26 24 19 Motor Controllers

1. **General:**
   A. Provide motor controllers per NEC requirements and as indicated below.

2. **Requirements:**
   A. Controllers to be NEMA rated only. Do not include IEC rated controllers in the specification.
   
   B. Motors 50 HP and larger shall be provided with reduced voltage starters
   
   C. Controllers to have over-load relays size to the motor's nameplate current.
   
   D. Doors on Magnetic Controllers should include a "Hand-Off-Auto" switch.
   
   E. Controller doors should include a transformer type indicator light indicating that the motor is in operation.
   
   F. Short circuit protection for each motor and motor controller should be provided by a Motor Circuit Protector.
   
   G. Each controller shall include a voltage monitoring relay to provide protection from the following:
     
     1) Phase loss
     
     2) Under- and overvoltage
     
     3) Phase imbalance
     
     4) Phase reversal
   
   H. Each controller should include a control circuit transformer providing 120 VAC control power.
   
   I. Each controller should include a minimum of two auxiliary contacts.
3. **Preferred Manufacturers:**
   
   A. Allen Bradley
   
   B. General Electric
   
   C. Square D
   
   D. Siemens
   
   E. Cutler Hammer