

SECTION 16467000.P01
50 AMPERE PREFABRICATED
PLUG-IN BUSWAY - LTG

PART 1 GENERAL

A. The requirements of the Contract, Division 1, and Division 16 apply to work in this Section.

1.01 SECTION INCLUDES

A. 50 ampere pre-fabricated plug-in busway

1.02 RELATED SECTIONS

1.03 REFERENCES

The busways and protection devices in this specification are designed and manufactured according to latest revision of the following standards (unless otherwise noted).

A. ANSI/IEEE C37.23 - 1987, (R1992), Metal-Enclosed Bus and Calculating Losses in Isolated-Bus, Guide for

B. ANSI/NEMA BU 1 - 1988, Busways

C. ANSI/NEMA KS 1 - 1990, Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts)

D. ANSI/NFPA 70 -1993, National Electrical Code

E. CSA C22.2 No. 27 - 94, Busways

F. NEMA AB 1 - 1993, Molded Case Circuit Breakers and Molded Case Switches

G. NEMA BU1.1 - 1991, General Instructions for Proper Handling , Installation, Operation, and Maintenance of Busway Rated 600 Volts or Less

H. NEMA ICS 2 - 1993, Industrial Control and Systems: Controllers, Contactors and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC

1.04 DEFINITIONS

1.05 SYSTEM DESCRIPTION

A. Pre-fabricated plug-in busway shall be UL listed and labeled.

1.06 SUBMITTALS

SECTION 16467000.P01
50 AMPERE PREFABRICATED
PLUG-IN BUSWAY - LTG

A. Manufacturer shall provide copies of following documents to owner for review and evaluation in accordance with general requirements of Division 1 and Division 16:

1. Product Data on specified product;
2. Shop Drawings on specified product;
3. Design Data, detailed component data on specified product, such as CT ratios, ratings;
4. Certified trip curves for each specified product;
5. Certified copies of all Type (Design) and Verification Test Reports.

1.07 PROJECT RECORD DOCUMENTS

A. Maintain an up-to-date set of Contract documents. Note any and all revisions and deviations that are made during the course of the project.

1.08 OPERATION AND MAINTENANCE DATA

A. Manufacturer shall provide copies of installation, operation and maintenance procedures to owner in accordance with general requirements of Division 1 and Division 16.

B. Submit operation and maintenance data based on factory and field testing, operation and maintenance of specified product.

1.09 QUALITY ASSURANCE (QUALIFICATIONS)

A. Manufacturer shall have specialized in the manufacture and assembly of 50 ampere pre-fabricated plug-in busway for [50] years.

B. 50 ampere pre-fabricated plug-in busway shall be listed and/or classified by Underwriters Laboratories in accordance with standards listed in Article 1.03 of this specification.

C. Installer has specialized in installing 50 ampere pre-fabricated plug-in busways with [minimum _ years documented experience].

1.10 REGULATORY REQUIREMENTS

1.11 MOCK-UPS (FIELD SAMPLES)

1.12 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle products in accordance with recommended practices listed in manufacturer's Installation and Maintenance Manuals.

B. Deliver each busway in individual shipping case.

C. Inspect and report concealed damage to carrier within specified time.

SECTION 16467000.P01
50 AMPERE PREFABRICATED
PLUG-IN BUSWAY - LTG

D. Store in a clean, dry space. Maintain factory protection or cover with heavy canvas or plastic to keep out dirt, water, construction debris, and traffic. (Heat enclosures to prevent condensation.)

E. Handle in accordance with NEMA [____] and manufacturer's written instructions to avoid damaging equipment, installed devices, and finish. <Lift only by installed lifting eyes.>

1.13 PROJECT CONDITIONS (SITE ENVIRONMENTAL CONDITIONS)

A. Follow (standards) service conditions before, during and after 50 ampere pre-fabricated plug-in busway installation.

B. Busway shall be located in well-ventilated areas, free from excess humidity, dust and dirt and away from hazardous materials. Ambient temperature of area will be between minus [30] and plus [40] degrees C. Indoor locations shall be protected to prevent moisture from entering enclosure.

1.14 SEQUENCING AND SCHEDULING

1.15 WARRANTY

A. Manufacturer warrants equipment to be free from defects in materials and workmanship for 1 year from date of installation or 18 months from date of purchase, whichever occurs first.

1.16 MAINTENANCE SERVICE

A. Furnish complete service and maintenance of 50 ampere pre-fabricated plug-in busways for [1 year] [5 years] <specify other service contract time period> from date of substantial completion.

B. Include _____.

1.17 EXTRA MATERIALS

A. Provide [parts] [spares] as indicated in drawings.

1.18 FIELD MEASUREMENTS

A. Make all necessary field measurements to verify that equipment shall fit in allocated space in full compliance with minimum required clearances specified in National Electrical Code.

PART 2 PRODUCTS

2.01 MANUFACTURER

SECTION 16467000.P01
50 AMPERE PREFABRICATED
PLUG-IN BUSWAY - LTG

A. General Electric Company products have been used as the basis for design. Other manufacturers' products of equivalent quality, dimensions and operating features may be acceptable, at the Engineer's discretion, if they comply with all requirements specified or indicated in these Contract documents.

2.02 MANUFACTURED ASSEMBLIES

A. Furnish 50-ampere prefabricated plug-in busways, GE Type LTG Busway (or equal) as indicated in drawings.

2.03 COMPONENTS

Refer to Drawings for: actual layout and location of equipment and components; current ratings of devices, bus bars, and components; voltage ratings of devices, components and assemblies; and other required details.

A. Busway shall be rated as indicated in drawings.

B. Housing shall include an integral polarizing lip to permit outlet installation in only one position to maintain phase relationship. Housing shall provide positive grip for hangars. A slot in housing bottom shall provide continuous outlet for power takeoffs.

C. Busbars shall be silver immersed for entire length.

D. Bus bars shall be rigidly supported and insulated from housing by high impact, high dielectric strength insulators.

E. Housing shall be supported at intervals not exceeding 5 feet in accordance with NEC. Housing shall be supported by [steel rods] [brackets] [messenger cable] attached to [sliding plates] [fixed plates] [coupling plates] [hangars]. Installer shall supply [steel rods] [brackets] [messenger cable].

F. All outlet devices shall be polarized to prevent incorrect phasing and to balance single phase loads. Outlets shall be designed to insert at any point in busway without using access doors or removing busway sections or endcaps.

2.04 ACCESSORIES N/A

2.05 TESTING

2.06 FINISH

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that 50 ampere pre-fabricated plug-in busways are ready to install.

SECTION 16467000.P01
50 AMPERE PREFABRICATED
PLUG-IN BUSWAY - LTG

- B. Verify field measurements are as [{shown on Drawings}] {instructed by manufacturer}].
- C. Verify that required utilities are available, in proper location and ready for use.
- D. Beginning of installation means installer accepts conditions.

3.02 LOCATION

3.03 INSTALLATION

Additional provisions and editing may be required for this part.

- A. Install required safety labels.

<B. Busway shall be installed using the General Electric roll-in system devices specifically designed for the purpose.>

3.04 FIELD QUALITY CONTROL

- A. Inspect installed busways for anchoring, alignment, grounding and physical damage.
- B. Check tightness of all accessible mechanical and electrical connections< with calibrated torque wrench>. Minimum acceptable values are specified in manufacturer's instructions.

3.05 ADJUSTING

3.06 CLEANING

- A. Clean interiors of <{switchboards}{, }{panels}{, }{separate enclosures}> to remove construction debris, dirt, shipping materials.
- B. Repaint scratched or marred exterior surfaces to match original finish.

END OF SECTION