Title (en)

OPENING AND/OR CLOSING CONTROL DEVICE FOR FAST-MOVING DOORS

Publication

EP 0232866 B1 19911009 (DE)

Application

EP 87101639 A 19870206

Priority

DE 3603940 A 19860207

Abstract (en)

[origin: US4853531A] The apparatus is utilized to detect disturbance created in an opening by objects even when the objects do not move so that they cannot be detected by a motion detector. The apparatus includes a transmitter-receiver apparatus provided at the opening comprising a plurality of arrays, each of which comprises a receiver and a plurality of transmitters. Because divergent beams are emitted by the transmitters, which preferably consist of infrared-emitting diodes, the transmitters and the associated receiver can be arranged to define a triangle in space so that the space of the opening can be completely covered by a plurality of transmitter-receiver arrays. By means of a cyclic signal sequence it is ensured that a signal which has been transmitted is checked in the receiver whether it belongs to the correct transmitter. In order to ensure that high-speed folding shutter doors which are being closed or opened will be controlled so that they move into undisturbed areas, the space in which the movement of the high-speed doors is effected must be protected so timely that an impact on an object protruding into the region of the opening will be prevented in time. For this reason an evaluation signal generated by a control circuit is utilized to operate the door drive in time.

IPC 1-7

E05F 15/20

IPC 8 full level

E05F 15/20 (2006.01); E05F 15/43 (2015.01); E05F 15/73 (2015.01)

CPC (source: EP US)

E05F 15/43 (2015.01 - EP US); E05F 15/73 (2015.01 - EP US); E05Y 2900/132 (2013.01 - EP US); E05Y 2900/146 (2013.01 - EP US)

Cited by

SG80575A1; EP2853677A1; EP0709335A1; US5567931A; US11105133B2; USD855438S; USD896616S

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0232866 A2 19870819; EP 0232866 A3 19871216; EP 0232866 B1 19911009; AT E68237 T1 19911015; DE 3603940 A1 19870813; DE 3773499 D1 19911114; US 4853531 A 19890801; YU 16787 A 19891031

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