

High Pedestrian Traffic Plus Environmental Obstructions Lead to LASER-based Safety System

BEA Division - Pedestrian Sensing Solutions

Industry Market - Food Retail

BEA Customer - [Automatic Door Group](#)

BEA Product(s) - LZR®-MICROSCAN T; stand-alone, door mounted, swing door safety system

INTRODUCTION

With over 45 years of experience, Automatic Door Group installs and services automatic pedestrian doors in the midwest area. The expertise of their technicians provides insight to solve frequent challenges related to full-energy swing doors.



THE CHALLENGE

For many medium-sized supermarkets, the entrance and exit doorways sit side-by-side, creating a narrow pathway for traffic. On top of traffic flow, typical storefronts include possible interferences like baskets and displays. In this application, the limited space, environmental obstructions and high pedestrian traffic demand the full-energy simultaneous pairs to meet rigorous performance expectations.

The original installation included active infrared sensors on both sides of the door leaf. But the sensors detected surrounding objects, like holiday decorations and floor imperfections, leading to false detections.



THE SOLUTION

To reduce the number of false detections caused by the environment, Automatic Door Group installed the LZR-MICROSCAN T. The LZR-MICROSCAN T produces four LASER-based curtains on each side of the door leaf that follow the path of the door as it swings open.

During setup, the sensor learns its environment and identifies fixed objects, like guide rails, in the swing path. After the learn cycle, LASER technology creates a dynamic detection zone for reactivation and safety, depending on the door side. While the door is in motion, the four detection fields automatically adjust to the environment.

THE RESULTS

Unlike other technologies, LASER Time-of-Flight measures the distance to and from the floor instead of reflecting off the floor. By measuring the distance, LASER has the ability to bring the detection field off the floor, creating the uncovered zone. The sensor is no longer dependent on the floor or environmental conditions. Since the installation of LZR-MICROSCAN T, Automatic Door Group has not been asked to provide service.