

LPS SERIES

Section 16XXX – Shunt Trip Switch

Elevator – Data Processing – Emergency Systems

Part 1 – General

1.01 Description

- A. Equipment shall be kept clean, dry, and in a protected environment until ready for installation and conform to all requirements identified in the project documents.

1.02 Protection of Elevator Circuits

- A. Provide LPS series shunt trip switch, fuses and accessories as specified on all project documents.

1.03 Protection of Related Systems

- A. Provide LPS series shunt trip switch, fuses and accessories as specified on all project documents.

1.04 Codes

- A. All work shall be performed in accordance with the latest editions of all applicable standards, codes, and laws.
 1. NFPA 70 (NEC*) – Section 240.12, 620-51 A-C, 620-62, 620.91
 2. Canadian Electrical Code Part 1 38-051, 38-062
 3. ANSI/ASME A17.1
 4. NFPA 72 – Section 6.15.4.4

1.05 Standards

- A. All equipment shall be manufactured in accordance with the manufacturer's specification and meet the latest applicable standards unless modified by local governing codes or standards with jurisdiction.
 1. Enclosed Switches, U.L. 98 and CSA – C22.2 No. 4

1.06 Substitutions

- A. In all such cases, substitutions shall comply with the project documents and meet any applicable code requirements. In addition, the engineer shall be advised and their approval obtained prior to any proposed changes.

1.07 Submittals

- A. Drawings and product information shall be submitted in accordance with the project provisions.
- B. Manufacturer's product information shall contain general catalog data, dimensions, mounting and installation information, and optional configurations as needed.
- C. All types, sizes, quantity, and location of fuses to be installed shall be submitted.
- D. Spare fuses shall be supplied in accordance with the general fuse specification.

Part 2 – Products

2.01 Manufacturers

- A. Littelfuse – LPS series shunt trip switch

*NEC is a trademark of its respective owner.

2.02 General Conditions & Requirements

- A. Provide LPS series shunt trip switch in a single UL (NEMA) type enclosure with all components and options (as listed below) shown on project drawings. The LPS series shunt trip switch shall be manufactured, listed and certified to the standards listed herein. The LPS series shunt trip switch shall have an ampere rating as shown on the project documents and include a molded case switch with shunt trip capabilities, separate fusing and have an appropriate horsepower rating. The switch rating shall be based on the elevator manufacturer's requirements and utilize UL Class J fuses. A 100 VA control power transformer shall be included as an accessory with primary and secondary fuses. The primary voltage rating shall be _____ volts with a 120 volt secondary. An isolation relay shall also be provided (3PDT, 10 amperes, 120 V). The rating of the coil of the isolation relay shall be _____ (120 V ac or 24 V dc). To energize the isolation relay and activate the shunt trip solenoid (140 VA inrush at 120 V), a 5 A normally open dry contact shall be provided. (Note: If a 24 V dc coil is selected, a separate 24 V dc source and contact must be provided by the Fire Alarm Safety System.) The switch shall include color coded control power terminal blocks.

The LPS series shunt trip switch shall include the following options:

- _____ Key to Test Switch
- _____ Pilot Light "ON" (Green, Red or White)
- _____ Isolated Neutral Lug
- _____ Mechanical Interlock Auxiliary Contacts (required for hydraulic elevators with automatic recall)
- _____ 1 NO & 1 NC
or
- _____ 2 NO & 2 NC
- _____ Fire Alarm Voltage Monitoring Relay (complies w/ NFPA 72)
- _____ UL (NEMA) _____ Enclosure (UL (NEMA) type 1 standard), 3R, 4, or 12
- _____ Fire Alarm Bypass (for Maintenance and Testing)

The complete Littelfuse catalog number for the LPS series shunt trip switch shall be _____.

The LPS series shunt trip switch shall have been successfully tested to a short-circuit rating at 200,000 amps RMS Symmetrical with Littelfuse Class J time-delay fuses. All switches shall include shunt trip capabilities at 120 V ac from remote fire safety signals. Selective coordination shall be maintained with branch feeders and other over current protective devices by utilizing UL Class J, RK1, or L fuses sized at a minimum 2:1 ratio.

Part 3 – Execution

3.01 Installation

- A. All equipment shall be installed in accordance with the manufacturer's guidelines and the latest edition of any applicable codes utilizing safe work practices.
- B. Fuses shall not be inserted in the equipment until the equipment is in place, completely connected, tested and ready to be energized.