

MAXIAMP® Cable Bus Feeder System Specifications

1.0 GENERAL

1.1 Scope

This specification applies to the design and supply of the MAXIAMP® Cable Bus Feeder System, which is a power distribution system used to transmit power at the load amperage and voltage specified in an outdoor location for above ground installation.

1.2 General Information

This specification defines the technical requirements related to the design and supply of the MAXIAMP® Cable Bus Feeder System, which shall consist of a ventilated enclosure system, incorporating unarmoured cable, specifically engineered to transmit the required load.

2.0 CODES AND STANDARDS

The components and complete assembly of the MAXIAMP System and its installation shall meet the requirements of the following Standards, as applicable:

- Canadian Electrical Code C22.1 (CE Code Part I)
- Canadian Standards Association
 - CSA C22.2 #38 – Thermoset Insulated Wires and Cables
 - CSA C68.10-08 – Shielded power cable for commercial and industrial applications 5 – 46kV
- UL
- ICEA
- NEMA

3.0 TECHNICAL REQUIREMENTS

3.1 Ventilated Cable Bus Enclosure

3.1.1 Enclosure material

The cable feeder dual level enclosure shall be constructed of high strength, high conductivity, 6063-T6 corrosion resistant aluminum alloy meeting the requirements of CSA C22.2 #126.1, unless otherwise specified.

3.1.2 Enclosure Ventilation

3.1.2.1 The enclosure shall be completely enclosed on both sides, and both top and bottom of the enclosure shall be ventilated with vents that do not expose the MAXIAMP® Cable Bus system nor allow mechanical penetration at 90 degrees from each surface.

3.1.3 Cable Bus Supports Within Enclosure

3.1.3.1 Cables shall be supported within the enclosure and on each level by metal supports which shall be at least 45 mm (1.77") in width.

3.1.3.2 The metal cable supports shall be repeated throughout the cable enclosure at regular intervals not exceeding 305 mm (12").

3.1.3.3 Metal supports on each successive vertical cable level shall be longitudinally offset by 1/2 of the support spacing, relative to the supports in the level immediately below.

3.1.4 Cable Bus Clamping Within Enclosure

3.1.4.1 Cable clamps shall be clamped to the metal supports at intervals not exceeding 1143 mm (48")

3.1.4.2 Cables shall be secured to a cable support by use of a one-piece non-ferrous metal clamp, of width equal to the underlying cable support, providing a trefoil cable arrangement.

3.1.4.3 Each clamp shall be formed to provide a sufficient number of cable ports to secure the designated number of feeder cables

3.2 Power Cables

Each individual power cable shall be of a single, continuous length between terminals, and shall meet the requirements of the appropriate Standard listed in Section 2.0 above, consistent with the system design voltage.

3.2.1 Conductors

Conductors shall be of annealed uncoated Class B stranded copper, sized to meet the current load requirements.

3.2.2 Insulation

MAXIAMP® Cable Bus cable insulation shall be composed of a CSA approved high dielectric elastomeric insulation for voltages 600 volts and greater.

3.2.3 Shielding

3.2.1 Strand and insulation shields shall be required on all cables rated 1000 volts or greater.

3.2.2 Nonmetallic semiconducting shields shall be of thermosetting material, compatible with the insulation material.

3.2.3 Metallic shielding shall consist of overlapped copper tape which is annealed and uncoated.

3.2.4 Jackets

All cables, rated 600 volts and greater, shall be FT-4 rated and shall include a protective jacket.

3.3 Grounding & Bonding

3.3.1 The enclosure system shall be certified as a continuous bonding conductor, with provision for a ground clamp at each end of each enclosure section.

3.3.2 A bonding conductor shall be connected at a single point to the inside wall of the enclosure system's top level within each longitudinal section of the enclosure and considered to be an equipment bond. A system grounding conductor, if required, shall be the responsibility of the electrical contractor.

3.4 Weatherproof Plate

If the feeder system termination points are exposed to high levels of moisture (such as rain and sprinkler systems), a weatherproof plate must be provided to prevent water from penetrating the termination housing. The plate shall be supplied complete by the cable bus manufacturer, pre-assembled with compatible weatherproof cable connectors and pre-drilled mounting holes with mounting hardware.

3.5 Supports

External MAXIAMP® Cable Bus supports shall be designed and provided by others. Cable Bus manufacturer to supply loading requirements.

3.6 Penetration Fire Seals

Where a fire separation is pierced by the enclosure system, all openings around the enclosure and around each individual cable within the enclosure shall be properly closed or sealed with an elastomeric three-hour rated sealing system, in compliance with the National Building Code of Canada.

3.7 Concrete Encasement (for below grade installations)

Provide the precast encasement as designed by the manufacturer to house the MAXIAMP® Cable Bus system. The power and off-set vents are to be positioned in accordance with the manufacturer's technical requirements. Refer to the attached drawing for additional information – Drawing #5 – Below Transformer and Below Grade Wall Entry

4.0 Acceptable Manufacturers

Cable Bus shall be the product of United Wire & Cable (MAXIAMP® Cable Bus), or identically equivalent.

5.0 Installation Procedure

All installations of a **MAXIAMP® Cable Bus** Feeder System shall be in complete accordance with the manufacturer's written installation procedure.