Claims

1. An image detection device installed in a board covering an upper part of a doorway of a car, the image detection device comprising:

a camera;

an image analysis module which analyzes an image captured by the camera based on setting of an opening direction of elevator doors and detects a user near the elevator doors; and

a switching module which detects the opening direction of the elevator doors or obtains information related to the opening direction of the elevator doors and switches the setting.

2. The image detection device of claim 1, further comprising a connector for a connection to a car control device which performs control of the car including opening and closing of the door, wherein

the switching module detects the opening direction of the elevator doors based on a state of a signal line drawn out to outside by the connector.

3. The image detection device of claim 2, wherein

a harness in which a jumper is provided based on the opening direction of the doors is connected to the connector.

4. The image detection device of claim 1, wherein

the image analysis module comprises a door opening direction detection module which analyzes temporally-successive images captured at least one of when the doors open or when the doors close and including the doors as subject images, and detects the opening direction of the doors, and

the switching module obtains a result of detection of the

door opening direction detection module as the information related to the opening direction of the elevator doors.

5. The image detection device of claim 4, wherein

the switching module instructs the car control device which performs the control of the car including the opening and closing of the doors to open and close the doors a predetermined number of times, instructs the image analysis module to detect the opening direction of the doors and obtains the result of detection of the door opening direction detection module.

6. The image detection device of claim 4, wherein

the door opening direction detection module detects the opening direction of the doors from a chronological change in luminance of pixels in the temporally-successive images, and

the switching module instructs the car control device which performs the control of the car including the opening and closing of the doors to turn off light in the car and at least one of open or close the doors, instructs the image analysis module to detect the opening direction of the doors and obtains the result of detection of the door opening direction detection module.

7. The image detection device of one of claims 1 to 6, wherein

in the setting, at least two of first setting for center opening in which the doors open from a center portion, second setting for left opening in which the doors open from a left end portion when seen from a hall, and third setting for right opening in which the doors open from a right end portion when seen from the hall can be exclusively and selectively set.

8. The image detection device of one of claims 1 to 7, wherein the camera, the image analysis module and the switching module are mounted in a single housing unit.

9. The image detection device of one of claims 1 to 8, wherein

the image detection device is installed in an area on the board corresponding to a center position of a doorway of the door in a case of center opening in which the doors open from a center portion,

the image detection device is installed in an area on the board corresponding to a side close to a left end from the center position of the doorway of the doors in a case of left opening in which the doors open from a left end portion when seen from the hall, and

the image detection device is installed in an area on the board corresponding to a side close to a right end from the center position of the doorway of the doors in a case of right opening in which the doors open from a right end portion when seen from the hall.