

# DFT Series Fiber Photoelectric Amplifiers

Compact rectangular plastic DIN-rail mount with Teach function - DC



- 4 models available
- DIN-rail mounting
- Bargraph signal-strength indicator
- NPN or PNP, Light-on/Dark-on selectable outputs
- Red LED with visible spot
- IP64 rated



DFT Series Fiber Photoelectric Amplifier Selection Chart							
Part Number	Price	Sensing Range	Output State	Logic	Connection	Wiring	Dimensions
DFT-AN-1A	\$142.00	Optical fiber dependent	N.O./N.C. selectable	NPN	2m (6.5') axial cable	Diagram 1	Figure 1
DFT-AN-1F	\$142.00				M8 (8mm) connector	Diagram 1	Figure 2
DFT-AP-1A	\$142.00			PNP	2m (6.5') axial cable	Diagram 2	Figure 1
DFT-AP-1F	\$142.00				M8 (8mm) connector	Diagram 2	Figure 2

Specifications		
Type	DFT-AN-1*	DFT-AP-1*
Sensing Distance	See Optical Fibers Table	
Light Spot Diameter	N/A	
Emission	red (680nm)	
Sensitivity	Dual Teach function	
Output Type	NPN Light On or Dark On Selectable Output delay or stretch programmable	PNP Light On or Dark On Selectable Output delay or stretch programmable
Operating Voltage	10-30VDC	
No-Load Supply Current	≤25mA	
Operating (Load) Current	≤200mA	
Off-state (Leakage) Current	≤0.1mA	
Voltage Drop	2V maximum at 200mA	
Switching Frequency	1.5kHz	
Ripple	≤20%	
Time Delay Before Availability (tv)	80ms	
Short-Circuit Protection	Yes (switch autoresets after overload is removed)	
Operating Temperature	-25° to +55° C (-13° to 131° F)	
Protection Degree	IEC IP64	
LED Indicators -Switching Status	Yellow (output energized)	
Housing Material	PBT	
Lens Material	Acrylic	
Shock/Vibration	<a href="#">See terminology section</a>	
Tightening Torque	N/A	
Weight (cable/connector)	68g (2.39oz) / 17g (0.60oz)	
Connectors	2m (6.5') axial cable; M8 (8mm) connector	
Agency Approvals	UL file E328811	

## Dimensions

(mm)

Figure 1

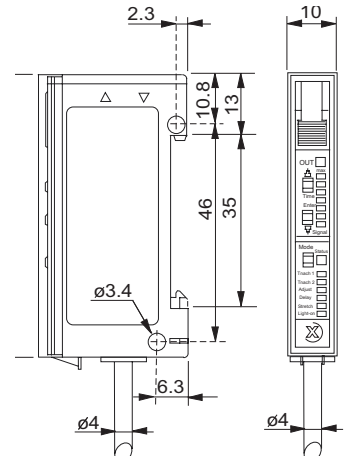
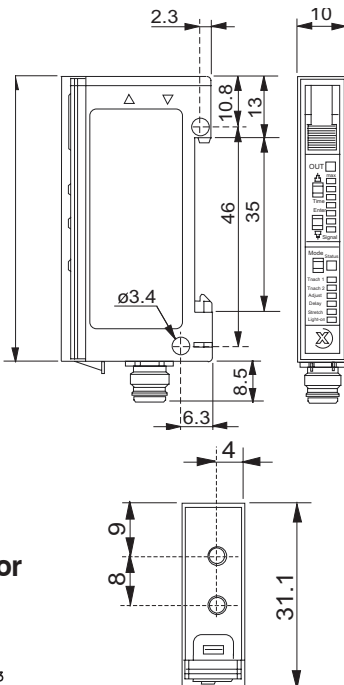


Figure 2



## Wiring diagrams

Switching Element Function		
	Thru-beam and Reflective Models	Diffuse Reflective Models
Light on	N.C.	N.O.
Dark on	N.O.	N.C.

Diagram 1

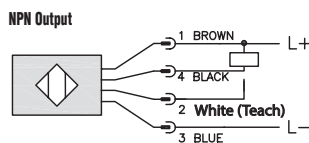
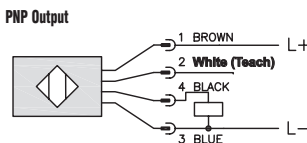
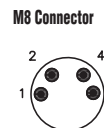


Diagram 2



Connector

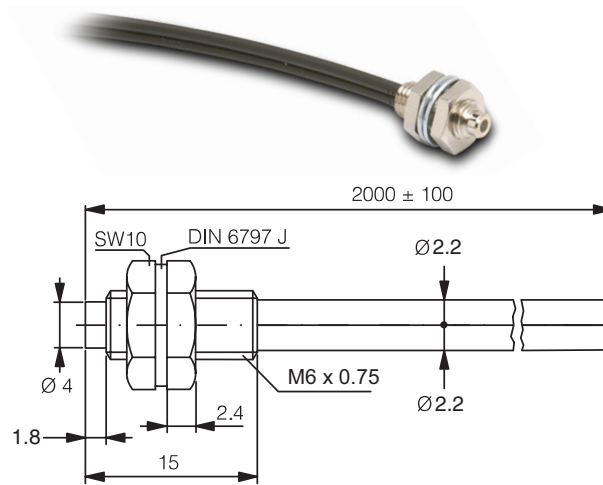


# Cuttable Optical Fibers (2.2 mm Diameter)

## CF-DB1-20 diffuse reflection

\$32.50

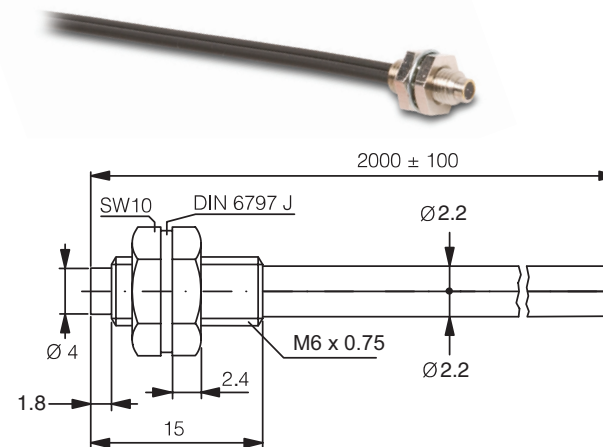
Specifications	
<b>Optical Fiber Core Ø</b>	1 mm (0.039in)
<b>Sensing Distance with DFT and DFP series</b>	200 mm (7.87in)
<b>Fiber Length (L)</b>	2.0 m (78.74in)
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M6
<b>Thread Pitch</b>	0.75 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file 328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass



## CF-DB2-20 diffuse reflection

\$48.50

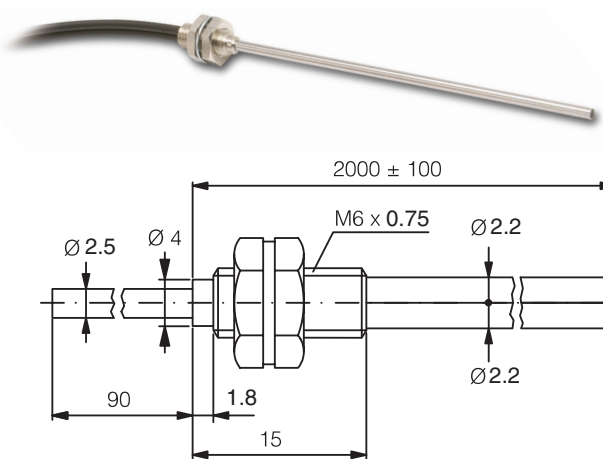
Specifications	
<b>Optical Fiber Core Ø</b>	1.5 mm (0.06in)
<b>Sensing Distance with DFT and DFP Series</b>	260 mm (10.27in)
<b>Fiber Length (L)</b>	2.0 m (78.74in)
<b>Fiber Bending Radius</b>	40 mm (1.57in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M6
<b>Thread Pitch</b>	0.75 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file 328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass



## CF-DB3-20 diffuse reflection

\$52.00

Specifications	
<b>Optical Fiber Core Ø</b>	1 mm (0.039in)
<b>Sensing Distance with DFT and DFP Series</b>	200 mm (7.87in)
<b>Fiber Length (L)</b>	2.0 m (78.74in)
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Bendable light-outlet tube</b>	Yes, 25 mm (0.98in) radius
<b>Free Cut</b>	Yes
<b>Head Size</b>	M6
<b>Thread Pitch</b>	0.75 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file 328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

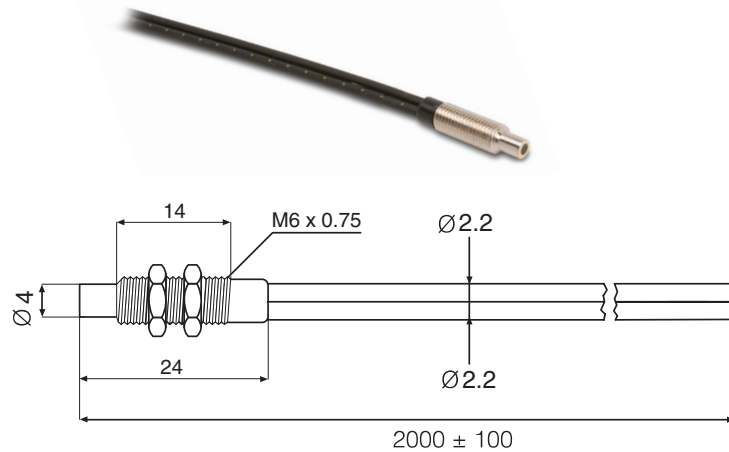


# Cuttable Optical Fibers (2.2 mm Diameter)

## CF-CB1-20 diffuse reflection

Specifications	
<b>Optical Fiber Core Ø</b>	1 mm (0.039in)
<b>Sensing Distance with SSF Series</b>	50 mm (1.97in)
<b>Fiber Length (L)</b>	2.0 m (78.74in)
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M6
<b>Thread Pitch</b>	0.75 mm
<b>Protection Degree</b>	IEC IP67
<b>Temperature Range</b>	-40° to +70°C (-40° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

\$27.00

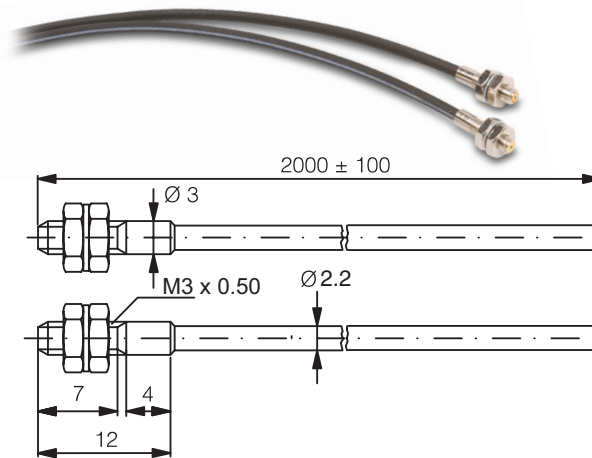


## CF-TB1-20 through-beam

Specifications	
<b>Optical Fiber Core Ø</b>	0.5 mm (0.02in)
<b>Sensing Distance with DFT and DFP Series</b>	200 mm (7.87in)
<b>Fiber Length (L)</b>	2.0 m (78.74in) ea. piece
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M3
<b>Thread Pitch</b>	0.5 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file 328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

\$32.50

Includes 2 optical fiber cables

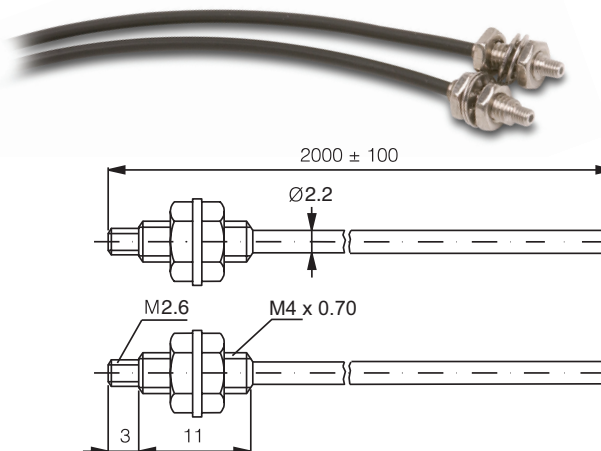


Includes 2 optical fiber cables

## CF-TB2-20 through-beam

Specifications	
<b>Optical Fiber Core Ø</b>	1 mm (0.039in)
<b>Sensing Distance with DFT and DFP Series</b>	700 mm (27.56in)
<b>Fiber Length (L)</b>	2.0 m (78.74in) ea. piece
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M4
<b>Thread Pitch</b>	0.7 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file E328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

\$32.50

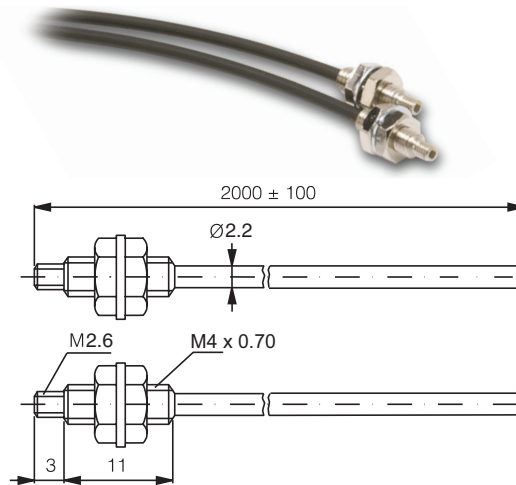


# Cuttable Optical Fibers (2.2 mm Diameter)

## CF-TB3-20 through-beam

Specifications	
<b>Optical Fiber Core Ø</b>	1.5 mm (0.06in)
<b>Sensing Distance with DFT and DFP Series</b>	900 mm (35.43in)
<b>Fiber Length (L)</b>	2.0 m (78.74in) ea. piece
<b>Fiber Bending Radius</b>	40 mm (1.57in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M4
<b>Thread Pitch</b>	0.7 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file E328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

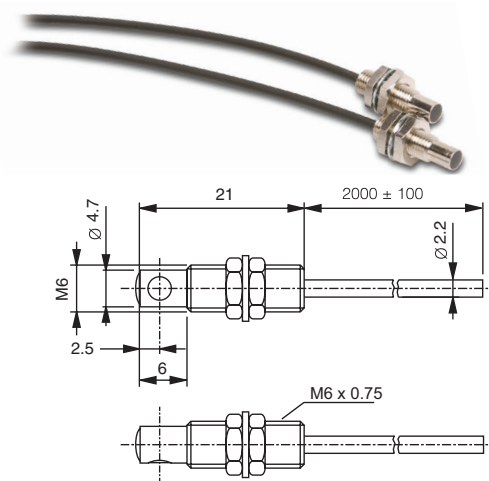
**\$52.00** Includes 2 optical fiber cables



## CF-TB4-20 90° through-beam

Specifications	
<b>Optical Fiber Core Ø</b>	1.0 mm (0.039in)
<b>Sensing Distance with DFT and DFP Series</b>	1800 mm (70.87in)
<b>Fiber Length (L)</b>	2.0 m (78.74in) ea. piece
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M6
<b>Thread Pitch</b>	0.75 mm
<b>Protection Degree</b>	IEC IP67
<b>Agency Approvals</b>	UL file E328811
<b>Temperature Range</b>	-25° to +70°C (-13° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

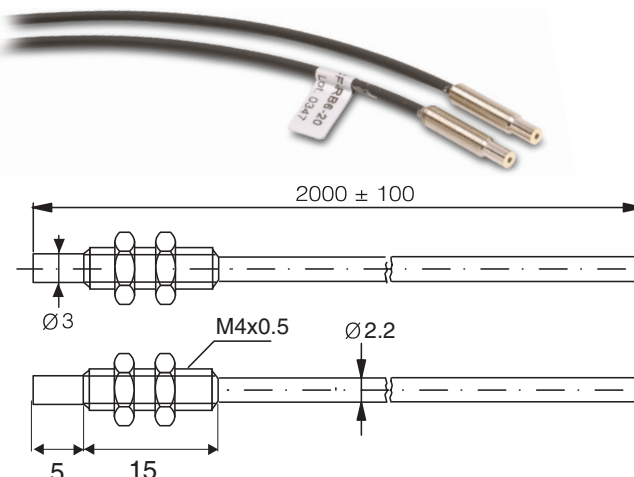
**\$65.00** Includes 2 optical fiber cables



## CF-RB6-20 through beam

Specifications	
<b>Optical Fiber Core Ø</b>	1.0 mm (0.039in)
<b>Sensing Distance with SSF Series</b>	120 mm (4.72in)
<b>Fiber Length (L)</b>	2.0 m (78.74in) ea. piece
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M4
<b>Thread Pitch</b>	0.50 mm
<b>Protection Degree</b>	IEC IP67
<b>Temperature Range</b>	-40° to +70°C (-40° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass

**\$27.00** Includes 2 optical fiber cables



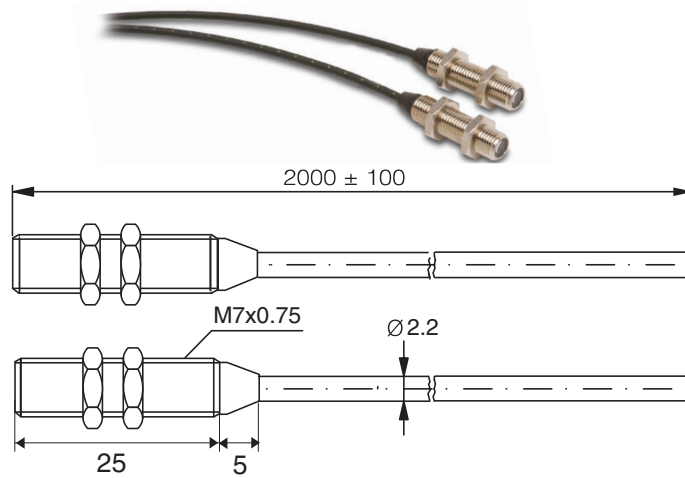
# Cuttable Optical Fibers (2.2 mm Diameter)

CF-RBA-20 through-beam with lenses

\$46.00

Includes 2 optical fiber cables

Specifications	
<b>Optical Fiber Core Ø</b>	1.0 mm (0.039in)
<b>Sensing Distance with SSF series</b>	1200 mm (47.24in)
<b>Fiber Length (L)</b>	2.0 m (78.74in) ea. piece
<b>Fiber Bending Radius</b>	25 mm (0.98in)
<b>Free Cut</b>	Yes
<b>Head Size</b>	M7
<b>Thread Pitch</b>	0.75 mm
<b>Protection Degree</b>	IEC IP67
<b>Temperature Range</b>	-40° to +70°C (-40° to 158°F)
<b>Fiber Materials</b>	PMMA
<b>Sleeve Materials</b>	Polyethylene
<b>Head Materials</b>	Nickel-plated brass



## Characteristic Curves

