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Load Weighers

General

A load weigher can be used for gearless or geared elevators to provide signals for various load dispatching operations and for pre-torquing with IMC controllers.

By identifying the load (light, heavy or overload), the system can activate anti-nuisance car call cancellation, loaded car hall call bypass, lobby up peak mode or overload. For dispatching, a load weigher can be used with all MCE controllers

For IMC Performa, IMC-SCR and IMC-MG, the load weigher signal can be used to adjust the amount of torque produced by the motor as the brake lifts to provide smooth starts. Every time the car leaves a floor, a new pre-torque value is computed based on how the car is loaded, ensuring that every start is the smoothest possible.

Depending on project requirements, a consultant or contractor can choose this system for the specific application.

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Isolated Platform

The isolated platform load weigher is recommended for installations with isolated platform elevator cars that require anti-nuisance, lobby dispatching, load bypass and/or overload. Pre-torquing is available for IMC PERFORMA, IMC-SCR and IMC-MG controls.

Specification Text, Isolated Platform Load Weigher

The load weigher shall consist of an inductive proximity switch and an amplifier. The amplifier output shall be connected to the machine room via two conventional wires (special wiring is not required). The output circuit shall be virtually impervious to damage from transients or accidental connection to voltages up to 120 VAC. A controller-mounted input buffer board and software are required in order to process the signal from the load weigh system.

The proximity switch and amplifier shall be mounted either under the car (preferred position), or on top of the car. When mounted under the car, a voltage signal is generated that is inversely proportional to the distance between the bottom of the car floor and the isolated platform frame. When mounted on top of the car, a voltage signal is generated that is proportional to the distance between the crosshead and the top of the cab.

Electrical requirements: Input 120 VAC, single phase 50Hz/60Hz, Output 10mA @ 18VDC.

Crosshead Deflection

A crosshead deflection load weigher is required for installations with non-isolated platform elevator cars.

Specification Text, Crosshead Deflection Load Weigher

The load weigher shall consist of load sensor(s), amplifier(s) and a buffer board. The buffer output shall be connected to the machine room via two conventional wires (special wiring is not required). The output circuit shall be virtually impervious to damage from transients or accidental connection to voltages up to 120 VAC.

The sensor(s) shall be mounted to the crosshead to measure deflection as the elevator is loaded. The voltage signal generated is directly proportional to the deflection of the crosshead. The amplifier(s) and buffer board are mounted on the cartop.

Electrical requirements: Input 120 VAC, single phase 50Hz/60Hz, Output 10mA @ 18VDC.