

SECTION 164XX

ELEVATOR SHUNT-TRIP FUSED DISCONNECT SWITCHES

PART 1 GENERAL

1.1 SUMMARY

- A. Furnish and install shunt-trip fused disconnect switch and accessories for elevator circuits as shown on the drawings.

1.2 RELATED SECTIONS

- A. Section 16491 – Fuses
- B. Sections with regards to elevator installation and shunt-tripping of main-line power

1.3 REFERENCES

- A. Fused Power Module Switch shall comply with:
 - 1. UL 98
 - 2. UL 248
 - 3. NEMA KS 1
 - 4. NEMA FU 1
 - 5. ANSI/ASME 17.1 – Section 102.2(4)
 - 6. NFPA 70 – Section 620.51(A-C), 620.62, and 620.91(C)
 - 7. NFPA 72 – Section 3-9.2.1 and 3-9.4.4

1.4 SUBMITTALS

- A. Drawings:
 - 1. Submit detailed dimensional outline and conduit entry/exit locations.
 - 2. Control circuit and accessory wiring diagram
- B. Product Data: Submit manufacturer's product data sheets including:
 - 1. Assembly (including shunt-trip switch, control wiring and accessories) ratings (voltage, current, horsepower, and short-circuit current rating)
 - 2. Conductor termination ratings
 - 3. Fuse ratings and type
- C. Provide 10 copies of above.

1.5 CLOSEOUT SUBMITTALS

- A. Final as-built drawings and product data information per Section 1.4
- B. Operation and maintenance manuals including replacement parts list.
- C. Provide 10 copies of above.

1.6 QUALIFICATIONS

- A. The equipment manufacturer shall have a minimum five years experience in producing UL 98 listed shunt-trip fused disconnect switches with integral control wiring for elevator circuits.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Equipment shall be handled and stored in a manner that avoids damage.
- B. Equipment shall be inspected prior to installation for damage. Do not install damaged equipment.

1.8 MAINTENANCE MATERIALS

- A. Furnish two sets of fuse pullers.

1.9 ADDITIONAL MATERIALS

- A. Furnish three sets of each rating and type of fuse installed and spare fuse cabinet where not already provided.

PART 2 PRODUCTS

2.1 GENERAL

- A. Manufacturer:
 - 1. Cooper Bussmann, Inc. Model - Power Module Switch - PS
 - 2. Substitutions can be submitted for acceptance only if the below requirements are met:
 - a. The electrical contractor supplies a written request to the engineer three weeks prior to the project bid date.
 - b. The electrical contractor provides product documentation to prove complete compliance with specification and all pertinent codes and standards requirements as specified above.
 - c. The shunt-trip disconnect switch does not incorporate an instantaneous trip mechanism.
 - d. Written approval is provided from the engineer.
- B. Feeders for multiple elevator installations shall be selective coordinated and fed from a Cooper Bussmann LPJ, LPN-RK/LPS-RK, or KRP-C fuse sized at a minimum of 2:1 (compared to the largest branch circuit fuse in the elevator shunt-trip fused disconnect switch) in accordance with NEC 620.62.

2.2 CONSTRUCTION

- A. Provide shunt-trip fused disconnect switch with all necessary relay(s), control transformer and other options, as shown on drawings and listed below:
 - 1. Ampere rating of the switch shall be based upon the elevator manufacturer requirements for Cooper Bussmann LPJ fuses.
 - 2. Short-circuit current rating of 200,000A with Cooper Bussmann LPJ fuses.

3. Interlocks to prevent the opening of the cover when the switch is in the ON position. Interlock shall be defeatable for testing purposes.
4. Handle lockable in OFF position.
5. 100VA control power transformer with primary and secondary fuses. The primary voltage rating shall be _____ volts with a 120V secondary.
6. Isolation relay (3PDT, 10amp, 120V). The coil of the isolation relay shall be _____ (120V AC or 24V DC). 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 (140VA inrush at 120V). (Note: if 24V DC coil is selected, a separate 24V DC source and contact must be provided by the Fire Alarm Safety System.)
7. Provide additional options as indicated on drawings or below:
 - a. ___ Key to Test Switch
 - b. ___ "On" Pilot Light (Green, Red or White)
 - c. ___ Isolated Full Capacity Neutral Lug
 - d. ___ 1P NC Mechanical Interlock (required for hydraulic elevators with automatic recall).
 - e. ___ Fire Alarm Voltage Monitoring Relay (Comply with NFPA 72)
 - f. ___ NEMA ___ Enclosure (NEMA 1, 12, 3R or 4)
8. Entire assembly (including shunt-trip switch, control wiring and accessories) shall have a short-circuit rating of 200,000A.

B. Complete catalog number for the Power Module Switch shall be _____

PART 3 EXECUTION

3.1 INSTALLATION

- A. Equipment shall be installed and handled in accordance with the manufacturer's recommendations.
- B. Equipment shall have a nameplate installed and mounted to the front cover and indicate: switch type, ampere rating, voltage rating, short-circuit rating, and load served.
- C. Install fuses in accordance with Section 2.2. Refer to Section 16491 for product requirements. Install labeling that identifies replacement fuse type/class and rating.

END OF SECTION