

**SECTION 26 29 13****ENCLOSED CONTROLLERS****PART 1 - GENERAL****1.1 REFERENCED DOCUMENTS**

- A. Comply with Division 1 - General Requirements and related documents.
- B. All sections of this specification.

**1.2 DESCRIPTION**

- A. Work Included: Provide and coordinate motor control centers, and the devices for each starter unit.

**1.3 QUALITY ASSURANCE**

- A. Source Quality Control:
  - 1. Manufacturer's tests to meet applicable Underwriters' Laboratories, Inc., Standards.
  - 2. Equipment designed and manufactured to meet applicable ANSI, NEMA, and IEEE Standards.

**1.4 SUBMITTALS**

- A. Manufacturer's Data: Submit copies of the manufacturer's literature, completely describing the motor controller, motor starter units, and controls.
- B. Shop Drawings: Submit copies of shop drawings completely describing motor controller dimensions, motor starter units, interconnecting wiring, fuses, and capacities.

**PART 2 - PRODUCTS****2.1 ACCEPTABLE MANUFACTURERS**

- A. Square D Company.
- B. Eaton.

**2.2 PRODUCTS**

- A. Furnish and install Combination motor starter and disconnect switches in NEMA Type 1 enclosures.

- B. Combination motor controller and disconnect units shall be equipped with individual control power transformers with one secondary control fuse. The other secondary lead shall be grounded. Starter units shall contain two spare auxiliary contacts, one N.C. and one N.O. in addition to those required for equipment interlock and temperature control wiring systems; and unit-mounted pilot devices and indicating lights.
- C. Padlocking arrangements shall permit locking the disconnect device OFF with padlocks. Unit disconnect operating handle shall be mounted on the disconnect, not on the unit door and shall indicate ON and OFF. Overload relays shall be reset from outside the enclosure by means of an insulated bar or button.
- D. All starters shall be full voltage, non-reversing type, single or two speed, as scheduled and as required by the load served. Coordinate with manufacturer's data for the equipment actually installed. Motor starter contactors shall be NEMA horsepower rated to meet or exceed the horsepower rating of the motors installed.
- E. Each starter unit shall be provided with quick-make, quick-break fusible switch unit disconnect, properly sized fuses, magnetic contactor with replaceable operating coil, overload relay with replaceable thermal elements, control power transformer with fuse, and hand-off-auto switch with on/off pilot lights or high-low-off-auto switch with high/low/off pilot lights. Two-speed relays shall be provided with adjustable time interval decelerating relays.
- F. Disconnect units shall be fusible switch quick-make, quick-break units with rejection type Fuse clips and provisions for padlocking on or off.

## **PART 3 - EXECUTION**

### **3.1 COORDINATION**

- A. This Contractor shall verify at the job site the voltage, phase, horsepower and number of speeds characteristic of each load item of equipment and furnish the proper size and type of starter required, fused as recommended by the manufacturer for the load and as required by the National Electrical Code.

### **3.2 NAME PLATES**

- A. Provide engraved lamacoid plastic name plates with the designation of each motor control center and the service voltage, and for each control unit with the circuit designation and the name of the item served.
- B. Designations shall be in 3/4" letters, and name plates shall be permanently secured to control center enclosures.

**END OF SECTION**