

Swift-E Reconfigurable 3D Sensor

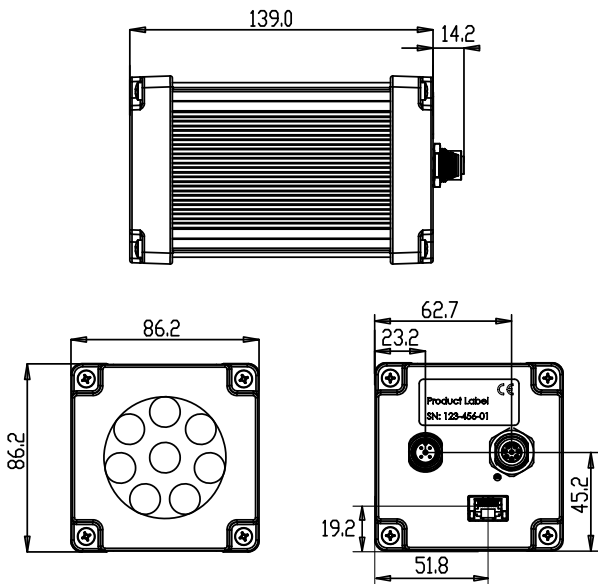
Catalog Number OI-E1480

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Dimensions

Figure 1. Dimensions (millimeters)



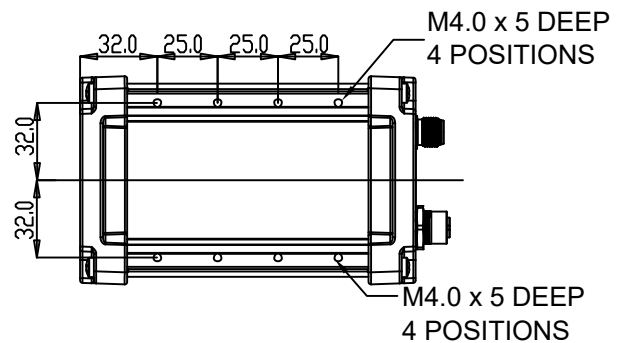
Mount and Position the Sensor

Swift-E supports two different methods of mounting:

1. The sensor has sixteen M4 screws for flexible attachment to a structure (figure 2)
2. The sensor can be supplied with an optional tripod mount plate (part number: OI-TMOUNT). The mount

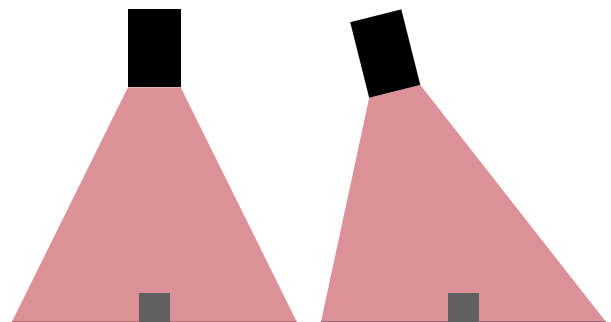
plate offers a standard 1/4" UNC tripod thread for attaching to any standard camera mounting device.

Figure 2. Location of M4 mounting points



In new applications, it is recommended that the sensor is initially mounted using a flexible approach (eg variable clamp or camera grip), as this will allow optimisation of the setup. If required, custom mounts can then be appropriately designed.

Figure 3. Example mounting options



1. The sensor should be mounted no closer than 0.5 m to the target object(s). Maximum operating range is 6 m, however at longer operating ranges (greater than 3 m), quality of measurement may be reduced.
2. In general, the sensor can be mounted using the most suitable method for the application. In some circumstances (particularly with highly reflective target objects) signal light generated by the sensor may be reflected directly back to the device (which can causing saturation of the sensor). In such situations, it may be

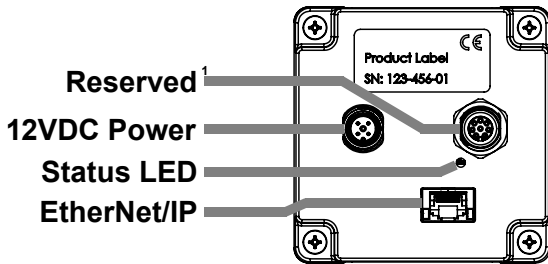
necessary to mount the device at a slight angle (eg 10 deg) with respect to the target objects.

Connections

The sensor should be powered with a 12 VDC supply via the 4-pin M12 power connector (figure 4 and table 2). EtherNet/IP connection to host is via RJ45.

IMPORTANT Swift-E requires a 12VDC power supply.

Figure 4. Sensor connections



1. This connector is reserved for future use.

Power Requirements and Pin Assignments

IMPORTANT Swift-E requires a 12VDC power supply.

Table 1. M12 Power connector on device

Face View of Male DC Micro	Pin	Signal / Receiver
	1	Not Connected
	2	12 VDC
	3	GROUND
	4	Not Connected

Table 2. M12 Power cable connections

Face View of Female DC Micro	Pin / Colour	Signal / Receiver
	1 / Brown	Not Connected
	2 / White	12 VDC
	3 / Blue	GROUND
	4 / Black	Not Connected

Status Indicators

Swift-E has a single, multicolour status LED on the rear of the housing, and dual communication status LEDs at the bottom of the RJ45 ethernet connector.

Table 3. Possible gigabit ethernet LED states and interpretation.

Face View of RJ45 connector	LED	Colour	Status
	LED0	flashing/solid orange	Ethernet activity
	LED1	flashing green	system is powered
	LED1	solid green	link to host established

Table 4. Status LED states and interpretation during startup and operation.

Sequence	Status LED	Sensor Status
Startup	off (15 s)	initial boot of device
	green (0.5 s), red (0.5 s) then green	power up sequence
	solid red	boot failure [power cycle device to attempt to redress error]
	solid blue	boot failure [power cycle device to attempt to redress error]
	flashing blue	device powered up in out-of-box condition ¹
Operation	flashing green	device started and Edit Mode is enabled, device available for configuration.
	solid green	device started and running
	flashing red	major recoverable fault
	solid red	major unrecoverable fault

1. Out-of-box condition means IP address is default (192.168.1.40), and no password has been set on the device. Opening the Web Connect interface will require the user to set a password).

Connect and Configure Swift-E

Initial configuration of Swift-E is carried out in a browser via **Web Connect** interface (figure 5). However, prior to connection via browser it may be necessary to alter default IP address. Swift-E devices support only static IP addresses, and are shipped with default address 192.168.1.40.

It is possible to set IP address with the FactoryTalk[®] Linx or RSLinx[®] applications or from **Settings** page inside the Swift-E **Web Connect** interface. If the host computer or laptop is on the same subnet as default IP (that is, an Ethernet adapter with IP address in range 192.168.1.x with mask 255.255.255.0), then it is possible to connect directly to the Swift-E in a browser by navigating to <http://192.168.1.40>.

Figure 5. Initiate Web Connect in Browser

Upon entering the **Web Connect** configuration interface for the first time, the user must create a password. Once inside the interface, users should follow the embedded help to create **Virtual Sensing Zones** and **Templates**.

OI-E1480 Catalog Numbers

Table 5. Swift-E Catalog numbers and available accessories

Description	Cat #
Odos Imaging Swift-E Reconfigurable 3D Sensor	OI-E1480
Allen-Bradley® 12-15 VDC 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
Ethernet cable with RJ45 connector (shielded cable is strongly recommended)	1585J-xxxxx
Mounting plate with 1/4"-20 thread for standard tripod mount	OI-TMOUNT
12V DC Power Supply (office grade), M12 Connector (does not include power cord)	OI-PS

Specifications

Table 6. Swift-E Product Specifications

Parameter	Value
Sensing Area	640 × 480 individual distance points
Field-of-view	43° × 33° (H × V, measured in center)
Measurement Resolution	1 cm
Measurement Precision	±1 cm (typical at 2 m, varies with return signal level)
Illumination	7 × LEDs @ 850 nm
Operating Range	0.5 — 6 m (~1.5 to 20 ft)
Output Data	Height, Distance
Response Time	~100 ms (trigger to data)
Protocol	EtherNet/IP
Power	12 VDC / 30 W (typical), 60 W (peak)
Operating Temperature	-20 to 50 °C
Environmental Rating	IP20
Virtual Sensing Zones	Up to 64 VSZ can be created for every template
Number of Templates	Up to 255 templates can be created

Waste Electrical and Electronic Equipment (WEEE)



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

Additional Resources

Resource	Description
OI-E1480 User Manual	Provides detailed information on the setup and use of Swift-E devices.
EtherNet/IP Network Devices, publication ENET-UM006	Manual describing 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.
Link to Product Certification website	Provides declarations of conformity, certificates, and other certification details.