

Title (en)

"Smart" position transducer system for elevators.

Title (de)

Intelligentes Lagenmesseinrichtungssystem für Aufzüge.

Title (fr)

Système intelligent de transducteur de position pour élévateurs.

Publication

EP 0405999 A2 19910102 (EN)

Application

EP 90307127 A 19900629

Priority

US 37510489 A 19890630

Abstract (en)

An elevator system employing a microprocessor-based group controller communicating with the cars (3, 4) using car position and velocity information provided by a "smart" primary position transducer (SPPT) system to control the motion of the cars and assign them to handle passenger demands. The SPPT includes an input shaft coupled to a primary encoder disk. Coupled to the shaft through gearing are one or more encoder disks performing the function of turns counting, as well as additional functions. Each disk contains multiple tracks, and each of these tracks is sensed by a sensor, or, alternatively, the SPPT may use two independent sensors per track. It is important to have two essentially independent means of performing the key sensing functions. The read heads of the SPPT are divided into primary and secondary sets with each set used to feed an independent processor. Within each set of sensor signals, cross checks are performed to insure the integrity of the system, which would detect a cracked or broken glass disk. In the electronics of the SPPT system primary and secondary position signals are each found by two methods and compared to maximize the likelihood of correct position determination, with one method given priority over the other, depending on the circumstances. Two independent channels for position and velocity information are maintained, using independent parts, except for the input shafts and encoder disks. Exemplary formulae for determining and generating the desired primary and secondary position and velocity information are provided.

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