

OMRON solution GUIDE

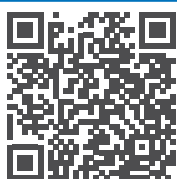
Object Detection in Robotic Cells

Ensuring precise and efficient automated manufacturing processes through advanced object detection.

Key Features

- Indicator lights enable users to conveniently check the operational status of sensors
- Sensor threshold is able to be set using a single button
- Anti-fouling coating prevents environmental elements such as dust and water from sticking to the sensing surface

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Challenges:

- Sensors within robotic cells often require precise positioning and alignment in order to perform consistently
- Object detection in robotic cells has to be able to adapt to dynamic changes in environment such as, lighting variations, new objects, and conditions such as dust
- Integrating new technologies into existing production processes

Why E3AS-F in Object Detection within Automation?

- Using the TOF (time-of-flight) method, the sensor is able to measure the distance between the itself and the object, providing robot cell real-time feedback in order to make necessary adjustments
- Additionally, TOF method allows the sensor to reliably detect objects regardless of color, texture, shape, and reflectivity
- IO Link facilitates installation and troubleshooting, making it possible to group check sensors for any installation mistakes or disconnections

Sensor Type	Sensor Distance	Material	Connection	PNP Model (I/O Link)	NPN Model
Time of Flight with Background Suppression	50-1500mm	Stainless Steel	Pre-wired M12 Connector	E3AS-F1500IMT- M1TJ 0.3M	E3AS-F1500IMN- M1TJ 0.3M
			M8 4pin Connector	E3AS-F1500IMT M3	E3AS-F1500IMN M3
		Plastic	Pre-wired M12 Connector	E3AS-F1500IPT- M1TJ 0.3M	E3AS-F1500IPN- M1TJ 0.3M
			M8 4pin Connector	E3AS-F1500IPT M3	E3AS-F1500IPN M3
	50-1000 mm	Stainless Steel	Pre-wired M12 Connector	E3AS-F1000IMT- M1TJ 0.3M	E3AS-F1000IMN- M1TJ 0.3M
			M8 4pin Connector	E3AS-F1000IMT M3	E3AS-F1000IMN M3
		Plastic	Pre-wired M12 Connector	E3AS-F1000IPT- M1TJ 0.3M	E3AS-F1000IPN- M1TJ 0.3M
			M8 4pin Connector	E3AS-F1000IPT M3	E3AS-F1000IPN M3