

SECTION 26 28 12 Medium Voltage Fuses

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. The Conditions of the Contract and applicable requirements of Divisions 0 and 1 and Section 26 00 01, "Electrical General Provisions", govern this Section.

1.2 DESCRIPTION OF WORK:

- A. Work Included: The extent of fuse work is as shown and scheduled, as indicated by the requirements of this Section, and as specified elsewhere in these Specifications.
- B. Types: The types of fuses required for the project include, but are not limited to, 5.5 kV current-limiting fuses and 15.5 kV current-limiting fuses.

1.3 STANDARDS:

- A. Products shall be designed, manufactured, tested, and installed in compliance with the applicable ANSI and NEMA standards.
- B. Where application of applicable codes, Trade Association standards, or publications appears to be in conflict with the requirements of this Section, an interpretation shall be obtained from the Architect/Engineer.

1.4 QUALITY ASSURANCE:

- A. Manufacturers: Provide products complying with these specifications and produced by one of the following:
 - 1. General Electric.
 - 2. Gould
 - 3. Cooper power.
- B. Coordination: All fuses shall, to the maximum extent possible, be from the same manufacturer to facilitate positive selective coordination of protective devices.
- C. Interrupting Ratings: Short circuit analysis and coordination study specified in Section 26 05 73 "Short Circuit Analysis/Coordination Study" shall be completed and submitted with switchboard submittal to confirm interrupting rating of submitted equipment is adequate for the point of application in the electrical distribution.

1.5 SUBMITTALS:

- A. Shop drawing submittals shall include, but not be limited to, the following:
 - 1. Cut sheet submittals shall be provided for all fuse types required for the project.
 - 2. Time-current melting curves for each fuse being provided.
 - 3. Short circuit analysis and coordination study specified in Section 26 05 73 "Short Circuit Analysis/Coordination Study" shall be completed and submitted with switchboard submittal to confirm interrupting rating of submitted equipment is adequate for the point of application in the electrical distribution.
 - 4. Additional information as required in Section 16002.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Store fuses in a clean and dry space and protected from weather. When necessary to store outdoors, elevate materials well above grade and enclose with durable, waterproof wrapping.

PART 2 - PRODUCTS

2.1 5/15 KV CURRENT-LIMITING FUSES:

[VERIFY INTERRUPTING CAPACITY]

- A. General: Provide **[37,500 (4.16kV)] [36,000 (13.8kV)] [29,400 (14.4kV)]** symmetrical amperes interrupting capacity (AIC) current-limiting **[or boric acid]** power fuses of the current ratings shown and with a voltage rating equal to or greater than the line to line voltage at the point of application.
- B. Construction: Fuses shall be an enclosed, nonexplosion design suitable for indoor or outdoor use, as applicable. Fuses shall be selected such that the fuse no-damage boundary is not exceeded during motor starting or transformer magnetizing.
- C. Types:
 - 1. Fuses for control power and potential transformers shall be UL Class E, General Electric Type "EJ-1" or an approved equal.
 - 2. Fuses in circuits supplying transformers, motors and mixed loads shall be **[UL Class E, General Electric Type "EJO-1"] [ANSI Class E, boric acid type]** or an approved equal.
- D. Discharge Filters/Condensers: Provide fuses with discharge filters or condensers where necessary to meet the manufacturers recommendations for fuse spacing, as applied on this project. Interrupting rating reductions for these devices shall be considered when fuses are selected.

2.2 SPARE FUSES:

- A. General: Provide spare fuses in the amount of 10% of each type and size installed, but not less than three spares of a specific size and type. Deliver these spares to the Owner at the time of acceptance of the project. Fuses shall be neatly encased in a properly labeled steel enclosure with padlock provision, to be wall mounted as directed.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. General: Install fuses in fuse holders immediately prior to energization of the circuit in which the fuses are installed. Fuses shall not be installed and shipped with equipment.
- B. Labels: Place fuse identification labels, showing fuse size and type installed, inside the cover of each switch or other location where fuses are installed.

END OF SECTION 26 8 12