

Installation Instructions

Original Instructions



Swift-E Reconfigurable 3D Sensor

Catalog Number 01-E1480

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes. Translated versions are not always available for each revision.

Topic	Page
Updated Specifications section	1
Updated Figure 1	1
Updated Mount the Sensor section	1
Updated Sensor Connections section	2
Updated Power Requirements and Pin Assignments section	2
Updated Status Indicators section	2
Updated Product Selection section	3
Updated Figure 5	3

Specifications

Attribute	Value
Sensing area	640 x 480 individual distance points
Field-of-view	43° x 33° (H x V, measured in center)
Measurement resolution	1 cm (0.39 in.)
Measurement precision	±1 cm (0.39 in.) (typical at 2 m (6.56 ft), varies with return signal level)
Illumination	7 light-emitting diode (LEDs) at 850 nm
Operating range	0.5...6 m (1.5...20 ft)
Output data	Height, distance
Response time	~100 ms (trigger to data)
Protocol	EtherNet/IP™
Power supply ⁽¹⁾	24V DC / 25 W (typical), 70 W (peak)
Operating temperature ⁽²⁾	-20...+50 °C (-4...+122 °F)
Environmental rating	IP65
Virtual sensing zones	Up to 64 virtual sensing zones can be created for every template
Number of templates	Up to 255 templates can be created

(1) Power supply must be UL Class 2/SELV/PELV or equivalent.

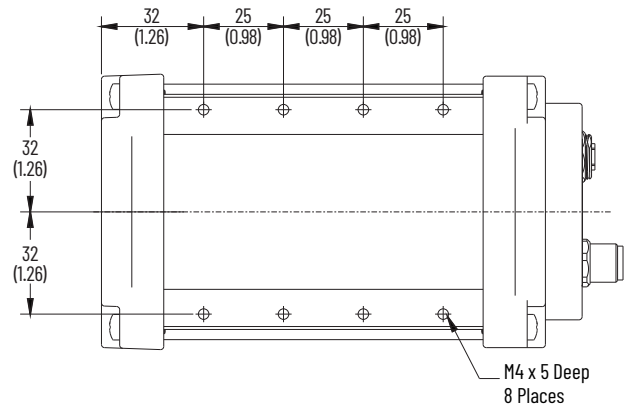
(2) If communication is not established within 1 minute of powering on the sensor below 0 °C (32 °F), it may be necessary to cycle the power to the unit. The unit operates normally once communication is established. For best performance at low or high temperatures, allow the temperature of the unit to stabilize after application of power and use height measurements where possible.

Mount the Sensor

The Swift-E sensor supports two methods of mounting:

- The sensor has 16 M4 screws for flexible attachment to a structure (see [Figure 1](#)).
- The sensor can be supplied with an optional tripod mount plate (catalog number 01-TMOUNT). The mount plate has a standard 1/4-20 UNC thread for attachment to any standard camera mounting device.

Figure 1 - Location of M4 Mounting Points [mm (in.)]



In new applications, we recommend that you initially mounted the sensor in a flexible way with a variable clamp or camera grip to optimize setup. Then, if necessary, custom mounts can be appropriately designed.

Figure 2 - Example Mounting Options

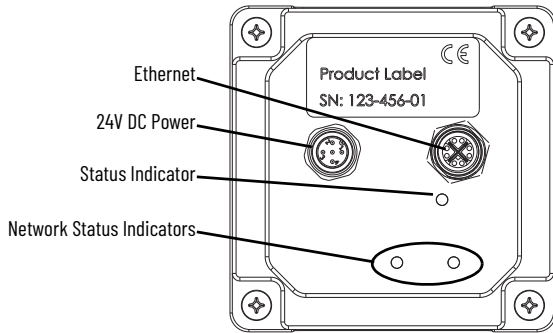


- The sensor must be mounted no closer than 0.5 m (1.64 ft) to the target object or objects. Maximum operating range is 6 m (19.68 ft), however at longer operating ranges [greater than 3 m (9.84 ft)], the quality of measurement can reduce.
- In general, use the most suitable method to mount the sensor for the application. In some circumstances (particularly with highly reflective target objects), the signal light that the sensor generates can reflect directly back to the device, which can cause saturation of the sensor. In such situations, it can be necessary to mount the device at a slight angle (for example, 10°) from the target objects.

Sensor Connections

The sensor must be powered with a 24V DC supply via the 4- or 5-pin M12 power connector (Figure 3 and Table 2). EtherNet/IP connection to host is via shielded M12 Xcode patchcord.

Figure 3 - Sensor Connections



Power Requirements and Pin Assignments

Table 1 - M12 Power Connector on Device

Face View of Convex DC Micro	Pin	Signal/Receiver
	1	Reserved
	2	24V DC
	3	Ground
	4	Reserved
	5	Shield/ground

Table 2 - M12 Power Cable Connections

Face View of Concave DC Micro	Pin	Color (1)	Signal/Receiver
	1	Brown	Reserved
	2	White	24V DC
	3	Blue	Ground
	4	Black	Reserved
	5	Gray	Shield/ground

(1) The wire colors that are listed refer to the recommended Bulletin 889D cordsets (see Table 5 on page 3).

Status Indicators

The Swift-E sensor has one, multicolor status indicator on the rear of the housing with two network status indicators below it (see Figure 3).

Table 3 - Network Status Indicator States

Status Indicator	Color	Status
Left/LEDO	Off	1 Gbps
	Flashing/steady orange	100 Mbps or 10 Mbps
Right/LED1	Flashing/steady green	Ethernet activity

Table 4 - Status Indicator States During Startup and Operation

Sequence	Status Indicator	Status Startup
Startup	Off (15 s)	Initial boot of device
	Green (0.5 s), red (0.5 s) then green	Power up sequence
	Steady red	Boot failure (power cycle device to attempt to redress error)
	Steady blue	Boot failure (power cycle device to attempt to redress error)
Operation	Flashing	Blue device powered up in out-of box condition (1)
	Flashing green	Device is started and Edit mode is enabled, device is available for configuration.
	Steady green	Device is started and running
	Flashing red	Major recoverable fault
	Steady red	Major nonrecoverable fault

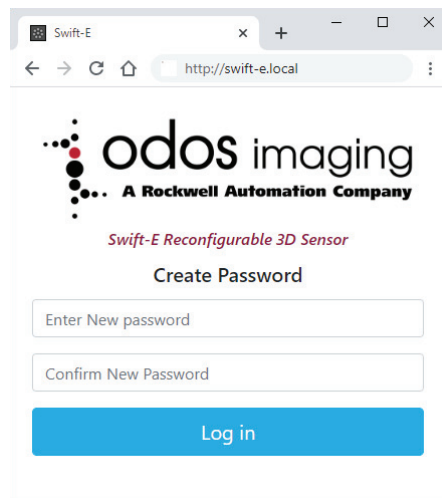
(1) Out-of-box condition means that the IP address is default (192.168.1.40), and no password is set on the device. To open the Web Connect interface, you must set a password.

Connect and Configure the Swift-E Sensor

Initial configuration of the Swift-E sensor is done in a browser via the Web Connect interface (see Figure 4). However, before connection via a browser, it can be necessary to alter the default IP address. Swift-E devices support only static IP addresses and are shipped with the default address 192.168.1.40.

It is possible to set the IP address with the FactoryTalk® Linx or RSLinx® applications or from the Settings page inside the Swift-E Web Connect interface. If the host computer is on the same subnet as the default IP (that is, an Ethernet adapter with IP address in range 192.168.1.x with mask 255.255.255.0), you can connect directly to the Swift-E sensor in a browser at http://192.168.1.40.

Figure 4 - Initiate Web Connect in Browser



Upon entering the Web Connect configuration interface for the first time, you must create a password. Once inside the interface, follow the embedded help to create Virtual Sensing Zones and templates.

Product Selection

Table 5 - Swift-E Sensor Catalog Numbers and Accessories

Description	Cat. No.	
Swift-E reconfigurable 3D sensor	01-E1480	
24V DC power supply (90 W)	1606-XLBx	
DC Micro-style (M12) concave cordset for use with industrial power supply (or similar)	4-pin	889D-F4AC-x
	5-pin	889D-F5AC-x
Shielded M12 Xcode Ethernet cable ⁽¹⁾	1585D-x8xGxx-x	
Mounting plate with 1/4-20 UNC thread for standard tripod mount	01-TMOUNT	

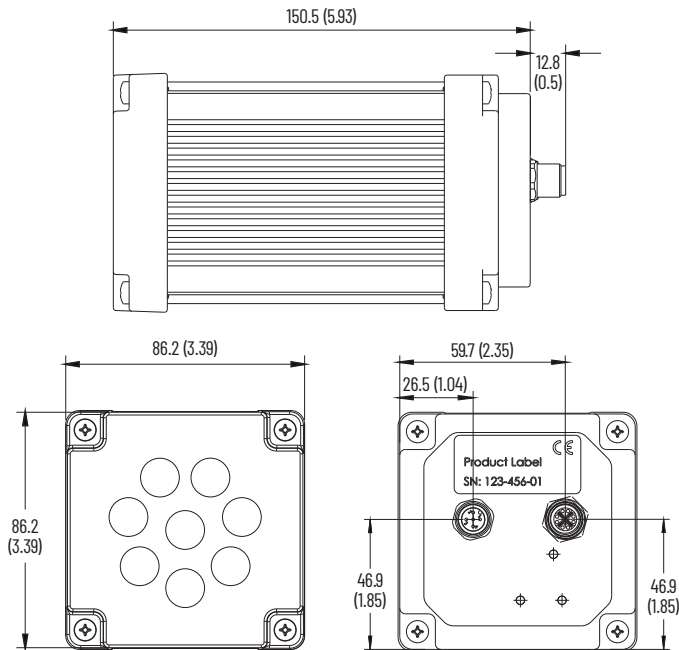
(1) See rockwellautomation.com/en-us/products/hardware/allen-bradley/connection-devices/network-media/ethernet/1585-m12-and-variant-1.html for details.

Additional Resources

Resource	Description
Swift-E Reconfigurable 3D Sensor User Manual, publication 01-UM001A	Provides detailed information on the setup and use of Swift-E devices.
EtherNet/IP Network Devices, publication ENET-UM006	Describes the connection of EtherNet/IP communication modules in Logix control systems.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website rok.auto/certifications and odos-imaging.com/certification/	Provides declarations of conformity, certificates, and other certification details.

Approximate Dimensions

Figure 5 - Swift-E Sensor [mm (in.)]



Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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