LASER-based sensor reduces false activations between loading dock and warehouse

BEA Division - Industrial Automation Solutions

Industry Market - High Performance Doors

BEA Customer - Star Equipment Inc.

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

INTRODUCTION

Within a manufacturing plant, there are many daily intricacies keeping processes running smoothly. And when one of these intricacies continue to experience issues, the team can undergo setbacks. This is what happened when a high-performance door continued to activate when not intended to.

THE CHALLENGE

The high-performance door separates two busy areas, the loading dock and the warehouse area. This particular loading dock is managed with pedestrian and pallet jack traffic while the warehouse area has a combination of pedestrian and vehicular traffic. With safety in mind, pedestrian traffic is expected to walk close to the wall (and door) to avoid roadways created for the forklift drivers. The high-performance door was originally installed with a motion sensor causing false activations by pedestrian traffic on the warehouse side.

THE SOLUTION

Star Equipment saw this as an opportunity to test LASER-based technology utilized in the LZR-WIDESCAN sensor by programming the three detection zones to solve each problem. On both sides of the door, the first detection field offers motion detection with unidirection at 100%. Unidrection motion detection is the default setting in the LZR-WIDESCAN and means that the sensor will only activate if a person or vehicle moves towards the door.

The second field offers presence with a 30-second learn time and the third field provides safety without a learn time at the door threshold. Learn time is an optional setting telling the sensor to ignore an object or person in the field within the set time limit. So, with a 30-second learn time, the sensor will begin the closing cycle if the object or person remains in the designated field longer than 30 seconds.

THE RESULTS

By programming the first detection field to only see traffic moving towards the door, the door remained shut when pedestrian traffic walked parallel of the door. The versatility and precision of LASER-based technology maintained the expectations needed to serve the team without constant disruptions.