



INDUSTRIAL AUTOMATION & VEHICLE

# SENSING SOLUTIONS

## SOLVING AUTOMATION CHALLENGES

### ▷ WHAT'S INSIDE:

Understand your technology options for high-speed doors

PG. 5

Read interviews from an industrial door and gate expert

PG. 6, 16



## CONTENT

Case Study: Confined Hallway Challenges.....	2 – 3
Application Breakdown: High-Speed Fabric Door.....	4 – 5
<b>Customer Highlight: Jim Cavers.</b> ....	6 – 7
Case Study: Warning Indication. ....	8 – 9
Case Study: Horizontal Activation & Safety.....	12 – 13
Application Breakdown: Swing Gate.....	14 – 15
<b>Customer Highlight: Jeff Zwergel.</b> .....	16 – 17
Contact BEA.....	18 – 19



# APPLICATIONS



**BARRIERS**



**GATES**



**TOLL GATES**



**VEHICLE CLASSIFICATION**



**PARKING**



**WAREHOUSING**



**HIGH PERFORMANCE DOORS**



**COMMERCIAL DOORS**



**LOADING DOCKS**

COMMON FACILITY TYPES

WAREHOUSES

AIRPORTS

AUTOMOTIVE DEALERSHIPS

PRIVATE RESIDENCES



# CASE STUDY

## Learn Time Functionality Resolves Maintenance Challenges in Confined Hallway

**BEA Segment** - Industrial Automation Solutions

**Industry** - Maintenance Center

**Distributor** - Star Equipment

**BEA Product(s)** - LZR®-WIDESCAN; motion, presence and safety sensor for automatic industrial doors

2

### INTRODUCTION

Serving Minnesota for over 25 years, Star Equipment focuses on providing complete safety solutions. With expertise in warehousing, loading dock equipment and commercial doors, the team utilizes its industry knowledge and technical know-how to solve challenges revolving around safety and energy efficiency.

### THE CHALLENGE

Facilities with confined hallways have challenges not only with traffic but stationary objects as well. At this facility, maintenance uses designated areas for storage bins near the high-performance doors. Due to the location of the storage bins, the sensor field extends beyond them leading to unnecessary door activations and energy consumption. Every time the bin is moved or rearranged, the sensor recognizes the change and tells the door to remain open.

## THE SOLUTION

With the LZR-WIDESCAN, you can program each motion, presence and safety detection area with specific functions. One of the functions for the presence and safety zone within the LZR-WIDESCAN is Maximum Presence Time (also known as learn time). Learn time enables the sensor to recognize an object in the detection zone and tell the door when it is okay to begin closing.

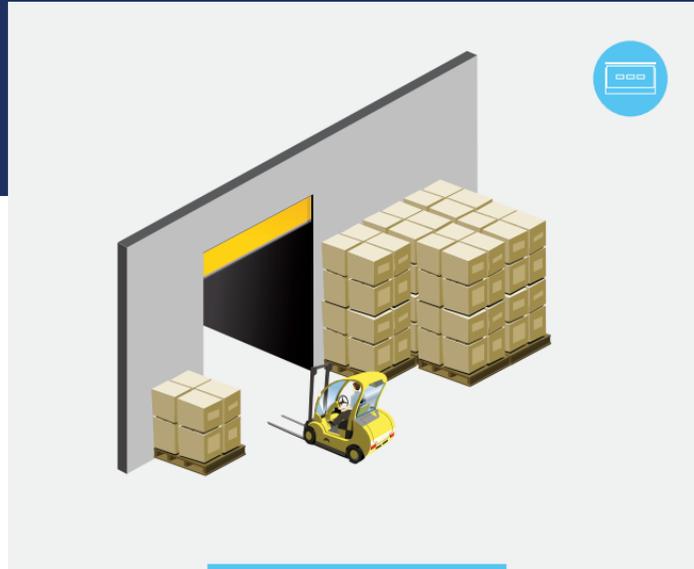
To reduce how long the high-performance door remains open, Star Equipment programmed the presence detection zone with a 30-second learn time. This setting will tell the high-performance door to open but, as long as the storage bins remain in place, the door will begin to close after 30 seconds.

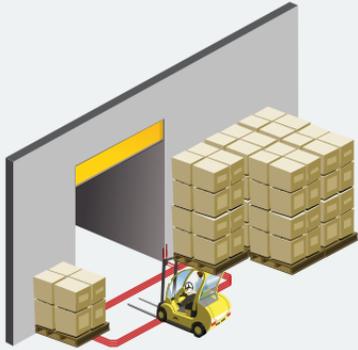
## THE RESULTS

Maximum Presence Time gives the door a command based on the environment. So, the facility will no longer experience constant or prolonged door openings which in turn can reduce energy consumption.



# HIGH-SPEED FABRIC DOOR





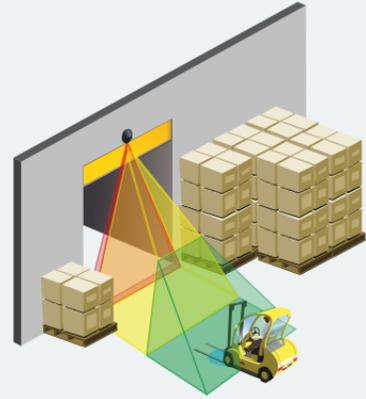
### Inductive Loops

- ✓ Defined Detection Area
- ✓ Pedestrian & Parallel Traffic Rejection
- ✓ Directionality
- ✓ Sequencing



### Motion Sensor

- ✓ Pedestrian & Parallel Traffic Rejection
- ✓ Adjustable Detection Field
- ✓ Remote Control Adjustments
- ✓ Rated for Harsh Environments
- ✓ Energy-Efficient



### LASER-Based Sensor

- ✓ Object Detection (speed, direction, size & height)
- ✓ Independent of Lighting or Ground Conditions
- ✓ Easy Setup (LCD or remote control)
- ✓ Virtual Pull-Cord
- ✓ Rated for Harsh Environments
- ✓ Energy-Efficient



# CUSTOMER HIGHLIGHT

Jim Cavers

Service Manager – Miner Ltd, dba Star Equipment

*1. How were you introduced to the automatic door industry?*

I was a licensed Electrician before working in the automatic door industry and was approached by the president of Star Equipment who was a friend. He thought my background would provide additional value to the services his company currently provided. I wanted a way to express my abilities and stepped up to the challenge. It is the best career move I have made.

*2. To date, what do you consider your proudest moment while in the field?*

I worked closely with BEA to provide a customer with a solution to increase the level of safety on the high-speed doors at their facility. The doors are auto closing and have a high frequency of foot traffic through the openings. We installed a fail-safe safety system by installing LZR-I30's on both sides of an opening and performed a month-long controlled test specifically on the system. After the successful testing, the customer purchased the custom system on the other 32 high speed door openings.

*3. In three words summarize the biggest challenge you face today.*

Customer Product Education

*4. How do you see the industry changing in the future?*

I see an upward trend with customers focusing on safety and product value. Safety includes devices which increases the safety zones away from the door threshold, installing devices in a fail-safe manner, and increasing visibility with lighting options. Product value includes high quality lighting products with high visibility and design options, sensors that provide unique safety or opening commands such as a virtual pull cord or vehicle height sensor, and always providing a system with versatility in mind. Nobody wants to purchase a custom system that is not adaptable to their ever-changing business practices or traffic flow changes.

# CASE STUDY

## Zero Strike System Inc. Develops Warning Indication System to Reduce Fire Station Bay Door Strikes

**BEA Segment** - Industrial Automation Solutions

**Industry** - Fire Station

**Distributor** - Zero Strike System Inc.

**BEA Product(s)** - LZR®-I30; LASER scanner for industrial door & gate safety

8

### INTRODUCTION

Zero Strike System Inc., founded by Florida Dock and Door, located in Tamarac, Florida provides the South Florida region with a state-of-the-art detection system designed to enhance safety on and around commercial doors.

### THE CHALLENGE

When responding to emergency calls, a firefighter's goal is to reach the incident as quickly and safely as possible. At times, rushing for a low response rate

leads to fire trucks striking the overhead door, which can result in costly damages to both the door and vehicle. A limited line of sight, coupled with the urgency of the situation and obstacles around the door, can make passing safely through the door a challenge.

### THE SOLUTION

Florida Dock and Door, who responds to more than 35 door-strikes each year, developed the Zero Strike System to combat these accidents. The

UL 325 compliant warning indication system has greatly reduced instances of fire station door strikes, while also enhancing pedestrian safety around the door. Zero Strike System's control box operates a highly visible, 10-foot LED strip and BEA's LZR-I30 sensor. The LZR-I30 creates a three-dimensional safety zone that monitors the area around the door and works in tandem with the vertically mounted LED strip.

The LED strip flashes red if the door is in motion and flashes blue indicating various interferences including objects in the doorframe, persons near the opening or loss of power. If it is solid green, the door is safe to pass through. The multiple color indications provide a consistent, clear signal that informs the firemen of the door's status as they pass through.

## THE RESULTS

Starting in late 2015, Zero Strike System Inc. has upgraded more than 200 fire station doors with the Zero Strike System in Broward and Palm Beach Counties in Florida. To date, out of those serviced, only one bay door incident has been reported.



**PRECISION**

Detection fields can be defined to the inch

**FLEXIBILITY**

Detection with object profiling, static or moving, and trajectory

**REFLECTIVITY**

Not disturbed by shadows, noise, or IR interferences

**HARSH ENVIRONMENTS**

Housed in NEMA 4 rated enclosure

# Engineering Safety Solutions with LASER-based Technology

## #LZR safety

Visit [LZRtechnology.com](https://www.LZRtechnology.com) to learn more



HIGH-PERFORMANCE



COMMERICAL



COLD STORAGE



BARRIERS



GATES

# CASE STUDY

## Horizontal LASER-Based Sensor Provides Activation and Safety on Door Surrounded by Water

**BEA Segment** - Vehicle Sensing Solutions

**Industry** - Hospitality Lodging

**Distributor** - Just Doors

**BEA Product(s)** - LZR®-H100; Horizontal LASER scanner

12

### INTRODUCTION

Serving Southern California since 2003, Just Doors takes pride in earning trust through their attention to detail. The same attention to detail also sets apart the luxury amenities of JW Marriott Desert Springs Resort & Spa, which needed a reliable solution for their boat services.

### THE CHALLENGE

Located on the ground floor of the lobby, boat rides offer customers a convenient and enjoyable way

around the hotel grounds. As a unique attraction, the hotel needed to ensure seamless operation. This unconventional application includes a bi-part sliding door over water. Not only did the door need to function properly, but the ideal solution also had to operate around water.

At first, the application used radio controls, but challenges arose when boat drivers encountered problems activating the door. Common challenges included failed signal transmission and drivers forgetting to press the remote button, leading to

recurring repairs on the door and boats.

## THE SOLUTION

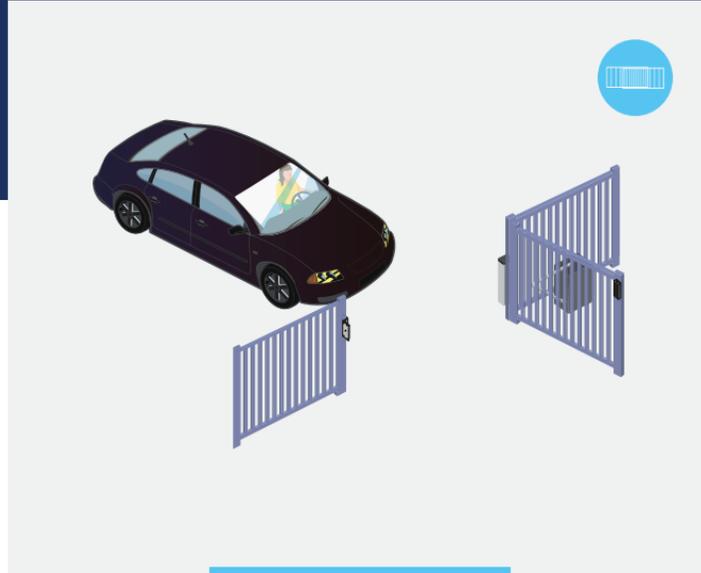
Since water is in a constant change of state, Just Doors required an activation sensor that wouldn't rely on ground conditions. BEA's LZR-H100 utilizes a horizontal plane of LASER-based detection. The unique orientation of the detection field allows the sensor to see objects without being affected by the environment. While radio controls rely on human interaction and zero interference, LASER-based technology uses motion and presence for activation. So, the sliding door only opens when the boats enter the detection field.

## THE RESULTS

Mounted on each side of the door, the sensors, offer complete coverage for boat traffic; leaving and returning to the dock. By taking the pressure off the boat drivers and identifying the ideal technology, Just Doors successfully solved the customer's unique challenges.



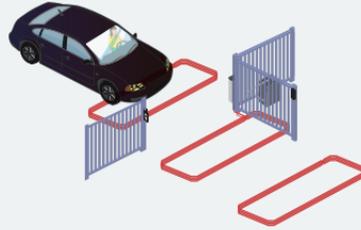
# SWING GATE





### Radio Controls

- ✓ Enhances Accessibility
- ✓ Variety of Product Options



### Inductive Loops

- ✓ Defined Detection Area
- ✓ Pedestrian & Parallel Traffic Rejection
- ✓ Directionality
- ✓ Sequencing



### LASER-Based Sensor

- ✓ Independent of Ground Type / Conditions
- ✓ Trajectory Detection
- ✓ Pedestrian Traffic Rejection
- ✓ Dual Relay
- ✓ Remote Control or Walk Path Setup
- ✓ Rated for Harsh Environments



# CUSTOMER HIGHLIGHT

Jeff Zwergel

President – Metro Fence

*1. How were you introduced to the gate / fence industry?*

It was 1981 and I was working at a body shop at the time. My friend worked at a fence company in Pittsburgh and the owner wanted two of his trailers refurbished and painted. My friend asked me to go give him a bid for that work. Instead of just sending the bid in I wanted to explain to the owner how we were going to do a quality job. After explaining to the owner what we were going to do and why it was

going to work, he did not want the trailers painted but instead asked me if I wanted a sales job. I have been in the business ever since.

*2. To date, what do you consider your proudest moment while in the field?*

Those moments happen each time a customer calls our company to do the next repair or install of their gate system or fence. The pride is that we must have done a good job at a fair price and stood behind the last job to be considered for the next one.

*3. In three words summarize the biggest challenge you face today.*

Hire new talent.

*4. How do you see the industry changing in the future?*

All controllers used in the gate and/or industry will have smart technology that will enable someone to view the event logs to troubleshoot and determine what happened on a specific date and time.



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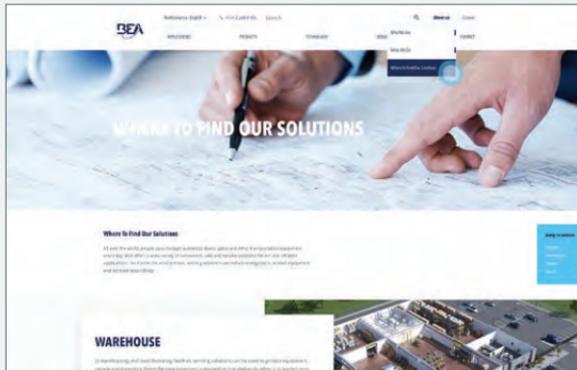
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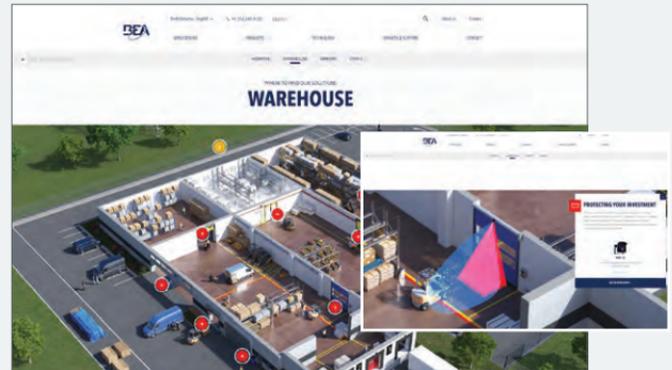
# EXPLORE APPLICATIONS

Learn where BEA products can be used within public buildings to promote accessibility, energy savings and safety.

[WhereToFindBEA.com](https://www.wheretofindbea.com)



Navigate between Warehouse, Hospital, Airport and Office.

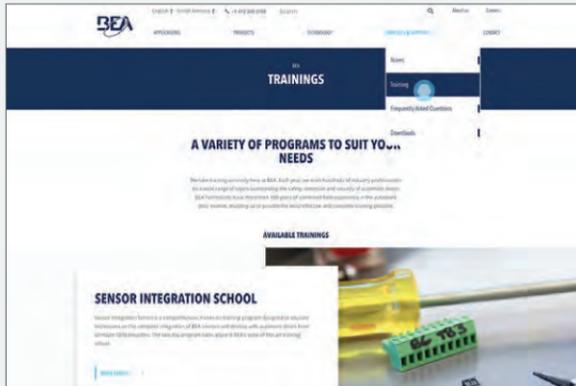


After selecting the environment, click on the glowing dots to explore each application.

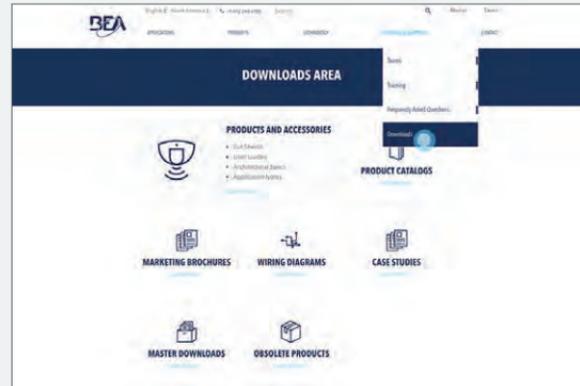
# EDUCATIONAL RESOURCES

Along with Technical and Customer Service support,  
BEA offers educational resources on our website:

[BEAsensors.com](https://www.beasensors.com)



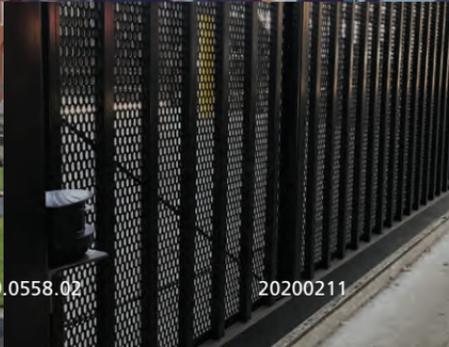
Reference our Training page  
for class and webinar schedules.



Browse our Downloads page  
for product and application guides.



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