



Orthos PIL-M02

Exit Lane Breach Control

Concept

The unit provides a controlled-access secure path of travel configured to allow high-volume single-direction pedestrian movement, and to sense, deter, and provide local and remote notification for attempts to enter corridor from the restricted direction. It is often employed at airports for the sake of controlled crossing of all passengers from airside (sterile area) to landside (non-sterile area). The modular system consists of a combination of several fast-moving half- and full-height door sets. The required security level may be achieved by different unit lengths and sensor combinations. The sophisticated sensor systems ensure a high object security with simultaneous regard to pedestrian safety.

Finish

Light alloy profiles Stainless steel for all visible parts.

Construction

Modular system (different lengths, widths, and door combinations)

Sensor-controlled corridor for passage in one direction only, consisting of:

- 1 to 3 full-height doors (double swing doors), safety glass ANSI Z97.1 6 mm; hampering of weapon or tool transfer and of passages into the security area; monitored swing range for safe passage; signaling by LED display, voice module (optional), low-energy drive concept.
- up to 2 half-height swing doors (fast-moving low-energy barriers creating an additional obstacle in case of a security breach attempt); opening and closing sensor system incorporated in the corridor, swing range monitoring by light curtain at foot level; PETG barrier elements.
- transparent glass sidewalls; 10mm glass ANSI Z97.1 in unit

dormakaba Deutschland GmbH

DORMA Platz 1
58256 Ennepetal
T +49 2333 793-0
info.de@dormakaba.com
www.dormakaba.com

dormakaba Austria GmbH

Ulrich-Bremi-Strasse 2
A-3130 Herzogenburg
T +43 2782 808-0
office.at@dormakaba.com
www.dormakaba.at

dormakaba Schweiz AG

Lerchentalstrasse 2a
9016 St. Gallen
T +41 848 85 86 87
info.ch@dormakaba.com
www.dormakaba.ch

height, fixed in floor rail (bottom) and cable duct (top); boundary plates at foot level protecting against bumping baggage, strollers etc.; end-to-end integration of light curtains.

- modular sensor system (pedestrian safety, detection of attempted security breaches, detection of objects left within the corridor) available in different performance levels;
- thrown objects 100x100x100mm/10m/s (optional)

Possible corridor combinations

- multiple units (parallel corridors for increased passenger flow).
- angled units (meeting architectural requirements)
- different lengths and widths (meeting architectural and security requirements).

Dimensions

Standard (2 full-height doors, 1 half-height door)

Passage width: 920mm Passage height: 2,100mm Total height: ca. 2,500mm

Total length

Other possible dimensions: Passage width: 650, 920, 1,100, or 1,400mm Total length: 3,091 – 9,129mm depending on door configuration

Capacity/Pedestrian flow

60 people per minute are possible when walking 1 m/s (3.6 km/h) in a distance of 1m from each other. Higher capacities are technically feasible, especially for wider corridor lanes.

Functions

Basic process: pedestrian approaches door → door opens → door remains open if further passengers approach the system. All the while, system monitors wrong-way movements. In case of a breach attempt, the system alarms and tries to close doors while respecting pedestrian safety.

The sensor system may be adjusted with specific regard either to personal safety or to object security.

Power failure

All full-height doors are closed by buffer power. Airside doors are closed and locked. All landside doors remain unlocked. All half-height doors are freely movable. Pedestrians may leave the corridor towards landside; thus security is never compromised.

Return of power

Complete unit is initialized automatically. Set operation mode is resumed.

Pedestrian safety

Areas of door movement are monitored by sensors, thus preventing people from being pinched or knocked down. Limited rotational energy due to low energy drives.

Object security

See chapter "Sensor System". Project-specific security levels may be achieved by different sensor levels, corridor dimensions, and door combinations.

Sensor systems

- radar sensors as standard for wrong way detection
- optional high performance stereo sensors for wrong way detection, increased detection reliability and decreased false alarm rates
- direction sensing for objects thrown into the corridor (optional)
- presence detection/left objects 50x50x50mm

Electric system

Power supply
100 – 240 VAC, 50 – 60 Hz, power supply rated at 600 VA
Power consumption
Standard unit: 162W during idle
Variants with 2 full-height doors and 1 half-height door: 210W during idle

Controls integrated in side walls.

Operating modes

normal flow, blocked, cleaning, interlock maintenance.

Alarmschemes

Full alarm in case of further breach attempt. Thrown objects (optional). Left objects.

Parameter settings

Runtime monitoring of sensors and drives, acoustic alarm duration, alarm reset (time-driven, manually, automatic), initialization time.

Installation

On finished floor level

Options

Operating panel, optionally with key switch. Remote operation via dry contacts.
Pre-alarm (suppressed first alarm). Stereo sensor.

LED lighting (4W power rating per LED).

Voice module.

Mesh ceiling to prevent objects from being thrown over the top and into the corridor.

Advantages

- detection of thrown objects (optional)
- minimal energy consumption (drive units and LED lighting)
- high degree of modularity
- no top access needed: controls integrated in side wall
- sensors independent of ambient light conditions
- open ceiling (easy integration into sprinkler and smoke detection systems)