1 Ratings
1.1 Three Phase 208Y/120 volt lighting systems with neutral.
   1.1.1 Rated 600 volt, 3 phase, 4 wire with full size neutral
1.2 Three Phase 240 volt power systems
   1.2.1 Consult Senior Electrical Engineer for these systems
1.3 Three Phase 480Y/277 volt power systems with neutral
   1.3.1 Rated 600 volt, 3 phase, 4 wire with full size neutral

2 Sound Levels
2.1 Inaudible when located in service shafts and loaded to rated capacity.

3 Protection
3.1 General purpose “Indoor Type” shall be used for Plug-in bus duct.
   3.1.1 Enclosure Class shall meet one of the following standards
       • NEMA 12
       • IEC IP40
   3.1.2 Provide closure plates at each suspended slab as a seal, with fire seal rated material packed around the busway and between the plates.
3.2 Vaults, unconditioned spaces, basements, and exterior installations (including tunnels) "Outdoor Type" shall be used for all Feeder Bus Duct.
   3.2.1 Enclosure Class shall meet one of the following standards
       • NEMA 3
       • IEC IP54
   3.2.2 Use where located in unheated spaces such as vaults
   3.2.3 Use where located below gratings or outside buildings
   3.2.4 Use for all feeder bus duct inside buildings.
   3.2.5 Arrange installation to drain condensation.
   3.2.6 Provide closure plates at each wall penetration as a seal, with fire rated material packed around the busway and between the plates.

4 Material
4.1 Copper bus bars
4.2 Painted steel case

5 Plug-In Style Busway
5.1 Sizes
   • 100A
   • 225A
   • 400A
5.2 Configuration
   • 3 phase, 4 wire
   • Neutral and phase conductors of equal size
   • The busway shall have a copper ground system consisting of one of the following:
     • A separate 50% rated copper internal ground bus.
     • A 50% rated ground bus consisting of two pieces of copper completely enclosing the phase bus bars.
     • The sheet metal case enclosing the busway shall act as the ground only when approved to do so on a case by case basis by Purdue Engineering. In this case both flanged ends shall terminate with a ground bar affixed to the case and equipped with a lug. Case grounding is not preferred.
5.3 Plug positions
   • Provide on both sides of Busway
   • Provide hinged covers for all plug openings
   • Plug positions two feet on centers
5.4 Plug-in units
   • Circuit breaker type
   • Common trip for all poles
   • Copper bus bars
   • Operator handle for opening or closing from a floor position

6 Joints
6.1 Sandwich style joint stack
6.2 Snap head torque joint bolt for initial
7 Installation

7.1 Install bidirectional sway restraints at each end and at manufacturers recommend intervals on rod suspended systems.

7.2 Design and install with NEC front clearance requirements for plug in units, on both sides of the busway.

7.3 Specify pre-energizing testing procedures.

7.4 Include re-torque requirements and procedures after one year of energized operation.

7.5 All busway must be installed per the manufacturer’s installation instructions. Some examples are:

   7.5.1 Joint stacks shall be perfectly centered between adjoining busway (busduct) sections.

   7.5.2 Adjacent busway sections shall run level and true across the joint stacks with a maximum deflection of no more than 1/6” or less as recommended by the manufacturer.

   7.5.3 Drain hole plugs shall be removed per the manufacturer’s instructions, based on the orientation of the associated bus duct sections.

8 Approved Manufacturers

8.1 GE

8.2 Square D

8.3 Siemens