

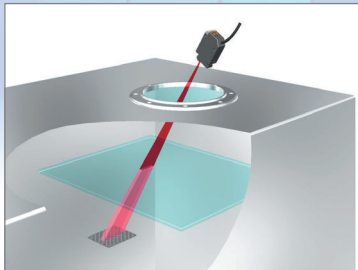
**NEW**

**OMRON**

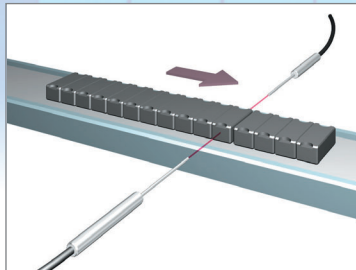
## New Models That Counteract the Decline in Operating Rates Caused by Dust and Dirt

### Advanced ATC Models

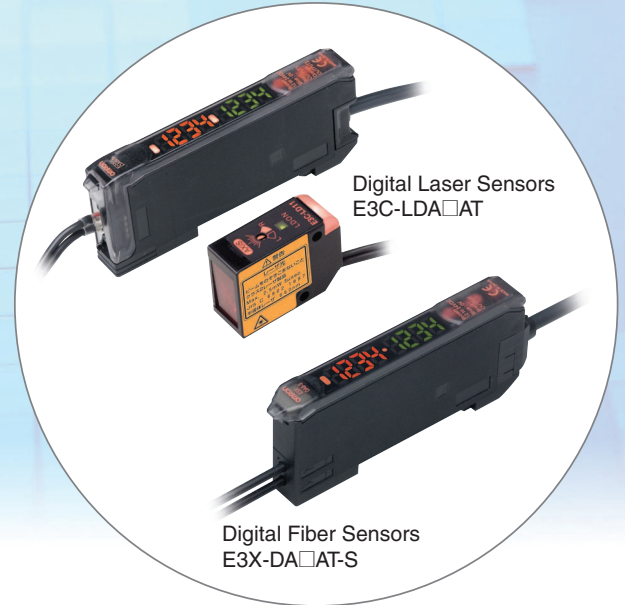
- **Active Threshold Control (ATC)**  
Automatically adjusts the threshold value.
- **ATC Error Output (Selectable Function)**  
Provides an error output when ATC does not adjust the threshold value.
- **Alarm Output (Selectable Function)**  
Provides an alarm when maintenance is required.



Glass substrate detection through view ports



Chip component detection



Digital Laser Sensors  
E3C-LDA□AT

Digital Fiber Sensors  
E3X-DA□AT-S

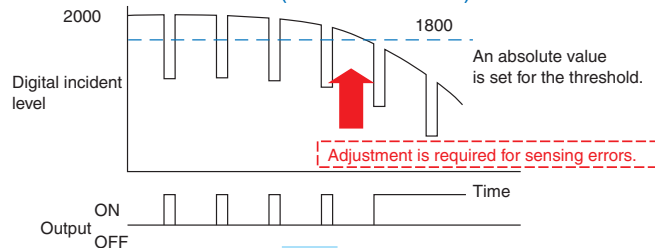
## Technology

### Intelligently Solve Problems Onsite with ATC Function

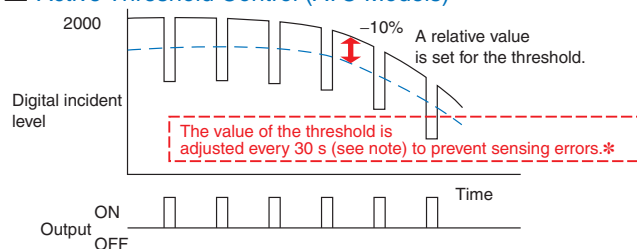
A unique OMRON algorithm has been used that can determine whether changes have been caused by dust and dirt or by differences in workpieces.

The threshold value is automatically adjusted by the Sensor according to changes to increase equipment operating rates by reducing sensing errors. This is particularly true in applications requiring high-precision detection.

#### ■ Fixed Threshold Value (Previous Models)



#### ■ Active Threshold Control (ATC Models)



\* The monitoring range is set in the Sensor according to the threshold value. The threshold value is adjusted according to changes within this range.

### The *DINC* Engine for High-performance Sensing

OMRON's many years of accumulated sensing technology and high-speed digital processing techniques merge to meet onsite needs. Our goal is high-performance sensing that provides easy, reliable application.

#### Reliable Detection of Small Workpieces

12-bit A/D converter (4,000 resolution),  
high-speed response of 48  $\mu$ s (Fiber Sensors)

Fine Sensing

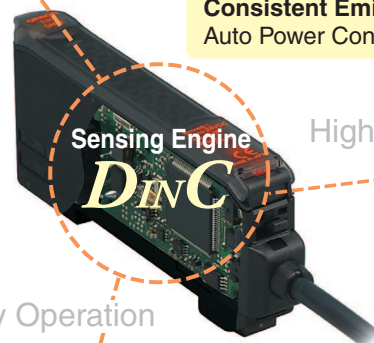
**Automatic Compensation for External Changes**

Active Threshold Control (ATC)

**Consistent Emitter Power**

Auto Power Control (APC)

Easy Operation





High Performance

**Easy-to-read Displays Even at a Distance**  
Intelligent Display



**Eliminates the Need for Distance Mode Settings**  
Power Tuning

## Ordering Information

### Digital Fiber Sensor

Type	Appearance	Functions	Model	
			NPN output	PNP output
Pre-wired Models		<div style="border: 1px solid black; padding: 2px; display: inline-block;">ATC</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">ATC error output</div>	E3X-DA11AT-S	E3X-DA41AT-S
Connector Models		<div style="border: 1px solid black; padding: 2px; display: inline-block;">Alarm output</div>	E3X-DA6AT-S	E3X-DA8AT-S

### Separate Digital Amplifier Laser Sensors

Type	Appearance	Functions	Model	
			NPN output	PNP output
Pre-wired Models		<div style="border: 1px solid black; padding: 2px; display: inline-block;">ATC</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">ATC error output</div>	E3C-LDA11AT	E3C-LDA41AT
Connector Models		<div style="border: 1px solid black; padding: 2px; display: inline-block;">Alarm output</div>	E3C-LDA6AT	E3C-LDA8AT

## Ratings and Specifications

Item	Type	Model	Digital Fiber Sensors		Separate Digital Amplifier Laser Sensors	
		NPN output	E3X-DA11AT-S	E3X-DA6AT-S	E3C-LDA11AT	E3C-LDA6AT
		PNP output	E3X-DA41AT-S	E3X-DA8AT-S	E3C-LDA41AT	E3C-LDA8AT
Response time	Super-high-speed mode	Operate or Reset: 80 μs			Operate or Reset: 100 μs	
	High-speed mode	Operate or Reset: 250 μs			Operate or Reset: 250 μs	
	Standard mode	Operate or Reset: 1 ms				
	High-resolution mode	Operate or Reset: 4 ms				
Functions	ATC	Active threshold control (used for output 1)				
	I/O settings	The signal that is output can be selected (used for output 2): ATC error output				
	Startup operation	The operation when power is turned ON can be selected: No operation, PT, or PT + ATC				

Note: Basic performance is the same as the Advanced Twin-output Sensors. Refer to E3C-LDA Datasheet (E338) and E3X-DA-S Datasheet (E336) for details. Only differences from the Advanced Twin-output Sensors have been given above.

This document provides information mainly for selecting suitable models. Please read the *Instruction Sheet* carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

**Note: Do not use this document to operate the Unit.**

#### OMRON Corporation

Industrial Automation Company

Application Sensors Division  
Sensing Devices and Components Division H.Q.

Shiokoji Horikawa, Shimogyo-ku,  
Kyoto, 600-8530 Japan  
Tel: (81)75-344-7068/Fax: (81)75-344-7107

#### Regional Headquarters

##### OMRON EUROPE B.V.

Sensor Business Unit,  
Carl-Benz-Str. 4, D-71154 Nufringen,  
Germany  
Tel: (49)7032-811-0/Fax: (49)7032-811-199

##### OMRON ELECTRONICS LLC

1 East Commerce Drive, Schaumburg,  
IL 60173 U.S.A.  
Tel: (1)847-843-7900/Fax: (1)847-843-8568

##### OMRON ASIA PACIFIC PTE. LTD.

83 Clemenceau Avenue,  
#11-01, UE Square,  
239920 Singapore  
Tel: (65)6835-3011/Fax: (65)6835-2711

##### OMRON CHINA CO., LTD. BEIJING OFFICE

Room 1028, Office Building,  
Beijing Capital Times Square,  
No. 88 West Chang'an Road,  
Beijing, 100031 China  
Tel: (86)10-8391-3005/Fax: (86)10-8391-3688

#### Authorized Distributor:

Note: Specifications subject to change without notice.

Cat. No. E356-E1-01  
Printed in Japan  
0305-2M (0305) (B)