Swift-E Reconfigurable 3D Sensor

A new sensing solution for flexible manufacturing

Features and benefits

Swift-E™ is a new type of sensor based on 3D Time-of-Flight (ToF) technology that allows for fast and reliable, fully reconfigurable distance or height measurement.

- Fast and reliable 3D sensing
- EtherNet/IP connectivity and Studio 5000® Add-on Profile (AOP)
- Built-in applications for distance or height measurement
- Fully configurable via built in web interface (no software required)
- Storage for up to 255 different templates, each with up to 64 virtual sensing zones of user defined shape
- Integrated near infrared (NIR) illumination with very low sensitivity to ambient light

Height Measurement – Swift-E enables the user to configure multiple virtual sensing zones for height measurement of in-motion or static objects. Individual virtual sensing zone results are available as tags in the controller

Presence Sensing – Swift-E can be taught to compare a known height with the measured height in a virtual sensing zone. The comparison results in a pass/fail inspection made available in the controller as a boolean tag for each of the defined virtual sensing zones.

Reconfigurability – Both the above solutions include the ability to support up to 255 different templates, each with up to 64 virtual sensing zones per template – all stored on the device. Templates can be instantly recalled over the EtherNet/IP interface – allowing the controller to define the sensing profile in use at any time.

Industry is evolving. Consumer expectations for personalization have resulted in a growing demand for greater product variability, ultimately driving the need for more flexible manufacturing and increased spatial awareness. The new Swift-E is a fully reconfigurable 3D sensor that enables machine builders and production plants to adapt to new market trends. The capability to adapt to changing products or conditions makes Swift-E an ideal solution for production lines that require high flexibility.

Swift-E includes built-in application profiles for distance or height measurement. These solutions are can be customized via an easy to use, web based interface that require no additional software.

As market needs evolve Swift-E will receive firmware updates to extend its capabilities with new built in applications.

Swift-E integrates quickly and easily with Allen-Bradley® Logix controllers via EtherNet/IP, providing real-time data access to help you maximize productivity and avoid unplanned downtime.

odos imaging
A Rockwell Automation Company

Example Applications

Robotic Palletizing

- Validating that all the product has been transferred from staging to the pallet is a common challenge in palletizing systems. With Swift-E each pallet level can be validated for completeness, ensuring the integrity of the pallet stacking. With 255 templates available, up to 255 different pallet layouts can be stored.

Case Packing Inspection

- Many of the modern case packing systems use robots or pneumatic transfer systems to fill product boxes. Validation of box filling is crucial – and difficult. Swift-E can provide height or completeness inspection to ensure all boxes are filled as expected.

Completeness Checking

- In many industrial systems it is necessary to validate the completeness or presence/absence of product. Swift-E provides no-touch, wide range solutions for validating the completeness or height of objects for a range of industrial applications.

Product Specifications

Parameter	Value
Resolution	640x480 pixels
Response Time	~50 ms
Operating Range	0.5 – 6 m (~1.5 to 20 ft) (typical)
Measurement Precision	~1 cm (typical, varies with return signal level)
Field of View	43°x33° (H x V, measured in center)
Illumination	7x LEDs @ 850 nm, Built-in
Output Data	Height, Presence or Absence
Interface	EtherNet/IP
Power	12V DC / 20 W (typical), 60 W (peak)
Virtual Sensing Zones	Up to 64 virtual sensing zones per template
Number of Templates	Up to 255 different templates

Swift-E	Cat #
Swift 3D EtherNet/IP sensor with built in applications, 12V DC power, 43x33 deg Field of View	OI-E1480
Swift 3D EtherNet/IP sensor with built in applications, 12V DC power, 43x33 deg Field of View, Silicone rubber ends	OI-E1480-R

Accessories	Cat #
12V DC Power Supply (office grade), M12 Connector (does not include power cord)	OI-PS
Mounting plate with 1/4 in.-20 thread for standard tripod mount	OI-TMOUNT
Allen-Bradley 12-15V DC Power supply – industrial grade (90 W)	1606-XLP90B
DC Micro-Style (M12) 4-pin female cordset for use with industrial power supply (or similar)	889D-F4AC-x

Connect with us.