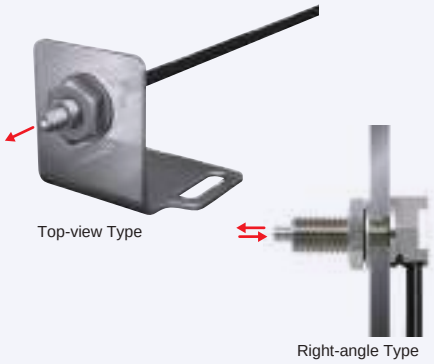
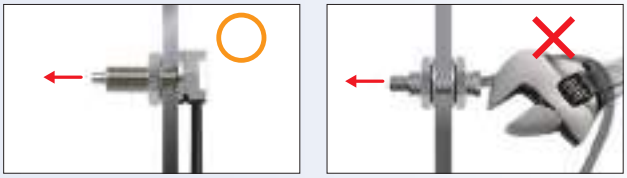


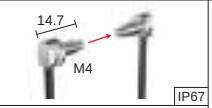
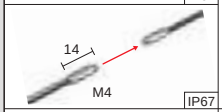
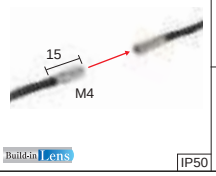
- Standard configuration. These Fiber Units are mounted into a hole drilled in a bracket and secured with nuts.
- The Right-angle Model prevents snagging on the cable because the cable runs along the mounting surface.



Hex-shaped Fiber Units with Build-in Lenses Build-in Lens have been added to the series. (They have a right-angle shape like that of the E32-T11N shown below.)
→ 98 Page

Specifications

Through-beam Fiber Units

Sensing direction (Aperture angle)	Size	Appearance (mm)	Bending radius of cable	Sensing distance (mm) E3X-HD GIGA	HS	Other modes	Sensing distance (mm) E3NX-FA NEW GIGA	HS	Other modes	Optical axis diameter (minimum sensing object)	Models	07 Page Dimensions No.
Right-angle (Approx. 60°)	M4	 IP67	Flexible, R1	2,000	700	ST : 1,000 SHS: 280	3,000	1,050	ST : 1,500 SHS: 280	1 dia. (5 µm dia./ 2 µm dia.)	E32-T11N 2M	07-A
Top-view (Approx. 60°)		 IP67									E32-T11R 2M	07-B
Top-view (Approx. 15°)		 Build-in Lens IP50	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 NEW	07-C
			Flexible, R1	4,000*	2,300	ST : 3,500 SHS: 920	4,000*	3,450	ST : 4,000* SHS: 920		E32-LT11R 2M NEW	

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

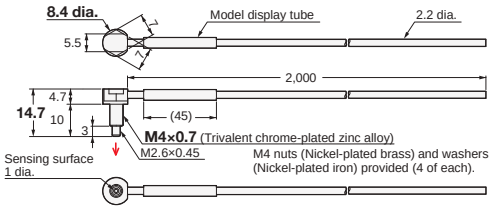
Note 1. The following mode names and response times apply to the modes given in the Sensing distance column.
[E3X-HD] GIGA: Giga-power mode (16 ms), HS: High-speed mode (250 µs), ST: Standard mode (1 ms), and SHS: Super-high-speed mode (NPN output: 50 µs, PNP output: 55 µs)
[E3NX-FA] GIGA: Giga-power 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.
3. The sensing distances for E3NX-FA are values for E3NX-FA□ models. The distances for E3NX-FAH□ infrared models are different.

Dimensions

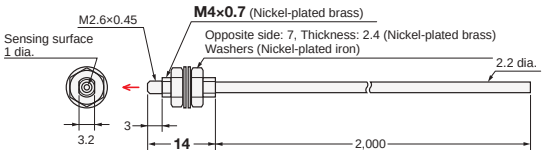
Installation Information → 59, 60 Page

Through-beam Fiber Units (Set of 2)

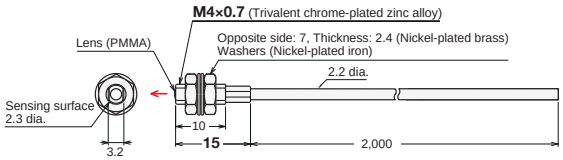
07-A E32-T11N 2M (Free Cutting)



07-B E32-T11R 2M (Free Cutting)



07-C E32-LT11 2M (Free Cutting)
E32-LT11R 2M (Free Cutting)



- Reference Information for Model Selection -

Features of the Right-angle Type

- Cable is less prone to snagging.
- Cable runs along the mounting surface for less space compared with Top-view Fiber Units.
- The nut is attached to the Fiber Unit to reduce installation work.

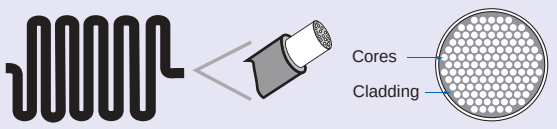
Build-in Lens

What Are Fiber Units with Build-in Lenses?

These Fiber Units have built-in lenses.
They feature high-power beams.
You don't have to worry about the lens falling off and getting lost.

What Is "Flexible" Fiber?

The flexible fiber has a small bending radius for easy routing without easily breaking.
It is easy to use because the cable can be bent without significantly reducing light intensity.



Structure which has a cladding around a large number of ultrafine cores.

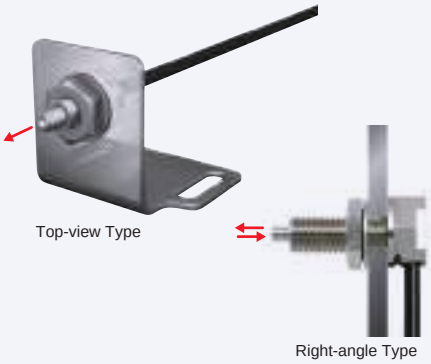
And

Long-distance Sensing Applications

A separate Lens Unit can be attached to extend the sensing distance.
→ 26 Page

Breaking Due to Snagging or Shock

The Fiber Unit can be protected from breaking with stainless steel spiral tube.
→ 40 Page (Excluding the E32-T11N 2M.)



- Standard configuration. These Fiber Units are mounted into a hole drilled in a bracket and secured with nuts.
- The Right-angle Model prevents snagging on the cable because the cable runs along the mounting surface.

Hex-shaped Fiber Units have been added to the series.
(They have a right-angle shape like that of the E32-C31N shown below.)
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Specifications

Reflective Fiber Units

Sensing direction (Aperture angle)	Size	Appearance (mm)	Bending radius of cable	Sensing distance (mm) E3X-HD GIGA	E3X-HD HS	E3X-HD Other modes	E3NX-FA NEW GIGA	E3NX-FA NEW HS	E3NX-FA NEW Other modes	Optical axis diameter (minimum sensing object)	Models	09 Page Dimensions No.
Right-angle (Approx. 60°)	M3	Coaxial, 20.5, M3, IP67	Flexible, R4	110	46	ST : 50 SHS: 14	160	69	ST : 75 SHS: 14	(5 µm dia./ 2 µm dia.)	E32-C31N 2M	09-A
	M6	Coaxial, 24, M6, IP67		780	220	ST : 350 SHS: 100	1,170	340	ST : 520 SHS: 100		E32-C91N 2M NEW	09-B
Top-view (Approx. 60°)	M3	11, M3, IP67	Flexible, R1	140	40	ST : 60 SHS: 16	210	60	ST : 90 SHS: 16		E32-D21R 2M	09-C
		Coaxial, 25, M3, IP67	R25	330	100	ST : 150 SHS: 44	490	150	ST : 220 SHS: 44		E32-C31 2M	09-D
		Coaxial, 11, M3, IP67	R10								E32-C31M 1M	09-E
	M4	15, M4, IP67	Flexible, R1	140	40	ST : 60 SHS: 16	210	60	ST : 90 SHS: 16		E32-D211R 2M	09-F
	M6	17, M6, IP67		840	240	ST : 350 SHS: 100	1,260	360	ST : 520 SHS: 100		E32-D11R 2M	09-G
		Coaxial, 23, M6, IP67	R25	1,400	400	ST : 600 SHS: 180	2,100	600	ST : 900 SHS: 180		E32-CC200 2M	09-H
Top-view (Approx. 15°)	M6	23, M6, Build-in Lens, IP50	R25	860	250	ST : 360 SHS: 110	1,290	370	ST : 540 SHS: 110	(1 dia./ 0.03 dia.)	E32-LD11 2M NEW	09-I
			Flexible, R1	840	240	ST : 350 SHS: 100	1,260	360	ST : 520 SHS: 100		E32-LD11R 2M NEW	

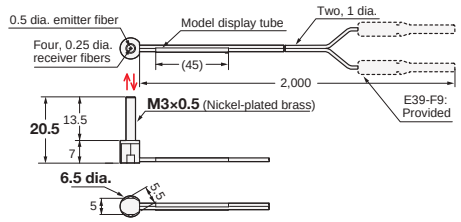
Note 1. The following mode names and response times apply to the modes given in the Sensing distance column.
[E3X-HD] GIGA: Giga-power mode (16 ms), HS: High-speed mode (250 µs), ST: Standard mode (1 ms), and SHS: Super-high-speed mode (NPN output: 50 µs, PNP output: 55 µs)
[E3NX-FA] GIGA: Giga-power 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 white paper. (The sensing distance for the E32-LD11 2M / E32-LD11R 2M are for glossy white paper.)
4. The sensing distances for E3NX-FA are values for E3NX-FA□ models. The distances for E3NX-FAH□ infrared models are different.

Dimensions

Installation Information → 58, 59 Page

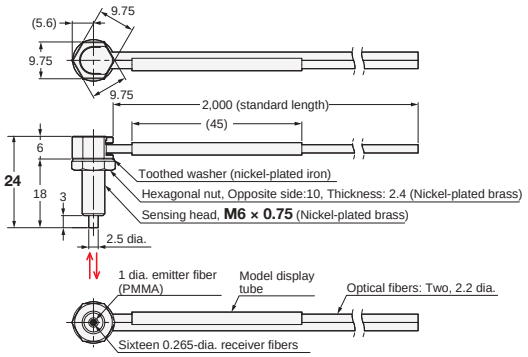
Reflective Fiber Units

09-A E32-C31N 2M (Free Cutting)



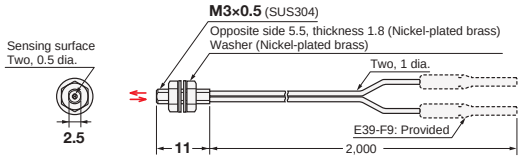
Note: There is a white line on the emitter fiber.
M3 nuts (Nickel-plated brass)
Washers (Nickel-plated brass) provided (2 of each)

09-B E32-C91N 2M (Free Cutting)

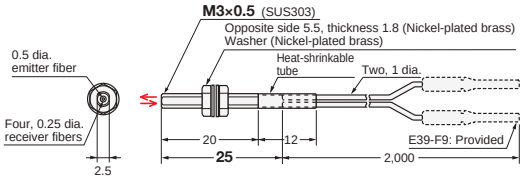


Note: There is a white line on the emitter fiber.

09-C E32-D21R 2M (Free Cutting)

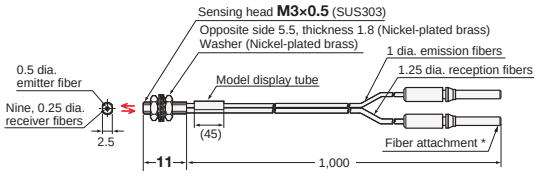


09-D E32-C31 2M (Free Cutting)



Note: There is a white line on the emitter fiber.

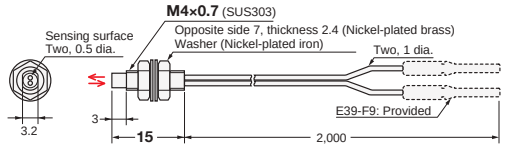
09-E E32-C31M 1M (Free Cutting)



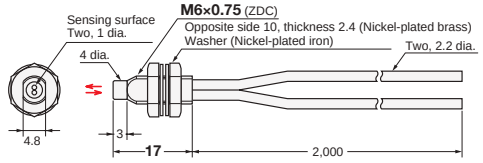
Note: There is a white line on the emitter fiber.

* The Fiber Attachments that are provided were specially designed for this Fiber Unit.
E39-F9 cannot be attached.

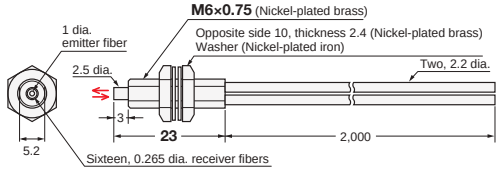
09-F E32-D211R 2M (Free Cutting)



09-G E32-D11R 2M (Free Cutting)

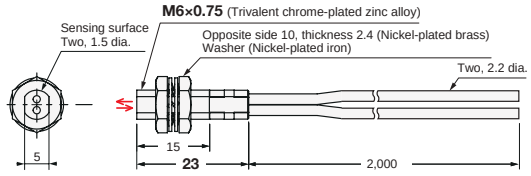


09-H E32-CC200 2M (Free Cutting)



Note: There is a white line on the emitter fiber.

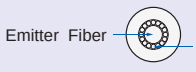
09-I E32-LD11 2M (Free Cutting)
E32-LD11R 2M (Free Cutting)



- Reference Information for Model Selection -

Features of Coaxial Reflective Type

These Fiber Units offer better detection of small objects at close distances (of 2 mm or less) than Standard Reflective Fiber Units.
They also detect glossy surfaces more reliably than Standard Reflective Fiber Units, even if the surface is tilted.
The receiver fibers are arranged around the emitter fiber as shown below.



And

Breaking Due to Snagging or Shock

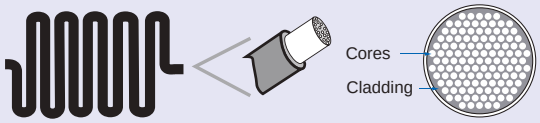
The Fiber Unit can be protected from breaking with stainless steel spiral tube.
→ 42 Page

Features of the Right-angle Type

- Cable is less prone to snagging.
- Cable runs along the mounting surface for less space compared with Top-view Fiber Units.
- The nut is attached to the Fiber Unit to reduce installation work.

What Is "Flexible" Fiber?

The flexible fiber has a small bending radius for easy routing without easily breaking.
It is easy to use because the cable can be bent without significantly reducing light intensity.

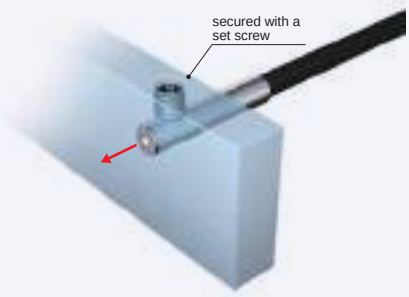


Structure which has a cladding around a large number of ultrafine cores.

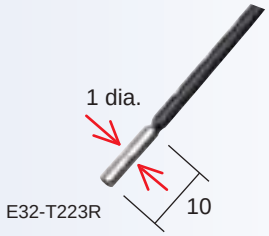
Build-in Lens

What Are Fiber Units with Build-in Lenses?

These Fiber Units have built-in lenses.
They feature high-power beams.
You don't have to worry about the lens falling off and getting lost.



- Inserted where space is limited. (Secured using a set screw.)
- Ultramate space-saving by micro-fiber head. (1 dia. × 10 mm)



- Side-view models can be mounted where there is limited depth.

Specifications

Through-beam Fiber Units

Size	Sensing direction	Appearance (mm)	Bending radius of cable	Sensing distance (mm) E3X-HD GIGA	HS	Other modes	Sensing distance (mm) E3NX-FA NEW GIGA	HS	Other modes	Optical axis diameter (minimum sensing object)	Models	11 Page Dimensions No.
1 dia.	Top-view	10, 1 dia., IP67	Flexible, R1	450	150	ST : 250 SHS: 60	670	220	ST : 370 SHS: 60	0.5 dia. (5 µm dia./ 2 µm dia.)	E32-T223R 2M	11-A
1.5 dia.	Top-view	10, 1.5 dia., IP67	Bendresistant, R4	680	220	ST : 400 SHS: 90	1,020	330	ST : 600 SHS: 90	0.5 dia. (5 µm dia./ 2 µm dia.)	E32-T22B 2M	11-B
3 dia.	Top-view	14, 3 dia., IP67	Flexible, R1	2,000	700	ST : 1,000 SHS: 280	3,000	1,050	ST : 1,500 SHS: 280	1 dia. (5 µm dia./ 2 µm dia.)	E32-T12R 2M	11-C
3 dia.	Side-view	35, 3 dia., IP67	Flexible, R1	750	260	ST : 450 SHS: 100	1,120	390	ST : 670 SHS: 100	1 dia. (5 µm dia./ 2 µm dia.)	E32-T14LR 2M	11-D

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 E3NX-FA are values for E3NX-FA□ models. The distances for E3NX-FAH□ infrared models are different.