VEHICLE SENSING SOLUTIONS

TECHNOLOGIES

LASER technology works according to the principle of Time-of-Flight. The sensor sends an intense light impulse in a defined direction and measures the time until the signal returns. As the speed of light is a constant value (approximately 300,000 km/s), this time is directly proportional to the distance between the sensor and the first object encountered by the light impulse.

As a result, and by sending multiple beams in multiple directions (2D or 3D), the sensor is capable of knowing the exact position of any object in its detection area at any given time.

ACTIVE INFRARED with background analysis technology works with a background (e.g. a sensor shines infrared light on the floor). In this case, the sensor lights up one or more areas and analyzes the energy that returns. Detection is triggered if there is any significant difference when compared to the original picture.

ACTIVE INFRARED with background suppression technology works on the principle of "triangulation", in which the sensor calculates the distance between the emitter and receiver. The emission angle is already known and the reflection angle becomes the key element as the distance to the object can be calculated according to the position of the reflected spot on the receiver side (a triangle can be drawn when you know one distance and two angles)

PASSIVE INFRARED technology measures the infrared light radiating from objects in its field of view. Motion or presence is detected when an infrared source with one temperature, such as a human being, passes in front of an infrared source with another temperature, such as the normal environment.

RADAR technology, also known as microwave technology, is based on the Doppler Effect: the radar sensor continuously emits microwaves with a certain frequency in a defined area. These microwaves are reflected back to the sensor by all of the objects present in its environment.

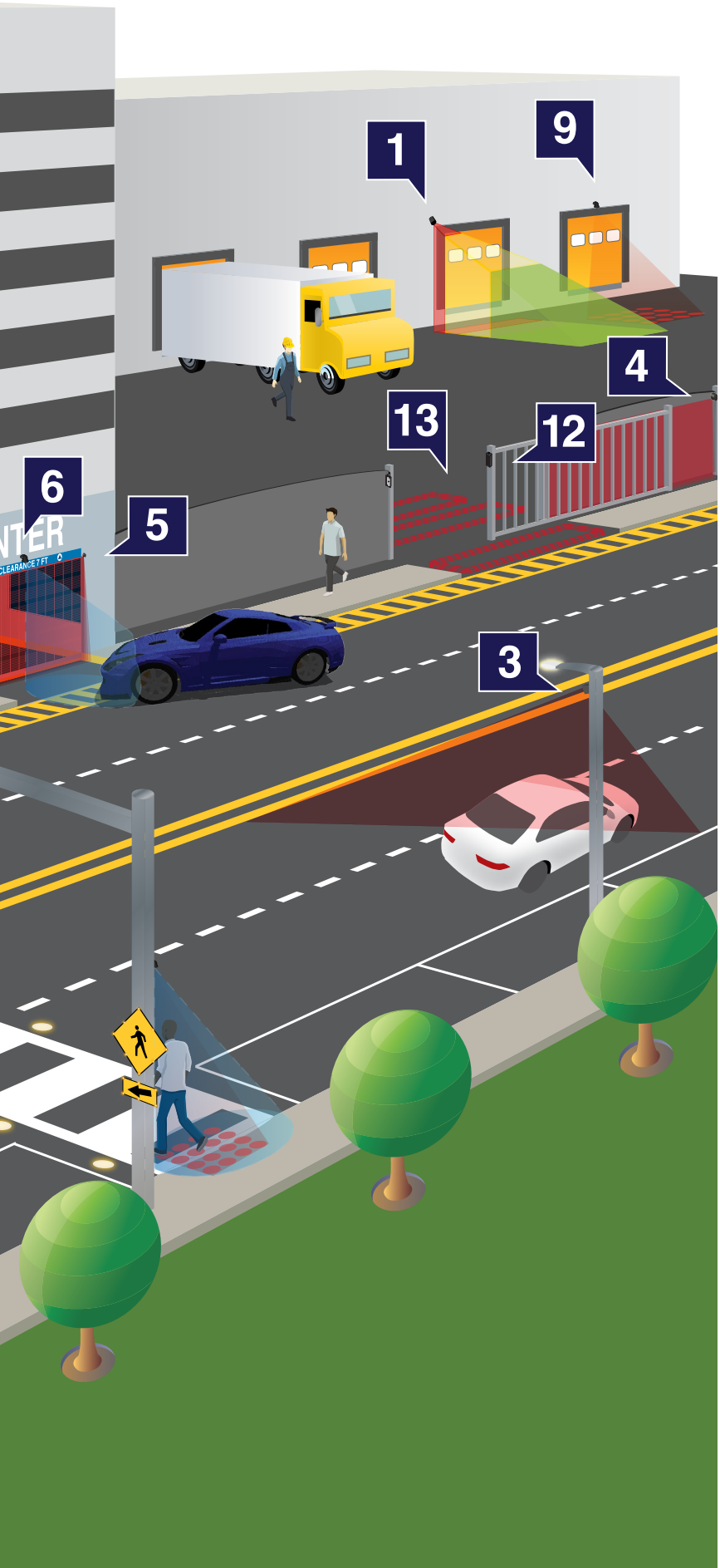
PIEZO technology, also known as piezoelectric, is the process of converting mechanical pressure (pushing a button) into electrical energy. A piezo switch is paired with a field effect transistor (FET) that, when pushed, allows current to flow through the FET.

CAPACITIVE technology detects close-range electrically charged objects. A small voltage is applied to a conductive surface, resulting in a uniform electrostatic detection field. When a conductor, such as the human hand, enters this field, detection occurs.

RADIO CONTROL FREQUENCY wireless technology uses transmitters and receivers operating on specific radio frequencies. The transmitter applies a radio frequency alternating current to an antenna, which then radiates radio waves. The receiver receives the transmitted frequency and converts the information into a usable form.

VIDEO technology uses optics and light to create pictures and videos. Enhanced definition cameras capture door environment and traffic usage in full color and high quality. Cameras are used within sensors to increase security and decrease liability.

LEVEL C
PARKING
EXIT
DO NOT ENTER
7
11
10
2
8



1 **LZR®-WIDESCAN**
MOTION, PRESENCE & SAFETY SENSOR FOR INDUSTRIAL DOORS

2 **LZR®-H100**
LASER SCANNER FOR VEHICLE DETECTION

3 **LZR®-U920 / U921**
COMPACT RAW DATA LASER SCANNER

4 **LZR®-S600**
LASER SCANNER FOR BUILDING AUTOMATION & SECURITY

5 **LZR®-I30**
LASER SCANNER FOR INDUSTRIAL AUTOMATION

6 **FALCON FAMILY**
MOTION SENSOR WITH CROSS-TRAFFIC & PEDESTRIAN REJECTION

7 **SPARROW**
HIGHLY FLEXIBLE MOTION SENSOR

8 **COLIBRI**
OFF-DOOR UNIDIRECTIONAL MOTION SENSOR

9 **IS40P**
PRESENCE SENSOR IDEAL FOR VEHICLE DETECTION

10 **SUPERSCAN-T**
PRESENCE SENSOR FOR BARRIER GATE APPLICATIONS

11 **IS40 / XL**
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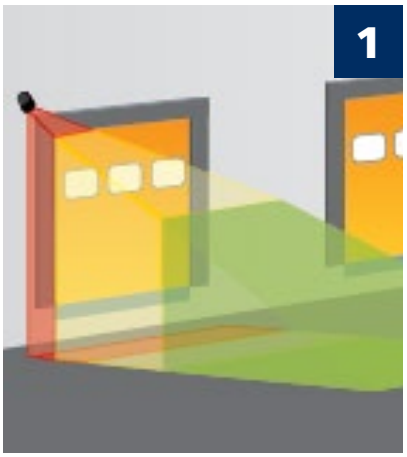
12 **GATELOCKS**
WEATHER-RESISTANT ELECTROMAGNETIC LOCKS

13 **MATRIX FAMILY**
UL LISTED SINGLE & DUAL LOOP DETECTORS

LASER BASED TIME-OF-FLIGHT



LZR®-WIDESCAN

MOTION, PRESENCE & SAFETY SENSOR FOR INDUSTRIAL DOORS

- Premier activation and safety sensor for commercial doors and gates
- Promotes energy savings by reducing false detections / unnecessary door cycling, helping to regulate HVAC
- Virtual pull-cord function can differentiate between pedestrian and vehicle traffic and can provide pulse-on-stop activation
- Ideal for replacing costly / labor-intensive induction loop and pull-cord solutions
- Two visible LASER alignment spots ensure accurate pattern placement

LZR®-H100

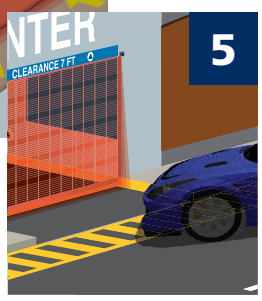
LASER SCANNER FOR VEHICLE DETECTION

- Ideal for applications where cutting ground for loops is prohibited, impossible or expensive
- Ability to detect vehicle trajectory during approach and departure
- Two relays allow for activation via motion or presence
- Maximum detection field of 32 × 32 feet
- Functions independent of the ground / surface environment
- NEMA 4 rated enclosure ideal for harsh environments

LZR®-U920 / U921

COMPACT RAW DATA LASER SCANNER

- Time-of-Flight technology ensures accurate object detection within a three dimensional zone
- Measurement range of up to 213 feet
- Has the ability to ignore dynamic ground conditions
- Ideal for vehicle classification when paired with a data management system
- NEMA 4 rated enclosure ideal for harsh environments



LZR®-S600

LASER SCANNER FOR BUILDING AUTOMATION & SECURITY

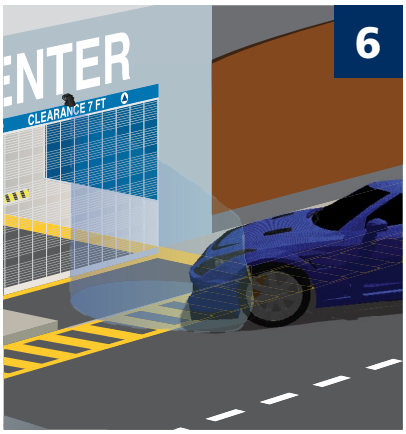
- Four curtains of detection capable of 82 × 82 feet
- Ideal for perimeter protection applications requiring a large detection field

LZR®-I30

LASER SCANNER FOR INDUSTRIAL AUTOMATION

- Four curtains of detection capable of 30 × 30 feet
- Has the ability to ignore dynamic ground conditions and extreme weather

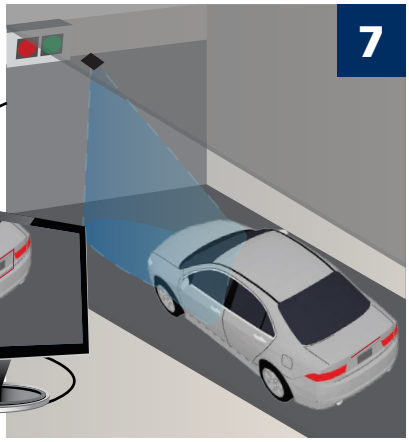
MICROWAVE ACTIVATION



FALCON FAMILY

MOTION SENSORS WITH CROSS-TRAFFIC & PEDESTRIAN REJECTION

- Adjustable detection zones of 20 × 30 feet
- Mounting height from 6½ to 23 feet
- Unique rejection settings allow the user to configure the sensor based on application needs
- NEMA 4 rated enclosure for harsh environments



SPARROW

HIGHLY FLEXIBLE MOTION SENSOR

- Adjustable detection zones of 20 × 30 feet
- Mounting height from 6½ to 20 feet
- Microwave antenna can be rotated 180 degrees to create different sensing fields
- Can be used in license plate recognition systems or other off-door applications
- IP64 rated enclosure for harsh environments

COLIBRI

OFF-DOOR UNIDIRECTIONAL MOTION SENSOR

- Ideal for motion detection in off-door applications
- Can detect traffic moving as slow as two inches per second
- Unidirectional microwave detection capability can decrease energy costs
- Mounting height from six to 10 feet

ACCESSORIES

MS08

- Touchless design reduces the spread of germs and bacteria
- Offers a detection range of four to 24 inches

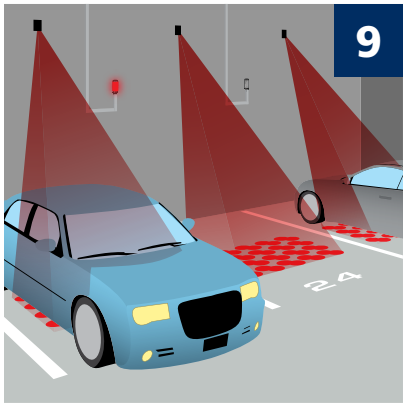
MS09

- NEMA 4 rated enclosure ideal for harsh environments
- Offers a detection range of four to 24 inches

MS11

- Stainless steel faceplate with illuminated center
- NEMA 4 rated enclosure
- Offers a detection range of two to 24 inches

INFRARED



IS40P

PRESENCE SENSOR IDEAL FOR VEHICLE DETECTION

- Mounting height from eight to 16 feet
- Utilizes 40 active infrared spots for presence detection
- Nine infrared patterns for customized configurations
- NEMA 4 rated enclosure for harsh environments

SUPERSCAN-T INDUSTRIAL

PRESENCE SENSOR FOR BARRIER GATE APPLICATIONS

- Detection zone of two to 96 inches
- Can be mounted horizontally or vertically providing versatility
- Can be used as an individual module or daisy chained with up to eight slave modules
- Housing available up to 48 inches in length; can be field cut to desired length
- Capable of external monitoring

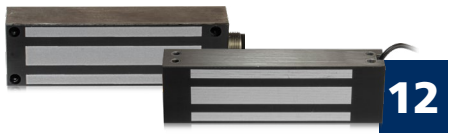
DUAL TECHNOLOGY

IS40 / XL

MOTION & PRESENCE DETECTION FOR PEDESTRIAN & VEHICLE APPLICATIONS

- Combines overhead motion detection with 40 spots of infrared presence detection
- Six modes of detection filtering for microwave immunity, including pedestrian and cross traffic rejection
- Nine unique infrared patterns capable of highly flexible presence detection
- NEMA 4 rated enclosure for harsh environments

ACCESSORIES

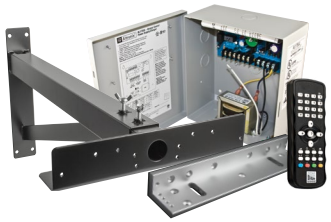


GATELOCKS

- UL Listed with holding force of 1200 lbs for both swing and slide gate applications
- Built-in remote lock status sensor with an output relay

ACCESS CONTROL

- Versatile, IP66 rated UNIVERSAL KEYPAD
- KEYSWITCHES available in momentary, maintained and combo-plate configurations



INSTALLATION ACCESSORIES

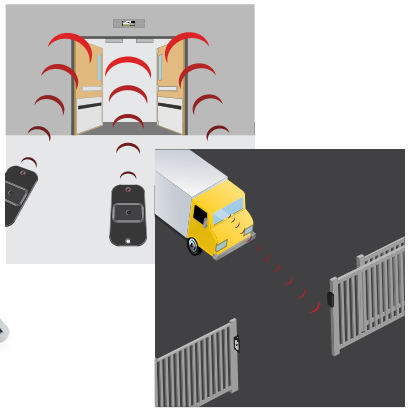
- UL Listed power supplies
- L & Z brackets
- Industrial extension brackets
- BEA UNIVERSAL REMOTE CONTROL

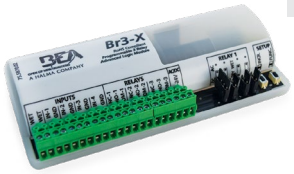
MODULES

MATRIX FAMILY

UL LISTED SINGLE & DUAL LOOP DETECTORS

- Available in operating powers of 110 to 120 VAC and 12 to 24 VAC / VDC
- Features failsafe open and failsafe closed
- Settings are adjusted via two easy-to-use potentiometers
- Pulse-on-entry and pulse-on-exit presence detection





BR2-900

2-RELAY LOGIC MODULE + 900 MHZ

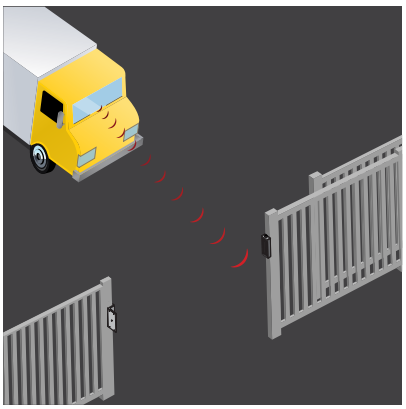
- 2-relay logic module with built-in 900 MHZ wireless technology and day / night mode functionality

BR3-X

PROGRAMMABLE 3-RELAY LOGIC MODULE

- 13 function universal module for a variety of application needs, such as time delay, 3-relay sequencing and more

RADIO CONTROLS

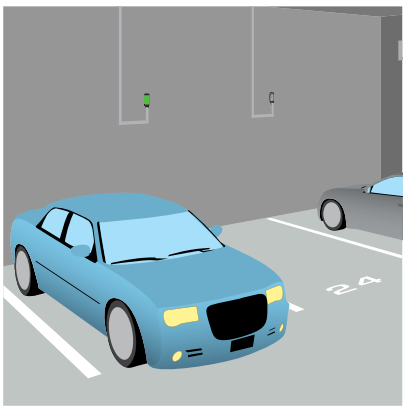


900 MHZ SERIES

LONG RANGE, 900 MHZ WIRELESS TRANSMITTERS & RECEIVER

- Most compact push-button transmitter and receiver on the market
- Handheld transmitters available in standard 1, 2, 3 and 4 button models
- NEMA 4 rated handheld transmitters available
- Connects up to 500 feet (open-air transmission)

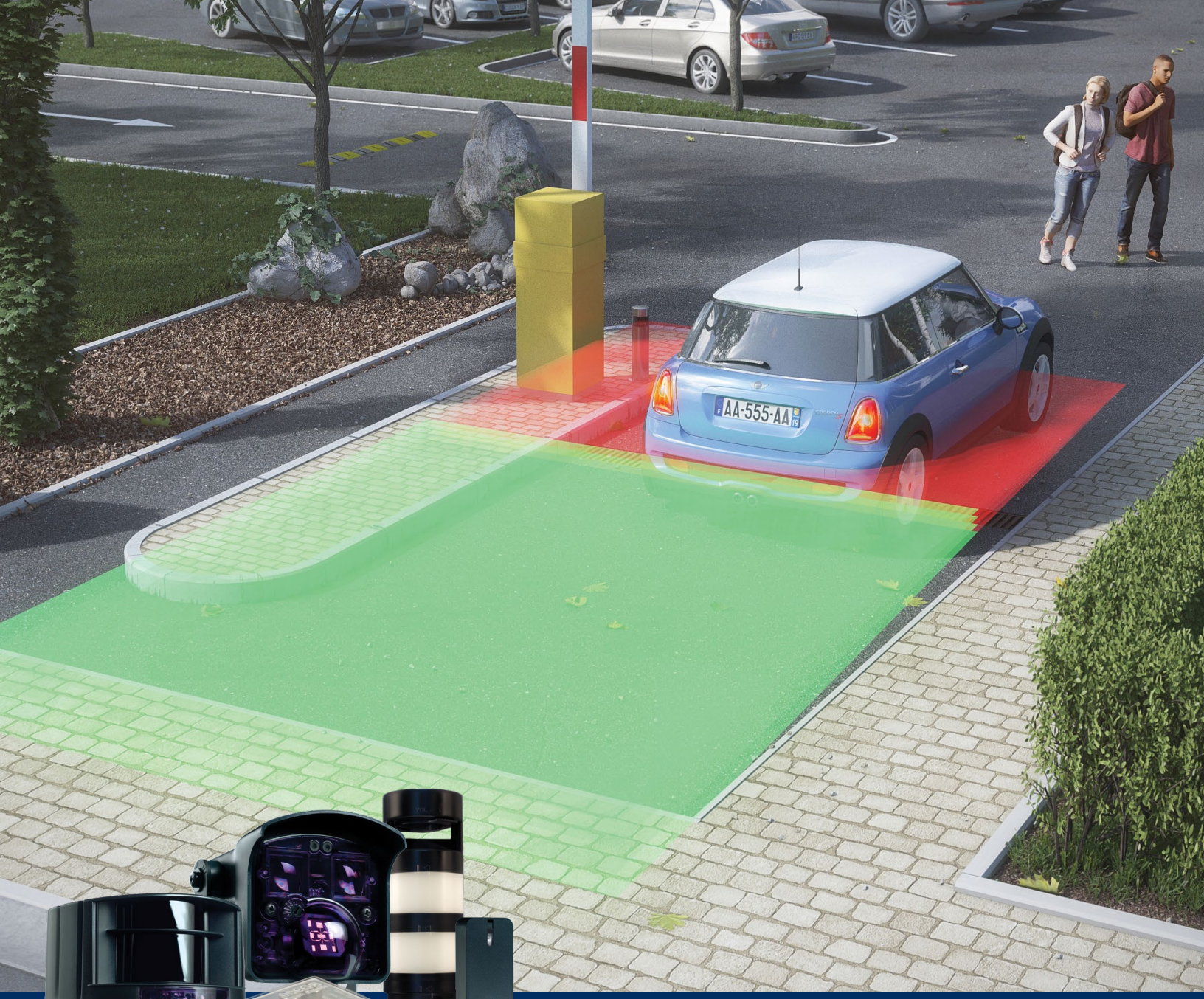
WARNING INDICATIONS



LED SIGNAL LIGHTS

LED SIGNALS FOR WARNING INDICATION SYSTEMS

- Available models include column, modular and traffic style
- All models are UL Listed and NEMA 4 / IP65 rated or higher
- Variety of color and audible configurations
- Modular series allows for maximum customization with stackable color and audible units



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