

**SECTION 26 28 13**  
**FUSES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fuses.
- B. Spare fuse cabinet.

**1.02 RELATED REQUIREMENTS**

- A. Section 26 05 53 - Identification for Electrical Systems: Identification products and requirements.
- B. Section 26 24 16 - Panelboards: Fusible switches.
- C. Section 26 28 18 - Enclosed Switches: Fusible switches.
- D. Section 26 29 13 - Enclosed Controllers: Fusible switches.

**1.03 REFERENCE STANDARDS**

- A. NEMA FU 1 - Low Voltage Cartridge Fuses; National Electrical Manufacturers Association; 2012
- B. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- C. UL 248-1 - Low-Voltage Fuses - Part 1: General Requirements; Current Edition, Including All Revisions.
- D. UL 248-10 - Low-Voltage Fuses - Part 10: Class L Fuses; Current Edition, Including All Revisions.
- E. UL 248-12 - Low-Voltage Fuses - Part 12: Class R Fuses; Current Edition, Including All Revisions.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Coordinate fuse clips furnished in equipment provided under other sections for compatibility with indicated fuses.
    - a. Fusible Switches for Panelboards: See Section 26 24 16.
    - b. Fusible Enclosed Switches: See Section 26 28 18.
    - c. Fusible Switches for Enclosed Motor Controllers: See Section 26 29 13.
  - 2. Coordinate fuse requirements according to manufacturer's recommendations and nameplate data for actual equipment to be installed.
  - 3. Notify Architect of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Extra Fuses: Two set(s) of three for each type and size installed.
  - 3. Fuse Pullers: Two set(s) compatible with each type and size installed.
  - 4. Spare Fuse Cabinet Keys: Two.

**1.06 QUALITY ASSURANCE**

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Cooper Bussmann, a division of Cooper Industries: [www.cooperindustries.com](http://www.cooperindustries.com).
- B. Mersen (formerly Ferraz Shawmut): [ferrazshawmut.mersen.com](http://ferrazshawmut.mersen.com).
- C. Littelfuse, Inc: [www.littelfuse.com](http://www.littelfuse.com).

### **2.02 APPLICATIONS**

- A. General Purpose Branch Circuits: Class RK1, time-delay.
- B. Individual Motor Branch Circuits: Class RK1, time-delay.
- C. Fuse Class Types shall be per equipment manufacturer's recommendation.

### **2.03 FUSES**

- A. Provide products listed and classified by Underwriters Laboratories Inc. as suitable for the purpose indicated.
- B. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a complete operating system.
- C. Contractor shall coordinate fuse types and rating with equipment installed. Fuses protecting motor, pumps and other mechanical equipment shall have fuse types and rating suitable for protecting that equipment.
- D. Provide fuses of the same type, rating, and manufacturer within the same switch.
- E. Comply with UL 248-1.
- F. Unless otherwise indicated, provide cartridge type fuses complying with NEMA FU 1, Class and ratings as indicated.
- G. Voltage Rating: Suitable for circuit voltage.
- H. Class R Fuses: Comply with UL 248-12.

### **2.04 SPARE FUSE CABINET**

- A. Description: Wall-mounted sheet metal cabinet with shelves and hinged door with cylinder lock, suitably sized to store spare fuses and fuse pullers specified.
- B. Finish: Manufacturer's standard, factory applied grey finish unless otherwise indicated.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that fuse ratings are consistent with circuit voltage and manufacturer's recommendations and nameplate data for equipment.
- B. Verify that mounting surfaces are ready to receive spare fuse cabinet.
- C. Verify that conditions are satisfactory for installation prior to starting work.

### **3.02 INSTALLATION**

- A. Do not install fuses until circuits are ready to be energized.
- B. Install fuses with label oriented such that manufacturer, type, and size are easily read.
- C. Install spare fuse cabinet as directed.
- D. Identify spare fuse cabinet in accordance with Section 26 05 53.

**END OF SECTION**