

Star Equipment streamlines vehicle congestion and energy savings with volumetric motion sensor

BEA Division - Industrial Automation Solutions

Industry Market - Public Transportation

BEA Customer - [Star Equipment Inc.](#)

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

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

Right after the morning and evening commute, the bus garage becomes inundated with 200 articulated buses ready for storage and maintenance. The high volume of large vehicles waiting to enter the facility creates a high-paced environment with drivers eager to end their shift. The bus entrance includes a vestibule to control air flow and cash depositing, which contributes to an increase in energy usage as the line of buses files in and out. The facility managers needed an automated solution that provides a quick and orderly process, no matter the weather conditions.

THE SOLUTION

To solve the vestibule challenges, Star Equipment utilized the many functions within the LZR-WIDESCAN. Requiring independence from changes in the weather and specific presence / safety conditions on the exterior side of the door, the sensor was programmed to activate with a height trigger and accommodate cold Minnesota temperatures with the internal heater function. The interior door also activates with a height trigger and holds open with a safety curtain spanning the threshold.



Additional programming incorporates an alternate door activation by using the virtual pull-cord function. This allows smaller vehicles to travel through the vestibule while still reducing false activations.

Along with the sensor, the bus traffic is also controlled with traffic lights tied into the door control. The sequencing of doors plus logic between the sensor and traffic lights permit the exterior door to activate only when the vestibule is empty.

THE RESULTS

If there is a bus within the vestibule waiting to enter the garage area, the exterior traffic light will remain red and the door shut. While the volumetric curtains of the LZR-WIDESCAN provide activation and presence, the logic between the doors provides safety for the individuals inside the vestibule and controlled air flow.