

SECTION 26 09 19

~~~ PROJECT NOTE ~~~~~

ARCHITECT OF RECORD/ENGINEER OF RECORD IS RESPONSIBLE FOR REVIEWING THIS SPECIFICATION SECTION IN DETAIL FOR COORDINATION WITH THE PROJECT SCOPE OF WORK.

ALL "PROJECT NOTE" TEXT IS TO BE REMOVED FOLLOWING REVIEW OF THE CONTENT OF EACH NOTE BY THE ARCHITECT OF RECORD/ENGINEER OF RECORD.

EDIT THE DOCUMENT FOOTER TO INCLUDE THE PROJECT NAME AND NUMBER.

EDIT THE DOCUMENT HEADER TO INDICATE THE ARCHITECT OF RECORD PROJECT ISSUE" DATE. THE "CPS CONTROL" DATE SHOULD NOT BE EDITED.

ANY MODIFICATIONS TO THE TECHNICAL STANDARDS IN THIS SECTION - INCLUDING THE REMOVAL OR ADDITION OF MANUFACTURERS - MUST BE APPROVED BY CPS.

REQUESTS FOR MODIFICATION ARE TO BE SUBMITTED TO THE DESIGN MANAGER DURING THE DESIGN PHASE FOR REVIEW AND APPROVAL.

~~~ END OF PROJECT NOTE ~~~~~

ENCLOSED CONTACTORS

~~~ PROJECT NOTE ~~~~~

GENERAL PURPOSE CONTACTORS TYPICAL OF PROJECTS. CONFIRM ALL USES OF GENERAL PURPOSE AND LIGHTING CONTACTORS WITHIN PROJECT.

~~~ END OF PROJECT NOTE ~~~~~

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. General purpose contactors.
- B. Lighting contactors.

1.02 REFERENCE STANDARDS

- A. City of Chicago Building Code - Municipal Code of Chicago for the Building Industry; 2017.
- B. Chicago Electrical Code - Municipal Code of the City of Chicago, Building/Electrical Code Requirements; 2018.
- C. NEMA ICS 2 - Industrial Control and Systems Controllers, Contactors and Overload Relays Rated 600 Volts; 2000, with Errata (2008).
- D. NEMA ICS 5 - Industrial Control and Systems: Control Circuit and Pilot Devices; 2017.
- E. NEMA ICS 6 - Industrial Control and Systems: Enclosures; 1993 (Reaffirmed 2016).
- F. NEMA KS 1 - Heavy Duty Enclosed and Dead-Front Switches (600 Volts Maximum); 2013.

- G. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2017.
- H. UL 508 - Industrial Control Equipment; Underwriters Laboratories Inc; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide dimensions, size, voltage ratings and current ratings.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Maintenance Data: Include instructions for replacing and maintaining coil and contacts.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience and with service facilities within 50 miles of Project.
- B. Products: Listed, classified, and labeled as suitable for the purpose intended.
- C. Listed and labeled as defined in the Chicago Electrical Code, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Comply with the City of Chicago Building Code.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Allen-Bradley/Rockwell Automation: ab.rockwellautomation.com.
- B. Eaton Corporation: www.eaton.com.
- C. General Electric Company: www.geindustrial.com.
- D. Schneider Electric; Square D Products: www.schneider-electric.us.
- E. ASCO Power Technologies, LP; a division of Emerson Electric Company; www.emerson.com.

2.02 GENERAL PURPOSE CONTACTORS

- A. Description: NEMA ICS 2, AC general purpose magnetic contactor.
- B. Coil operating voltage: 120 volts, 60 Hertz.
- C. Poles: As required to match circuit configuration and control function.
- D.

~~~ PROJECT NOTE ~~~~~

**REVIEW AND CONFIRM ENCLOSURE TYPE BASED ON LOCATION, NEMA 3R OR NEMA 4X MAY BE REQUIRED.**

~~~ END OF PROJECT NOTE ~~~~~

- E. Enclosure: NEMA ICS 6, Type 1.
- F. Accessories:
 - 1. Pushbutton: ON/OFF.
 - 2. Selector Switch: ON/OFF.
 - 3. Indicating Light: RED.
 - 4. Auxiliary Contacts: One, normally open.
 - 5.

~~~ PROJECT NOTE ~~~~~

**DELETE ARTICLE BELOW IF NOT USED**

~~~ END OF PROJECT NOTE ~~~~~

2.03 LIGHTING CONTACTORS

- A. Description: NEMA ICS 2 and UL 508, magnetic lighting contactor.
- B. Configuration: Electrically operated, mechanically held, refer to drawings for required type of controls.
- C. Coil operating voltage: 120 volts, 60 Hertz.
- D. Poles: As required to match circuit configuration and control function.
- E. Contact Rating: Match branch circuit overcurrent protection, considering derating for continuous loads.
- F.

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**REVIEW AND CONFIRM ENCLOSURE TYPE BASED ON LOCATION, NEMA 3R OR NEMA 4X MAY BE REQUIRED.**

~~~ END OF PROJECT NOTE ~~~~~

- G. Enclosure: NEMA ICS 6, Type 1.
- H. Accessories:
 - 1. Pushbutton: ON/OFF.
 - 2. Selector Switch: ON/OFF.
 - 3. Indicating Light: RED.
 - 4. Auxiliary Contacts: One, normally open.

2.04 ACCESSORIES

- A. Auxiliary Contacts: NEMA ICS 2, 2 normally open contacts in addition to seal-in contact.
- B. Cover Mounted Pilot Devices: NEMA ICS 5, standard type.
- C. Pilot Device Contacts: NEMA ICS 5, Form Z, rated A150.

- D. Pushbuttons: Unguarded type.
- E. Indicating Lights: Transformer, LED type.
- F. Selector Switches: Rotary type.

2.05 DISCONNECTS

- A. Combination Contactors: Combine contactor with disconnect in common enclosure.
- B. Disconnects: Thermal magnetic circuit breaker with integral thermal and instantaneous magnetic trip in each pole; UL listed.
- C. Disconnects: Fusible switch assembly; NEMA KS 1, enclosed knife switch with externally operable handle. Fuse clips: Designed to accommodate Class R fuses.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install enclosed contactors where indicated, in accordance with manufacturer's instructions.
- B. Install enclosed contactors plumb. Provide supports in accordance with Section 26 05 29 - Hangers and Supports for Electrical Systems.
- C. Height: 5 ft. to operating handle.
- D. Provide fuses for fusible switches; refer to Section 26 28 13 - Fuses for product requirements.
- E. Identify enclosed contactors in accordance with Section 26 05 53 - Identification for Electrical Systems.

3.02 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform applicable inspections and tests listed in NETA ATS, Section 7.16.1.

3.03 CLEANING

- A. The contractor shall remove all paint spatters and other spots, dirt and debris from the equipment. Clean equipment internally and externally using methods and materials recommended by the manufacturer.

END OF SECTION 26 09 19