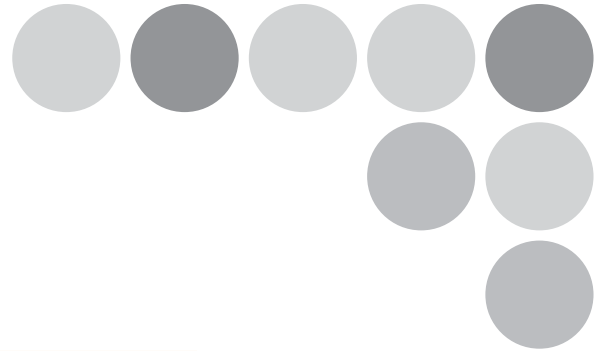


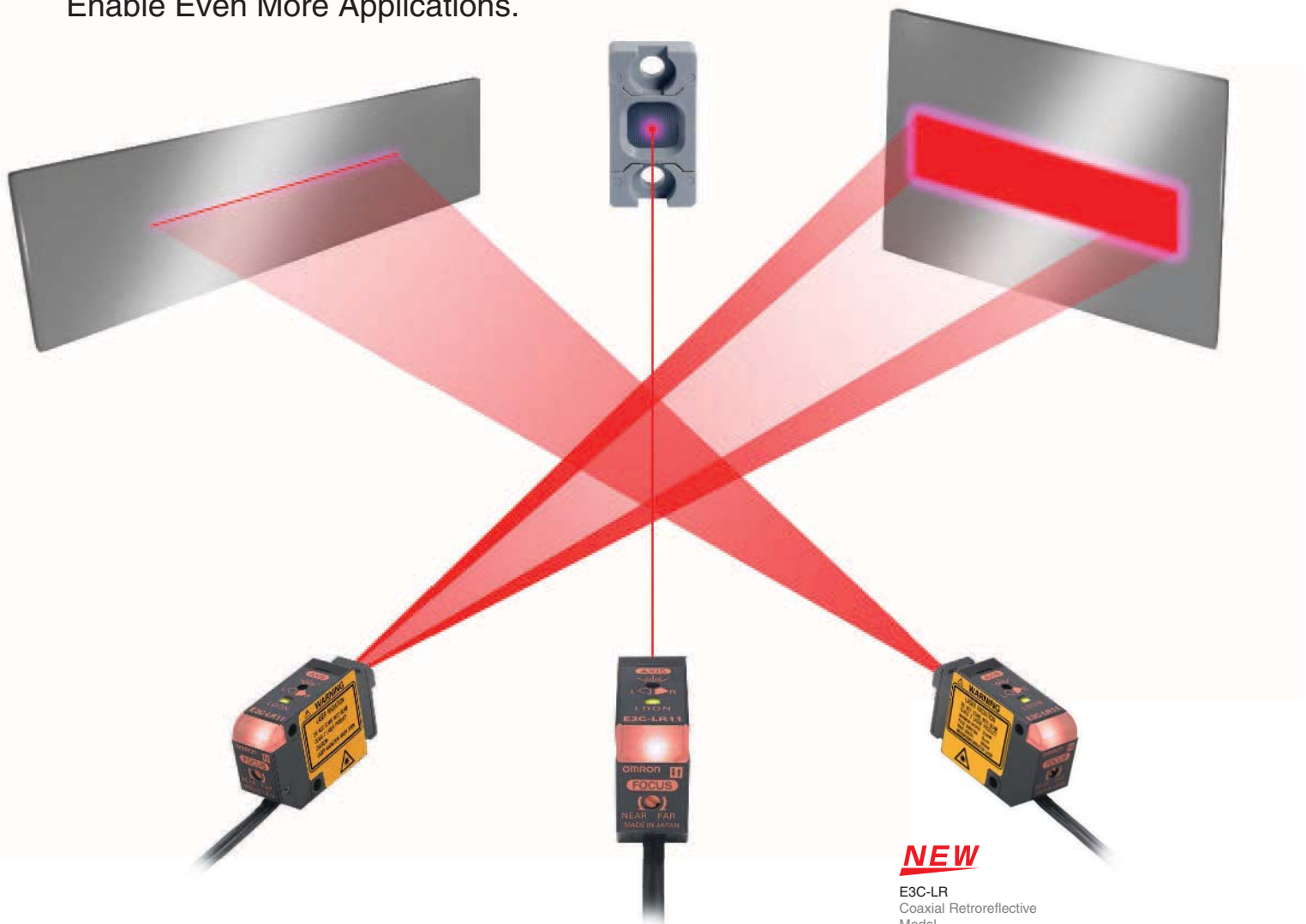
Photoelectric Sensors with Separate Digital Amplifiers

Laser Type

E3C-LDA Series



We Have Added Spot, Line, and Area Type **Coaxial Retroreflective Models** to Our Popular Line of Spot, Line, and Area Type Diffuse Reflective Models to Enable Even More Applications.



NEW

E3C-LR
Coaxial Retroreflective
Model

E3C-LD
Diffuse Reflective Model



**Innovation
in the Solution Age**

OMRON INDUSTRIAL AUTOMATION

Easy to Set and Highly Precise!

Versatile laser beam application.

NEW

Coaxial Retroreflective Model

Easy Sensor Installation and Sensing Characteristics Equivalent to Through-beam Sensors.

Sensing distance of 7 m.



E39-R13*

Optical axis alignment range:
Approximately ± 1 to 1.5

At 1 m: Minimum spot diameter of 0.8 mm

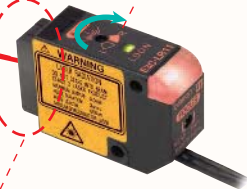
Variable Focal Point Mechanism

Spot diameter can be adjusted to enable ultra-high-precision positioning.

The E3C-LR12 conforms to Class 1 JIS standards and provides a focused linear beam with a constant 2-mm diameter.

Optical Axis Adjustment Mechanism

The sensor detection point can be easily changed.

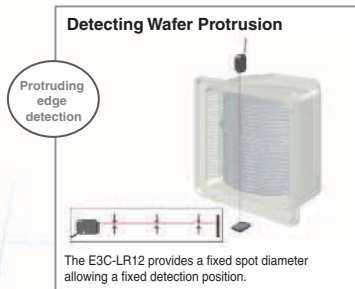
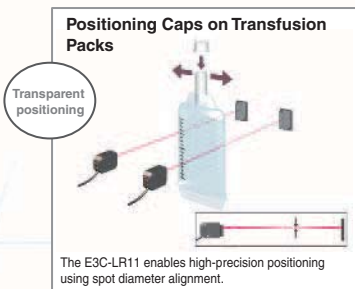


NEW

Spot Type
E3C-LR11

Coaxial Optical System

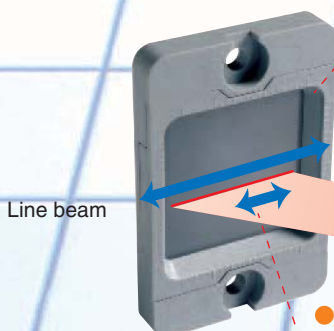
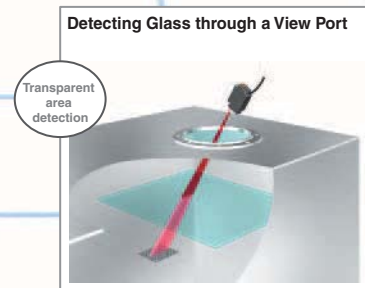
The coaxial optical system and laser beam allow high-precision detection. The built-in MSR Function inhibits the effect of reflected light from the workpiece.



Applications

Reflectors

Graduated scale enables smooth beam alignment. The disk-like shape helps prevent dust accumulation. Select from 5 models, including cuttable sheet types. (Reflector sold separately.)



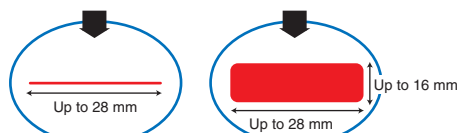
E39-R12*

Variable Beam Sizes

The beam size can be changed to suit the application using the focus adjustment.

Beam Units

Mounting a Beam Unit enables easy application of line beams or area beams.



E39-P31/P41
Line Area

Line Type
E3C-LR11 + E39-P31
Area Type
E3C-LR11 + E39-P41

* Shape change from Reflectors shipped September 2003.

Spot, line, and area types - Select from 3 optical systems

Created to enable beam type selection.



Diffuse Reflective Model

All three beam types provide ample long-distance detection of 1,000 mm.

Sensing distance of 1 m.

Three beam types means a wider variety of applications.

● **Spot, Line, and Area Types**

Suitable for various applications without any additional costs.

Mount Beam Units to a Spot Type Sensor to convert to Line or Area Type.

Line Type
E3C-LD21



8 mm - 0.2 mm - 3.5 mm
VR minimum VR median VR maximum

At distance of 150 mm
7 mm - 28.5 mm - 33 mm
VR minimum VR median VR maximum

At 1,000 mm: Minimum spot diameter of 950 μm

Spot Type
E3C-LD11



5 mm to 15 mm
VR minimum VR maximum

At distance of 150 mm
5 mm to 33 mm
VR minimum VR maximum

Area Type
E3C-LD31



Applications

Noodle Protrusion Inspection

- Confirmation before packaging

Area detection

Line beam

Protrusion

Fewer NG products

Repeated Robot Arm Positioning Teaching for Calibration

Positioning

Improved product quality

Inspection for Fine Pins

- Confirming guide pin movement

Minute objects

Fewer NG products

Improved operating rate

Sheet Displacement Inspection

- Confirming marks on sheets
- Confirming sheet displacement before printing

Edge white/black deviations

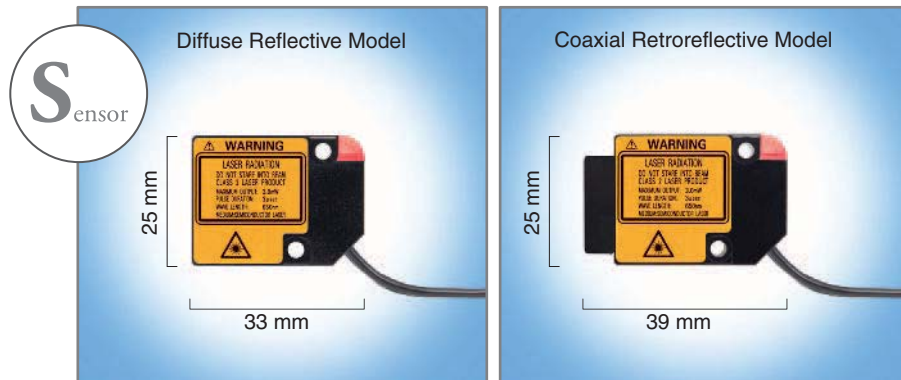
Fewer NG products

Improved operating rate

Sensor

Industry-first Variable Focal Point and Optical Axis Alignment Mechanisms. Optimize for workpieces and improve inspection quality.

Two functions for simple adjustment and reliable detection for small workpieces.

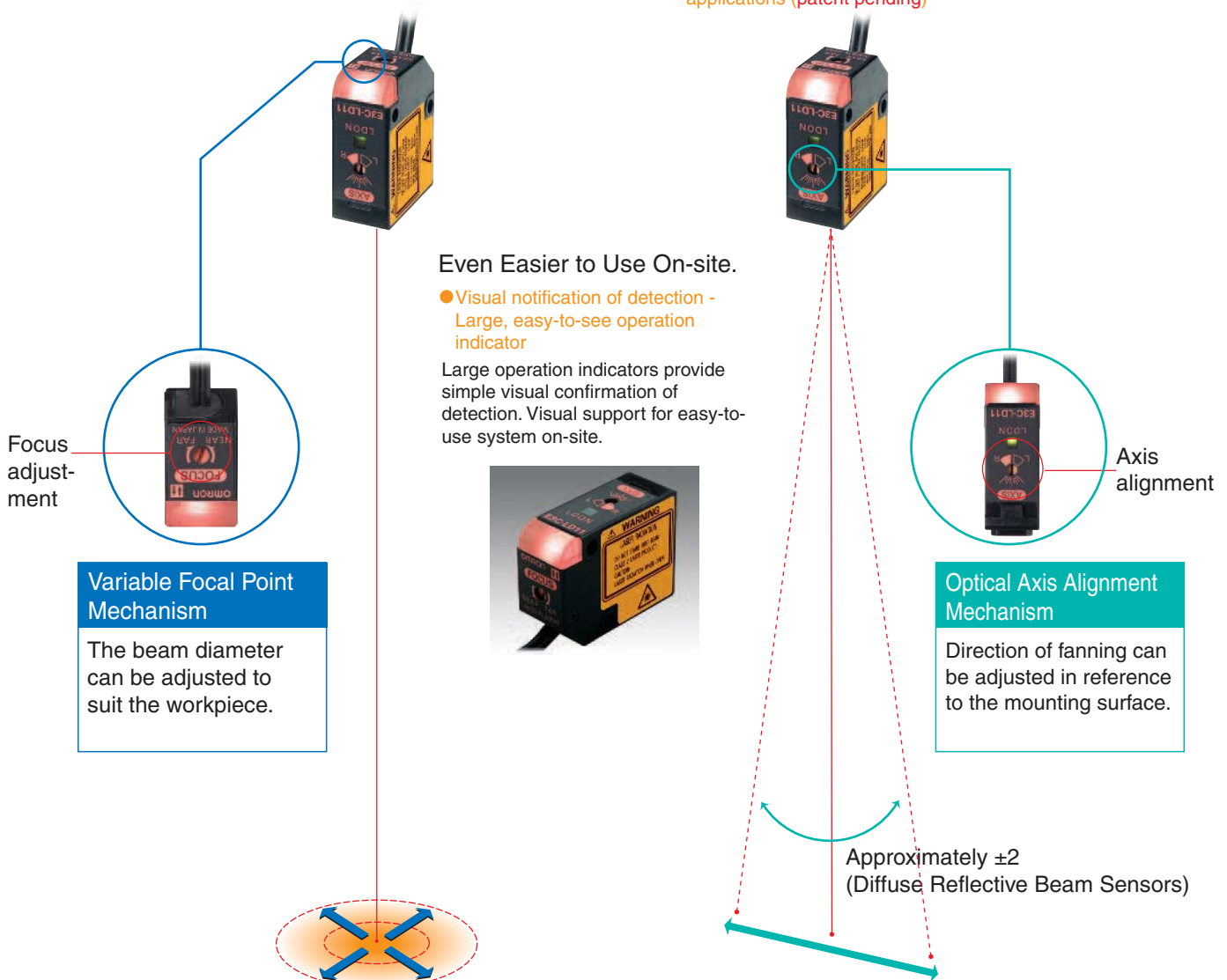


Selectable beam sizes improve the reliability of detection with a variable focal point mechanism.

- User-adjustable beam size (patent pending)

Use the optical axis alignment mechanism to easily adjust the optical axis. No more bothersome axis alignments.

- Perfect for long-distance positioning applications (patent pending)



Amplifier

Drive the Laser with an Amplifier the Same Size as a Digital Fiber Amplifier.

Intelligent display with the Mobile Console: The ultimate in easy operation.

Refer to the E3X-DA-S Digital Fiber Sensor datasheet (Cat. No. E336) for details.



Connectors comply with E-Con specifications*.



E-Con* Connectors make Sensor Heads easier to connect.

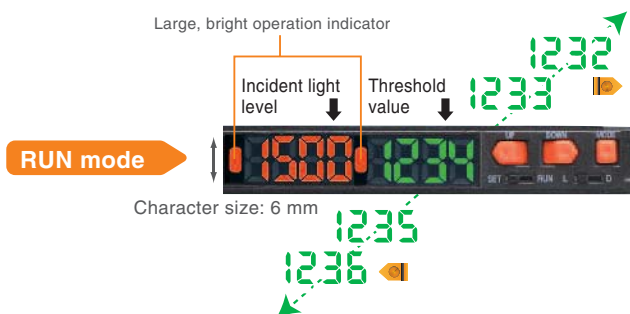
One-touch Connector between Sensor Head and Amplifier
Allows repeated connection when replacing sensors, when wiring, or during maintenance. Reduced inconsistencies or mistakes by maintenance staff through simple connection procedure and reliable contact.

*Connectors Comply with E-Con Specifications

Specifications meet the current standardization trends of FA device and connector manufacturers.
Connection is simple: No special tools are required.

Clear, large, easy-to-read Intelligent Display.

Two easy-to-read digital displays with large characters
Thresholds can be set easily while checking incident light levels.



Comprehensive functions.

- Dual digital display makes sensitivity adjustments easy.
- A variety of display modes to assist settings and operation.
- High-speed response (80 μ s: E3C-LDA21/51/7/9)
- High-precision mode (long distance, high resolution)
- Interference prevention (10 Units: Standard/High-resolution mode. Can be used together with E3X-DA-S-series Fiber Amplifiers.)
- Select 2 outputs or 1 output and 1 input (depending on model).
- Differential function and counter function
- Zero reset function and timer function

Flexible control using a Mobile Console.

A Mobile Console can be used for remote operation from the Sensor Head when the Sensor Head and Amplifier Unit are separated by a considerable distance.

E3X-MC11-S

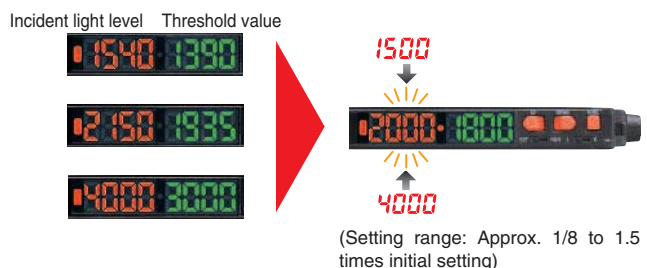


Optimal light level setting and power tuning function made possible by digital operation.

■ Display values on different Sensors can be unified exactly.

Patent pending

You can easily control settings even when multiple Sensors are used because the same incident light levels and threshold value settings can be made for the same application.

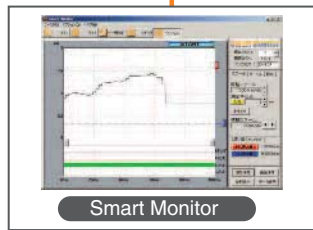


ms.

A host of remarkable functions inside a compact body.
 A complete lineup of sensor heads to handle an even wider range of applications.
 This is the platform for OMRON's sensing technology.

Linear Platform

High-resolution sensing using laser and magnetic technology.



Laser-type Smart Sensors ZX-L Series



An improved lineup for smarter sensing.

Inductive Displacement Smart Sensors ZX-E Series



A lineup of Smart Sensors that use the eddy current method.

ON/OFF Platform

A common platform for Fiber Sensors and Sensors with Separate Amplifiers.



Digital Fiber Sensors E3X-DA-S Series



Refinement and a new generation that goes beyond superior performance.

Laser-type Photoelectric Sensors with Separate Digital Amplifiers E3C-LDA Series



Photoelectric Sensors with Separate Digital Amplifiers have joined the Smart Sensor family.

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