NEW

Fiber Unit Build-in Lens Series

E32-LT/LD

OMRON

~Reduce Your Work Load~

Build-in Lens High-power, Stable Detection Is the Standard for the Future!

15°

Build-in Lens
GIGA Beam

Without lens
60°

M4 Through-beam

M6 Reflective

realizing

Build-in Lens Series

～Reduce Your Work Load～

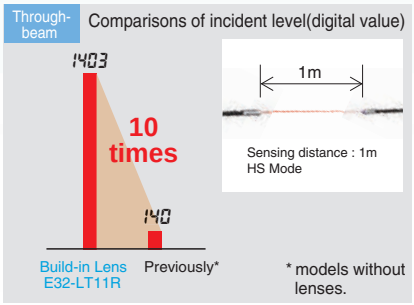
High-power, Stable Detection Is the Standard for the Future!

General-purpose threaded Fiber Units provide easy installation and stable detection for a variety of uses at an affordable price.

High Power and Aperture Angle of 15° “GIGA Beam”

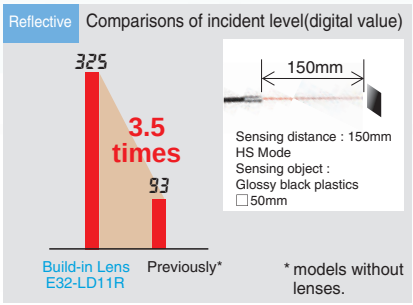
Stable

Long-term stable detection in dust environment



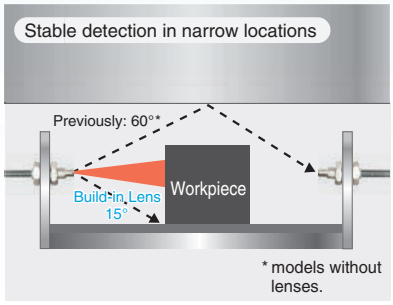
Approximately 10 times the light intensity of conventional models. High power achieves long-term stable detection.

Stable Detection Even for Workpieces with Low Reflection



Approximately 3.5 times the light intensity of conventional models. Differences in incident level are increased even for black workpieces to provide stable detection.

Prevents false detection of light that is reflected off surrounding objects



Aperture angle of 15° greatly reduces false detection due to reflected light in narrow locations.

No Need to Ever Attach a Lens

Easy

Reduced work in selection and attachment

There is no need to select a combination with a lens or attach a lens delicately. The lens also does not protrude for neater installation.

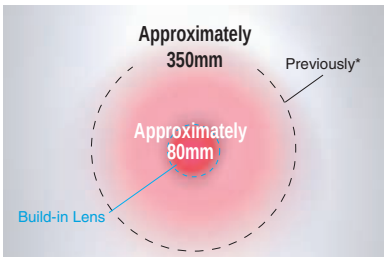
Reliable

No worries about loosing a lens

There is no need to worry about a lens falling off and getting mixed with the workpieces or about ordering a new lens when one is lost.

Point

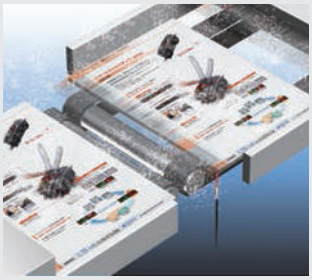
The clear spot simplifies onsite adjustments.



Comparison with Fiber Unit without a Lens with a Sensing Distance of 300 mm (Spots Overlapped in the Center)
* models without lenses.

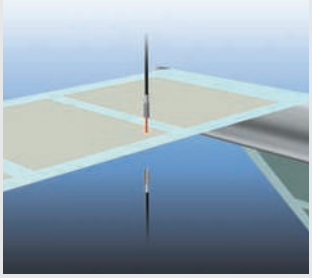
Application

Positioning Paper in Book Production



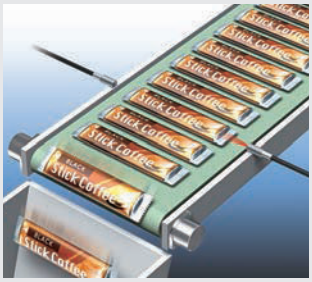
The high power provides stable detection even in environments containing paper dust.

Detection of Labels through Label Backings



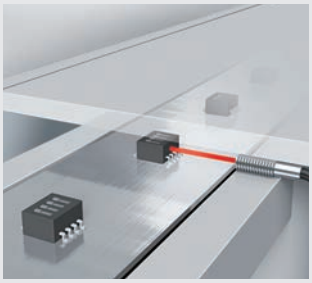
The high power lets the light penetrate the backing material for stable label detection

Detection of Passing Stick Coffee Packages



Aperture angle of 15° ensures stable detection even with narrowly spaced workpieces.

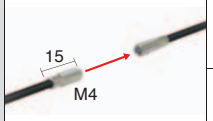
Detection of Electronic Component inside Devices



Aperture angle of 15° also ensures stable detection without an error even if there are objects near small devices.

Through-beam Fiber Units

Specifications

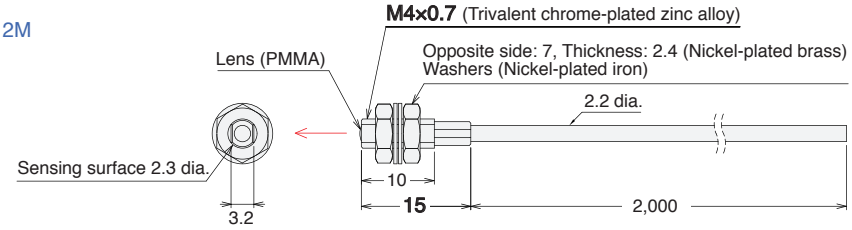
Type		Appearance (mm)	Bending radius of cable	Sensing distance (mm)				Optical axis diameter (minimum sensing object)	Models
				E3X-HD		E3NX-FA			
Sensing direction	Aperture angle			GIGA HS	Other modes	GIGA HS	Other modes		
Top-view	15°		R25	4,000* / 2,700	ST : 4,000* SHS: 1,080	4,000* / 4,000*	ST : 4,000* SHS: 1,080	2.3 dia. (0.1 dia./ 0.03 dia.)	E32-LT11 2M
			Flexible, R1	4,000* / 2,300	ST : 3,500 SHS: 920	4,000* / 3,450	ST : 4,000* SHS: 920		E32-LT11R 2M

* The optical fiber is 2 m long on each side, so the sensing distance is 4,000 mm.

Note 1. The following mode names and response times apply to the modes given in the Sensing distance column.
[E3X-HD] GIGA: Giga-power mode (16 ms), HS: High-speed mode (250 µs), ST: Standard mode (1 ms), and SHS: Super-high-speed mode (NPN output: 50 µs, PNP output: 55 µs)
[E3NX-FA] GIGA: Giga-power mode (16 ms), HS: High-speed mode (250 µs), ST: Standard mode (1 ms), and SHS: Super-high-speed mode (30 µs)
2. The values for the minimum sensing object are reference values that indicate values obtained in standard mode with the sensing distance and sensitivity set to the optimum values. The first value is for the E3X-HD and the second value is for the E3NX-FA.

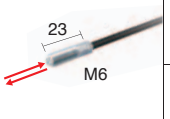
Dimensions (mm)

E32-LT11 2M/E32-LT11R 2M
(Free Cutting)



Reflective Fiber Units

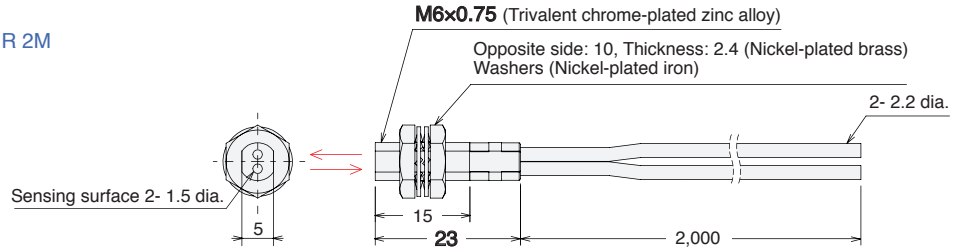
Specifications

Type		Appearance (mm)	Bending radius of cable	Sensing distance (mm)				Optical axis diameter (minimum sensing object)	Models
				E3X-HD		E3NX-FA			
Sensing direction	Aperture angle			GIGA HS	Other modes	GIGA HS	Other modes		
Top-view	15°		R25	860 / 250	ST : 360 SHS: 110	1,290 / 370	ST : 540 SHS: 110	(0.1 dia./ 0.03 dia.)	E32-LD11 2M NEW
			Flexible, R1	840 / 240	ST : 350 SHS: 100	1,260 / 360	ST : 520 SHS: 100		E32-LD11R 2M NEW

Note 1. The following mode names and response times apply to the modes given in the Sensing distance column.
[E3X-HD] GIGA: Giga-power mode (16 ms), HS: High-speed mode (250 µs), ST: Standard mode (1 ms), and SHS: Super-high-speed mode (NPN output: 50 µs, PNP output: 55 µs)
[E3NX-FA] GIGA: Giga-power mode (16 ms), HS: High-speed mode (250 µs), ST: Standard mode (1 ms), and SHS: Super-high-speed mode (30 µs)
2. The values for the minimum sensing object are reference values that indicate values obtained in standard mode with the sensing distance and sensitivity set to the optimum values. The first value is for the E3X-HD and the second value is for the E3NX-FA.
3. The sensing distances for Reflective Fiber Units are for glossy white paper.

Dimensions (mm)

E32-LD11 2M/E32-LD11R 2M
(Free Cutting)



Point

Proof of Stable Detection with Reflective Models

See the Difference Even for Difficult-to-detect Black Workpieces!

The sensing distance is about twice that of conventional Fiber Units without lenses even for (small or low-reflective) workpieces that require short sensing distances due to small differences in incident level.The High Power ensures not only stable presence detection, but also the high precision required for long-distance positioning.

		Sensing distance (mm) : Amplifier Units E3X-HD			
		SHS	HS	ST	GIGA
E32-LD11		65	160	160	500
E32-LD11R		65	150	150	400
conventional models	E32-D11R	25	70	70	250

twice

Sensing object : Glossy black plastics □50mm

Through-beam Fiber Units

Installation Information

Models	Installation		Cable						Weight (packed state) (g)
	Ambient temperature	Tightening torque	Bending radius	Unbendable length	Tensile strength	Sheath material	Core material	Emitter/receiver differentiation	
E32-LT11 2M	-40 to 70°C	0.78N·m	R25	10	29.4N	Polyethylene	Plastic	None	40
E32-LT11R 2M			R1	0					

Reflective Fiber Units

Installation Information

Models	Installation		Cable						Weight (packed state) (g)
	Ambient temperature	Tightening torque	Bending radius	Unbendable length	Tensile strength	Sheath material	Core material	Emitter/receiver differentiation	
E32-LD11 2M	-40 to 70°C	0.98N·m	R25	10	29.4N	Polyethylene	Plastic	None	40
E32-LD11R 2M			R1	0					

Introduction to Fiber Sensors

OMRON also provides many other types of Fiber Sensors.

Refer to Fiber Sensor Best Selection Catalog (E418).

E3X-HD Smart Fiber Amplifier Units

Easily Achieve the Highest Stability

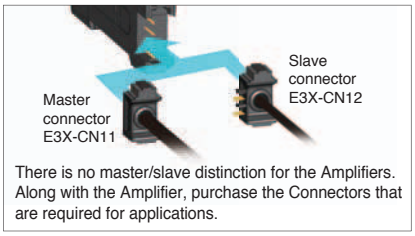
Fiber Amplifier Units

Type	Appearance	Connection method	Model	
			NPN output	PNP output
Standard		Pre-wired (2 m)	E3X-HD11 2M	E3X-HD41 2M
		Wire-saving connector	E3X-HD6	E3X-HD8
		M8 connector	E3X-HD14	E3X-HD44
For Communication unit connection		Communication unit connector	E3X-HD0	

Wire-saving Connectors

(Order Separately) (An Amplifier Unit with a wire-saving connector is required.)

Type	Appearance	Number of conductors	Model
Master connector		3	E3X-CN11
Slave connector		1	E3X-CN12



There is no master/slave distinction for the Amplifiers. Along with the Amplifier, purchase the Connectors that are required for applications.

Sensor I/O Connectors

(Order Separately) (An Amplifier Unit with a M8 connector is required.)

Appearance	Cable length	Number of conductors	Model
Straight	2 m	4	XS3F-M421-402-A
Right-angle			XS3F-M422-402-A

*Refer to Fiber Sensor Best Selection Catalog (E418).

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