

## **SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS**

### **PART 1 - GENERAL**

#### **1.1 DESIGN REQUIREMENTS**

- A. All electrical equipment and systems shall be properly labeled in accordance with this section. It includes requirements for electrical identification components including but not limited to the following:
  - 1. Identification labeling for raceways, cables, and conductors.
  - 2. Equipment labels and signs.

#### **1.2 SUBMITTALS**

- 1. Samples of each color, lettering style, and other graphic representation required for identification materials; samples of labels and signs.

### **PART 2 - PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Acceptable Manufacturers: Subject to compliance with requirements, provide products by the following:
  - 1. Ideal Industries, Inc.
  - 2. LEM Products, Inc.
  - 3. Markal Corp.
  - 4. Panduit Corp.
  - 5. W.H. Brady, Co.

#### **2.2 MATERIALS, GENERAL**

- A. Nameplates: Engraved plastic laminate, black letters on white background for normal systems and white letters on red background for emergency systems.
- B. Electronic Labels: 9mm self-adhesive tape, black letters on clear for normal systems and red letters on clear for emergency systems. Embossed DymoType labels are not accepted.
- C. Wires and Cable Markers: Cloth markers, split sleeve and tubing type.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION, GENERAL**

- A. Lettering and Graphics: Coordinate names, abbreviations, colors, and other designations used in electrical identification work with corresponding designations specified or indicated. Install numbers, lettering, and colors as approved in submittals and as required by code.
- B. Sequence of Work: Where identification is to be applied to surfaces that require finish, install identification after completion of finish work. Degrease and clean surfaces to receive nameplates and labels.
- C. Conduit Identification: Use adhesive marking labels at 40 foot intervals to identify all conduits run exposed or located above accessible ceilings. Conduits located above non-accessible ceiling or in floors and walls shall be labeled within 3 feet of becoming accessible. Use the following colors:
  - 1. 600 Volt and Below: Black letters on orange background indicating feeder identification and
  - 2. Other Systems: Provide color banding as specified below.

- D. Identify System Raceways with Color Banding: Band exposed or accessible raceways of the following systems for identification. Bands shall be pre-tensioned, snap-around colored plastic sleeves, colored adhesive marking tape, or a combination of the two. Make each color band 2 inches wide, completely encircling conduit, and place adjacent bands of two-color markings in contact, side by side. Install bands at changes in direction, at penetrations of walls and floors, and at 40-foot maximum intervals in straight runs. Provide Brady B-946 vinyl or equivalent. Colored duct tape is not acceptable. Apply the following colors:
1. Security System: Blue and Yellow with Gray Cable.
  2. Telecommunications System: Green and Yellow with Blue and White Cables.
  3. Fire Alarm Systems: Red with Red Cable.
  4. Audio/Visual Systems: Violet.
  5. Building Automation System (BAS): Blue and Green.
  6. Lighting Control Cabling shall be Green.
- E. Identify Junction, Pull, and Connection Boxes: Identification of systems and circuits shall be pressure-sensitive, self-adhesive label indicating system voltage and identity of contained circuits on outside of box cover. Color code shall be same as conduits for pressure sensitive labels. Use pressure-sensitive plastic labels at exposed locations and indelible marker (black or red) at concealed boxes. All fire alarm boxes shall have covers painted red.
- F. Power Circuit Identification: Tag or label conductors as follows:
1. Multiple Circuits: Where multiple branch circuits or control wiring or communications/signal conductors are present in the same box or enclosure label each conductor or cable including neutrals. Provide legend indicating source, voltage, circuit number, and phase for branch circuit wiring. Phase and voltage of branch circuit wiring may be indicated by means of coded color of conductor insulation. For control and communications/signal wiring, use color coding or wire/cable marking tape at terminations and at intermediate locations where conductors appear in wiring boxes, troughs, and control cabinets. Use consistent letter/number conductor designations throughout on wire/cable marking tapes.
  2. Match identification markings with designations used in panel boards shop drawings, Contract Documents, and similar previously established identification schemes for the facility's electrical installations.
- G. Install equipment/system circuit/device identification as follows:
1. Apply equipment identification labels of engraved plastic-laminate on each major unit of electrical equipment in building, including central or master unit of each electrical system. This includes communication/signal/alarm systems, unless the unit is specified with its own self-explanatory identification. Text shall match terminology and numbering of the Contract Documents and shop drawings. Identification must include equipment name, voltage, phase, amperage, and fed from.. Apply labels for each unit of the following categories of electrical equipment.
    - a. Switchboards, switchgear, panelboards and enclosures, 1/2" high lettering.
    - b. Access doors and panels for concealed electrical items, 1/4" letters
    - c. Transformers 1/2" high letters.
- H. Apply circuit/control/item designation labels of engraved plastic laminate for disconnect switches, breakers, pushbuttons, pilot lights, motor control centers, and similar items for power distribution and control components above, except panel boards and alarm/signal components, where labeling is specified elsewhere.
- I. For panel boards, provide framed, typed circuit schedules (label all spares and spaces in pencil) with explicit description and identification of items controlled by each individual breaker.
- J. Install labels at locations indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.

- K. Provide tape labels for identification of individual receptacle and switch wall plates. Locate tape on front of plate and identify branch circuit serving the receptacle or switch.

**END OF SECTION 26 05 53**