Claims

1. An elevator system (1) comprising:

an elevator car (10) that can be moved between floors (L1, L2, L3) of a building (2), wherein the elevator car (10) has an elevator door (6) and a door control device (7) for controlling the elevator door (6);

a control device (8, 12) that is communicatively connected to the door control device (7) and designed to evaluate at least one registered destination call that defines a passenger's desired trip from a boarding floor to an exit floor, wherein it is possible for the destination-call evaluation to plan a number of boarding or exiting passengers for each stopping floor (L1, L2, L3) and determine a corresponding door dwell time of the elevator door (6) for each stopping floor (L1, L2, L3) to make it possible for a registered passenger to board or exit on a stopping floor; and

a sensor system (4) that is communicatively connected to the control device (8, 12) and with which a number of passengers exiting the elevator car (10) on a stopping floor and a number of passengers entering the elevator car (10) on the stopping floor can be determined;

wherein the control device (8, 12) is designed in such a way that it causes the elevator door (6) to close regardless of the set door dwell time if the number of passengers boarding and exiting on the stopping floor determined by the sensor system (4) corresponds to the number of boarding and exiting passengers planned for the stopping floor.

2. The elevator system (1) according to claim 1, wherein the elevator door (6) has a safety device (26) for detecting an obstruction in a doorway, wherein the safety device (26) prevents the elevator door (6) from closing if an obstruction is detected.

3. The elevator system (1) according to claim 1 or claim 2, wherein the sensor system (4, 6) comprises a camera system with which the number of boarding and exiting passengers can be determined.

4. The elevator system (1) according to claim 3,

- wherein a camera of the camera system is arranged on each floor (L1, L2, L3),

- wherein a camera of the camera system is arranged on the elevator car (10) or
- wherein a camera of the camera system is arranged on each floor (L1, L2, L3) and on the elevator car (10).

5. The elevator system (1) according to claim 1 or claim 2, wherein the sensor system (4, 6) comprises a system having 3D sensors, with which the number of boarding and exiting passengers can be determined.

6. The elevator system (1) according to claim 5,

- wherein at least one 3D sensor is arranged on each floor (L1, L2, L3),
- wherein at least one 3D sensor is arranged on the elevator car (10) or
- wherein at least one 3D sensor is arranged on each floor (L1, L2, L3) and on the elevator car (10).

7. The elevator system (1) according to any of the preceding claims, also having a load measurement device (24) that is at least partially arranged on the elevator car (10) and is communicatively connected to the control device (8, 12).

8. A method for controlling an elevator door (6) of an elevator car (10) that can be moved between floors (L1, L2, L3) of a building (2), comprising:

evaluating at least one registered destination call that defines a passenger's desired trip from a boarding floor to an exit floor, wherein the destination-call evaluation makes it possible to plan a number of boarding or exiting passengers for each stopping floor (L1, L2, L3);

setting a corresponding door dwell time of the elevator door (6) for each stopping floor (L1, L2, L3) to allow a registered passenger to board or exit on a stopping floor;

determining a number of passengers that exit the elevator car (10) on the stopping floor and a number of passengers that board the elevator car (10) on the stopping floor; and

triggering a closure of the elevator door (6) regardless of the set door dwell time if the determined number of passengers boarding and exiting on the stopping floor corresponds to the number of boarding and exiting passengers planned for the stopping floor.

9. The method according to claim 8, also comprising preventing a closure of the elevator door (6) if an obstruction is detected in the doorway.