finishes and installation of other products.

PART 2 PRODUCTS

2.01 PLUG-IN BUSWAY

A. Product Description: NEMA BU 1, 3 phase, 4 wire low impedance plug-in busway.

1. Voltage: 480 volts, 60 Hz.
2. Plug-in Openings: 24 inch centers each side, with hinged doors to protect opening where plug-in unit is not installed.
3. Ampere Ratings: As required to complete the work and comply with Code.
4. Full neutral.

B. Conductors: Copper bars, fully insulated except at joints.

C. Joints: Single bolt type, with silver-plated contact surface for bus and splice plate.

D. Fittings: According to manufacturer's recommendations.

E. Finish: Manufacturer's standard gray enamel.

2.02 INDOOR FEEDER BUSWAY

A. Product Description: NEMA BU1, 3 phase, 4 wire low impedance enclosed busway.

1. Voltage: 480 volts, 60 Hz.
2. Full neutral.
3. Provide isolated ground bus

B. Conductors: Copper bars, fully insulated except at joints.

C. Joints: Single bolt type, with silver-plated contact surface for bus and splice plate.

D. Fittings: According to manufacturer's recommendations.

E. Finish: Manufacturer's standard gray enamel.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install in accordance with NEMA BU1.1.

B. Tighten joints using torque wrench, to manufacturer's specified values.

C. Install busway length with expansion fitting at each location where busway run crosses building expansion joint.

D. Mount horizontal busway runs in as required to complete the work and comply with Code.

E. Support busway intervals as recommended by manufacturer. Support vertical riser at each floor.

F. Install busway with integral fire stops located where busway penetrates fire-rated walls and floors. Seal around opening to maintain fire-rating equal to wall or floor rating.

G. Install concrete curb around interior floor penetrations.

H. Install fuses in fused switches.

I. Select and install heater elements in motor controllers to match installed motor characteristics.

J. Install engraved plastic nameplates in accordance with Division 26.

K. Ground and bond busway in accordance with Division 26.

3.02 FIELD QUALITY CONTROL

A. Division 01 - Quality Requirements and Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.

B. Inspect and test in accordance with NETA ATS, except Section 4.

C. Perform inspections and tests listed in NETA ATS, Section 7.4.

END OF SECTION