**SECTION 26 27 28**

**DISCONNECT SWITCHES**

**BASED ON DFD MASTER ELECTRICAL SPEC DATED 03/21/22**

This section has been written to cover most (but not all) situations that you will encounter. Depending on the requirements of your specific project, you may have to add material, delete items, or modify what is currently written. The Division of Facilities Development expects changes and comments from you.

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes disconnect switches, fuses and enclosures. Included are the following topics:

PART 1 - GENERAL

 Scope

 Related Work

 References

 Submittals

 Operation and Maintenance Data

 General

PART 2 - PRODUCTS

 Disconnect Switches

 Fuses

PART 3 - EXECUTION

 Installation

 Construction Verification Items

RELATED WORK

Applicable provisions of Division 1 govern work under this Section.

Section 26 27 02 - Equipment Wiring Systems

Section 26 27 29 - Elevator Distribution Equipment

Section 26 29 00 - Low voltage Controllers

Section 26 08 00 - Commissioning of Electrical

Section 01 91 01 or 01 91 02 – Commissioning Process

**REFERENCES**

NECA (National Electrical Contractors Association) "Standard of Installation"

NEMA ICS 2 – Industrial Control Devices, Controllers, and Assemblies

NEMA KS 1 – Enclosed Switches

UL 50 – Enclosures for Electrical Equipment

UL 98 – Enclosed and Dead-front Switches

**SUBMITTALS**

Include outline drawings with dimensions, and equipment ratings for voltage, ampacity, horsepower, and short circuit.

**OPERATION AND MAINTENANCE DATA**

All operations and maintenance data shall comply with the submission and content requirements specified under section GENERAL REQUIREMENTS.

**GENERAL**

Provide disconnect switches for loads required by code. Review HVAC and Plumbing specifications to determine what equipment is furnished with disconnect switches. Install disconnect switches whether furnished under this contract or not. It is the Electrical Contractors responsibility to determine the need for a disconnect switch for each load. The contractors shall include in their bid the code required disconnect switches whether indicated on the drawings or not.

**PART 2 - PRODUCTS**

**DISCONNECT SWITCHES**

Fusible Switch Assemblies: NEMA Type Heavy Duty; quick‑make, quick‑break, load interrupter, enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse Clips: designed to accommodate Class R, Class J or Class CC (motors) cartridge type fuses.

Nonfusible Switch Assemblies: NEMA Type Heavy Duty; quick‑make, quick‑break, load interrupter, enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position.

Enclosure:

Indoor: NEMA 1 code gauge steel with rust inhibiting primer and baked enamel finish.

Outdoors: NEMA 3R code gauge zinc coated steel with baked enamel finish. or NEMA 4X, 304 stainless steel with brushed finish, when indicated on drawings.

Corrosive Areas, Kitchen/Food service areas, Therapeutic/Pool spaces and Interior Damp/Wet locations: NEMA 4X, 304 stainless steel with brushed finish.

Provide manufacturer’s equipment ground kit in all disconnect switches.

In applications where the switch serves as the service entrance disconnect, provide service ground kit, label as service disconnect and provide UL listing for service disconnect.

**FUSES**

Fuses 600 Amperes and Less: Dual element, time delay, [250] [600] volt, UL Class [RK 1.] [RK 5.] [J.] Interrupting Rating: 200,000 rms amperes.

Fuses 601 Amperes and Larger: Low Peak, time delay, 600 volt, UL Class L. Interrupting Rating: 200,000 rms amperes.

Fuses 30 Amperes and less: Time-Delay, 600 volt, UL Class CC. Interrupting rating: 200,000 rms amperes.

Provide three (3) spares of each size and type fuse.

Provide cabinet/enclosure for spare fuses sized to accommodate all required spare fuses for entire facility. Cabinet shall have hinged and latched cover. Label cabinet “Spare Fuses”. Locate cabinet in main electrical room.

**PART 3 - EXECUTION**

**INSTALLATION**

Install disconnect switches where indicated on Drawings or required by NEC.

Provide identification as specified in Section 26 05 53.

Provide label on inside of disconnect cover identifying the type and size of fuse to be utilized.

VFD installations; Provide aux contact to de energize VFD when operating local disconnect.

Generator installations; Provide monitoring micro switches for audio/ visual alarm indication at generator control panel and remote annunciator panels for disconnects serving the emergency side of each automatic transfer switches.

**CONSTRUCTION VERIFICATION**

Contractor is responsible for utilizing the construction verification checklists supplied under specification Section 26 08 00 in accordance with the procedures defined for construction verification in Section 01 91 01 or 01 91 02.

END OF SECTION