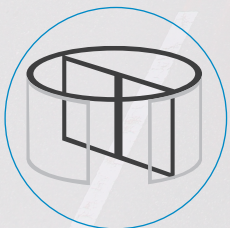




VEHICLE SENSING SOLUTIONS

PEDESTRIAN SENSING SOLUTIONS



INDUSTRIAL AUTOMATION SOLUTIONS



PUBLIC TRANSPORTATION SOLUTIONS



VEHICLE SENSING SOLUTIONS



PEOPLE COUNTING SOLUTIONS



A HALMA COMPANY

BEA IN BRIEF

BEA, founded in Belgium in 1965, has now over 400 employees around the globe. A pioneer in the sensor industry, BEA was one of the first companies to launch a Doppler microwave radar specially adapted for automatic doors.

Based in Beijing, the APAC regional head office covers all the Asian countries. This regional center gathers skilled and passionate people from different cultures, different backgrounds and experiences. They speak different languages and are working together as a team to support our customers in the best conditions.

Our goal is to partner with our customers in order to add value and innovation to their solutions, raise the safety awareness on the market and bring satisfaction to BEA users.

A HALMA COMPANY

Since 2002, BEA has been a member of the British HALMA Group, which includes 50 companies around the world designing, producing and marketing products for the safety of public and industrial automatic installations.












Sensor solutions for vehicle sensing

BEA Provides dedicated solutions for parking, toll gates and intelligent traffic solutions.

◀ Sensor series

	MATRIX	Induction loop controller detecting the presence of vehicles and metallic objects.	2
	CONDOR J	Combined sensor used to replace loop detector and count vehicles.	3
	REMOTE CONTROL	Remote control for garage doors, gates, barriers and brake machine.	4
	LZR®-I100	Laser scanner for barriers and gates.	5
	LZR®-H100	Laser scanner for barriers and gates, as a loop detector replacement.	6
	LZR®-MICROSCAN U920	Laser scanner suitable for the profile / detection analysis.	7
	LZR®-U920/U921	Laser scanner used in profile analysis and object measurement.	8

MATRIX



MATRIX is an induction loop controller detecting the presence of vehicles and metallic objects.

◀ Features

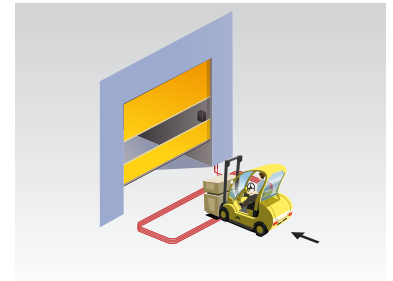
- 4 frequency adjustments to avoid all interferences.
- Possibility to define the motion direction on 2-channel loop controllers.
- ASB function used to make the loop sensitive to raised floor vehicles, trail tillers or fork-lifts.
- Accurate detection parameter adjustment with a guarantee of stability in the long term.

◀ Installation

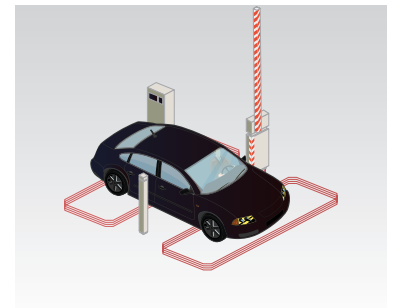
- One or two-channel versions supplied with 12-24, 220 Volts.
- Thanks to standard connectors, the MATRIX can be embedded into most control boxes.

◀ Application

- Parking barriers, toll gates, traffic, sliding gates.



Parking barrier applications



Parking barrier applications

◀ Technical specifications

Technology	Inductive loop
Detection mode	Presence
Presence time	1 minute to infinity
Learning time	Max. 8 s per channel
Supply voltage	MATRIX S&D 12-24: 12 V - 24 V AC/DC $\pm 10\%$ MATRIX S&D 220: 220 V - 240 V AC $\pm 10\%$
Power consumption	< 2.5 W
Dimensions	77 mm (W) x 40 mm (H) x 75 mm (D)
Optional temperature	-30°C to +40°C
Degree of protection	IP40

◀ Accessories



Matrix Socket

CONDOR J



CONDOR J has a microwave motion detector and an active infrared presence sensor built in the same housing. This sensor is used for vehicle parking and counting applications.

◀ Features

- Microwave technology to detect vehicle as a replacement of loop detectors.
- Infrared technology to detect vehicle for optimum safety.
- Suitable for vehicle counting application.
- Combined sensor for vehicle detector, safety & counting.

◀ Installation

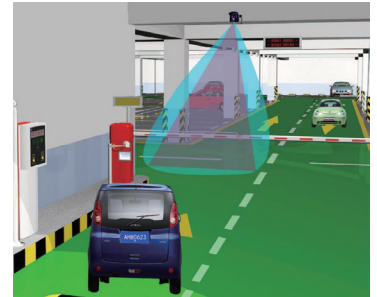
- Easy to install without destroying the ground.
- Simple and fast installation without interrupting current traffic, saving time and cost.
- Outdoor applications: IP65 protection.
- Easy to adjust the install angle with the adjustable bracket.
- Mounting height from 2.5m to 3.5m.
- Additional parameters can be adjusted by remote control.

◀ Application

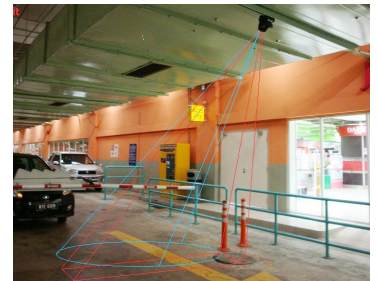
- Car park zone counting: for small and medium car parking.
- Alternative sensors to loop detector.
- Pedestrian warning at car park entrance/exit.
- Traffic detection & counting.

◀ Technical specifications

Technology	Microwave and infrared
Detection mode	Motion and presence
Supply voltage	12 V to 24 V AC/DC ± 10 %
Power consumption	< 3.5 W
Dimensions	127 mm (L) x 102 mm (H) x 96 mm (D)
Temperature range	-30°C to +60°C
Degree of protection	IP65
Mounting height	2.5 m to 3.5 m



Vehicle sensing applications



Entrance / exit loop replacement

◀ Accessories



Remote control



Spotfinder

Remote control



Remote control is a handy and practical solution to open gates, barriers, blake machine manually.

◀ Features

- Robust, industrial environment suitable design.
- Control distance is up to 100 m in open space.
- Operates with a unique rolling code each time the switch is activated.
- Multiple applications (i.e. Vestibule) with delay or no delay programming.
- 100 transmitters can be programmed into a single receiver; A transmitter code can be removed.
- 4 relays can be programmed flexibly.
- 4 transmitter-versions available (1, 2, 3 or 4 buttons).
- Red LED indicator on transmitter confirms transmission and battery life.
- Extended antenna available.

◀ Installation

- The BEA 433MHz receiver can be easily installed with the door / gate operator / barriers.

◀ Application

- Ideal solution for residential / commercial car park barriers / gates activation.

◀ Technical specifications

Frequency	433 MHz
Emitted Radio Power	≤ 7 dBm (Transmitter)
Current Consumption	32 mA (Transmitter) 40 mA (Receiver)
Contact range	1.0 A @ 30 VDC
Power supply	3 V DC(CR 2032 3V battery*2) 50,000 cycles (Transmitter) 9 V to 30 V DC/AC (Receiver)
Max No. of programmed units per receiver	100 Transmitters
Operating temperature	-30°C to +70°C
Modulation	GFSK



IDRC 433 K1



IDRC 433 K2



IDRC 433 K3



IDRC 433 K4



IDC 433



IDC 433+



IDATN

LZR[®]-I100



LZR[®]-I100 works on the principle of time of flight. This high precision technology ensures optimal safety. A dynamic orientation of the LASER beams on 4 planes offers more safety in the barriers /gates threshold and its proximity.

◀ Features

- Programmable object size and dimensions of detection field.
- Convenient alternative to light grids and infrared solutions.
- LZR[®]-I100 produces 4 planes to cover a given area in height, width and depth, offering a very high accuracy able to detect small parts of vehicle (long trailer).
- Time of flight technology combined with a dedicated software guarantees an high immunity to environmental disturbances: sunlight, rain, snow, dust, etc.

◀ Installation

- Aesthetical solutions improving the toll gate design.
- Remote control to easily set the adjustable parameters.
- Easy, cost effective and fast installation on site compared to current light curtain solutions.
- Teach-in function, 3 visible laser beams, self-learning of the environment and background with automatic adjustment of the detection planes.

◀ Application

- Laser scanner for vehicles detection and safety.
- Ideal solution for tail-gating applications (vehicles separations).
- The installation of two lasers next to each other provides unidirectional counting.

◀ Technical specifications

Technology	Time-of-flight
Detection mode	Presence
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



Safety for barriers



Vehicles detection

◀ Accessories



Remote control



LBA

LZR[®]-H100



LZR[®]-H100 offers a real alternative to induction loops: time gain during installation detection of all types of vehicles and greater adaptability. This laser sensor for rising barriers and gates is used to open, secure and/or detect a presence.

◀ Features

- Opening, maintenance of presence and/or safety.
- Installation of the product without any impact on the surrounding ground.
- Unrestricted and easy definition of the detection fields independently of one another (walking teach-in).
- Possible to detect the vehicle's trajectory as it is approaching or moving away.
- Screens pedestrians in the opening area.

◀ Installation

- Horizontal installation.
- Easy to adjust the installation angle in both directions.
- Easy to adjust the parameters with a remote control.
- Positioning of the detection fields facilitated by means of 3 visible infrared points.
- Easy to set the reference spot for area teach-in.

◀ Application

- Opening, presence and/or safety detection for rising barriers / sliding gates.



Screens pedestrians in the opening area



Parking barrier applications

◀ Technical specifications

Technology	Time-of-flight
Detection mode	Motion and presence
Max. detection range	9.9 m x 9.9 m
Cable length	5 m (standard), max.10 m
Supply voltage	10 V to 35 V DC @sensor side
Power consumption	< 5 W
Dimensions	125 mm (L) x 93 mm (D) x 70 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65

◀ Accessories



Remote control



LBA

LZR[®]-MICROSCAN U920



LZR[®]-MICROSCAN U920 is an economical laser measurement device with bidirectional bus communication.

◀ Features

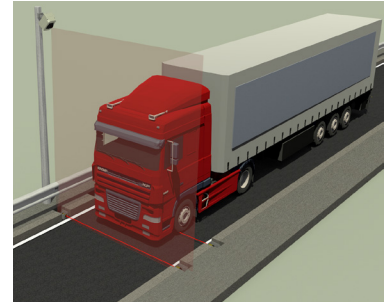
- 100 ° emission angle, 4 layer scanning plane for three-dimensional scanning.
- ToF (time of flight) technology.
- Max.detection range of 10 m (3 m@ 5% reflectivity).
- Low power consumption (< 4 w).

◀ Installation

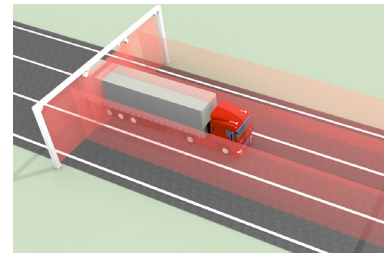
- Output the measurement data with RS422 full-duplex communication.
- Compact, flexible and easy installation.
- Easy to reset the sensor by reset button.

◀ Application

- Applied in profile /detection analysis, such as traffic statistics model analysis and AGV.



Profile analysis



Profile analysis

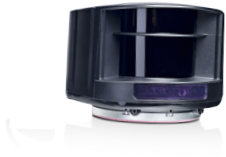
◀ Technical specifications

Technology	Time-of-flight
Detection range	Max.10 m
Supply voltage	12 V to 24 V AC/DC ±10%
Power consumption	< 4 W
Cable length	3 m
Dimensions	118 mm (W) x 80 mm (H) x 54 mm (D)
Temperature range	-25°C to +55°C
Protect degree	IP54
Housing color	Black

◀ Accessories

This product has no accessories.

LZR[®]-U920/U921



LZR[®]-U920/U921 is a raw data laser-based measurement device measuring distances on up to 4 planes. This sensor is widely used for vehicle profiling and classification.

◀ Features

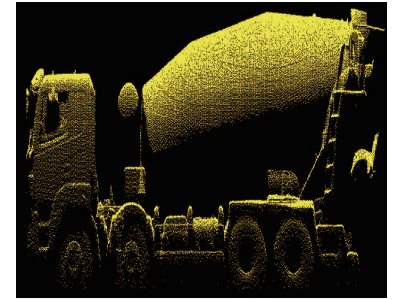
- Integrate to users' system flexibly to support specific applications.
- Background or substrate has almost no effect on measurements.
- Standard platform product, easily to be programmed by users.
- Standard RS485 bus communication(half-duplex).
- No external illumination of target object necessary compared to camera system.
- IP65 housing for harsh outdoor environments.

◀ Installation

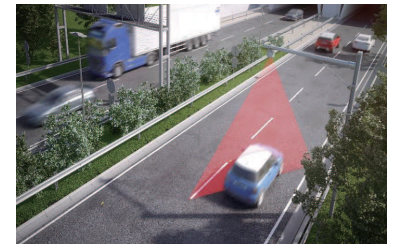
- Visible laser spots to make easier alignment.

◀ Application

- Profile detection/profile analysis.
- Object measurement.
- Position measurement.



Vehicle classification



Car profiling

◀ Technical specifications

Technology	Time-of-flight
Angle	96°
Detection range	Max.65 m 10 m@remission factor 2%
Remission factor	> 2 %
Supply voltage	10 V to 35 V DC
Power consumption	< 5 W
Dimensions	125 mm (L) × 93 mm (D) × 77.3 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65

◀ Accessories

This product has no accessories.

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