

Standard model fiber optic sensors FX-N425 series



Screw-fixed type

The sensor comes with its own threaded connection, allowing direct fixation by using screws.



Dropped workpieces detection

Highly flexible, resistant to movement interference.



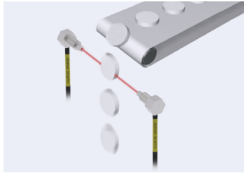
Microtarget detection

Easy-to-use, beginnerfriendly.

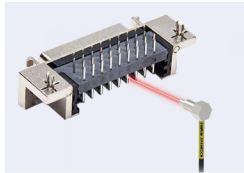


* For more product features, please contact SENPUM engineers.

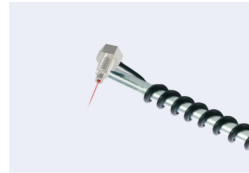
Application



Screw-fixed type



Detect PIN



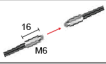
Superb bending resistance

Product List

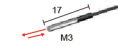
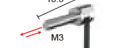
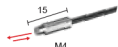
Amplifier

Appearance	Output type	
	NPN	PNP
	FX-N425N	FX-N425P

Laser fiber

Dimension	Fiber element length (diameter) Ambient temperature	Appearance	Bend radius(mm)	Detection distance (mm)	Optical axis diameter	Smallest detectable object	Model/Weight
M4	2 m free-cut (ø2.2) -40 to +50°C		R4 ToughFlex	0~3600	ø1.13	ø0.005	SP-278-CN Approx.25g
	2 m free-cut (ø2.2) -40 to +50°C		R2 ToughFlex	0~3100			SP-278TZ-CN Approx.43g
M6	2 m free-cut (ø2.2) -40 to +70°C		R25	0~3600	ø1.5		SP-272-CN Approx.29g

Reflective fiber

Dimension	Appearance	Inspection layout	Fiber element length (diameter)	Appearance	Bend radius (mm)	Detection distance (mm)	Smallest detectable object	Model/Weight		
M3	Threaded	Coaxial	1 m free-cut(ø1.3×2) -40 to +70°C		R25	0~550	ø0.005 Metal wire	SP-136FA-CN Approx.6g		
			1 m free-cut(ø1.3×2) -40 to +50°C		R2 ToughFlex	0~450		SP-136FZ-CN Approx.6g		
	Hexagon		1 m free-cut(ø1.3×2) -40 to +50°C			0~400		SP-136TZ-CN Approx.7g		
M4	Threaded	Parallel	2 m free-cut(ø1.3×2) -40 to +50°C		R25	0~1100	ø0.005 Metal wire	SP-167-CN Approx.10g		
	Hexagon		2 m free-cut(ø1.3×2) -40 to +50°C		R2 ToughFlex	0~640		SP-167TZ-CN Approx.10g		
M6	Threaded		2 m free-cut(ø2.2×2) -40 to +50°C		R2 ToughFlex	0~900		SP-168-CN Approx.21g		
			2 m free-cut(ø2.2×2) -40 to +50°C		R0.5 ToughFlex			SP-168TZ-CN Approx.32g		

Fiber Optic Sensors

SP
P-20/40
SP2
FX-N10
FX-N425
FX-620

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



SENPU

0164



FX-N425

Standard model fiber optic sensors

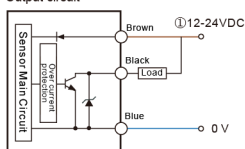
Specs

Type	Standard model	
Model	FX-N425N	FX-N425P
Output type	NPN	PNP
Light source	Red 4-element LED (Wavelength 630nm)	
Response time	100µs (HIGH SPEED) / 250µs (FINE) / 500µs (TURBO) 1ms (SUPER) / 4ms (ULTRA) / 16ms (MEGA)	
Output selection	LIGHT-ON/DARK-ON toggle	
Transmission material	Cable	
Timer function	Timer OFF, OFF-delay timer, ON-delay timer, One-shot timer	
Control output	NPN Output max: 100mA, residual voltage: maximum 1V PNP Max. load current: 100mA, residual voltage: maximum 1V	
Power voltage	Between 12-24VDC±10%, ripple voltage (P-P): 10% or less	
Protection circuit	Reversed polarity protection, output overcurrent protection, output surge protection	
Ambient light	Incandescent : 20,000lux max, daylight : 30,000lux	
Ambient temperature	-20 to +55°C, no condensation	
Relative humidity	35 to +85%, no condensation	
Vibration resistance	10 to 55Hz, 1.5mm double amplitude, 2 hours each in the X,Y,Z direction	
Shock resistance	500 m/s ² 3 times for each of X,Y,Z axis	
Case material	Polycarbonate	
Dimensions(L*W*H mm)	83.62×10.05×30.3	
Cable length	2m	
Weight	Approx 60g	

I/O Circuit Connection Diagram

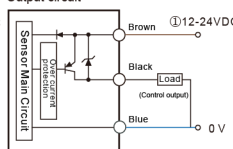
FX-N425N

Output circuit



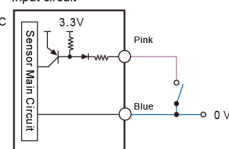
FX-N425P

Output circuit



FX-N425N / FX-N425P

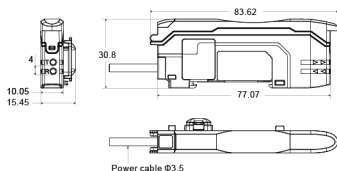
Input circuit



Dimensions

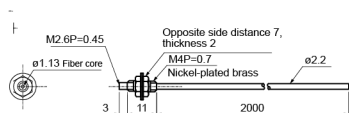
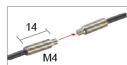
Unit: mm

FX-N425N / FX-N425P



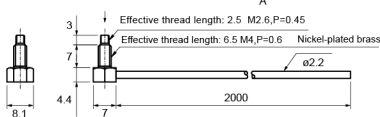
SP-278-CN

Thrubeam free-cut



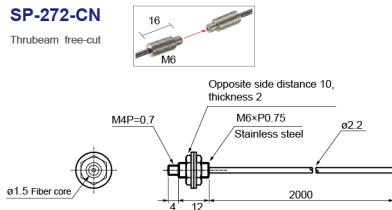
SP-278TZ-CN

Thrubeam free-cut

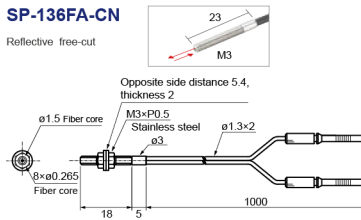


SP-272-CN

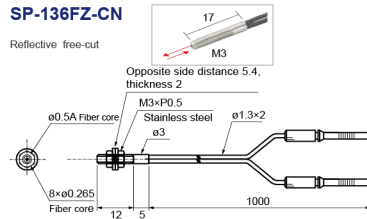
Thrubeam free-cut

**SP-136FA-CN**

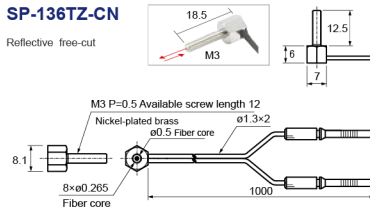
Reflective free-cut

**SP-136FZ-CN**

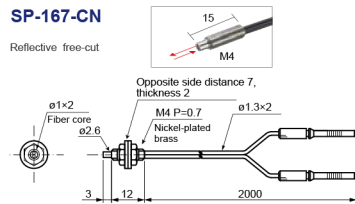
Reflective free-cut

**SP-136TZ-CN**

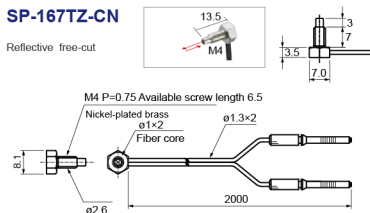
Reflective free-cut

**SP-167-CN**

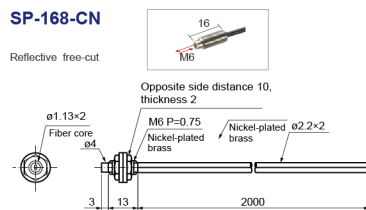
Reflective free-cut

**SP-167TZ-CN**

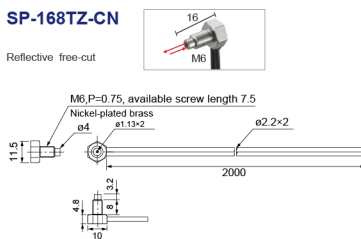
Reflective free-cut

**SP-168-CN**

Reflective free-cut

**SP-168TZ-CN**

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

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Infrared Temperature Sensors

Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

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