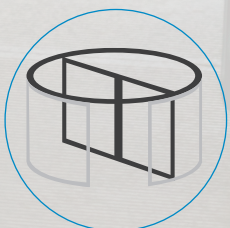




PUBLIC TRANSPORTATION SOLUTIONS

PEDESTRIAN SENSING SOLUTIONS



INDUSTRIAL AUTOMATION SOLUTIONS



PUBLIC TRANSPORTATION SOLUTIONS



VEHICLE SENSING SOLUTIONS



PEOPLE COUNTING SOLUTIONS








A HALMA COMPANY



Sensor solutions for transportation

BEA has a range of sensors that can be used in railways, PSD doors, and other transportation applications.

◀ Sensor series

	LZR® -U920/U921	Universal raw data laser scanner used in profile analysis, rolling stock and people detection.	2
	LZR® -T305	Premium sensor to secure the zone between platform screen door and the train door.	3
	LZR® -FLATSCAN RS305	Flat and compact sensor to secure the zone between platform screen door and the train door.	4
	LZR® -S25	Long distance laser scanner used in perimeter protection /intrusion detection.	5
	RS-15	Sensor with safety and opening functions for internal train doors.	6

LZR[®]-U920/U921



LZR[®]- U920 is an universal laser scanner that provides 3D measurement with 4 planes for profiling or position measurement for different applications.

◀ Features

- Up to 4 planes provide 3D scanning.
- Measurement range up to 65 m maximum.
- Background or substrate has almost no effect on measurement.
- 274 spots for each plane provides high resolution.
- Integration of heating system with an IP65 water proof level, suitable for outdoor environments.
- Standard RS485 communication.

◀ Installation

- Visible spots help installation.

◀ Application

- Profile detection / Profile analysis / Traffic status monitoring.
- Object measurement.
- Position measurement.
- LZR[®]- U921: 1 plane for detection or measurement.



Body profile analysis



Platform screen door application

◀ Technical specifications

Technology	Time-of-flight
Angle	96°
Detection range	Max. 65 m 10 m@ 2% remission factor, 30 m@ 10% remission factor
Remission factor	> 2%
Supply voltage	10 V to 35 V DC
Dimensions	125 mm (L) × 93 mm (D) × 76 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65
Vibrations	< 2 G

◀ Accessories

This product has no accessories.

LZR[®]-T305



EN62061 SIL2



The LZR[®]-T305 is a premium laser scanner providing accurate 3D detection to secure the area between platform screen doors and the train doors.

Features

- Detection range of 5.0 m × 5.0 m with 2 detection areas can be specified.
- 4 planes can be activated or deactivated independently.
- In accordance with EN62061 SIL2.
- Detection reliability can be improved by adjusting the size and activation duration time.
- Time of flight technology combined with a dedicated software guarantees a high immunity to environment disturbances.
- Integration of heating system with an IP65 water proof level, suitable for outdoor environments.

Installation

- Easy to adjust the installation angle in both directions.
- Visible spots help to confirm the curtain position.
- Easy to adjust the parameters with a remote control.
- Self-learning of environment and surroundings with teach-in.

Application

- PSD safety in the subway, high speed railway or any application which requires “virtual curtain” for a given detection area.

Technical specifications

Technology	Time-of-flight
Detection mode	Motion & Presence
Mounting angles on bracket	-45°, 0°, 45°
Max. detection range	5 m x 5 m
Remission factor	> 2 %
Supply voltage	10 V to 35 V DC @ sensor side
Power consumption	< 5 W
Dimensions	125 mm (L) × 93 mm (D) × 70 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65
Vibrations	< 2 G



Platform screen door application



Platform screen door application

Accessories



Remote control



LBA

LZR[®]-FLATSCAN RS305



The LZR[®] - FLATSCAN RS305 is a flat and compact laser scanner to secure the narrow gap between the platform screen doors and train doors.

◀ Features

- Detection range: up to 5 m × 5 m.
- Very flat and compact design for complicated PSD installation environment.
- IP66 water proof level make it possible to install in a harsh environment.
- Metal housing and industrial connector design for crucial installation in subway or railway.
- Detection reliability can be improved by adjusting the size and activation duration time.
- Suitable for narrow width between train and platform screen doors.

◀ Installation

- One-single unit ease the installation compare with light curtain.
- Visible spots help to position the curtain.
- Easy to adjust the parameters with remote control.
- Self-learning of environment and surroundings with teach-in.

◀ Application

- PSD safety in the subway, high speed railway or any application which requires “virtual curtain” for a given detection area.

◀ Technical specifications

Technology	Time-of-flight
Detection mode	Safety
Tilt angles on bracket	± 2.5 °
Remission factor	> 2 %
Supply voltage	12 V to 24 V DC±15%
Power consumption	< 2 W
Dimensions	124 mm (L) × 50 mm (D) × 90 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP66
Vibrations	< 2 G



Platform screen door application



Platform screen door application

◀ Accessories



Remote control



LBA

LZR[®]-S25



The LZR[®]-S25 is a long-distance laser scanner used to prevent any intrusion into a railway or a well-defined perimeter.

◀ Features

- Maximum detection range: 25 m × 25 m.
- 4 planes cover a flexible 3D detection area in height, width and depth with independent activation or deactivation for each curtain.
- High immunity to environmental interference due to time of flight with dedicated software.
- Integration of heating system with an IP65 water proof level, suitable for outdoor environments.
- Compact, light and competitive for new and retrofit installation.

◀ Installation

- Easy to adjust the installation angle in both directions.
- Visible spot help to confirm the curtain position.
- Easy to adjust the parameter with a remote control.
- Self-learning of environment and surroundings with teach-in.

◀ Application

- Perimeter protection.
- Intrusion detection and alarm.

◀ Technical specifications

Technology	Time-of-flight
Detection mode	Presence
Detection area	25 m x 25 m max
Mounting angles on bracket	-45°, 0°, 45°
Remission factor	> 2 %
Supply voltage	10 V to 35 V DC @ sensor side
Power consumption	< 5 W
Dimensions	125 mm (L) × 93 mm (D) × 70 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65



Perimeter protection



Border protection

◀ Accessories



Remote control



LBA

RS-15



DIN 5510



RS-15 is designed to open doors when needed and keep them open in case of presence in the threshold for the passengers' comfort and safety.

◀ Features

- Active IR technology, background analysis sensor producing 3 lines of 5 spots. Typical dimension: detection area 1.2 m × 1 m @ mounting height of 2.2 m.
- Based on the 15 available spots, 9 different shapes of detection areas are available as presettings.
- As each of the 15 spots can be individually switched on in either motion or presence detection or switched off, any combination out of more than 14 million choices can be supplied on request.
- Compliant with railway norms.
- Conceived for every train design with a focus on aesthetics.

◀ Installation

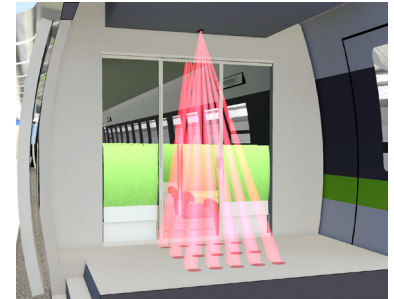
- Compact housing.
- Tilt angle accessible even when sensor is recessed.
- Configurable parameters adjustable with a remote control.

◀ Application

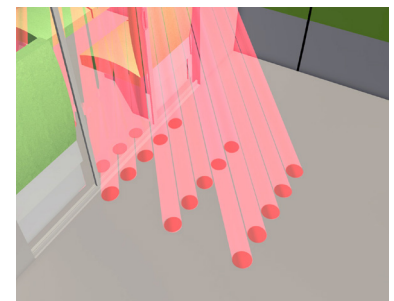
- Internal railway doors: motion detection and/or presence detection in the door threshold.
- 9 presettings available to cover different types of platforms, entrance areas, aisles, etc.
- Convenient solution for retrofit projects.

◀ Technical specifications

Technology	Active infrared with background analysis
Detection mode	Motion and presence
Tilt angles	0° to 20° (each step = 5°)
Detection area	Max. 1 m (W) x 1.2 m (D)
Supply voltage	12 V to 30 V AC ±10%
Power consumption	< 3 W
Dimensions	140 mm (L) × 38 mm (W) × 55 mm (D)
Degree of protection	IP41
Mounting	Designed to be flush-mounted



Entrance area



Matrix of 3 × 5 spots

◀ Accessories



Remote control



Spotfinder

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