

**1 GENERAL**

**1.1 REFERENCES**

- .1 CSA C22.2 No 75 – Thermoplastic –insulated wires and cables.

**1.2 PRODUCT DATA**

- .1 Provide product data in accordance with Section 01 00 10 – General Instructions.

**2 PRODUCTS**

**2.1 BUILDING WIRES**

- .1 Conductors: stranded for 10 AWG and larger. Minimum size: 12 AWG.
- .2 Copper conductors: size as indicated, with 1000 V insulation of cross-linked thermosetting polyethylene material rated RW90 XLPE.
- .3 Copper conductors: size as indicated, with thermoplastic insulation type T90 Nylon rated at 600 V.

**2.2 ARMOURED CABLES**

- .1 Conductors: insulated, copper, size as indicated.
- .2 Type: AC90.
- .3 Armour: interlocking type fabricated from aluminum strip.
- .4 Connectors: anti short connectors.

**2.3 CONTROL CABLES**

- .1 Type: LVT: 2 pair soft annealed copper conductors, sized as indicated:
  - .1 Insulation: thermoplastic.
  - .2 Sheath : thermoplastic jacket, and armour of closely wound aluminum wire.
- .2 Type: low energy 300 V control cable: stranded annealed copper conductors sized as indicated:
  - .1 Insulation: TW polyethylene.
  - .2 Shielding: braid metallized tapes over conductors.
  - .3 Overall covering: PVC jackets.
- .3 Type: 600 V stranded annealed copper conductors, sizes as indicated:
  - .1 Insulation: cross-linked polyethylene type.
  - .2 Shielding: wire braid metallized tapes.
  - .3 Overall covering: PVC.

3                   **EXECUTION**

3.1               **FIELD QUALITY CONTROL**

- .1       Perform tests in accordance with Section 26 05 00 – Common Work Results - Electrical.
- .2       Perform Insulation resistance (megger) tests using method appropriate to site conditions and to approval of Departmental Representative and local authority having jurisdiction over installation.
- .3       Perform tests before energizing electrical system.

3.2               **GENERAL CABLE INSTALLATION**

- .1       Terminate cables in accordance with Section 26 05 20 – Wire and Box Connectors – 0-1000 V.
- .2       Cable Colour Coding: to Section 26 05 00 - Common Work Results – Electrical.
- .3       Wiring in walls: typically drop or loop vertically from above to better facilitate future renovations. Generally wiring from below and horizontal wiring in walls to be avoided unless indicated.
- .4       Provide numbered wire collars for control wiring. Numbers to correspond to control shop drawing legend. Obtain wiring diagram for control wiring.

3.3               **INSTALLATION OF BUILDING WIRES**

- .1       Install wiring as follows:
  - .1       In conduit systems in accordance with Section 26 05 34 – Conduits, Conduit Fastenings and Conduit Fittings.

3.4               **INSTALLATION OF ARMOURED CABLES**

- .1       Group cables wherever possible on channels.

3.5               **INSTALLATION OF CONTROL CABLES**

- .1       Install control cables in conduit
- .2       Ground control cable shield.