

**SECTION 26 28 16 - SAFETY SWITCHES - HEAVY DUTY**

- \* **Industrial, commercial, all 480 V applications.**

**PART 1 - GENERAL**

## 1.01 REFERENCE

- A. Refer to section 26 00 00 for requirements which are applicable to this section.
- B. Refer to NFPA and in particular the National Electrical Code.
- C. Refer to NEMA, UL, and IEEE Standards.

## 1.02 WORK INCLUDED

- A. Provide all labor, material, equipment, and supervision necessary to furnish and install and place into operation safety switches where indicated on the drawings and specified herein.

## 1.03 SUBMITTALS

- A. Submit manufacturer's shop drawings of devices.

## 1.04 QUALITY ASSURANCE

- A. Verify that all equipment is installed in accordance with the manufacturer's warranty requirements.
- B. Install systems and equipment in accordance with the National Electrical Code and local codes having jurisdiction.
- C. Provide adequate supervision of labor force to see that installations are correct.

**PART 2 - PRODUCTS**

## 2.01 HEAVY DUTY SAFETY SWITCHES

## A. APPLICATION DATA

- 1. 30-1200 amperes
- 2. 600 volts AC for 480 V applications
- 3. 240 Volt-AC for 208 V applications.
- 4. NEMA 1 - General Purpose, painted sheet steel
- 5. NEMA 3R - Rainproof, painted galvanized steel
- 6. Maximum - Time delay (dual element) fuse

## B. CONSTRUCTION

- 1. Visible blades
- 2. Handle attached to box, not cover
- 3. Handle position indicates "ON" or "OFF"
- 4. Top hinged cover on NEMA 3R
- 5. Operating mechanism is quick-make, quick-break
- 6. Plated current carrying parts
- 7. Provisions for padlocking the switch in the "OFF" position
- 8. Class R fuse standard for 30 - 600 Amp switches.

- 9. Class L fuses standard for 800-1200 Amp switches.
- C. NEUTRAL AND GROUNDING
  - Provisions for field installation of solid neutral assembly.
  - Ground kits for field installation
- D. TERMINALS
  - UL listed for Al or Cu wires
  - UL listed for 60 deg. or 75 deg. C. wires
  - Meets UL 486 B requirements
- E. FUSE CLIPS
  - Spring reinforced
  - Plated
- F. APPLICATION
  - Fusible - Class R or Class L as indicated above
  - Not fusible
- G. NEMA STANDARDS
  - KS1 - 1975
- H. UL LISTING
  - UL 98 Enclosed Switches
  - Maximum HP ratings
- I. UL LISTED SHORT CIRCUIT RATING:
  - 200,000 RMS Symmetrical Amperes with proper rejection kit and Class R fuses.
- J. Acceptable Manufacturers:
  - 1. Siemens
  - 2. Cutler Hammer
  - 3. ABB Group.
  - 4. Square D

### **PART 3 - EXECUTION**

#### **3.01 SAFETY SWITCHES**

- A. Furnish and install safety switches on all motors which do not have integral equipment disconnect devices, local starters and/or where indicated on the drawings.
- B. Furnish and install safety switches where indicated on the drawings.
- C. Safety switches shall be installed to meet the area classification as to standard, hazardous, rainproof, etc.
- D. Safety switches shall be installed securely to building structure or be provided with supplemental support steel such as angle iron or uni-strut when required to locate on other than building structure.
- E. All safety switches shall be grounded.

END OF SECTION