

SECTION 16195  
ELECTRICAL IDENTIFICATION

PART 1 GENERAL

1.1 SESSION INCLUDES:

- A. Nameplates.
- B. Wire and conduit markers.
- C. Box color coding.
- D. Lighting and power junction boxes.
- E. Panel directories.

1.2 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01300.
- B. Include schedule for nameplates.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Nameplates: Engraved three-layer laminated plastic, white letters on a black background.
- B. Underground-Type Plastic Line Marker: Manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, intended for direct-burial service; not less than 6" wide x 4 mils thick. Provide tape with printing which most accurately indicates the type of the buried conduit.
- C. Wire and Cable Markers: Cloth markers, split sleeve or tubing type.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Degrease and clean surfaces to receive nameplates.
- B. Install nameplates parallel to equipment lines.
- C. Secure nameplates to equipment fronts using screws, rivets, or adhesive. Secure nameplate to outside face of recessed panel board doors in finished locations.
- D. Embossed tape will not be permitted for any application.
- E. Provide underground-type plastic line marker above exterior underground conduits. Bury 6" to 8" below finish grade. Provide line markers on each side of trench if wider than 16".

3.2 WIRE IDENTIFICATION

- A. Wire Color Coding:
  - 1. 120/208-volt system, "A" phase - black, "B" phase -red, "C" phase - blue, neutral - white, and ground green.
  - 2. 277/480-volt system, "A" phase - brown, "B" phase - purple, "C" phase - yellow, neutral - gray, and ground - green.
- B. Maintain A, B, C, phase relation left to right or top to bottom when viewed from front. Maintain color-coding throughout entire project.
- C. Conductors #10 and smaller shall have a continuous outer factory finish, meeting the requirements of 16195-3.2a. NEC 310-12 shall be met for neutrals and equipment grounding conductors.

3.3 NAMEPLATE ENGRAVING SCHEDULE (EXAMPLE)

- A. Provide nameplates of minimum letter height as scheduled below.
- B. Panelboards, Switchboards and Motor Control Centers: ½"; identify equipment designation. ¼"; identify voltage rating.
- C. Individual Circuit Breakers, Switches, and Motor Starters, Switchboards, and Motor Control Centers:

- $\frac{3}{8}$ "; identify circuit and load served, including location.
- D. Safety Switches, Enclosed Switches, and Motor Starters:  $\frac{1}{4}$ "; identify load served.
- E. Transformers:  $\frac{3}{8}$ " identify equipment designation.  $\frac{1}{4}$ "; identify primary and secondary voltages.
- F. Electrical Cabinets and Enclosures:  $\frac{3}{8}$ "; identify equipment designation.
- G. System Terminal Cabinets:  $\frac{3}{8}$ ", identify equipment designation.
- H. Switches Not Within Sight of the Equipment or Light(s) Controlled:  $\frac{1}{8}$ ", identify load served.

### 3.4 BOX COLOR CODING SCHEDULE (EXAMPLE)

- A. Paint junction box and cover in the following manner:
  1. Emergency power - red.
  2. Fire alarm - orange.
  3. Optional Standby Power - green.
  4. Intercom system - blue.
  5. Security system - black.
  6. ITV system - brown.
  7. Data and Telephone systems - yellow.
  8. AC and EMS controls - purple.
  9. Video Surveillance system - Gold
  10. Card Access system - Tan
- B. In exposed finished painted areas, occupied by students, identify junction box with  $\frac{1}{2}$ " diameter self-adhesive colored dot (same as in 16195-3.4 A) instead of painting.
- C. For junction boxes above suspended ceilings, install  $\frac{1}{2}$ " diameter self-adhesive colored dot (same as in 16195-3.4 A) on ceiling "T" bar below each junction box to show location.
- D. Paint emergency power panels and disconnect switches, red.
- E. Hand holes: Paint interior of hand holes to match color in Section 16195-3.4 (A).

### 3.5 LIGHTING AND POWER JUNCTION BOX IDENTIFICATION

- A. Permanently identify lighting and power junction box covers with circuit and panel board number on the outside.
- B. In exposed finished student occupied areas, place circuit and panel board number on inside of cover.

### 3.6 PANEL DIRECTORY

- A. Shall be typewritten, indicate specific and clear area of control, using official Florida Tech room numbers, and be protected by a plastic covering.

END OF SECTION