

# Properly Installing Primary Entrapment Protection

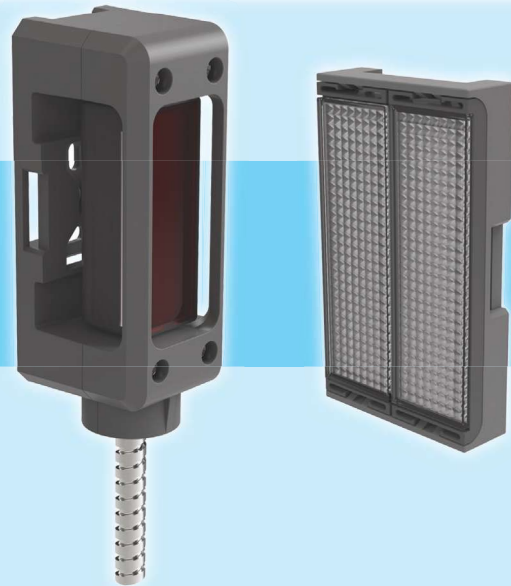
By Dan Dombkowski

Since August 29, 2010, UL325 has required all commercial door operators be either constant pressure to close or be equipped with a primary external monitored entrapment protection device, typically a photo electric eye. In my travels, I have observed that commercial door technicians are installing monitored photo electric eyes at three feet above the finished floor or on one side of the door at a height of six inches while shooting it at an angle to the opposing photo-eye installed at a height of four feet on the opposite side of the door. While this is a good way to protect vehicles, it is in conflict with the purpose of the Underwriters Laboratory requirement for primary entrapment protection, as well as manufacturers' instructions. Photo electric eyes intended for primary entrapment protection should be installed parallel to the floor and no higher than six inches above the finished floor as required by UL. Installing the eyes higher than six inches could be exposing the installing dealer to liability.

Technicians often say the reason they install photo-eyes outside of the six-inch maximum height is because the customer wants to protect vehicles from being hit by the door. Technicians need to make customers aware that it is inappropriate to move the set of primary entrapment protection above the six-inch height, and doing so would create a dangerous environment and expose the customer's company to liability. A commercial door operator installed outside the manufacturers' instructions could also be an OSHA violation as evidenced by the following news article.

Barnesville Bus Co., Barnesville, MN. **\$25,900** fine. A man found pinned under a garage door in March 2011 was asphyxiated by the door's pressure on his chest. The door's safety sensor, meant to stop it from closing on buses, was located 7 feet from the floor. The victim, Stephen J. Peterson, 51, of Barnesville was part-owner in the business, according to a Fargo Forum newspaper article. The company was cited for ...failing to have garage doors with "safeguards to prevent entrapment of employees" and for failing to promptly report the accident to OSHA.<sup>1</sup>

Professional dealers can use this case to educate their customers on providing a safe environment in their businesses. By understanding the latest version of the UL325 code and explaining it to their customers, dealers not only can aid their customers in doing what is right, but also increase their dealership's overall sales. Customers are very concerned with safety – they just don't have the knowledge of what constitutes a safe door. If customers want to protect vehicles from being struck by a closing door, ancillary protection like additional sets of photo-eyes, edges, light curtains or other devices can be used. Vehicle loop detectors,



while not appropriate for pedestrian entrapment protection, can also be used to protect vehicles from being hit by the door. Note that loops cannot be placed directly under the door because the door's movement would cause a reversal. Any ancillary protection provided is not required by UL to be monitored. This doesn't mean that it can't be monitored, as only monitored entrapment protection lets you know when the system isn't functioning properly.

Today's commercial door operators provide a much safer environment for your customer than they did in the past but only if they are installed properly following the manufacturers' installation instructions.



*Dan Dombkowski has been in the industry for 30 years, is Manager, Sales Training for LiftMaster, and IDOA President-elect.*

<sup>1</sup>Source: "State cites 9 employers for workplace deaths," (Minneapolis) Star Tribune, March 10, 2012.