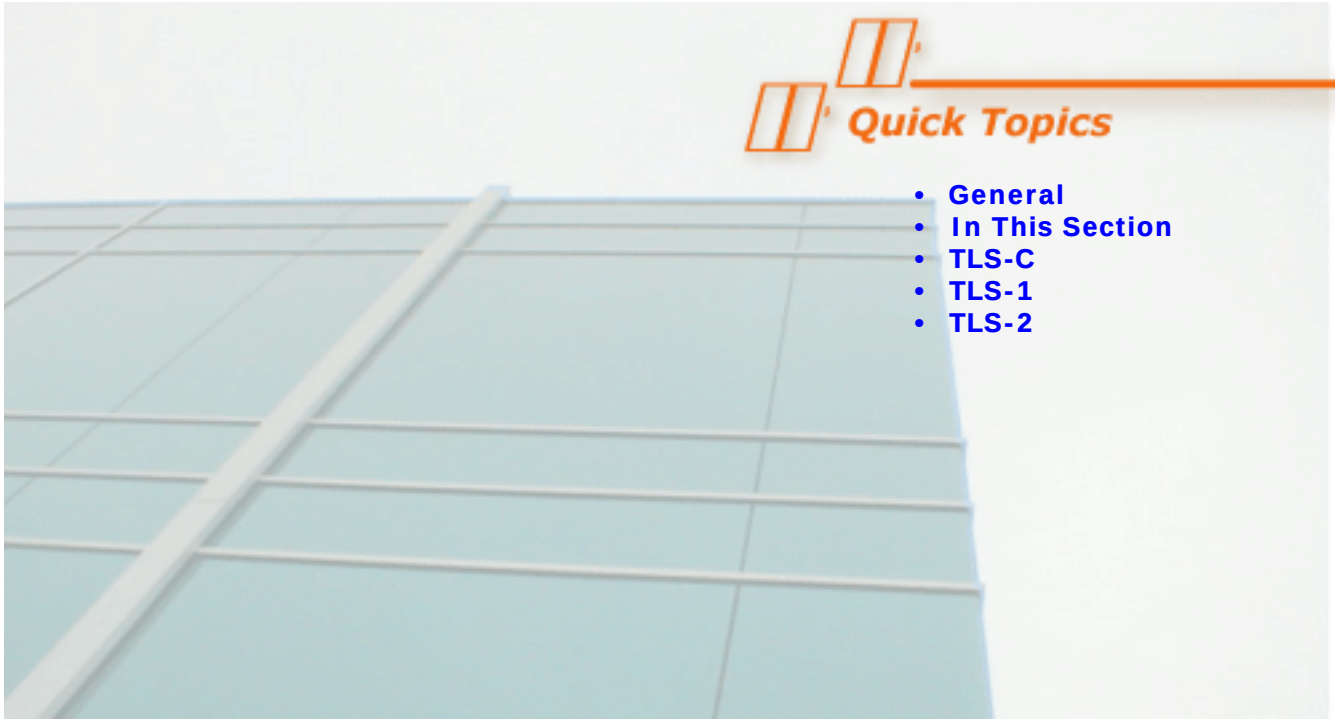

TLS Terminal Limit Switches

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General

The TLS Terminal Limit Switch System consists of highly accurate, magnetically activated switches and actuating magnets. The system is designed specifically for computer-based elevator control systems requiring reliable contacts at speeds up to 2,000 fpm (10 m/s).

The TLS system provides reliable operation with clearances up to 3/4 inch (19mm), maintaining a high level of accuracy over the complete range of car movement. An ideal alternative to old-style mechanical TM switches and contacts, TLS eliminates noisy rollers and cams, cumbersome lever arms and the necessity for regular adjustment and cleaning.

Three models of TLS Terminal Limit Switches are available, TLS-C, TLS-1 and TLS-2. This system can be used for Normal Terminal Slowdown Device, Emergency Terminal Stopping or Speed Limiting Device, Access Limit and Earthquake Car-to Counterweight Switch. Depending on project requirements, a consultant or contractor can choose a system for the specific application.

In This Section

TLS-C Recommended Use

TLS-C Cartop Terminal Limit Switch System consists of a cartop mounted, magnetically activated switch array with rail-mounted actuating magnets. There are two models available, TLS-C-12 (with 12 switches) and TLS-C-16 (with 16 switches). The switches are in an enclosure designed to be mounted on the cartop, with each switch operated by a magnetic actuator installed on a bracket with adjustable channel which is mounted to the guide rail. The number of magnetic actuators is equal to the number of switches, which is also equal to the number of lanes. The switches are mounted on 1 5/16" centers in easily replaceable modules of four switches per module. This system is designed specifically for computer-based traction elevator control systems with car speeds up to 2000 fpm (10 m/s).

Specification Text, TLS-C

The terminal limit switches shall consist of an array of magnetically activated switches and corresponding actuating magnets. The switch array shall be mounted on the cartop and the actuating magnets shall be mounted to the guide rail. Mounting brackets for the magnetic actuators shall be supplied by the manufacturer. The switches shall have hermetically sealed contacts with tolerance for high temperature and humidity. The switches shall be direction-dependent with bi-stable memory. The number of switches required, based on the speed of the car, shall be determined by the manufacturer.

TLS-1 Recommended Use

TLS-1 Terminal Limit Switches are individual hermetically sealed units. Each switch is installed on its own bracket in an adjustable channel mounted to the guide rail. The magnetic actuator is installed on a bracket with an adjustable channel mounted to the cartop. The switches are arranged in a single vertical lane in the hoistway and therefore only one magnetic actuator is required. TLS-1 can be used for traction elevators up to 1600 fpm (8.13 m/s).

Specification Text, TLS-1

The terminal limit switches shall consist of magnetically activated switches and an actuating magnet. The switches shall be mounted to the guide rail and a single magnetic actuator shall be mounted to the cartop. Mounting brackets for the switches and magnetic actuator shall be supplied by the manufacturer. The switches shall have hermetically sealed contacts with tolerance for high temperature and humidity. The switches shall be direction-dependent with bi-stable memory. The number of switches required, based on the speed of the car, shall be determined by the manufacturer.

TLS-2 Recommended Use

TLS-2 Terminal Limit Switches are individually hermetically sealed units. The switches are installed side-by-side on a bracket with adjustable channel mounted to the car top. The magnetic actuators are installed on brackets with an adjustable channel mounted to the guide rail. The number of magnetic actuators is equal to the number of switches, as the switches are not in a single lane. The switches can be mounted on 3 ½" centers. Because of the width of the mounting brackets, the practical maximum for this model is three switches. TLS-1 is typically used in conjunction with other slowdown devices and can be used for traction elevators up to 1600 fpm (8.13 m/s).

Specification Text, TLS-2

The terminal limit switches shall consist of magnetically activated switches and corresponding actuating magnets. The switches shall be mounted to the cartop and the magnetic actuators shall be mounted to the guide rail. Mounting brackets for the switches and magnetic actuators shall be supplied by the manufacturer. The switches shall have hermetically sealed contacts with tolerance for high temperature and high humidity. The switches shall be direction-dependent with bi-stable memory. The number of switches required, based on the speed of the car, shall be determined by the manufacturer.