

Plastic Fiber Optic Cables



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Product Description

Plastic Fiber Optic Cables from Eaton's electrical sector offer a lower-cost alternative to glass fibers. They are available as bulk cable or pre-assembled with sensing tips.

Bulk fiber optic cable is ordered by the foot and can be cut to length by the user with a special cutter accessory. It can be used with lenses, adapters and terminations. Single fiber is normally used for thru-beam sensing and duplex fiber (two isolated cables running in parallel) for diffuse reflective. Order single fiber cable for both source and detector cable runs. Order duplex fiber cable equal to the length of run—separate source and detector cable not required.

Pre-assembled fiber optic cables are special purpose cables to solve a variety of fiber optic sensing applications. A fiber optic cable cutter is included only for 1 mm bundle models. The cables are available in 1 mm and 0.5 mm diameters (0.5 mm cables cannot be cut to length). Single cable is used for thru-beam sensing, duplex for diffuse reflective sensing.

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Features

- Fiber optic cables allow remote sensing in areas where space is restricted or tight viewing angles are required
- The economical plastic cable is easy to cut to length during installation for a perfect fit (see cutter accessory, 0.5 mm cable cannot be cut)
- Single cable styles are ideal for thru-beam sensing
- Duplex cable styles are typically used for diffuse reflective sensing
- Pre-assembled cables are available in 0.5 mm for sensing extremely small targets



DANGER

THIS SENSOR IS NOT A SAFETY DEVICE AND IS NOT INTENDED TO BE USED AS A SAFETY DEVICE. This sensor is designed only to detect and read certain data in an electronic manner and perform no use apart from that, specifically no safety-related use. This sensor product does not include self-checking redundant circuitry, and the failure of this sensor product could cause either an energized or de-energized output condition, which could result in death, serious bodily injury, or property damage.


For the most current information on this product, visit our Web site: www.eaton.com

For Customer Service in the U.S. call 1-877-ETN CARE (386-2273), in Canada call 1-800-268-3578.
For Application Assistance in the U.S. and Canada call 1-800-426-9184.

Product Selection

Bulk Fiber Optic Cable

Bulk Fiber Optic Cable

	Fiber Diameter	Cable Style	Catalog Number ^①
Bulk Fiber Optic Cable 	0.039 in (1 mm)	Duplex cable (for diffuse reflective sensing)	6324A-XXX
		Single cable (for thru-beam sensing)	6323A-XXX
	Accessories, see Page V8-T9-4 .		

Pre-Assembled Fiber Optic Cables





Pre-Assembled Duplex Fiber Optic Cables
(for Diffuse Reflective Sensing)

	Fiber Diameter	Catalog Number ^②
	Large Diameter, Threaded Tip	
	0.039 in (1.0 mm)	6324A-6501
	0.059 in (1.5 mm)	6324E-6501 ^③
	Small Diameter, Threaded Tip	
	0.020 in (0.5 mm)	6324A-6511
	Large Diameter, Threaded Tip with Bendable Probe	
	0.039 in (1.0 mm)	6324A-6502
	Small Diameter, Threaded Tip with Bendable Probe	
	0.020 in (0.5) mm	6324A-6512
Dimensions, see Page V8-T9-5.		

Notes

- ① Quantity ordered indicates length, for example, a quantity of 5 equals five feet of fiber.
 ② One cable.
 ③ Larger diameter (1.5 mm) fibers provide approximately 50% longer sensing range than small diameter (1 mm).
 ④ Set of two.

Pre-Assembled Single Fiber Optic Cables
(for Thru-Beam Sensing)

	Fiber Diameter	Catalog Number ^④
	Large Diameter, Threaded Tip	
	0.039 in (1.0 mm)	6323A-6501
	0.059 in (1.5 mm)	6323E-6501 ^③
	Small Diameter, Threaded Tip	
	0.020 in (0.5 mm)	6323A-6511
	Large Diameter, Threaded Tip with Bendable Probe	
	0.039 in (1.0 mm)	6323A-6502
	Small Diameter, Threaded Tip with Bendable Probe	
	0.020 in (0.5) mm	6323A-6512
Dimensions, see Page V8-T9-5.		

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Fiber Optic Cables

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Accessories

Cable Accessories

Bulk Fiber Optic Cable Accessories



	Description	Range Increase	Catalog Number
Fiber Optic Termination	Fiber Optic Cable Cutter		
	For 1 mm diameter fiber, good for six cuts	—	8909A-6501
	Fiber Optic Termination		
	For mounting of 1 mm diameter bulk fiber. Sensing distance is the same as for bare fibers without lenses	—	6230A-6503
Dimensions, see Page V8-T9-6.			

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Lenses

For 1 mm diameter bulk cable only. Lenses extend the range of thru-beam sensors. Sold individually—two required for thru-beam sensing.

Lenses

	Description	Range Increase	Catalog Number
0.25 In Diameter Thru-Beam Lens	Thru-Beam Lenses		
	0.25 in diameter thru-beam lens	10X	6230A-6505
	0.5 In Diameter Thru-Beam Lens		
	0.5 in diameter thru-beam lens	100X	6230A-6509
	1.0 In Diameter Thru-Beam Lens		
	1.0 in diameter thru-beam lens	200X	6230A-6508
Dimensions, see Page V8-T9-6.			

Technical Data and Specifications

Plastic Fiber Optic Cables

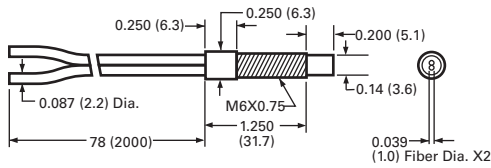
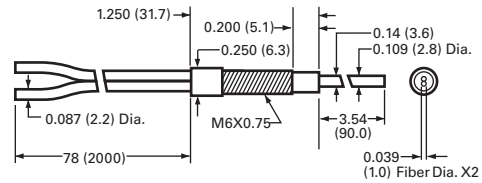
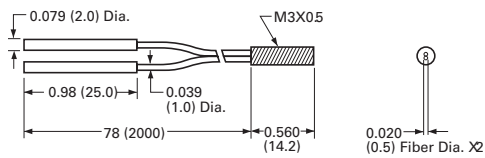
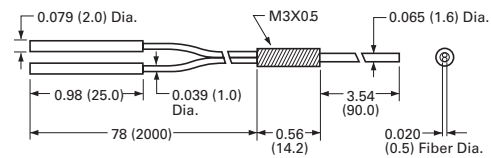
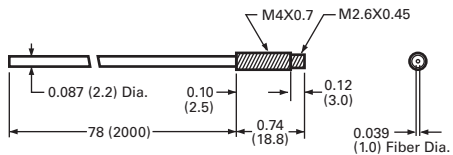
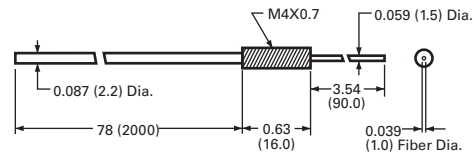
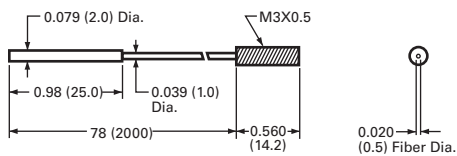
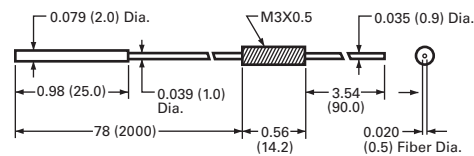
Description	Specification
Storage and operating temperature	−22° to 158°F (−30° to 70°C)
Length, pre-assembled cables	6.6 ft (2m)
Sheathing	Polyethylene
Bend radius ^①	1 mm fiber: 2 in; 0.5 mm fiber: 1 in with no loss of optical signal. Tighter bends will result in some signal loss.

Note

^① **IMPORTANT:** Do not bend fibers within 0.5 in of either end.

Dimensions

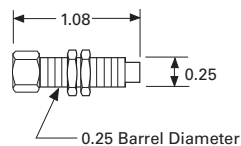
Approximate Dimensions in Inches (mm)

Pre-Assembled Duplex Fiber Optic Cables (for Diffuse Reflective Sensing)**Large Diameter, Threaded Tip****Large Diameter, Threaded Tip with Bendable Probe****Small Diameter, Threaded Tip****Small Diameter, Threaded Tip with Bendable Probe****Pre-Assembled Single Fiber Optic Cables (for Thru-Beam Sensing)****Large Diameter, Threaded Tip****Large Diameter, Threaded Tip with Bendable Probe****Small Diameter, Threaded Tip****Small Diameter, Threaded Tip with Bendable Probe**

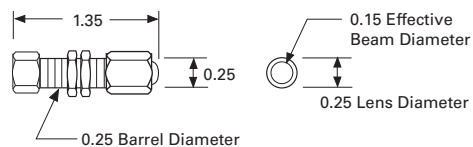
Approximate Dimensions in Inches

Accessories

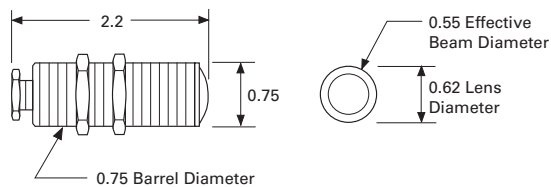
Fiber Optic Termination



0.25 In Diameter Thru-Beam Lens



0.5 In Diameter Thru-Beam Lens



1.0 In Diameter Thru-Beam Lens

