

1. PART 1 – GENERAL

1.1 Related sections

- .1 Section 260520E - Wire and Box Connectors - 0 - 1000 V.

1.2 References

- .1 CSA C22.2 No .0.3, Test Methods for Electrical Wires and Cables.
- .2 CAN/CSA-C22.2 No. 131, Type TECK 90 Cable.

1.3 Shop drawings and product data

- .1 Submit product data in accordance with Section 260500E – Common Work Results for Electrical.

2. PART 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 600 V insulation of chemically cross-linked thermosetting polyethylene material rated RW90.

2.2 Armoured cables

- .1 Conductors: insulated, copper, size as indicated.
- .2 Type: AC90.
- .3 Armour: fabricated from galvanized steel strip.

2.3 Control cables

- .1 Type LVT: 2 soft annealed copper conductors, sized as indicated, with thermoplastic insulation, outer covering of cotton braid thermoplastic jacket, and armour of closely wound aluminum wire.
- .2 Low energy 300 V control cable: solid annealed copper conductors, sized as indicated, with PVC insulation type TW with shielding of wire.
- .3 Fire alarm system cables FAS105, to FT-4 standard.

3. PART 3 – EXECUTION

3.1 Installation of building wires

- .1 Install wiring as follows:
 - .1 In conduit systems in accordance with Section 260534E;
 - .2 In surface mounted ducts in accordance with Section 260534E;
- .2 Install one “return” conductor (White) per circuit; no shared "return" allowed.

3.2 Installation of armoured cables

- .1 Group cables wherever possible.
- .2 Unless otherwise indicated, use armoured cables for connection to:
 - .1 ☒ suspended lighting;
 - .2 ☐ no cable AC-90.
- .3 Unless otherwise indicated, limit use of armoured cables to:
 - .1 ☐ all branches;
 - .2 ☒ final connections (3 meters maximum).
- .4 In all cases, feeders and branches located in technical rooms (electrical, mechanical, etc.), and any where installation is required in conduit.

3.3 Installation of control cables

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

3.4 Conductor (cables) rating

- .1 Ratings indicated herein are minimum. Contractor to install required conductors (cables) to limit voltage drops to values below those prescribed in Electrical Code. Selection of conductors and cables take into account derating of cables, as required by Electrical Code.
- .2 Minimum rating for protection as follows:
 - .1 15A: #12;
 - .2 20A: #12;
 - .3 30A: #10;
 - .4 40A: #8;
 - .5 For protection above 40A, minimum conductor and cable rating in accordance with drawings.

3.5 Identified white neutral conductors

- .1 Each single-pole circuit must have an identified white neutral conductor.