

Automated Safety Solution Improves Forklift Loading Processes

SICK, Inc.

SICK is one of the world's leading manufacturers of sensors, safety systems, machine vision, encoders and automatic identification products for industrial applications. With more than 1000 patents, SICK continues to lead the industry in new product innovations. The diversity of its product line allows SICK to offer solutions at every phase of production in the logistics, automotive, packaging, electronics, food and beverage, and material handling markets.

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“Surely we need better and more useful technology instead of simply more technology”

Dr. Erwin SICK, founder, SICK Inc.

Growth & Impact



Safety
Improved safety on forklift trucks



Efficiency
Increased Speed and Ergonomics



Cost Savings
Speeds up the forklift loading process

Automated Safety Solution Improves Forklift Loading Processes

Industrial Vehicle Access Recognition increases speed and ergonomics



The Challenge: Traditional Safeguarding for Loading and Unloading

Industrial manufacturing by its nature, requires a consistent infeed of bulk material to turn out product in quality. The high volume of material going in and product coming out requires manufacturers to rely on a combination of forklift trucks, autonomous guided vehicles (AGV)s, pallet transfer stations, and automated storage and retrieval systems (ASRs) to keep the steady stream of finished goods moving to market.

Traditionally, infeed and outfeed conveyors, pallet transfer systems, and other mid-process loading systems require a combination of conveyor, photoelectric muting sensors, HMI inputs, and safety related light curtains to protect the loading and unloading of material.

All of these loading and unloading processes, while safe and widely adopted, require large sections of hard guarding, frequent operator interaction, and significant factory floor space to be effective. These guarding methods also require frequent process or cycle stops, request for entry and often lead to false emergency off conditions due to a misunderstanding of the load/unload process.

The Solution: IVAR in Use at Consumer Goods Manufacturer

- After a risk assessment of the system was performed by SICK, usage of Industrial Vehicle Access Recognition (IVAR) was deemed an appropriate solution as was added to the Safety Solution Concept for review and final customer approval.
- IVAR Solution utilizes a combination of various safety measures: contour recognition, sequence monitoring, and time check. The muting of the systems is activated only when the forklift truck is recognized and if it follows a specified approach corridor.
- Safety Performance Level d (PL d) is maintained using the microScan3 to quickly differentiate between an expected and unexpected hazard.
- IVAR can provide significant economic advantages for manufacturers.
- IVAR is exclusively available from SICK and is sold through its Safety Services program