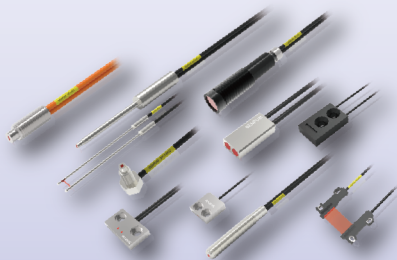


High performance fiber optic sensors SP series



Ask Senpum

+86-755-83330055

Same-Day Delivery

Conventional model     

Most of the products are in stock and can be arranged to be shipped on the same day the order is received. Fast delivery reduces your overhead costs and losses caused by work stoppages.

※ Unconventional goods 3-5 days delivery



WeChat



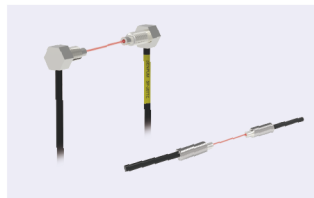
WhatsApp



LINE

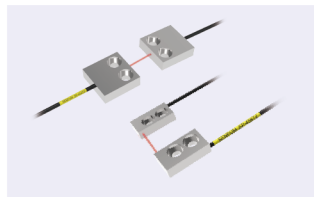
Screw-in type

The sensor is fixed by screws.



Flat-plate bracket type

Plate bracket type with mounting holes for easy installation where space is limited.



Heat resistant fiber type

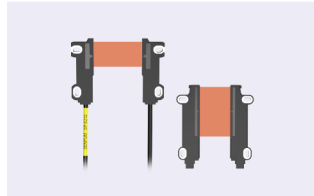
Sensor withstands temperatures from 100°C to 500°C for a wide range of applications.

**Resistant to high temperature
over 100~500°C**



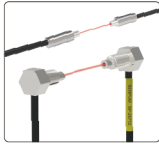
Area type

Can detect objects in a certain area range, the maximum width of the detection area can be more than 100mm.



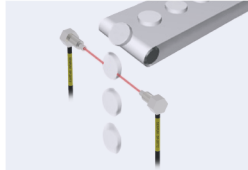
* For more product features, please contact SENPUM engineers.

Thrubeam



Screw-fixed type

The sensor is fixed by screws, which is simple and convenient.



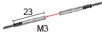
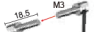
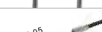
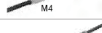
Screw-fixed type



Small target detection



ToughFlex

Type	Fiber unit length (diameter)	Appearance	Bend radius (mm)	Detection distance (mm)	Optical axis diameter (mm)	Smallest detectable object	Model/Weight	Dimensions
Dimensions/Shape	Ambient temperature							
M3	Threaded	1 m Free-cut (ø1.3×2) -40 to +50°C	 R25	0-550	-	ø0.005	SP-236FA Approx. 12g	-
		1 m Free-cut (ø1.3×2) -40 to +70°C	 R2 ToughFlex	0-450	-		SP-236TZ Approx. 12g	-
Hexagon	2 m Free-cut (ø2.3) -20 to +50°C	 R1 ToughFlex	0-3600	ø2.3	SP-271TZ Approx. 22g		 P0147	
	2 m Free-cut (ø2.2) -40 to +50°C	 R2 ToughFlex	0-3100		ø1.13		SP-278TZ Approx. 43g	 P0133
	1 m Cut not allowed -40 to +50°C	 R10 Stainless steel	0-1800				SP-278TG Approx. 43g	 P0147
	M4	2m Free-cut (ø2.2) -40 to +70°C	 R25	0-3600	ø1		SP-28F Approx. 21g	 P0132
		2 m Free-cut (ø1.3) -40 to +70°C	 R4	0-2200			SP-279 Approx. 9g	 P0132
2 m Free-cut (ø2.2) -40 to +50°C		 R4 ToughFlex	0-3600	SP-278 Approx. 25g			 P0133	
Threaded		 R0.5 ToughFlex		ø1.13	SP-278V Approx. 25g		 P0133	
		1 m Cut not allowed -40 to +50°C	 R10 Stainless steel		0-1800		SP-278G Approx. 39g	 P0147
M6		2 m Free-cut (ø2.2) SP-272Z: -40 to +50°C SP-272: -40 to +70°C	 R2 ToughFlex	0-3600	ø1.5		SP-272Z Approx. 25g	 P0133
			 R25				SP-272 Approx. 25g	 P0133

Fiber Optic Sensors

SP
P-20/40
SP2
FX-N10
FX-620
FX-625
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

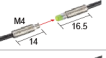
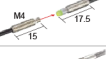
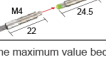
Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



Thrubeam							
Type	Fiber unit length (diameter)	Appearance	Minimum bend radius (mm)	Detection distance (mm)*1	Optical axis diameter (mm)	Model/Weight	Dimensions
Dimensions/Shape	Ambient temperature						
M4	Hexagon	2m Free-cut (ø2.2) -40 to +60°C		R2 ToughFlex	0~3600	Transmission: ø1 Reception: ø3.2	SP-R278TZ Approx.25g  P0147
	Hexagon	1m Cut not allowed -40 to +60°C		R10 Stainless steel	0~1800		SP-R278TG Approx.43g  P0147
	Threaded	2m Free-cut (ø2.2) -40 to +60°C		R2 ToughFlex	0~3600		SP-R278 Approx.21g  P0147
		2m Free-cut (ø2.2) -40 to +60°C		R25	0~3600		SP-R28F Approx.21g  P0148
		1m Cut not allowed -40 to +60°C		R10 Stainless steel	0~1800		SP-R278G Approx.41g  P0148

*1 when using FX-N10 series, "3600mm(1800mm)"is the maximum value because the length of the fiber optic cable is 2m(1m).

- Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

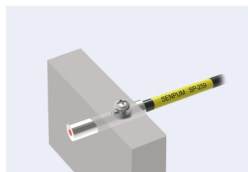
Static Eliminators

Thrubeam

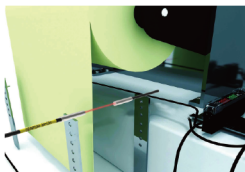


Cylindrical

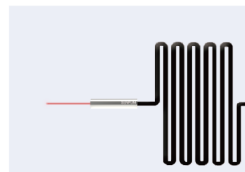
In tight spaces, it can be mounted by screws after drilling.



In limited space, it can be mounted by screws after drilling.



Detection of papers edges



ToughFlex

Size	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Bend radius (mm)	Detection distance(mm)	Optical axis diameter (mm inch)	Smallest detectable object	Model/Weight	Dimensions
ø1.0	50cm Cut not allowed -40 to +50°C		R10	0-380	ø0.265	ø0.005	SP-259 Approx.8g	P0132
	1m Free-cut (ø1.0) -40 to +50°C		R2 ToughFlex High-flex	0-590	ø0.5		SP-259U Approx.4g	P0132
ø1.5	1 m Free-cut (ø1.0) -40 to +70°C		R4 High-flex	0-1200	ø0.7		SP-260 Approx.3g	P0133
	1 m Free-cut (ø1.0) -40 to +50°C		R2 ToughFlex High-flex	0-590	ø0.5		SP-260U Approx.4g	P0133
ø2.5	50 cm Cut not allowed -40 to +70°C		R10	0-45	ø0.125		SP-256 Approx.3g	P0132
	50 cm Cut not allowed -40 to +70°C						SP-257 Approx.3g	P0132
	Do not bend sleeve.							
ø3	2m Free-cut (ø2.2) -40 to +70°C		R25	0-3600	ø1		SP-26F Approx.19g	P0132
	2 m Free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0-3600	ø1.13		SP-26FZ Approx.19g	P0147

Fiber Optic Sensors

SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity
Sensors

Precision Contact
Sensors

Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement
Sensors

Distance Laser
Sensors

Confocal Displacement
Sensors

Barcode Scanners

Infrared Temperature
Sensors

Digital Pressure
Sensors

Gate Magnetic Sensors

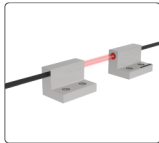
Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators

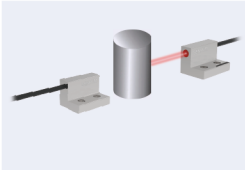


Thrubeam

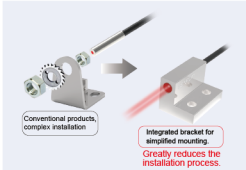


Integrated mounting bracket type

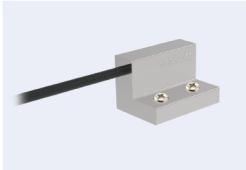
Sensor with mounting holes for quick fixing and simplified installation.



Vibration resistance



Simple and easy to install



Self-contained screw holes for quick and easy installation

Photoelectric Sensors
Color Sensors
Laser Sensors
Inductive Proximity Sensors
Precision Contact Sensors
Area/Safety Light Curtain
Laser Scanners
Digital Contact Sensors
Laser Displacement Sensors
Distance Laser Sensors
Confocal Displacement Sensors
Barcode Scanners
Infrared Temperature Sensors
Digital Pressure Sensors
Gate Magnetic Sensors
Ultrasonic Displacement Sensors
Magnetic Scale
Static Eliminators

Beam emitting direction	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Detection distance (mm inch)	Optical axis diameter (mm inch)	Smallest detectable object	Model/Weight	Dimensions
Top	2 m Free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0-2200	ø1.13	ø0.005	SP-L4522 Approx. 30g	P0135
	2 m Free-cut (ø2.2) -40 to +50°C						SP-L4532 Approx. 30g	P0135
	2 m Free-cut (ø2.2) -40 to +50°C						SP-L4542 Approx. 30g	P0135
Top (Built-in lens)	2 m Free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0-3600	ø3.5	ø0.2	SP-L4512 Approx. 30g	P0135
Side	2 m Free-cut (ø2.2) -40 to +50°C			0-1900	ø1.13	ø0.005	SP-L4552 Approx. 30g	P0134



Thrubeam



Focused beam/High power

Long range, narrow beam makes the beam more focused.

Deflection direction	Aperture angle	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance (mm)	Optical axis diameter (mm)	Model/Weight	Dimensions
Side	Approx. 2°	2 m Free-cut (ø1.0) SP-217Z -40 to +50°C SP-217 / 219 -20 to +70°C		R10	0~3600	ø2.5	SP-219 Approx. 8g	ⓧ P0145
	Approx. 6°						SP-217 Approx. 8g	ⓧ P0145
	Approx. 6°			R2			SP-217Z Approx. 8g	ⓧ P0145
	Approx. 3°	2 m Free-cut (ø1.0) -20 to +70°C		R10	0~3600	ø1.0	SP-219M Approx. 6g	ⓧ P0145
Side	Approx. 6°	2 m Free-cut (ø1.0) -20 to +50°C		R2 ToughFlex	0~3600	ø2.8	SP-251 Approx. 8g	ⓧ P0145



Thrubeam

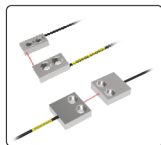
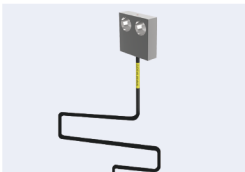


Plate bracket type

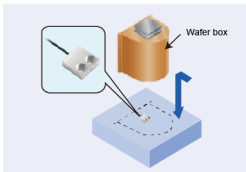
Thin sensor with mounting holes for easy installation where space is limited.



Ability to install in tight spaces

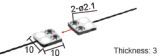
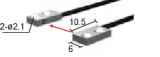


Unaffected by movement, ToughFlex



This sensor can be installed in limited space, wafer drop detection

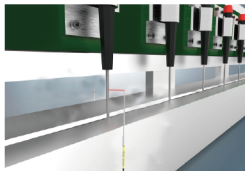
Photoelectric Sensors
Color Sensors
Laser Sensors
Inductive Proximity Sensors
Precision Contact Sensors
Area/Safety Light Curtain
Laser Scanners
Digital Contact Sensors
Laser Displacement Sensors
Distance Laser Sensors
Confocal Displacement Sensors
Barcode Scanners
Infrared Temperature Sensors
Digital Pressure Sensors
Gate Magnetic Sensors
Ultrasonic Displacement Sensors
Magnetic Scale
Static Eliminators

Beam emitting direction	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Detection distance (mm inch)	Optical axis diameter (mm inch)	Smallest detectable object	Model/Weight	Dimensions
Top	1 m Free-cut (ø1.0) -40 to +50°C		R2 ToughFlex	0~810	ø0.5	ø0.005	SP-452TZ Approx.5g	 P0134
	2 m Free-cut (ø1.3) -40 to +50°C			0~2900	ø1		SP-453TZ Approx.15g	 P0134
Flat	1 m Free-cut (ø1.0) -40 to +50°C			0~500	ø0.5		SP-454TZ Approx.10g	 P0134
	2 m Free-cut (ø2.2) -40 to +50°C			0~2900	ø1		SP-455TZ Approx.25g	 P0134
	2m Free-cut (ø2.2) -40 to +50°C			0~750	ø1.13		SP-457TZ Approx.20g	 P0134
Side	1 m Free-cut (ø1.0) -40 to +50°C			0~740	ø0.5		SP-458TZ Approx.5g	 P0134
	1 m Free-cut (ø1.0) -40 to +70°C			0~630	ø0.7		SP-458TE Approx. 5g	 P0132

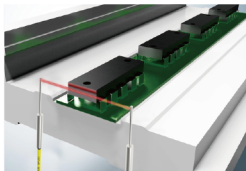


Casing type

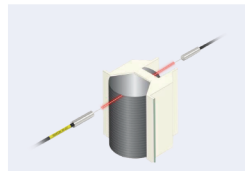
The front part is thin and side-view type is available, which makes it easier to install in places with limited space.



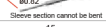
Ultra-fine diameter, side exit light, detects presence of screws



Detecting the presence or absence of chip pin

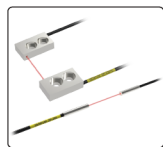


Wafer position detection

Beam emitting direction	Fiber unit length (diameter) Ambient temperature	Appearance (mm)	Minimum bend radius (mm)	Detection distance (mm)	Optical axis diameter (mm)	Smallest detectable object	Model/Weight	Dimensions
Side	1 m Free-cut (ø1.3) -40 to +70°C		R25	0-520	ø0.6	ø0.005	SP-233 Approx.5g	 P0132
	2 m Free-cut (ø2.2) -40 to +70°C			0-1600			SP-235 Approx.17g	 P0132
Top	2 m Free-cut (ø2.2) -40 to +70°C		R10	0-3600	SP-274 Approx.24g		 P0133	
	1 m Free-cut (ø1.0) -40 to +70°C			0-690	ø0.5		SP-276F Approx.10g	 P0133
	50cm Cut not allowed -40 to +70°C			0-45	ø0.125		SP-257 Approx.3g	 P0132

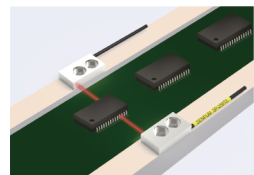


Thrubeam

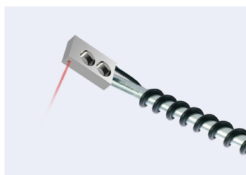


High flex

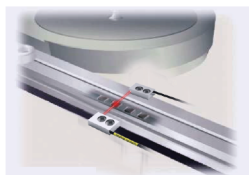
Made of flexible, bend-resistant fiber optic cable material; can withstand 10 million bends.



Unaffected by movement, flexural



ToughFlex



High flexible type, exceeding 50 million times

Size	Fiber unit length (diameter) Ambient temperature	Appearance (mm)	Bend radius (mm)	Detection distance (mm)	Optical axis diameter (mm)	Smallest detectable object	Model/Weight	Dimensions
ø1.5	1 m Free-cut (ø1.0) -40 to +70°C		R4 High-flex	0-1200	ø0.7		SP-260 Approx.3g	P0133
M3	1 m Free-cut (ø1.0) -40 to +70°C						SP-280 Approx.6g	P0133
ø1.0	1 m Free-cut (ø1.0) -40 to +50°C		R2 ToughFlex High-flex	0-590	ø0.5	ø0.005	SP-259U Approx.4g	P0132
ø1.5	1 m Free-cut (ø1.0) -40 to +50°C						SP-260U Approx.4g	P0133
M3	1 m Free-cut (ø1.0) -40 to +50°C						SP-280U Approx.5g	P0133
M4	1 m Free-cut (ø1.0) -40 to +50°C			0-1800	ø2.3	-	SP-271U Approx.5g	P0147
	2 m Free-cut (ø1.0) -40 to +50°C		R1 ToughFlex	0-3600			SP-271TU Approx.5g	-

Thrubeam



Oil/chemical resistance type

Oil- and chemical-resistance protective housing prevents fiber optic deterioration.

Type	Beam emission direction	Fiber unit length (diameter) Ambient temperature	Appearance (mm)	Minimum bend radius (mm)	Detection distance (mm)*1	Optical axis diameter (mm)	Model/Weight	Dimensions
Chemical resistance	Top	2 m Free-cut (ø2.2) -40 to +70°C		R40	0~3600	ø3.7	SP-893 Approx.71g	▶ P0143
		2 m Free-cut (ø2.2) -40 to +70°C				ø6	SP-899 Approx.70g	▶ P0143
		2 m Free-cut (ø2.2) -40 to +70°C		R40		ø2.8	SP-897 Approx.71g	▶ P0143
	Side	2 m Free-cut (ø2.2) 0 to +60°C		R25*2		ø3.7	SP-897T Approx.35g	▶ P0143
Oil-proof		2m Free-cut (ø2.2) -20 to +100°C		R2 ToughFlex		ø2.3	SP-881T2 Approx.30g	▶ P0143
	2 m Free-cut (ø2.2) -20 to +100°C		ø4.3			SP-881MT2 Approx.55g	▶ P0143	

^{*1} When using the SP series, "360mm" is the maximum value because the length of the fiber optic cable is 2m.

^{*2} The optical fiber cannot be bent within 25mm of the end of the fixing screw cap.

^{*3} Please use within the range of -40 ~ +130°C for continuous use.

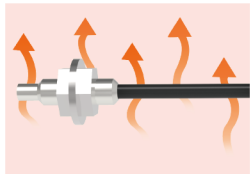
^{*4} The fiber is 2m long on one side, so the length is 4000mm.



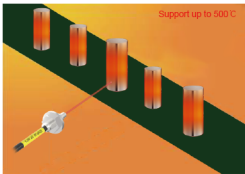


Heat resistant temperature

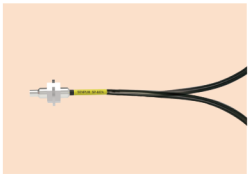
Sensor withstands temperatures from 100°C to 500°C.



Heat resistant temperature



Support up to 500 °C

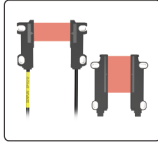


ToughFlex

Photoelectric Sensors
Color Sensors
Laser Sensors
Inductive Proximity Sensors
Precision Contact Sensors
Area/Safety Light Curtain
Laser Scanners
Digital Contact Sensors
Laser Displacement Sensors
Distance Laser Sensors
Confocal Displacement Sensors
Barcode Scanners
Infrared Temperature Sensors
Digital Pressure Sensors
Gate Magnetic Sensors
Ultrasonic Displacement Sensors
Magnetic Scale
Static Eliminators

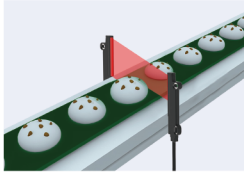
Heat resistant temperatures	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance (mm)	Optical axis diameter (mm inch)	Smallest detectable object	Model/Weight	Dimensions
100°C	2 m Free-cut (ø2.2) -40 to +100°C		R5 ToughFlex	0-3600	ø1		SP-687Z Approx.25g	P0135
105°C	2 m Free-cut (ø2.2) -40 to +105°C		R25	0-3600	ø1		SP-687A Approx.22g	P0134
150°C	2 m Free-cut (ø2.2) -40 to +150°C		R20	0-2700	ø1.5	ø0.005	SP-687H Approx.35g	P0134
180°C	2 m Free-cut (ø2.2) -60 to +180°C		R35	0-2700	ø1.5	ø0.005	SP-689 Approx.36g	P0135
300°C	2 m Cut not allowed -40 to +300°C		R25	0-1800	ø1	ø0.005	SP-685C Approx.66g	P0134

Thrubeam

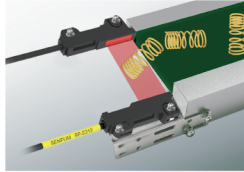


Area type

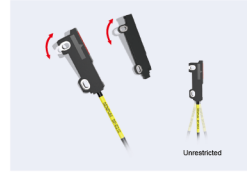
Area detection width up to 100mm.



Large detection range for material counts



Detecting spring drop counts



Easily adjust the optical axis using the long screw hole design.

Detection method	Optical axis width	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance (mm inch)	Optical axis diameter (mm inch)	Model/Weight	Dimensions	
Area	10	2m Free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0~3600	10×3 (comes with a 1.0mm wide seam allowance)	SP-A223 Approx.23g	-	
	11	2 m Free-cut (ø2.2) -40 to +50°C				11×2	SP-E212 Approx.20g	 P0135	
	40	2 m Free-cut (ø2.2) -40 to +50°C				40×3	SP-E241 Approx.30g	 P0135	
Array	5	2 m Free-cut(ø2.2) -40 to +70°C		R4 ^{1/2}	0~3600	Approx.6×0.3	SP-A206 Approx.20g	 P0144	
	10	2 m Free-cut (ø2.2) -40 to +70°C				Approx.11×0.3	SP-A201 Approx.20g	 P0144	
	40	2 m Free-cut (Exception for the screw section 50mm) -20 to +50°C		R10		Approx. 40×0.25	SP-A241 Approx.70g	 P0144	
	100	2 m Free-cut(Exception for the screw section 50mm) -20 to +50°C				Approx. 100×0.25	SP-A2100 Approx.110g	 P0144	

Fiber Optic Sensors

SP
P-20/40
SP2
FX-N10
FX-620
FX-625
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

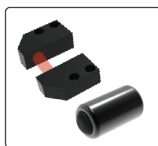
Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



Reflective



Focusing lens

Detection distances using thrubeam lenses

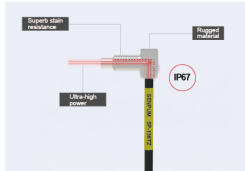
Type	Ambient temperature	Appearance (mm inch)	Model/Weight	Detection distance (mm inch)	Applicable fiber
Long-detecting distance Aperture Angle: Approx. 15°	-40 to +300°C	Tip: ø4.3 Tip: ø4.3 P-22 P-41 9 9.2	Cost effective P-22 Approx.2g High performance P-41 Approx.2g	0~3600	SP-278TZ/278V/278/285C/289K SP-28F/287A SP-287Z SP-279
				0~1800	SP-278G/278MG/278TG/278MTG
Ultra-long detecting distance Aperture Angle: Approx. 8°	-40 to +70°C	Tip: ø4.3 9.5	P-24 Approx.1g	0~3600	SP-278TZ/278V/278 SP-28F SP-279
				0~1800	SP-278G/278MG/278TG/278MTG
Side-view with mounting holes	-40 to +105°C	Fixing Nut 9.3 16.7 6	P-25 Approx.10g	0~3600	SP-278V/278 SP-28F/288A SP-287Z SP-279
				0~1800	SP-278G

Reflective

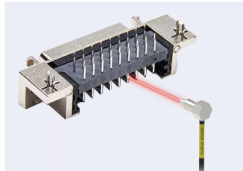


Screw-fixed type

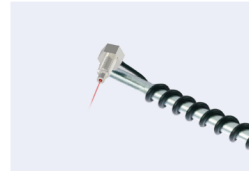
The sensor is fixed by screws, which is simple and convenient.



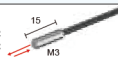
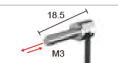
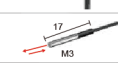
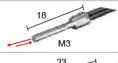
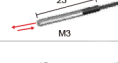
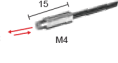
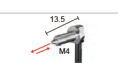
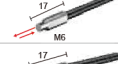
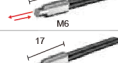
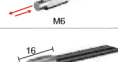
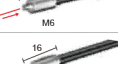
Resin material inside



Detect PIN



ToughFlex

Size	Shape	Detection layout	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance (mm)	Smallest detectable object	Model/Weight	Dimensions
M3	Threaded	Coaxial	50cm Cut not allowed SP-122X: -40 to +70°C SP-125X: -40 to +50°C		R25	0-130	ø0.005 Metal wire	SP-122X Approx.4g	 P0136
	Hexagon		1 m Free-cut(ø1.3×2) -40 to +50°C		R10	0-100		SP-125X Approx.4g	 P0136
	Threaded		1 m Free-cut(ø1.3×2) -40 to +50°C		R2 ToughFlex	0-400		SP-136TZ Approx.7g	 P0137
			1 m Free-cut(ø1.3×2) 30cm screw -40 to +50°C		R10 Stainless Steel	0-450		SP-136FG Approx.6g	 P0137
			1 m Free-cut(ø1.3×2) -40 to +70°C		R25	0-550		SP-136FA Approx.6g	 P0137
			M4	Threaded	Parallel	2 m Free-cut(ø1.3×2) SP-167: -40 to +70°C SP-167Z: -40 to +50°C			R25
Hexagon	2 m Free-cut(ø1.3×2) -40 to +50°C			R2 ToughFlex		0-770	SP-167Z Approx.10g	 P0139	
	M6	Hexagon		Coaxial	1 m Cut not allowed -40 to +50°C		R10 Stainless Steel	0-400	SP-136TG Approx.32g
2 m Free-cut(ø2.2×2) -40 to +70°C							0-720	SP-126 Approx.18g	 P0137
Threaded		Parallel	2 m Free-cut(ø2.2×2) -40 to +70°C		R25	0-1100	SP-17F Approx.21g	 P0136	
			2 m Free-cut(ø2.2×2) -40 to +70°C			0-1300	SP-162 Approx.21g	 P0138	
			2 m Free-cut(ø2.2×2) -40 to +50°C		R2 ToughFlex	0-900	SP-168 Approx.21g	 P0139	
			2 m Free-cut(ø2.2×2) -40 to +50°C		R0.5 ToughFlex		SP-168V Approx.25g	 P0139	
			2 m Free-cut(ø2.2×2) -40 to +50°C		R0.5 ToughFlex		SP-168TZ Approx.32g	 P0139	

Fiber Optic Sensors

 SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



Reflective

Type		Fiber unit length (diameter) Ambient temperature	Appearance	Minimum bend radius (mm)	Detection distance (mm)*1	Model/Weight	Dimensions
Dimensions/Shape							
M4	Hexagon	2m Free-cut(ø2.2×2) -40 to +60°C		R2 ToughFlex	0~710	SP-R168TZ Approx.25g	P0148
		1m Cut not allowed -40 to +60°C		R10 Stainless Steel	0~710	SP-R168TG Approx.32g	P0148
	Threaded	2m Free-cut(ø2.2×2) -40 to +60°C		R2 ToughFlex	0~900	SP-R168 Approx.21g	P0148
		2m Free-cut(ø2.2×2) -40 to +60°C		R25	0~1100	SP-R17F Approx.21g	P0148
		1m Cut not allowed -40 to +60°C		R10 Stainless Steel	0~900	SP-R168G Approx.29g	P0148

*1 When using the FS-N40 series.

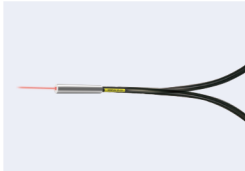
- Photoelectric Sensors
- Color Sensors
- Laser Sensors
- Inductive Proximity
Sensors
- Precision Contact
Sensors
- Area/Safety Light
Curtain
- Laser Scanners
- Digital Contact Sensors
- Laser Displacement
Sensors
- Distance Laser
Sensors
- Confocal Displacement
Sensors
- Barcode Scanners
- Infrared Temperature
Sensors
- Digital Pressure
Sensors
- Gate Magnetic Sensors
- Ultrasonic
Displacement Sensors
- Magnetic Scale
- Static Eliminators

Reflective

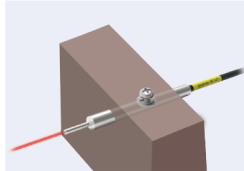


Cylindrical

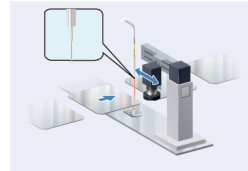
In tight spaces, it can be mounted by screws after drilling.



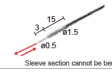
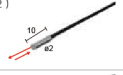
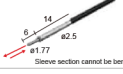
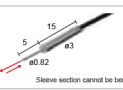
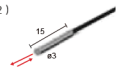
ToughFlex



Perforated mounting where space is limited



Solar cell wafer inspection

Size	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Detection distance (mm inch)	Smallest detectable object	Model/Weight	Dimensions
ø1.5	1 m Cut not allowed -40 to +70°C		R10	0~27	ø0.005 Metal wire	SP-147 Approx.2g	 P0138
	1 m Cut not allowed -40 to +70°C		R4 ToughFlex	0~150		SP-150X Approx.3g	 P0138
ø2	1 m Cut not allowed (ø1.0×2) -40 to +50°C		R2 ToughFlex High-flex	0~140		SP-150U Approx.4g	 P0138
ø2.5	50 cm Cut not allowed -40 to +70°C		R25	0~72		SP-123X Approx.4g	 P0136
ø3	2 m Cut not allowed (ø1.3×2) SP-15F : -40 to +70°C SP-15FZ : -40 to +50°C			0~1100		SP-15F Approx.8g	 P0136
	50 cm Cut not allowed -40 to +70°C		R25	0~830		SP-124X Approx.4g	 P0136
	50 cm Cut not allowed -40 to +70°C		R4	0~68		SP-146X Approx.4g	 P0138
	2 m Cut not allowed (ø1.0×2) -40 to +70°C		R4 High-flex	0~290		SP-149 Approx.7g	 P0138

Fiber Optic Sensors

 SP
P-20/40
SP2
FX-N10
FX-620
FX-625
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

 Inductive Proximity
Sensors

 Precision Contact
Sensors

 Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

 Laser Displacement
Sensors

 Distance Laser
Sensors

 Confocal Displacement
Sensors

Barcode Scanners

 Infrared Temperature
Sensors

 Digital Pressure
Sensors

Gate Magnetic Sensors

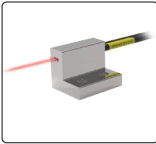
 Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators

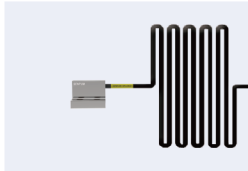


Reflective

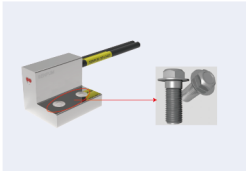


Integrated mounting bracket type

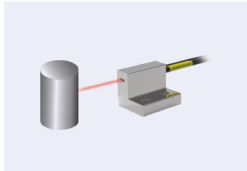
Sensor with mounting holes for quick fixing and simplified installation.



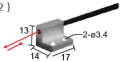
ToughFlex



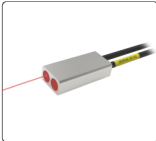
Self-contained screw holes for direct mounting



Anti-vibration

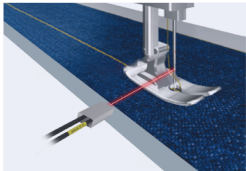
Beam emitting direction	Optical axis height	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Detection distance (mm inch)	Smallest detectable object	Model/Weight	Dimensions
Top	10	2 m Free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0~760	ø0.005	SP-L342Z Approx.25g	 P0135

Reflective

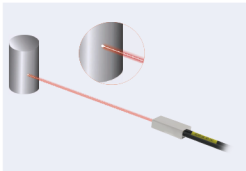


Focused beam/High power

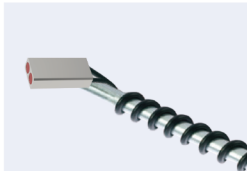
Long range, narrow beam makes the beam more focused.



High power



Remote inspection of workpiece



Superb bending resistance

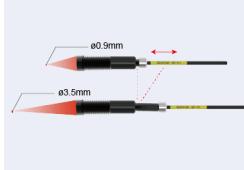
Detection direction	Aperture angle	Fiber unit length (diameter) Ambient temperature	Appearance (mm)	Bend radius (mm)	Detection distance (mm)	Smallest detectable object	Model/Weight	Dimensions
Top	Approx.8°	2 m Free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0~2300	ø0.3 Stainless steel(vertical)	SP-141 Approx.23g	 P0138
		1 m Cut not allowed (ø1.0) -40 to +50°C		R10 Stainless steel	0~2700		SP-141G Approx.50g	 P0145

Reflective

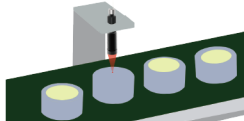


Small beam spot

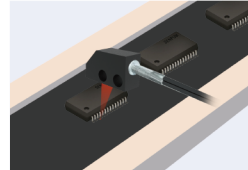
Suitable for detecting smaller objects. You can freely choose the size of the light spot and change the focal distance.



Spot adjustable



Can be installed even if space is limited



Small beam spot to detect tiny objects

Adjustable photoelectric sensors(built-in lens fiber optic unit)

Type	Beam spot diameter (mm inch)	Focal distance (mm inch)	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Model/Weight	Dimensions
Built-In Lens Variable Beam Spot	ø0.9~3.5	10~30	2 m Free-cut (ø1.3×2) -40 to +70°C	M6 26.4-31.5	R25	SP-111 Approx. 5g	P0136

Small beam spot (built-in lens fiber optic unit)

Type	Beam spot diameter (mm inch)	Focal distance (mm inch)	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Model/Weight	Dimensions
Small spot	Approx. ø0.1	5	50 cm Cut not allowed -40 to +70°C Tip: ø3	18	R25	SP-121 Approx. 2g	P0136

Fiber Optic Sensors

SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

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Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

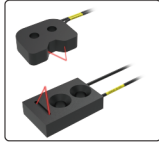
Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators

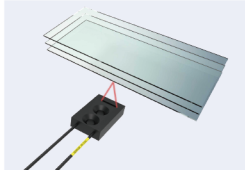


Reflective

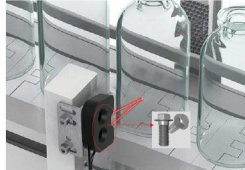


Definite-reflective model

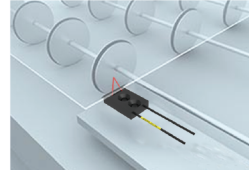
Definite detection range can detect transparent objects, comes with mounting holes for easy installation.



Limited reflection detection of transparent objects



Comes with screw holes for direct mounting



Detects the presence of glass

Detection direction	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance(mm)	Optical axis diameter (mm inch)	Smallest detectable object	Model/Weight	Dimensions
Side	2 m Free-cut (ø1.0×2) -40 to +70°C	Thickness: 5	R10	3 center of detection distance	Approx. ø4.5 Approx. ø3.5 (at distance of 3)	ø0.005 Metal wire	SP-138 Approx. 6g	➤ P0137
Flat	2 m Free-cut (ø1.0×2) -40 to +70°C	Thickness: 4.3		0~4	—	ø0.08 Copper wire	SP-139V Approx. 5g	➤ P0137
	2 m Free-cut (ø1.0×2) -40 to +70°C	Thickness: 4		6 center	Approx. ø1.5 (at distance of 6)	-	SP-139 Approx. 5g	➤ P0145
	2 m Free-cut (ø2.2×2) -40 to +60°C	Thickness: 5.2	R25	0~89	-	-	SP-139L Approx. 20g	➤ P0145
	2 m Free-cut (ø2.2×2) -40 to +70°C	Thickness: 3.6	R5	0~25	-	-	SP-139S Approx. 20g	➤ P0146
	2 m Free-cut (ø2.2×2) -40 to +70°C	Thickness: 3.6	R25	0~14	-	-	SP-139R Approx. 20g	➤ P0146
Top	2 m Free-cut (ø2.2×2) -40 to +70°C	Thickness: 7.4	R25	0~150	-	-	SP-141S Approx. 25g	➤ P0145



Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



Reflective

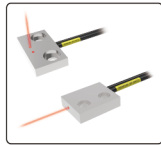
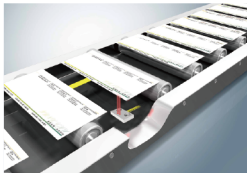
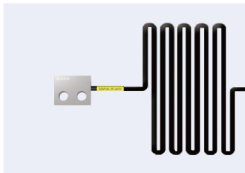


Plate bracket type

Thin sensor with mounting holes for easy installation where space is limited.



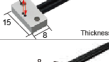
Envelope detection



ToughFlex



Wafer inspection

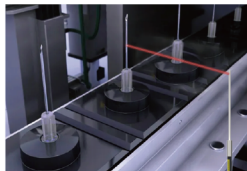
Beam emitting direction	Fiber unit length (diameter) Ambient temperature	Appearance (mm inch)	Minimum bend radius (mm inch)	Detection distance (mm inch)	Smallest detectable object	Model/Weight	Dimensions
Flat	1 m Free-cut (ø1.0×2) -40 to +50°C		R2 ToughFlex	0~120	ø0.005 Metal wire	SP-342TZ Approx.5g	P0140
	2 m Free-cut (ø2.2×2) -40 to +50°C			0~500		SP-343TZ Approx.24g	P0140
	2 m Free-cut (ø2×2.2) -40 to +50°C			0~120		SP-344TZ Approx.22g	P0140
Top	1 m Free-cut (ø1.0×2) -40 to +50°C		R2 ToughFlex	0~160	ø0.005 Metal wire	SP-345TZ Approx.3g	P0140
Side	1 m Free-cut (ø1.0×2) -40 to +50°C					SP-348TZ Approx.4g	P0140

Reflective



Casing type

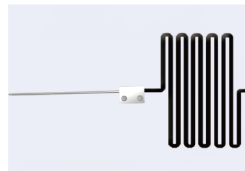
The front part is thin and side-view type is available, which makes it easier to install in places with limited space.



Needles to detect defects



Number of bottles detected



ToughFlex

Detection direction	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance (mm)	Smallest detectable object	Model/Weight	Dimensions
Coaxial narrow beam 10°	50cm Cut not allowed -40 to +70°C		R25	0-72		SP-123X Approx. 4g	P0136
Side	2 m Free-cut (ø1.0×2) -40 to +70°C		R10	0-180		SP-132 Approx. 5g	P0137
	1 m Free-cut (ø2.2×2) -40 to +70°C			0-320		SP-134 Approx. 10g	P0137
Top	2 m Free-cut (ø1.3×2) -40 to +70°C		R25	0-330		SP-144 Approx. 8g	P0138
	50cm Cut not allowed -40 to +70°C		R4	0-68		SP-146X Approx. 4g	P0138
	1 m Cut not allowed -40 to +70°C			0-27		SP-147 Approx. 2g	P0138
	1 m Free-cut (ø1.0) -40 to +70°C		R10	0-390		SP-277F Approx. 10g	P0145
	2 m Free-cut (ø1.3×2) -40 to +70°C					SP-164 Approx. 10g	P0138
	2 m Free-cut (ø1.3×2) -40 to +70°C		R25	0-330		SP-164T Approx. 10g	P0139
	2 m Free-cut (ø1.3×2) -40 to +50°C		R2 ToughFlex	0-290		SP-164Z Approx. 10g	P0139
	50cm Cut not allowed -40 to +70°C		R4	0-68		SP-166X Approx. 5g	P0139
					e0.005 Metal wire		

Fiber Optic Sensors

 SP
 P-20/40
 SP2
 FX-N10
 FX-520
 FX-525
 FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

 Inductive Proximity
Sensors

 Precision Contact
Sensors

 Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

 Laser Displacement
Sensors

 Distance Laser
Sensors

 Confocal Displacement
Sensors

Barcode Scanners

 Infrared Temperature
Sensors

 Digital Pressure
Sensors

Gate Magnetic Sensors

 Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators



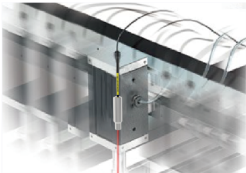


Reflective

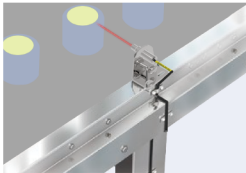


High flex

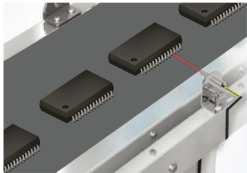
Made of fiber optic cable material that is elastic and flexible and can be bent repeatedly up to tens of million of times.



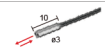
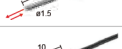
Highly resistant to movement and mounted on moving robotic arms.



Superb resistant to bending



High flexible type, exceeding 50 million times

Size	Fiber unit length (diameter) Ambient temperature	Appearance	Minimum bend radius (mm)	Detection distance (mm)	Smallest detectable object	Model/Weight	Dimensions
ø3	2 m Free-cut (ø1.0×2) -40 to +70°C		R4 High-flex	0~290	ø0.005 Metal wire	SP-149 Approx.7g	 P0138
M4	2 m Free-cut (ø1.0×2) -40 to +70°C					SP-169 Approx.8g	 P0139
ø3	1 m Free-cut (ø1.0×2) -40 to +50°C		R2 ToughFlex High-flex	0~140		SP-149U Approx.4g	 P0138
ø2	1 m Free-cut (ø1.0×2) -40 to +50°C					SP-150U Approx.4g	 P0138
M3	1 m Free-cut (ø1.0×2) -40 to +50°C					SP-170U Approx.4g	 P0140
ø1.5	1 m Cut not allowed -40 to +70°C		R4 High-flex	0~150		SP-150X Approx.3g	 P0138
M3	1 m Cut not allowed -40 to +70°C					SP-170X Approx.3g	 P0139

Reflective



Oil/chemical resistance type

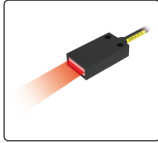
The sensor is locked up in a carbon-oxygen resin box.

Type	Beam emission direction	Fiber unit length (diameter) Ambient temperature	Appearance (mm)	Minimum bend radius (mm)	Detection distance (mm)*1	Standard target to be detected	Model/Weight	Dimensions
Oil/chemical resistance	Top	2 m Free-cut (ø1.3×2) -40 to +70°C		R40	0~310	—	SP-792 Approx.32g	 P0143
		2 m Free-cut (ø1.3×2) -40 to +60°C	Thickness: 9.6 (ø4.1 width of mounting hole support surface) 		0~20	200~200mm t=0.7mm Glass substrate	SP-798P Approx.75g	 P0143
		2 m Free-cut (ø1.3×2) -40 to +85°C	Thickness: 9 				SP-798S Approx.90g	 P0144

*1 when using the SP series, standard target object: white matter paper (reflective type only).



Reflective

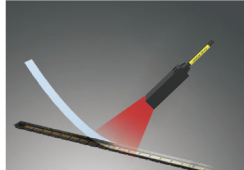


Area type

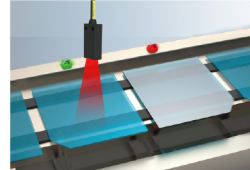
Area detection width up to 15mm.



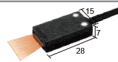
Detecting tin slips



Aluminum surface temperature inspection



Detecting workpieces of different colors

Detection method	Optical axis width	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Detection distance(mm)	Smallest detectable object	Model/Weight	Dimensions
Area	15 (at distance of 15)	2 m Free-cut (ø2.2) -40 to +70°C		R25	0~200	ø0.1 Metal wire	SP-112 Approx. 19g	 P0136
Array	10 (at distance of 4)	2 m Free-cut (ø2.2x2) -40 to +70°C		R4	0~1200		SP-A106D Approx. 20g	 P0146
	15 (at distance of 4)	2 m Free-cut -40 to +70°C					SP-A111D Approx. 20g	 P0146

Fiber Optic Sensors

 SP
P-20/40
SP2
FX-N10
FX-620
FX-625
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

 Inductive Proximity
Sensors

 Precision Contact
Sensors

 Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

 Laser Displacement
Sensors

 Distance Laser
Sensors

 Confocal Displacement
Sensors

Barcode Scanners

 Infrared Temperature
Sensors

 Digital Pressure
Sensors

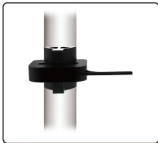
Gate Magnetic Sensors

 Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators





Liquid level

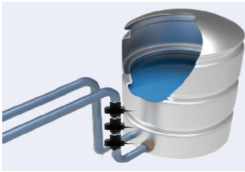
Detecting the liquid level in a transparent pipe requires only a fixed installation outside the pipe, without contact.



Installed directly outside the pipe



Simple and easy to install



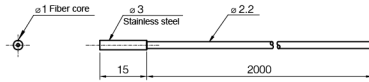
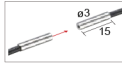
Installation outside the pipe can be detected

Photoelectric Sensors
Color Sensors
Laser Sensors
Inductive Proximity Sensors
Precision Contact Sensors
Area/Safety Light Curtain
Laser Scanners
Digital Contact Sensors
Laser Displacement Sensors
Distance Laser Sensors
Confocal Displacement Sensors
Barcode Scanners
Infrared Temperature Sensors
Digital Pressure Sensors
Gate Magnetic Sensors
Ultrasonic Displacement Sensors
Magnetic Scale
Static Eliminators

Detection method	Transparent tube diameter	Beam axes	Fiber unit length (diameter) Ambient temperature	Appearance	Bend radius (mm)	Accessories	Model/Weight	Dimensions
Pipe mounting type	ø4 ~ ø26	1	2 m Free-cut (ø1.0×2) SP-196 : -40 to +70°C SP-196Z : -40 to +50°C SP-196HA : -40 to +105°C		R10	End zone×2 Nonslip rubber×2 Packing×2 Screw×2 Nut×2	SP-196 Approx.7g	P0140
					R2 ToughFlex		SP-196Z Approx.7g	P0140
					R10		SP-196HA Approx.7g	P0140
Penetration type			2 m Free-cut(ø1.3×2) SP-194 : -40 to +70°C SP-194Z : -40 to +50°C		R25		SP-194 Approx.78g	P0146
					R0.5 ToughFlex		SP-194Z Approx.78g	P0146

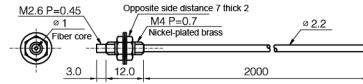
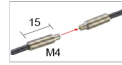
SP-26F

Thrubeam Free-cut



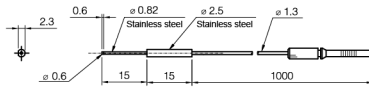
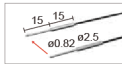
SP-28F

Thrubeam Free-cut



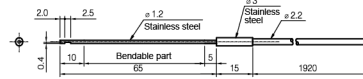
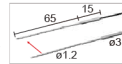
SP-233

Thrubeam Free-cut



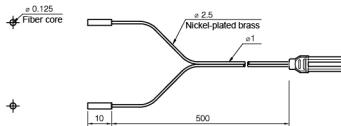
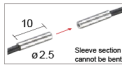
SP-235

Thrubeam Free-cut



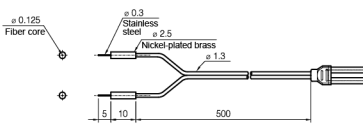
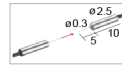
SP-256

Thrubeam Free-cut



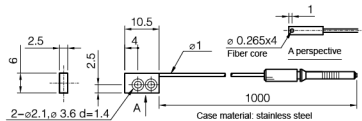
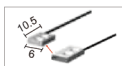
SP-257

Thrubeam Free-cut



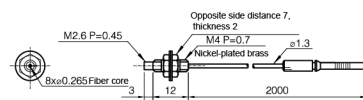
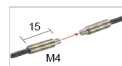
SP-458TE

Thrubeam Free-cut



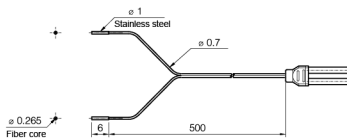
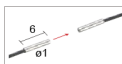
SP-279

Thrubeam Free-cut



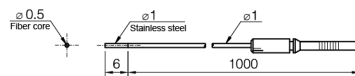
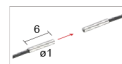
SP-259

Thrubeam
Can not be cut



SP-259U

Thrubeam Free-cut



SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity
Sensors

Precision Contact
Sensors

Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement
Sensors

Distance Laser
Sensors

Confocal Displacement
Sensors

Barcode Scanners

Infrared Temperature
Sensors

Digital Pressure
Sensors

Gate Magnetic Sensors

Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators

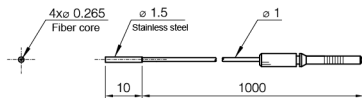
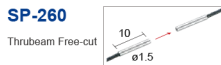


SENPUM
0133

Dimensions

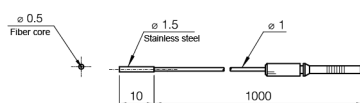
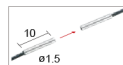
SP-260

Thrubeam Free-cut



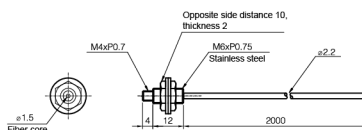
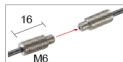
SP-260U

Thrubeam Free-cut



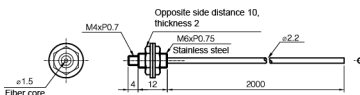
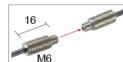
SP-272

Thrubeam Free-cut



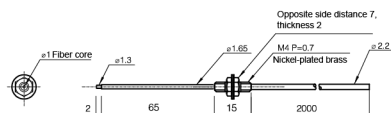
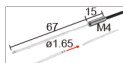
SP-272Z

Thrubeam Free-cut



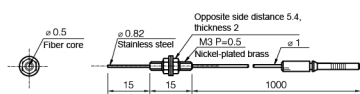
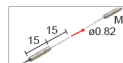
SP-274

Thrubeam Free-cut



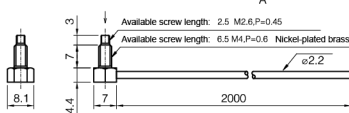
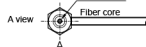
SP-276F

Thrubeam Free-cut



SP-278TZ

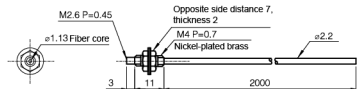
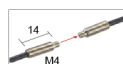
Thrubeam Free-cut



SP-278

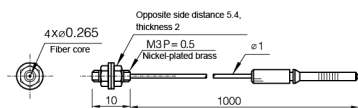
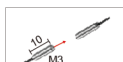
SP-278V

Thrubeam Free-cut



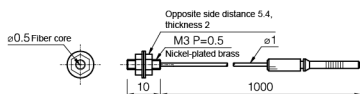
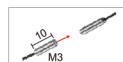
SP-280

Thrubeam Free-cut



SP-280U

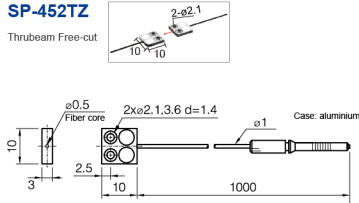
Thrubeam Free-cut



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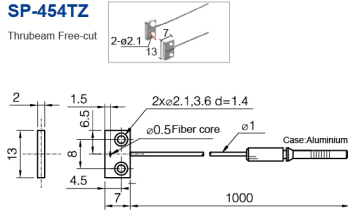
SP-452TZ

Thrubeam Free-cut



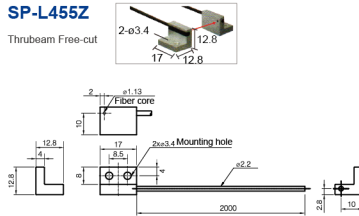
SP-454TZ

Thrubeam Free-cut



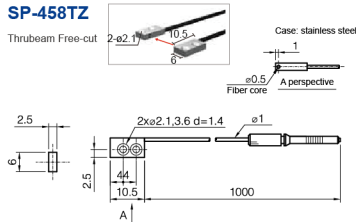
SP-L455Z

Thrubeam Free-cut



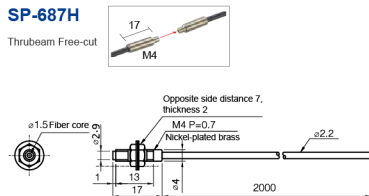
SP-458TZ

Thrubeam Free-cut



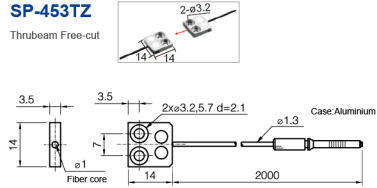
SP-687H

Thrubeam Free-cut



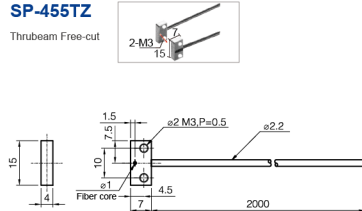
SP-453TZ

Thrubeam Free-cut



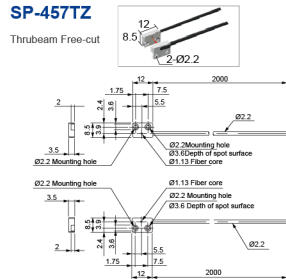
SP-455TZ

Thrubeam Free-cut



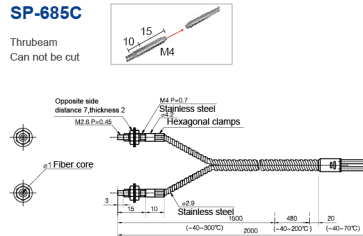
SP-457TZ

Thrubeam Free-cut



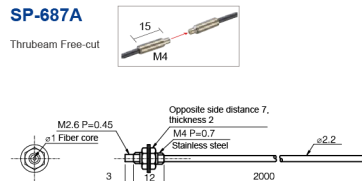
SP-685C

Thrubeam
Can not be cut



SP-687A

Thrubeam Free-cut



Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



SP

P-20/40

SP2

FX-N10

FX-520

FX-525

FX-620

Fiber Optic Sensors

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



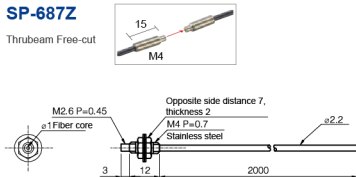
SENPUM

0135

Dimensions

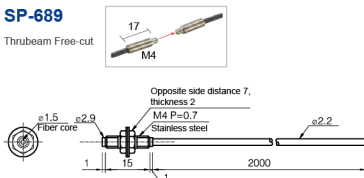
SP-687Z

Thrubeam Free-cut



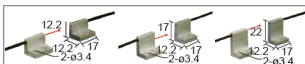
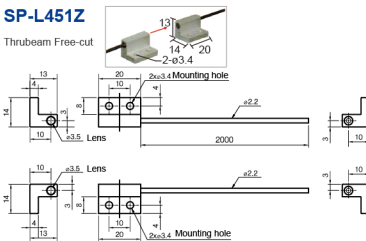
SP-689

Thrubeam Free-cut

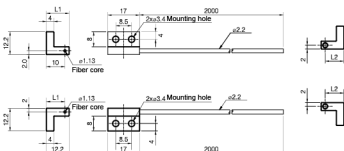


SP-L451Z

Thrubeam Free-cut



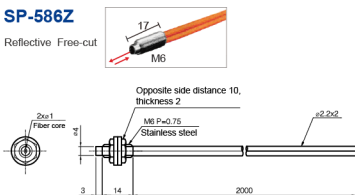
SP-L452Z / SP-L453Z / SP-L454Z



SP-L452Z L1=12.2 L2=10
 SP-L453Z L1=17 L2=15
 SP-L454Z L1=22 L2=20

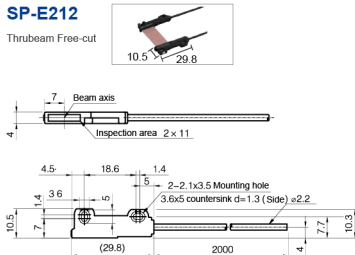
SP-586Z

Reflective Free-cut



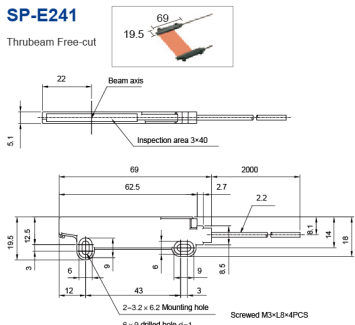
SP-E212

Thrubeam Free-cut



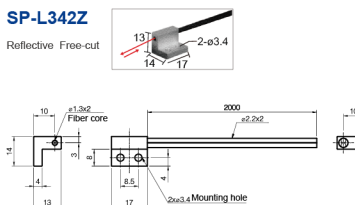
SP-E241

Thrubeam Free-cut



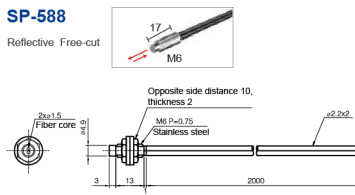
SP-L342Z

Reflective Free-cut



SP-588

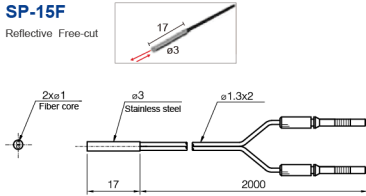
Reflective Free-cut



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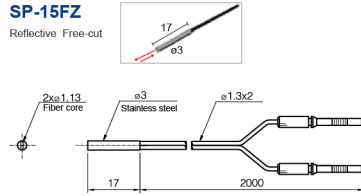
SP-15F

Reflective Free-cut



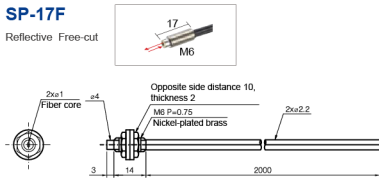
SP-15FZ

Reflective Free-cut



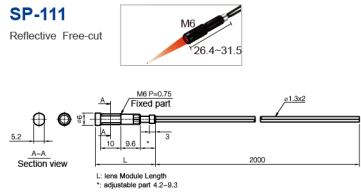
SP-17F

Reflective Free-cut



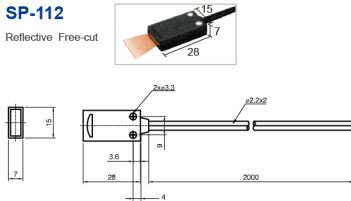
SP-111

Reflective Free-cut



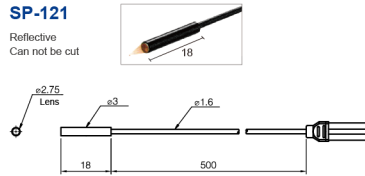
SP-112

Reflective Free-cut



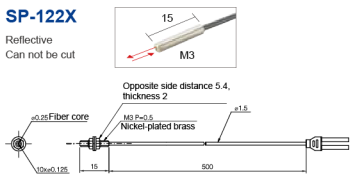
SP-121

Reflective Can not be cut



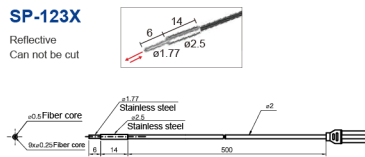
SP-122X

Reflective Can not be cut



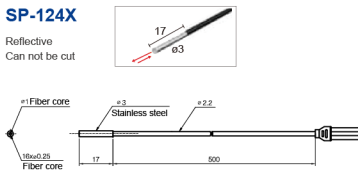
SP-123X

Reflective Can not be cut



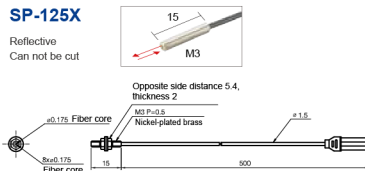
SP-124X

Reflective Can not be cut



SP-125X

Reflective Can not be cut



Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

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Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators

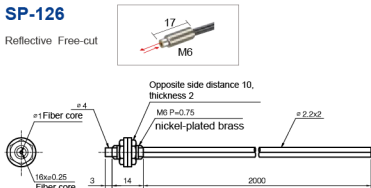


SENPUM
0137

Dimensions

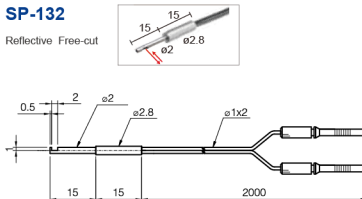
SP-126

Reflective Free-cut



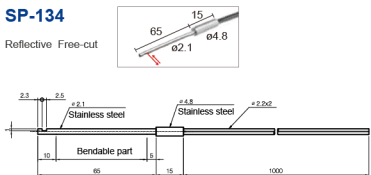
SP-132

Reflective Free-cut



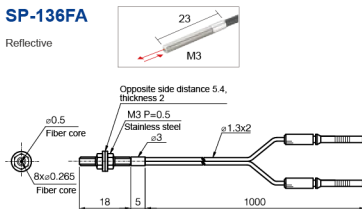
SP-134

Reflective Free-cut



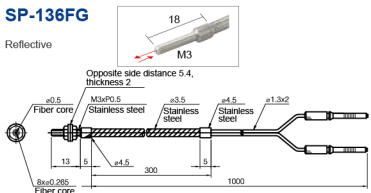
SP-136FA

Reflective



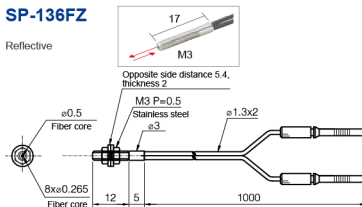
SP-136FG

Reflective



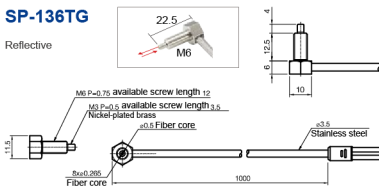
SP-136FZ

Reflective



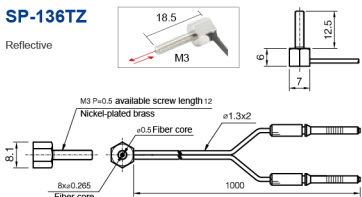
SP-136TG

Reflective



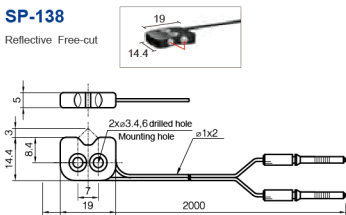
SP-136TZ

Reflective



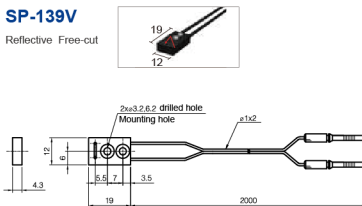
SP-138

Reflective Free-cut



SP-139V

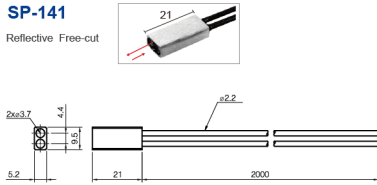
Reflective Free-cut



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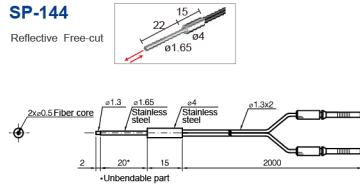
SP-141

Reflective Free-cut



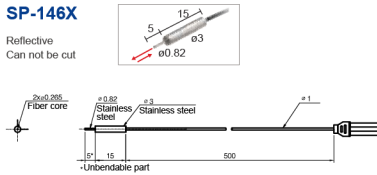
SP-144

Reflective Free-cut



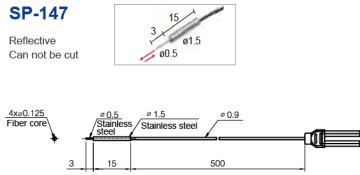
SP-146X

Reflective
Can not be cut



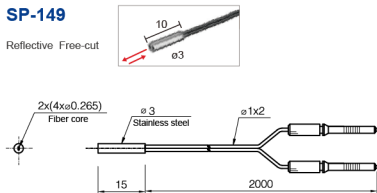
SP-147

Reflective
Can not be cut



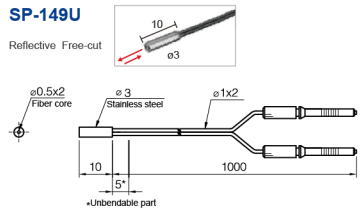
SP-149

Reflective Free-cut



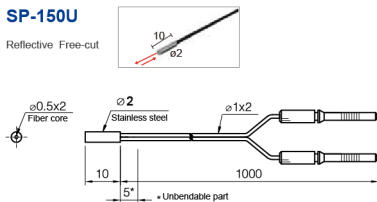
SP-149U

Reflective Free-cut



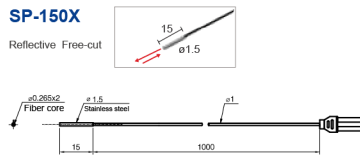
SP-150U

Reflective Free-cut



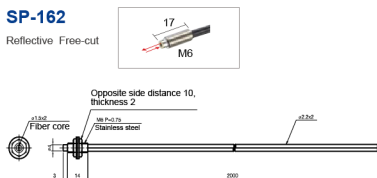
SP-150X

Reflective Free-cut



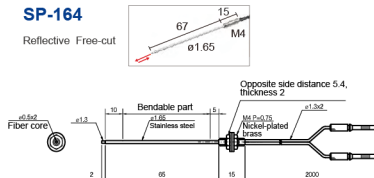
SP-162

Reflective Free-cut



SP-164

Reflective Free-cut



Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity
Sensors

Precision Contact
Sensors

Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement
Sensors

Distance Laser
Sensors

Confocal Displacement
Sensors

Barcode Scanners

Infrared Temperature
Sensors

Digital Pressure
Sensors

Gate Magnetic Sensors

Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators



SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity
Sensors

Precision Contact
Sensors

Area/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement
Sensors

Distance Laser
Sensors

Confocal Displacement
Sensors

Barcode Scanners

Infrared Temperature
Sensors

Digital Pressure
Sensors

Gate Magnetic Sensors

Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators

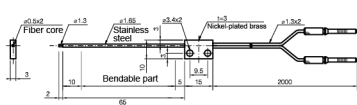
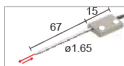


SEN-PUM
0139

Dimensions

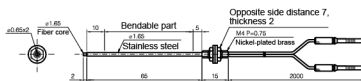
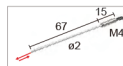
SP-164T

Reflective Free-cut



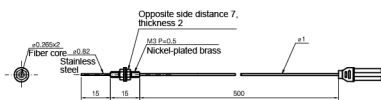
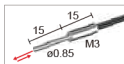
SP-164Z

Reflective Free-cut



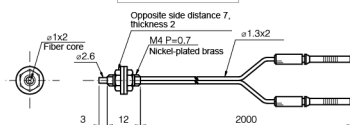
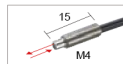
SP-166X

Reflective
Can not be cut



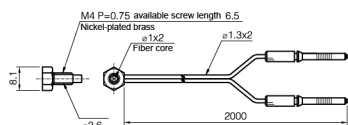
SP-167

Reflective Free-cut



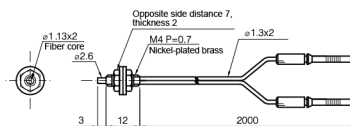
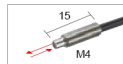
SP-167TZ

Reflective Free-cut



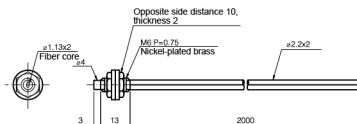
SP-167Z

Reflective Free-cut



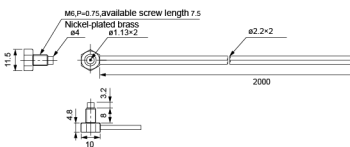
SP-168 SP-168V

Reflective Free-cut



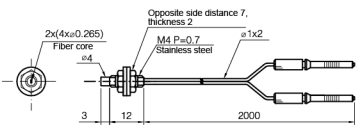
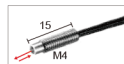
SP-168TZ

Reflective Free-cut



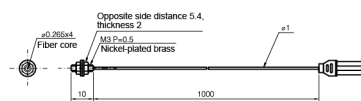
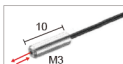
SP-169

Reflective Free-cut



SP-170X

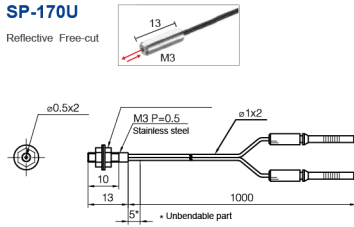
Reflective
Can not be cut



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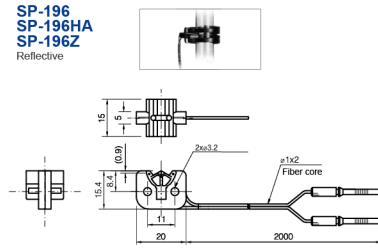
SP-170U

Reflective Free-cut



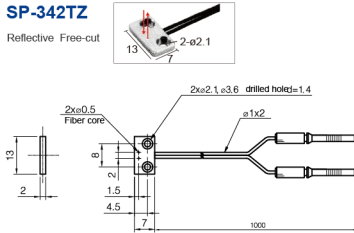
SP-196 SP-196HA SP-196Z

Reflective



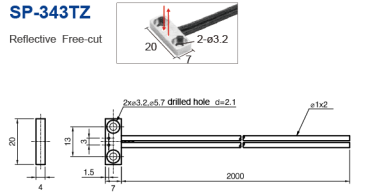
SP-342TZ

Reflective Free-cut



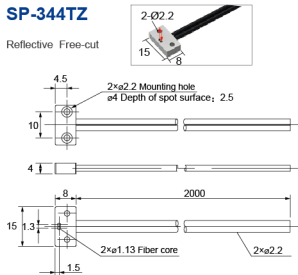
SP-343TZ

Reflective Free-cut



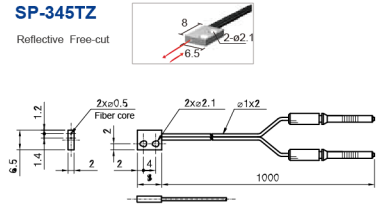
SP-344TZ

Reflective Free-cut



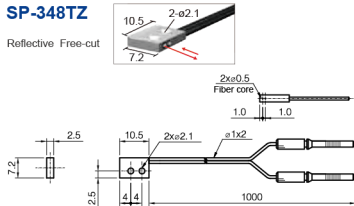
SP-345TZ

Reflective Free-cut



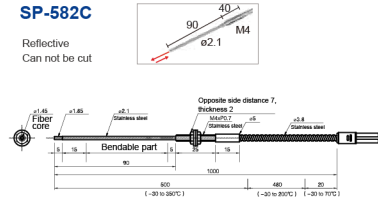
SP-348TZ

Reflective Free-cut



SP-582C

Reflective
Can not be cut



Fiber Optic Sensors

SP
P-20/40
SP2
FX-N10
FX-520
FX-525
FX-620

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

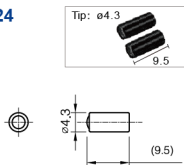
Ultrasonic Displacement Sensors

Magnetic Scale

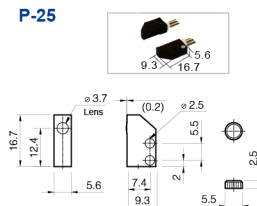
Static Eliminators



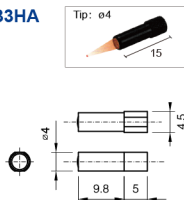
P-24



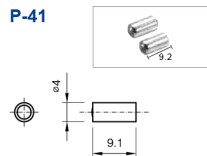
P-25



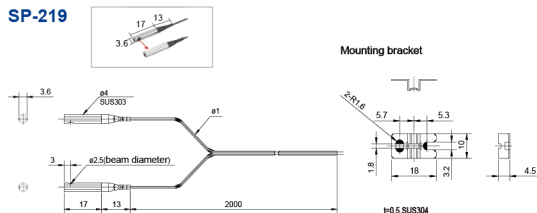
P-33HA



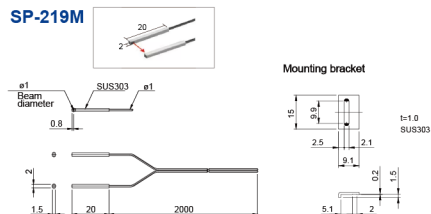
P-41



SP-219



SP-219M



Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators



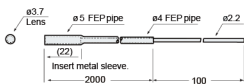
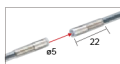


Dimensions

SP-893

Thrubeam Free-cut

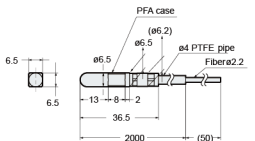
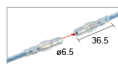
A set of two



SP-899

Thrubeam Free-cut

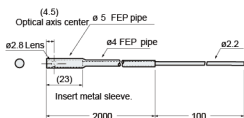
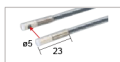
A set of two



SP-897

Thrubeam Free-cut

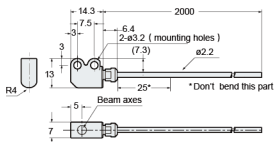
A set of two



SP-897T

Thrubeam Free-cut

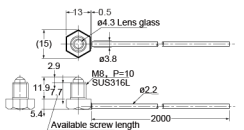
A set of two



SP-881TZ

Thrubeam Free-cut

A set of two

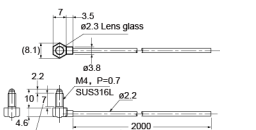


Accessories: M8 nut, opposite side=13, t=3.0, SUS316L
 M8 spring washer: ø15.4, t=2.0, SUS316L
 M8 flat washer: ø15.5, t=1.6SUS316L

SP-881MTZ

Thrubeam Free-cut

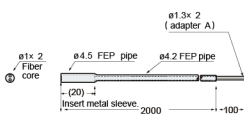
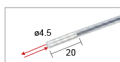
A set of two



Accessories: M8 nut, opposite side=, t=3.2, SUS316L
 M8 spring washer: ø7.6, t=1.0, SUS316L
 M8 flat washer: ø8, t=0.8SUS316L

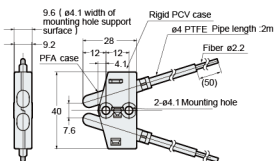
SP-792

Reflective Free-cut



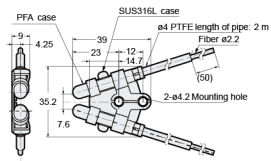
SP-798P

Reflective Free-cut



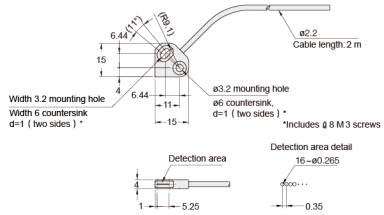
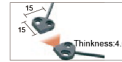
SP-798S

Reflective Free-cut
A set of two



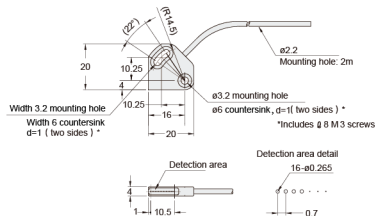
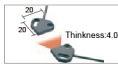
SP-A206

Thrubeam Free-cut



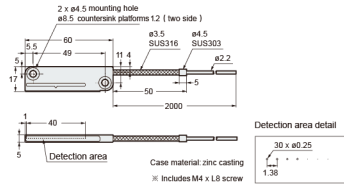
SP-A201

Thrubeam Free-cut



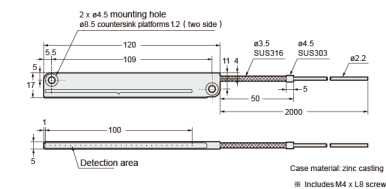
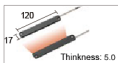
SP-A241

Thrubeam



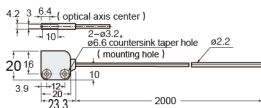
SP-A2100

Thrubeam



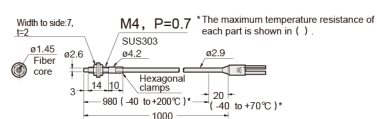
SP-223

Thrubeam Free-cut
A set of two



SP-688K

Heat-resistant
Thrubeam





Dimensions

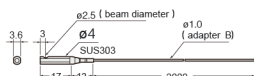
SP-217

SP-217Z

SP-219

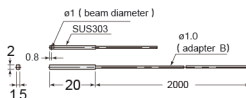
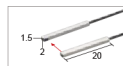


Thrubeam Free-cut
A set of two



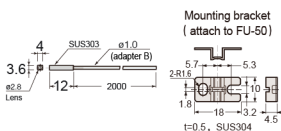
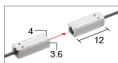
SP-219M

Thrubeam Free-cut
A set of two



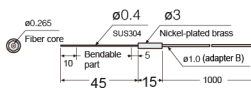
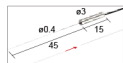
SP-251

Thrubeam Free-cut
A set of two



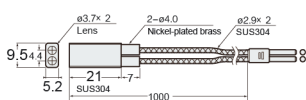
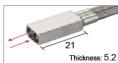
SP-277F

Thrubeam Free-cut
A set of two



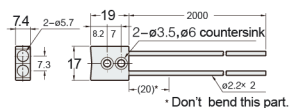
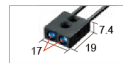
SP-141G

Thrubeam Free-cut
A set of two



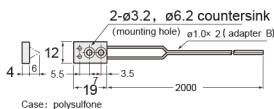
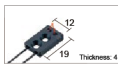
SP-141S

Thrubeam Free-cut



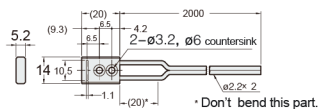
SP-139

Thrubeam Free-cut



SP-139L

Thrubeam Free-cut



SP

P-20/40

SP2

FX-N10

FX-520

FX-525

FX-620

Fiber Optic Sensors

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity
SensorsPrecision Contact
SensorsArea/Safety Light
Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement
SensorsDistance Laser
SensorsConfocal Displacement
Sensors

Barcode Scanners

Infrared Temperature
SensorsDigital Pressure
Sensors

Gate Magnetic Sensors

Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators

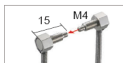


SENPUM

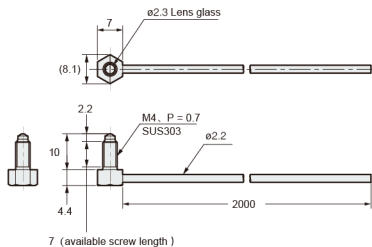
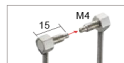
0147

Dimensions

SP-278TG

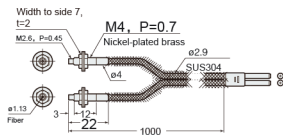
Thrubeam
A set of two

SP-271TZ

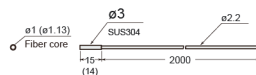
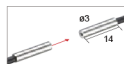
Thrubeam Free-cut
A set of two

SP-278G

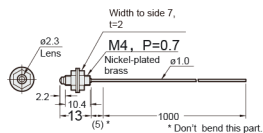
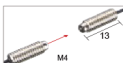
Thrubeam



SP-26FZ

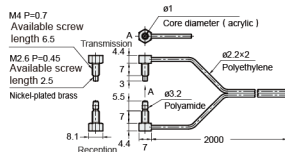
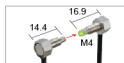
Thrubeam Free-cut
A set of two

SP-271U

Thrubeam Free-cut
A set of two

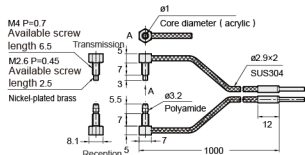
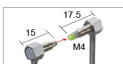
SP-R278TZ

Thrubeam Free-cut



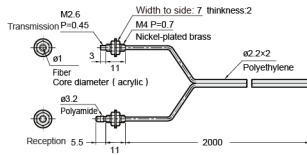
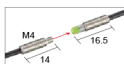
SP-R278TG

Thrubeam



SP-R278

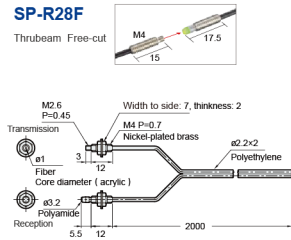
Thrubeam Free-cut



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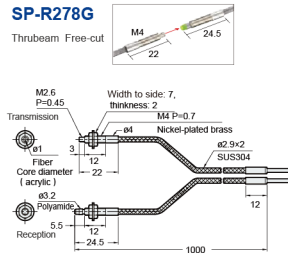
SP-R28F

Thrubeam Free-cut



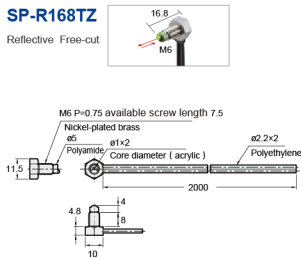
SP-R278G

Thrubeam Free-cut



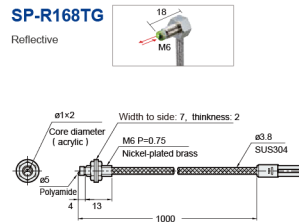
SP-R168TZ

Reflective Free-cut



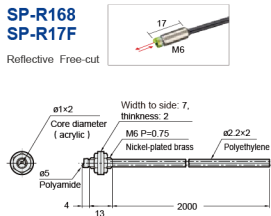
SP-R168TG

Reflective



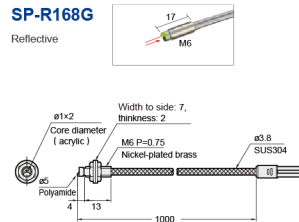
SP-R168 SP-R17F

Reflective Free-cut



SP-R168G

Reflective



Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners

Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators

