

# **DIVISION 26 – ELECTRICAL**

## **26 05 23 CONTROL-VOLTAGE CABLES**

### **PART 1 - GENERAL**

#### 1.01 SCOPE

- A. Control Voltages in this section are defined as system voltages above 0V and less than 150V.
- B. Control Voltage cables shall be plenum rated and installed in non-flexible raceway or cable tray.
  - 1. Flexible raceway systems permitted only in lengths of six feet or less.
  - 2. Any deviation requires approval from the WSU Project Manager and Engineering Services.

### **PART 2 - PRODUCTS**

#### 2.01 PATHWAYS

- A. When open cabling is required and approved by WSU Engineering Services, the following are acceptable means of support:
  - 1. NRTL labeled for support of respective open cabling.
  - 2. Support brackets with cable tie slots for fastening cable ties to brackets.
  - 3. Lacing bars, spools, straps, J-hooks, and D-rings.

#### 2.02 BOXES:

- A. Outlet boxes shall be no smaller than 2" wide, 3" high and 2-1/2" deep.

#### 2.03 BACKBOARDS

- A. All backboards shall be fire-retardant treated plywood or equivalent.

#### 2.04 RS-232 CABLE

- A. Plenum-Rated Cable: Type CMP
  - 1. Paired, two pairs, No. 22 AWG, stranded (7x30) tinned copper conductors.
  - 2. Plastic insulation.
  - 3. Individual aluminum foil polyester tape shielded pairs with 100 percent shield coverage.
  - 4. Plastic jacket.

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5. Pairs are cabled on common axis with No. 24 AWG, stranded (7x32) tinned-copper drain wire.
6. Cabling shall meet the equipment manufacturer's specifications.

#### 2.05 RS-485 CABLE

##### A. Plenum rated cable: Type CMP

1. Paired, two pairs, No. 22 AWG, stranded (7x30) tinned-copper conductors.
2. Fluorinated ethylene propylene insulation.
3. Unshielded.
4. Fluorinated ethylene propylene jacket.
5. Cabling shall meet the equipment manufacturer's specifications.

#### 2.06 CONTROL CABLE

##### A. Plenum rated, paired cable: Type CMP

1. One pair, twisted, No. 18 AWG, stranded (19x30) tinned-copper conductors.
2. Fluorinated ethylene propylene insulation.
3. Unshielded.
4. Plastic jacket.
5. Cabling shall meet the equipment manufacturer's specifications.

## **PART 3 - EXECUTION**

#### 3.01 TERMINATIONS AND SPLICES

- A. All control cable terminations and splices shall be enclosed.

**END OF SECTION**