SECTION 26 28 16
ELEVATOR CONTROL SWITCHES

PART 1 - GENERAL

1.1 SCOPE

A. Furnish and install elevator control switches of the types, sizes and quantities indicated on the contract drawings.

1.2 RELATED DOCUMENTS

A. All drawings and general provisions of the Contract including Division 1 requirements apply to this section.

B. ***[The following sections shall be adhered to in the performance of work specified by this section:***
   1. ***[Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables]***
   2. ***[Section 26 05 26 – Grounding and Bonding for Electrical Systems]]***

1.3 SUBMITTALS

A. Provide product information prior to fabrication and installation. Product data shall include all dimensions, weights, electrical ratings and replacement parts.

1.4 RELATED STANDARDS

A. The safety switches and all accessories shall be designed, manufactured and tested in accordance with the latest applicable standards of the following:
   1. UL98 – Enclosed and Dead-Front Switches
   2. NFPA 70 – 1999 Section 620-51 (a)-(c), 620-62, 620-91(c)
   3. ANSI/ASME A17.1 – 1996 Section 102.2 (c) (3)
   4. NFPA 72 – 1999 Section 3-9.4.4

B. ***[Manufacturer Seismic Qualification: The safety switch(es) shall meet and be certified to seismic requirements specified in the [IBC 2012 International Building Code] [OSHPD Special Seismic Certification (OSP)][CBC 2013 California Building Code]***
   1. ***Equipment certification acceptance criteria shall be based upon the ability for the equipment to be returned to service immediately after a seismic event within the above requirements without the need for repairs.***
   2. ***The following minimum mounting and installation guidelines shall be met, unless specifically modified by the above referenced standards.***
      a. ***The Contractor shall provide equipment anchorage details, coordinated with the equipment mounting provision, prepared and stamped by a licensed civil engineer in the state. Mounting recommendations shall be provided by the manufacturer based upon the above criteria to verify the seismic design of the equipment.***
      b. ***The equipment manufacturer shall certify that the equipment can withstand, that is, function following the seismic event, including both vertical and lateral required response spectra as specified in above codes.***
   3. ***The equipment manufacturer shall document the requirements necessary for proper seismic mounting of the equipment. Seismic qualification shall be considered achieved when the capability of the equipment, meets or exceeds the specified response spectra.]***

1.5 QUALITY ASSURANCE

A. Manufacturer: For equipment required for the work of this section, provide product which is the responsibility of one manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials and products in factory labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage from weather, excessive temperatures and construction operations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The elevator control switches shall be manufactured by Siemens or pre-approved equal. Approved manufacturers are as follows:
   1. SIEMENS
   2. ***[__]***
   3. ***[__]***

2.2 ELEVATOR CONTROL SWITCHES

A. GENERAL CONDITIONS AND REQUIRMENTS
   1. Provide the Elevator Control Switch(es) in a NEMA enclosure(s) with all relays, control transformers and other features and options listed below, and as shown on drawings.
   2. The Elevator Control Switch shall be constructed, listed, and certified to the standards as listed above in Related Standards.
   3. The Elevator Control Switch shall have an ampere rating as shown on the Contract Drawings and shall include a horsepower rated fusible switch with shunt trip capabilities. The ampere rating of the switch shall be based upon elevator manufacturer requirements and utilize Class J Fuses that are provided separately from the distributor.
   4. The Elevator Control Switch(es) shall include a 100 VA control power transformer with primary and secondary fuses. ***The primary voltage rating shall be [__] volts*** with a 120-volt secondary. It shall also contain an isolation relay (3PDT, 10 amp, and 120V). ***The coil of the isolation relay shall be [120 VAC][24 VDC].***
   5. A normally open dry contact shall be provided by the Fire Alarm Safety System to energize the isolation relay and activate the shunt trip solenoid (140 VA inrush at 120V). **(Note: If 24 Vdc coil is selected, a separate 24 VDC source and contact must be provided by the Fire Alarm Safety System. *[Note to Spec Writer: This will need to be added to your Fire Alarm Safety System specification.)* *The fire alarm safety system shall provide a separate 24 VDC source and contact.]***
   6. The switch shall include a 120-volt key to test switch and a 1-NO/1-NC mechanically interlocked auxiliary contact rated 5A, 120 Vac. The switch shall contain the following features:
      a. "ON" Pilot Light: ***[Green][Red][White]***
      b. Isolated Full Capacity Neutral Lug
      c. Fire Alarm Voltage Monitoring Relay to comply with NFPA 72
      d. NEMA ***[1][3R][12][4]*** Enclosure
      e. Main Switch Auxiliary Contacts (1 NO/1 NC)
   7. The module shall have been successfully tested to a short circuit rating with Class J fuses at 200,000 amps RMS Symmetrical. All switches shall have shunt trip capabilities at 120 Vac from remote fire safety signal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. The contractor shall install all equipment in accordance with the contract drawings and manufacturers recommendations.

3.2 ADJUSTMENTS AND CLEANING

A. The contractor shall install the necessary accessories in order to place the safety switches in final operating condition.

3.3 TESTING

A. Perform factory and installation tests in accordance with applicable NEC, NEMA and UL requirements.

3.4 WARRANTY

A. Equipment manufacturer warrants that all goods supplied are free of non-conformities in workmanship and materials for one year from date of initial operation, and not more than eighteen months from date of shipment.

END OF SECTION