

SECTION 16480
MOTOR CONTROL

PART 1 GENERAL

1.1 WORK INCLUDED:

- A. Manual motor starters.
- B. Magnetic motor starters.
- C. Combination magnetic motor starters.
- D. Motor control centers.
- E. Coordinate with Mechanical Section 15170 – Motors. PROVIDED UNDER THIS SECTION.

1.2 REFERENCES

- A. ANSI/NEMA ICS 6 - Enclosures for Industrial Controls and Systems.
- B. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service.
- C. FS W-P-115 - Power Distribution Panel.
- D. FS W-F-870 - Fuse holders.
- E. FS W-S-865 - Switch, Box, Enclosed, Surface-Mounted.
- F. NEMA AB 1 - Molded Case Circuit Breakers.
- G. NEMA ICS 2 - Industrial Control Devices, Controllers, and Assemblies.
- H. NEMA KS 1 - Enclosed Switches.
- I. NEMA PB 1 - Panelboards.
- J. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or less.

1.3 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Indicate on shop drawings, front and side views of motor control center enclosures with overall dimensions. Include conduit entrance locations and requirements; nameplate legends; size and number

A. Keys: Furnish two each to Owner.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS - MOTOR STARTERS

- A. Square D.
- B. General Electric.
- C. Cutler Hammer.
- D. Siemens/ITE.
- E. Allen Bradley.

2.2 MANUAL MOTOR STARTERS

- A. Manual Motor Starter: NEMA ICS 2; AC general-purpose Class A manually operated full-voltage controller for induction motors rated in horsepower, with overload relay, red pilot light, auxiliary contact, and push button operator.
- B. Fractional Horsepower Manual Starter: NEMA ICS 2; AC general-purpose Class A manually operated, pole, full-voltage controller for fractional horsepower induction motors, with thermal overload unit, red pilot light, and key operator.
- C. Motor Starting Switch: NEMA ICS 2; AC general-purpose Class A manually operated pole, full-voltage controller for fractional horsepower induction motors, without thermal overload unit, red pilot light, auxiliary contact, and push button operator.
- D. Enclosure: ANSI/NEMA ICS 6

2.3 MAGNETIC MOTOR STARTERS

- A. Magnetic Motor Starters: NEMA ICS 2; AC general-purpose Class A magnetic controller for induction motors rated in horsepower.
- B. Full Voltage Starting
- C. Reduced Voltage Starting.
- D. Two Speed Starting: With integral time delay transition between FAST and SLOW speeds.
- E. Coil Operating Voltage: 120 volts, 60 Hertz.
- F. Size: NEMA ICS 2; size as shown on Drawings.
- G. Overload Relay: NEMA ICS 2; melting alloy.
- H. Enclosure: NEMA ICS 6
- I. Combination Motor Starters: Combine motor starters with disconnecting me

knife switch with externally operable handle. Provide interlock to prevent opening front cover with switch in ON position. Handle lockable in OFF position.

D. Fusible Switch Assemblies: NEMA KS 1; quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle. Provide interlock to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse Clips: FS W-F-870.

2.5 ACCEPTABLE MANUFACTURERS - MOTOR CONTROL CE59.bA98(T)8.5R CTOR CONTpenin ope D.30