

SECTION 262914-ENCLOSED CONTACTORS**PART 1 GENERAL****1.1 SUMMARY**

- A. Section includes enclosed contactors for lighting and general purposes.

1.2 REFERENCES AND QUALITY ASSURANCE

- A. NECA (National Electrical Contractors Association) - Standard of Installation.
- B. NEMA AB 1 (National Electrical Manufacturers Association) - Molded Case Circuit Breakers.
- C. NEMA FU 1 (National Electrical Manufacturers Association) - Low Voltage Cartridge Fuses.
- D. NEMA ICS 2 (National Electrical Manufacturers Association) - Starters, Contactors, and Overload Relays Rated Not More Than 2000 Volts AC or 750 Volts DC.
- E. NEMA ICS 5 (National Electrical Manufacturers Association) - Industrial Control and Systems: Control Circuit and Pilot Devices.
- F. NEMA ICS 6 (National Electrical Manufacturers Association) - Industrial Control and Systems: Enclosures.
- G. NEMA KS 1 (National Electrical Manufacturers Association) - Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).
- H. NETA ATS (International Electrical Testing Association) - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

1.3 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit dimensions, size, voltage ratings and current ratings.

1.4 CLOSEOUT SUBMITTALS

- A. Section 017700 - Closeout procedures.
- B. Project Record Documents: Record actual locations and ratings of enclosed contactors.
- C. Operation and Maintenance Data: Submit instructions for replacing and maintaining coil and contacts.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

PART 2 PRODUCTS

2.1 GENERAL PURPOSE CONTACTORS

- A. Manufacturers:
 - 1. Square "D".
 - 2. General Electric.
 - 3. Cutler Hammer
 - 4. Automatic Switch Co.
 - 5. Zenith Controls.
 - 6. Siemens
- B. Product Description: NEMA ICS 2, AC general purpose magnetic contactor.
- C. Coil operating voltage: 120 volts, 60 Hertz.
- D. Poles: To match circuit configuration and control function.
- E. Product Features:
 - 1. Cover Mounted Pilot Devices: NEMA ICS 5, heavy-duty oiltight type with Form Z contacts, rated A150.
 - 2. Pushbutton: ON/OFF function, with unguarded lockable configuration.
 - 3. Selector Switch: ON/OFF/AUTOMATIC function, with rotary action.
 - 4. Indicating Light: RED lens, with led lamp.
 - 5. Auxiliary Contacts: One, normally open and normally closed field convertible in addition to seal-in contact.
 - 6. Relays: NEMA ICS 2.
 - 7. Control Power Transformers: 120 volt secondary, 100 VA minimum, in each enclosed contactor. Furnish fused primary and secondary, and bond unfused leg of secondary to enclosure.
- F. Combination Contactors: Combine contactors with enclosed knife switch conforming to NEMA KS 1, with externally operable handle and fuse clips designed to accommodate NEMA FU 1, Class R fuses.
- G. Enclosure: NEMA ICS 6, to meet conditions. Fabricate enclosure from steel finished with manufacturer's standard gray enamel.
 - 1. Interior Dry Locations: Type 1.
 - 2. Exterior Locations: Type 3R.
 - 3. Wet Locations: Type 4.

2.2 LIGHTING CONTACTORS

- A. Manufacturers:
 - 1. Square "D".
 - 2. General Electric.
 - 3. Westinghouse.
 - 4. Automatic Switch Co.
 - 5. Zenith Controls.
- B. Product Description: NEMA ICS 2, magnetic lighting contactor.
- C. Configuration: Electrically held or Mechanically held, 3 wire control specified in detail.
- D. Coil operating voltage: 120 volts, 60 Hertz.
- E. Poles: To match circuit configuration and control function.
- F. Contact Rating: Match branch circuit overcurrent protection, considering derating for continuous loads.
- G. Accessories:
 - 1. Cover Mounted Pilot Devices: NEMA ICS 5, heavy-duty oiltight type with Form Z contacts, rated A150.
 - 2. Pushbutton: ON/OFF function, with unguarded lockable configuration.
 - 3. Selector Switch: ON/OFF/AUTOMATIC function, with rotary action.
 - 4. Indicating Light: RED lens, with led lamp.
 - 5. Auxiliary Contacts: One, normally open and normally closed field convertible in addition to seal-in contact.
 - 6. Relays: NEMA ICS 2.
 - 7. Control Power Transformers: 120 volt secondary, 100 VA minimum, in each enclosed contactor. Furnish fused primary and secondary, and bond unfused leg of secondary to enclosure.
- H. Combination Contactors: Combine contactors with enclosed knife switch conforming to NEMA KS 1, with externally operable handle and fuse clips designed to accommodate NEMA FU 1, Class R fuses.
- I. Enclosure: NEMA ICS 6, to meet conditions. Fabricate enclosure from steel finished with manufacturer's standard gray enamel.
 - 1. Interior Dry Locations: Type 1.
 - 2. Exterior Locations: Type 3R.
 - 3. Wet Locations: Type 4.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install enclosed contactors, in accordance with NECA "Standard of Installation."

- B. Install enclosed contactors plumb. Provide supports in accordance with Section 260529.
- C. Height: 5 ft to operating handle.
- D. Install fuses for fusible switches. .
- E. Install engraved plastic nameplates.

3.2 FIELD QUALITY CONTROL

- A. Refer to Division 1 requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.16.1.

END OF SECTION 262914