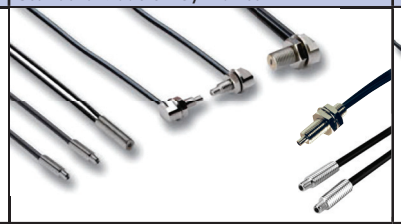
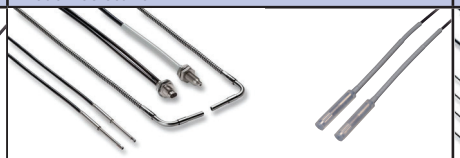
Fiber-Optic Sensing Heads

Navigation Guide

OMRON AUTOMATION & SAFETY

Product Line		Standard Models	Special Beam Models	Environment-Resistant Models	Application Specific Models
Application		These fiber units can be used in a variety of applications, such as detecting the presence of workpieces and positioning.	A variety of fiber units incorporating the latest optical technology makes it possible to solve common problems related to detection in dusty and dirty areas, detecting small workpieces and in high vibration applications.	These fiber units for adapting to a variety of environmental conditions. These fiber units enable detection in high-temperature, splattering chemicals and vacuums.	Fiber units developed for specific applications like: • Label detection • Liquid-level detection • Alignment and mapping glass substrates • Wafer mapping • True color detection • Distance measurement
Sensor Type		Through-Beam, Diffused Reflective	Through-Beam, Diffused Reflective, Retro-reflective, Convergent reflective	Through-Beam, Diffused Reflective	Through-Beam, Diffused Reflective
Sensing Distances		Standard Mode Shortest Distance 0-8 mm, Longest Distance 0-1000 mm	Standard Mode Shortest Distance 0-3 mm, Longest Distance 0-20,000 mm	Standard Mode Shortest Distance 0-40 mm, Longest Distance 0-3400 mm	Standard Mode Shortest Distance 1-5 mm, Longest Distance 0-3400 mm
IP Rating		IP67, IP50, IP40	IP67, IP50, IP54, IP40	IP67	IP67, IP50, IP40
Minimum Bending Radius		1 mm, 4 mm, 10 mm, 25 mm	1 mm, 4 mm, 10 mm, 25 mm	4 mm, 10 mm, 25 mm, 30 mm, 35 mm, 40 mm	1 mm, 4 mm, 10 mm, 25 mm, 35 mm, 40 mm
Material	**Head**	Nickel-Plated Brass (NPB) Stainless Steel (SUS)	Nickel-Plated Brass, Stainless Steel, Fluororesin, Aluminum	Nickel-Plated Brass, Stainless Steel, Fluororesin, Aluminum	Nickel-Plated Brass, Stainless Steel, Fluororesin, Aluminum, ABS
	Fiber	PMMA (polymethylmethacrylate)	PMMA (polymethylmethacrylate), Glass	PMMA (polymethylmethacrylate), Glass, Fluororesin	PMMA (polymethylmethacrylate), Glass
	Sheath	Polyethylene Coating, PVC Coating	Polyethylene Coating, PVC Coating	Fluororesin Coating, Fluororesin, Stainless Steel, Polyethylene Coating	Polyethylene Coating, PVC Coating, Stainless Steel
Selection		Standard Models - Cylindrical	Special Beam - Long Distance	Heat Resistant	Area monitoring
Appearance					
Standard Part Numbers		• E32-TC200 • E32-TC200E • E32-T11N • E32-DC200 • E32-D11N • E32-DC200E • E32-CC200	• E32-T16J • E32-T17L • E32-D16	• E32-T51 • E32-T61-S • E32-T81F-S • E32-T84S-S • E32-D61-S • E32-D73-S	• E32-M21 • E32-T16PR • E32-T16JR • E32-T16WR • E32-T16W • E32-ET16WR-1 • E32-D36P1
Selection		Standard Model - Square	Special Beam - Miniature	Vacuum Resistant	Special Application
Appearance					
Standard Part Numbers		• E32-T15X • E32-T15Y • E32-D15X • E32-D15Y • E32-D15Z	• E32-TC-200B • E32-TC200F • E32-DC200B • E32-DC200F • E32-D21L • E32-D33	• E32-VF4 (thru-wall fitting) • E32-T15V • E32-T54V • E32-T84SV (in-chamber) • E32-T10V 2M (external)	• E32-T11F • E32-D16 • E32-G14 • E32-D82F1 • E32-T14

Additional fiber-optic sensing heads can be found online at **www.omron247.com**, search E25I-E-01

Fiber-Optic Sensor Amplifiers

Navigation Guide

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Product Line	Easy-Teach Digital Amplifier	High Performance Digital Fiber Amplifier	Bar Graph Display Amplifier
Selection	E3X-HD	E3NX-FA	E3X-NA, E3X-NA-F
Description	**The E3X-HD is the new go-to fiber amplifier** for standard applications. It offers stable detection and intuitive operation. $	**The E3NX-FA is the go-to for advanced fiber-optic applications.** It provides the same intuitive operation as the E3X-HD, but with improved detection and more output/input options. $$	**The E3X-NA is a basic fiber amplifier,** providing quick & easy potentiometer adjustment and bar graph display. $
Features	• Simple one-button smart tuning for sensor threshold and light intensity • Confirm settings and status easily with dual digital display • Automatic compensation for large objects and low reflectance dark targets • Smart power control function compensates for grime build-up and LED deterioration • EtherCAT and CompoNet high-speed network communication interfaces available	• Provides the longest sensing distance and smallest minimum sensing object size • Offers options with 1 or 2 outputs and an external input • Same simple one-button teach and dual digital display as the E3X-HD, but with an even brighter LED display • Automatic compensation for large objects and low reflectance dark targets • Smart power control function compensates for grime build-up and LED deterioration • High-speed network communication interfaces available	• Easy adjustment with potentiometer • Mutual interference prevention • Enhanced water resistance types • E3X-NA-F: 20 µs turn on time

Quick Link B326

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Product Line	2-in-1 Digital Fiber Amplifier	Color (RGB) Digital Fiber Amplifier	Infrared Digital Fiber Amplifier
Selection	E3X-MDA	E3X-DAC-S	E3X-DAH-S
Description	**E3X-MDA incorporates 2 digital fiber amplifiers** in one slimline housing. For applications requiring the detection of two objects simultaneously the E3X-MDA provides an easy to use operation saving space and set-up time. $$$	**The E3X-DAC-S detects the color and returned light intensity of a mark or object** and compares it with a stored RGB ratio or intensity value. The RGB ratio or contrast difference allows the stable detection of differently colored, black, grey or white marks or objects. $$$	**Digital fiber amplifiers with infrared LED** are ideal for detection applications in dusty or misty environments, or where visible light is not desired (such as film and photo processing labs). $$$
Features	• Two digital amplifiers in one slimline housing • Twin output models – on/off or area (between two threshold values) • Signal comparison functions (AND, OR, etc.)	• White LED for color independence • Fast response time of min. 60 µs • Timer function for variable ON or OFF delay up to 5 seconds • Remote teaching or easy one-button teaching	• Infrared LED • LED power control and signal processing function