LANBAO

Hotline
0086-400-820-8259
0086-800-820-8259

LANBAO CATALOG 2024-11

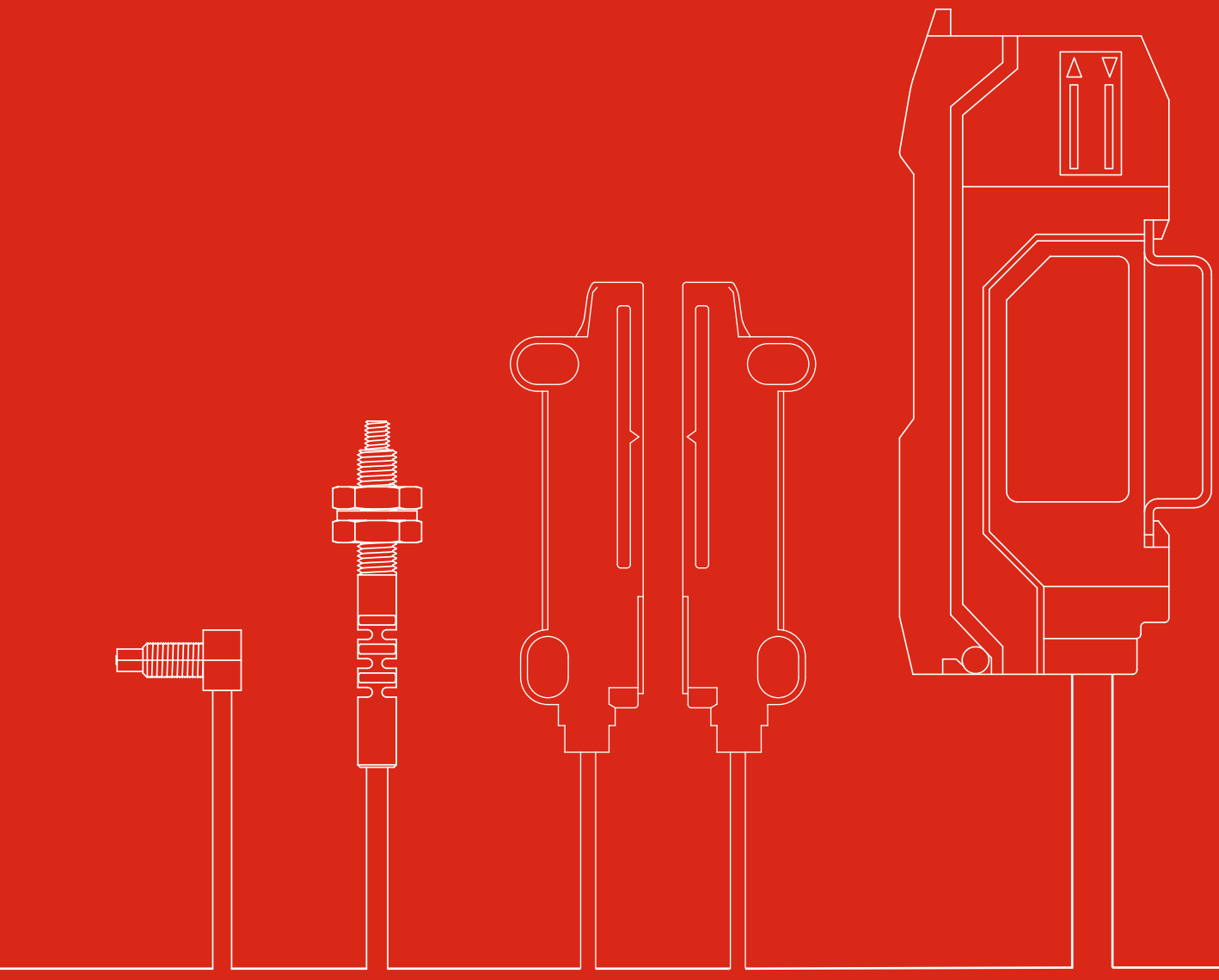
Add:No.228 jinbi Road, Jinhui Industrial Park,
Fengxian Area, Shanghai, China 202404
Tel:86-21-57486188
Fax:86-21-57486199
E-mail:market@shlanbao.cn
Web/URL:www.lanbaosensor.com

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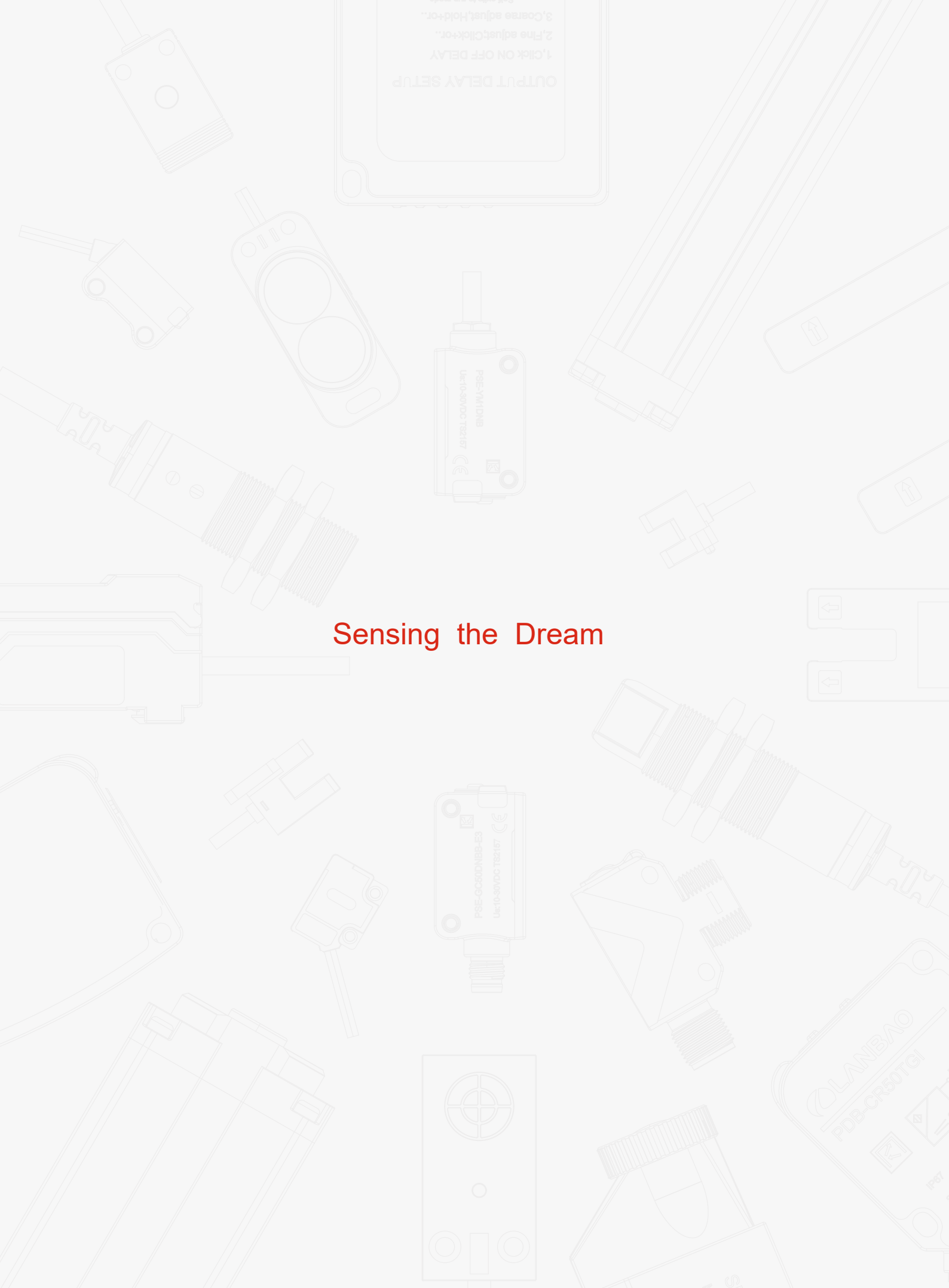
Sensing the Dream

LANBAO

Fiber Optic Sensor



Shanghai Lanbao Sensing Technology Co., Ltd.


Sensing the Dream



About Us

Shanghai Lanbao Sensing Technology Co., Ltd., established in 1998, is a leading Chinese provider of industrial automation solutions. We specialize in developing innovative sensing technologies and systems, driving advancements in intelligent manufacturing. Our products are widely used across various industries, including electronics, automotive, and energy, enhancing efficiency, safety, and sustainability.

Lanbao offers a comprehensive range of sensors, including photoelectric, inductive, capacitive, laser, millimeter wave, ultrasonic, and 3D laser measurement. Our solutions cater to diverse applications, from industrial robotics and automation to advanced manufacturing processes.

Recognized for our commitment to quality and innovation, Lanbao sensors are a preferred choice for replacing imported products, contributing to the localization of China's industrial automation sector.

In 1998
Established

360+
Patents and copyrights

99,000m²
Factory

120+
Countries

10,000+
Products

15,000,000
Pcs/year



CORE PRODUCTS

Based on intelligent sensing technology, internet of things, cloud computing, big data, mobile internet and other advanced technologies, Lanbao improved the intelligence level of various products to help customers transform their production mode from artificial to intelligent and digital. In this way, we're able to elevate the level of intelligent manufacturing to empower customers with high competitiveness.



Inductive Sensors

- Standard function cylindrical series
- Standard function square series
- High protection series
- Temperature extended series
- Factor one series
- Welding immune series
- Extended distance series
- Full metal housing series
- Clamp position series
- Analog output series
- Self-diagnosis series
- Speed monitoring series
- NAMUR series
- High pressure resistant series
- Inductive distance measuring series



Capacitive Sensors

- Standard function series
- Extended sensing distance series
- Tube liquid detection series
- Time delay function series
- High temperature material detection series
- Corrosion resistance detection series
- Frequency enhanced series



Photoelectric Sensor

- Ultra thin series
- Micro square series
- Slot series
- Optical fiber series
- Little square series
- Large square series
- Color series
- Label series
- Round and square series
- Cylindrical series
- Color mark series

LANBAO

Measurement and vision sensor



Laser distance measuring sensor

PDA/PDB

OLED digital display, convenient operation, button/remote teach-in, multiple specifications available.



Laser displacement sensor

PDA/PDB/PDE

OLED digital display, easy operation, small size with high precision, flexible output mode, multiple specifications available.



CCD Laser diameter measuring sensor

PDT/PDM

Exquisite wide range, high precision, a variety of measurement modes,com-patible with one-to-two, multi-control-ler cascading.



2D Laser scanner sensor

PDL

High-performance lidar to meet multiple applications widely used in manufacturing, warehousing, logistics, medical and service robot industries.



LVDT displacement sensor

LVR/LVA

Digital/analog/RS48 measurement accuracy reaches micron level.



Ultrasonic sensor

UR12/18/30 US40

With features as anti-pollution, antidust, anti-moisture, and strong penetration ability, widely used in fields like liquid level monitoring, robot anti-collision, single and double sheet detection, etc.



Millimeter wave radar sensor

MRA

Long-distance and high-precision ranging to meet micro-change monitoring in complex environments.



Code reader

PID

Wide resolution coverage and multiple series to meet industrial-level information traceability needs.



3D line scan sensor

PHM

In use of high-precision CMOS sensors and unique algorithms, with ultra high linear accuracy to realize non-contact and wear-free measurement.

Sensing the Dream

Safetyand control



Light curtain

SFB/SFE/SFG/SFN/SFS
MH20/MH40

SFx series high-level safety protective light curtains are widely used in forging and stamping industries, automotive manufacturing, and electri cal and electronics manufacturing industries. MHxx series measuring light curtains can measure the size of objects and are extensively used in product quality inspection and passing detection.



Safety door switch

SLB-D/SLC-D/SLAS-D/SLD/
Operation keys

Combining ease of use and reliability, with various sizes and contact points available for selection.



Encoder

ENI38K/38S/50S/58K/58S
ENA39S/58S

Applied to machine tool feed axes, servo motion control, and industrial robots, the encoder features high rigidity, high response, and high positioning accuracy.

Industrial network module and connection system



Industrial network module

Master/hub

Stable and reliable communication transmission, robust metal casing, excellent cost-performance ratio, aiding in the realization of Industry 4.0.



Junction box

DB08/DB12

Consolidate multiple power and data signals, reducing the amount of wiring needed.



Connection cable

QE8/QE12

Esigned to connect various electronic devices for data transmission and power supply.



Standard function cylindrical series

QE8/QE12

For circuit connections, making the design and production process more convenient and flexible.

Product Family

Optic fiber amplifier

FD1 Series

One-touch setup for stable detection,ideal for simple working conditions.

F01 -003



FD2 Series

Real-time data display, compact, and convenient.

F02-001



FD3 Series

New LED and circuit design with added functionalitie

F03-001



Optical fiber and related accessories

Plastic diffuse reflection

Multiple sizes, fully threaded design, easy to install.

F04-005



Plastic through-beam

Long-distance detection, area inspection.

F05-001



Glass diffuse reflection

Withstanding temperatures up to 350°C.

F06 -001



Glass through-beam

Suitable for long-distance measurement in high-temperature。

F07-001



Focusing mirror

Optic fiber accessories, compact and easy to install.

F08-001



FD1

FD2

FD3

Diffuse

Through-beam

Glass diffuse

Glass through-beam

Focusing mirror

Product Family

Naming rules

Official Website

Optic Fiber Amplifier

Fiber Optic Sensor

Naming rules

FD ① 1 ② □□ ③④ - □ ⑤ □ ⑥ 11 ⑦ R ⑧ - □ ⑨ □ ⑩

1.Classification code
FD：Optic fiber amplifier

2.Shape
One-digit notation

3.Industry/Area
Factory definition

4.Power supply
N/A：12...24VDC
J：5VDC

5.Output logic
N：NPN
P：PNP
Q：NPN*2
F：PNP*2
G：Push-Pull
H：Dual-channel Push-Pull

6.Output status
B：NO/NC optional
O：NO
C：NC
R：NO+NC
I：With current output 4-20mA

7.Switch mode
10：Wireless extension unit
11：Basic unit

8.Light source
N/A：Infrared
R：Red light

9.Connection
N/A：2M cable
E1：M8 3-core connector
E2：M12 4-core connector
E3：M8 4-core trapezoidal connector
E4：M12 4-core trapezoidal connector
E5：M12 5-core connector
F3：M8 3-core connector with 0.2m cable

10.Special requirement
4 Digits or letters

Quick selection

Appearance	Light source	Response time	Output type	Power supply	Ambient temperature	Housing material	Connection	Model
	Red visible light (660nm)	＜1ms	NPN+PNP NO/NC	10...30 VDC	0...55°C	PC+ABS	2m PVC cable	FD1-NPR
	Red visible light (660nm)	＜200us(FINE) ＜300us(TURBO) ＜550us(SUPER)	NPN NO/NC	12...24 VDC	0...55°C	PC+ABS	2m PVC cable	FD2-NB11R
			PNP NO/NC					FD2-PB11R
	Red LED (650nm)	50μs (HIGH SPEED) 250μs (FINE) 1ms (SUPER) 16ms (MEGA)	NPN NO/NC	12...24 VDC	-20...55°C	PC	2m PVC cable	FD3-NB11R
			PNP NO/NC					FD3-PB11R
	Red LED (650nm)	50μs (HIGH SPEED) 250μs (FINE) 8ms (SUPER) 8ms (MEGA)	4...20mA	12...24 VDC	-20...55°C	PC	2m PVC cable	FD3-NI11R
								FD3-PI11R

FD1
FD2
FD3
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Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

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Diffuse
Through-beam
Glass diffuse
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Naming rules

Fiber Optic Sensor

Optic Fiber Amplifier FD1 Sensor



CE

For specifications, certification, usage, and model list.
please scan the product QR code



- **PC transparent housing is aesthetically pleasing and dust-resistant.**
- **Green LED indicates power supply and signal stability**
  Red LED is used for output indication and short circuit indication
- **Delay setting**

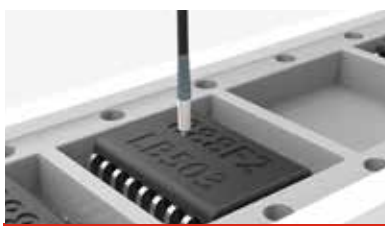
  NORM: output without delay
  OFF DLY100ms: output off delay 100ms
- **Light-on/dark-on selection**

  L.ON: The output is activated for NPN+PNP when there is a light signal.
  D.ON: The output is activated for NPN+PNP when there is no light signal.
- **Button function is used to set the detection distance**

Application



Bottle counting detection



Parts missing detection



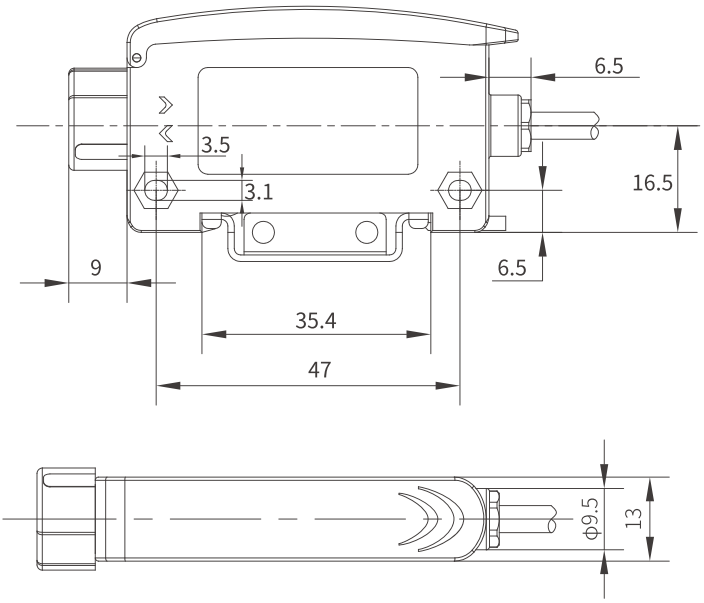
Capacitor pin detection

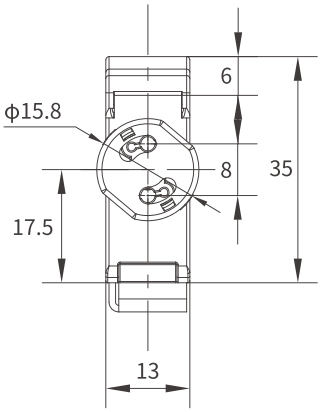
Official Website

Specifications

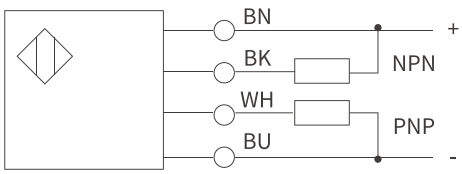
Model specification	FD1-NPR
Power supply	DC 10-30V
Ripple voltage	<10%
Leakage current	<0.1mA
Current consumption	<40mA
Output type	NPN+PNP;NO/NC Dip switch optional
Circuit protection	Overload protection and short-circuit protection
Voltage drop	<2.5V
Rated load current	100mA
Minimum load current	1mA
Hysteresis	3%~20%
Repeat accuracy	<5%
Anti-shock	Shock(impulse)wave shape Half sine, Peak speed 30g; Puse durationr 11ms
Output indication	Power:green LED; Output:red LED
Output delay	Settable(NORM:Output without delay;OFF DLY 100ms:Output turn-off delay 100ms)
Distance adjustment	Button
Response time	<1ms
Temperature drift	<10%
Ambient temperature	0°C~50°C
Light source	Red LED(660nm)
Dielectric properties	<0.2mA(500VAC,60s)
Anti-vibration	Amplitude: 1mm; Frequency:10~55Hz, Sweep frequency cycle: 5min
Protection degree	IP54
Connection	2m PVC Cable
Housing material	PC+ABS

Dimensions





Wiring diagram



FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

Memo

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FD2
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Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

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FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Optic Fiber Amplifier FD2 Sensor



CE

For specifications, certification, usage, and model list.
please scan the product QR code

- **Industry-leading dual monitoring mode**
- **Built-in high-speed digital processing chip**
- **Automatic and manual correction functions optional**
- **Leading-edge high-precision detection compared to similar products**
- **Detection range that surpasses conventional fiber optics**
- **Easy-to-install and maintain wiring system**



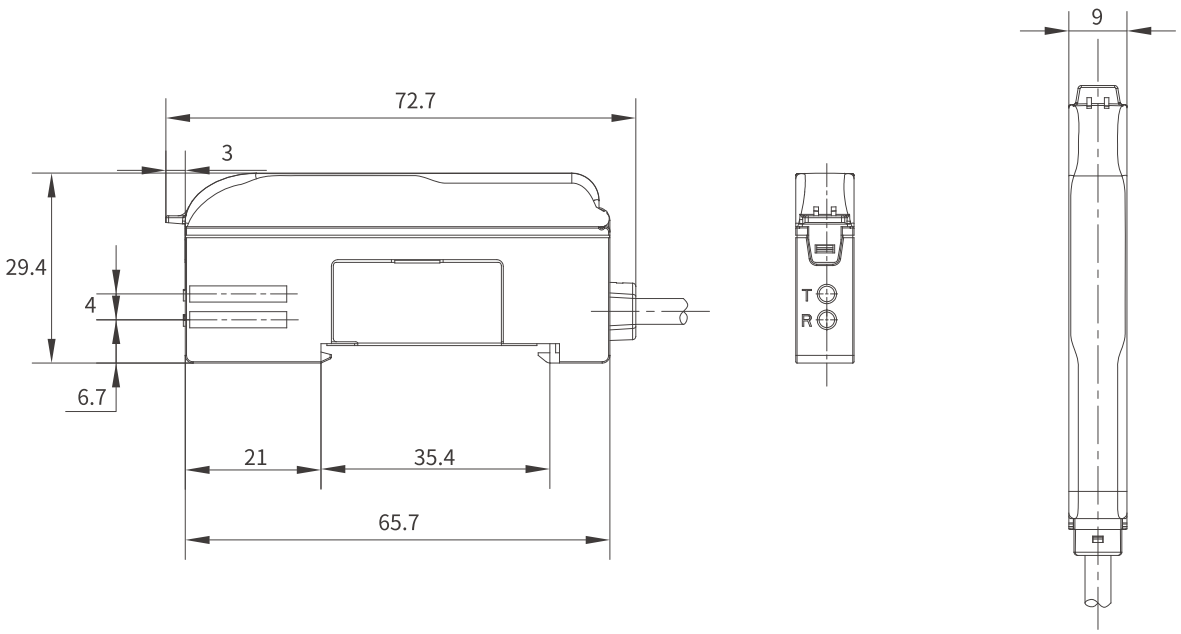
Official Website

Specifications

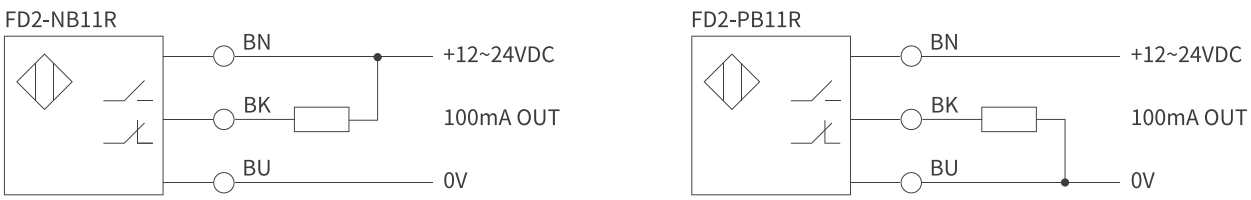
Fiber Optic Sensor

Model specification	FD2-NB11R	FD2-PB11R
Supply voltage	DC 12-24V	
Consumption current	<60mA	
Voltage drop	<1.5V	
Load current	<100mA	
Response time	<200uS(FINE),<300us(TURBO),<550us(SUPER)	
Detection accuracy	>0.01mm(Fiber-related)	
Light source	660nm Visible red light	
Anti ambient light	incandescent light<3,000lux, daylight 10000lux	
Circuit protection	Reverse polarity, surge, overload protection	
Output indication	4-digit LED digital display, LED bar display, action display	
Features	Optional transmit power and optional output delay	
Ambient temperature	-10°C~+50°C (no freezing)	
High voltage resistance	1000V/AC 50/60Hz 60s	
Insulation resistance	⩾50MΩ(500VDC)	
Vibration resistance	Amplitude:0.5mm Frequency:10...50Hz	
Impulse withsand	500m/s2(50g)X,Y,Z 3 times each	
Protection degree	IP54	
Housing material	PC+ABS	
Connection	2m PVC Cable	

Dimensions



Wiring diagram



Official Website

FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Optic Fiber Amplifier FD3 Sensor



CE

For specifications, certification, usage, and model list.
please scan the product QR code



4 application modes for flexible selection

(MEGA\SUPER\FINE\HIGH SPEED)

Powerful functional composition

Counting, zero migration, percentage, anti-light interference, regional rising and falling edges (DTM), numerical amplification, normally open and normally closed interchange, delay and other functions

Response speed as fast as 50us

Advanced Circuit Protection

Reverse polarity, over-voltage, and over-current protection

Application



Water flow device detection



Packaging bag detection



Chip missing detection

Official Website

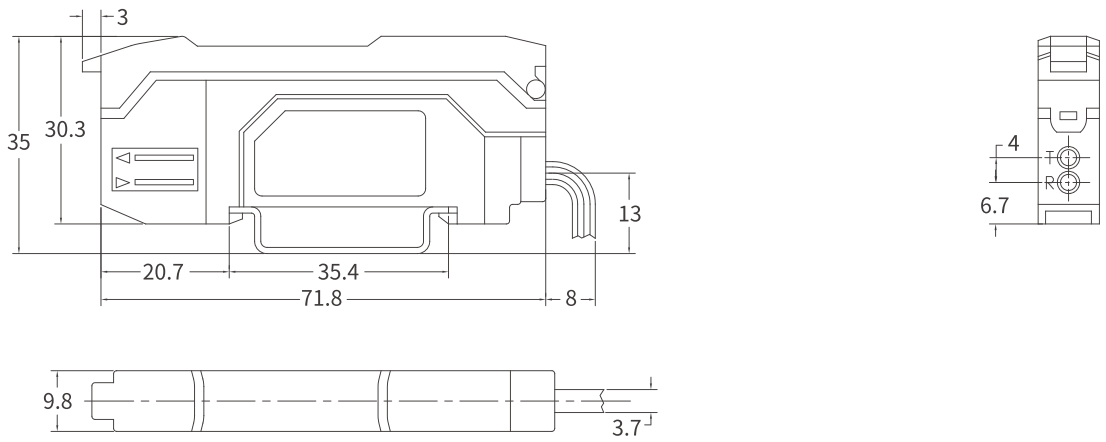
Specifications

Fiber Optic Sensor

Model specification	FD3-NB11R	FD3-PB11R
Supply voltage	12...24VDC±10%, Ripple (P-P):≤10%	
Voltage drop	≤1.5V	
Load current	≤100mA	
Output status	NO/NC optional	
Response time	50μs (HIGH SPEED) / 250μs (FINE) / 1ms (SUPER) / 16ms (MEGA)	
Power consumption *	NPN:≤900mW	PNP:≤950mW
Circuit protection	Short circuit protection, overload protection, reverse polarity protection	
Light source	Red LED(650nm)	
Delay function	Off-delay timer/On-delay timer/Single timer	
Anti ambient light	Incandescent light:≤20,000 lux;Day light :≤30,000 lux	
Ambient temperature	-20...55°C (No freezing)	
Environment humidity	35...85%RH (No condensation)	
Vibration resistance	10...55Hz, double amplitude 1.5mm (2 hours each in X, Y, Z directions)	
Impulse withsand	500m/s², 3 times each in X, Y, Z directions	
Housing material	PC	
Connection	2m PVC Cable	
Weight	About 66g	

*High speed mode makes an increase of 160mW (7mA) power consumption

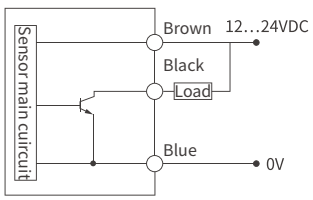
Dimensions



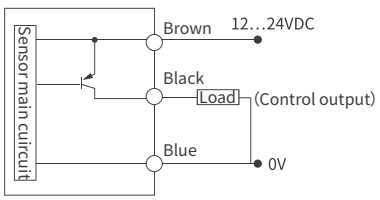
Wiring diagram

Toggle the power selection switch to output two different channel (NPN/PNP) type switching modes

NPN:FD3-NB11R



PNP:FD3-PB11R



FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

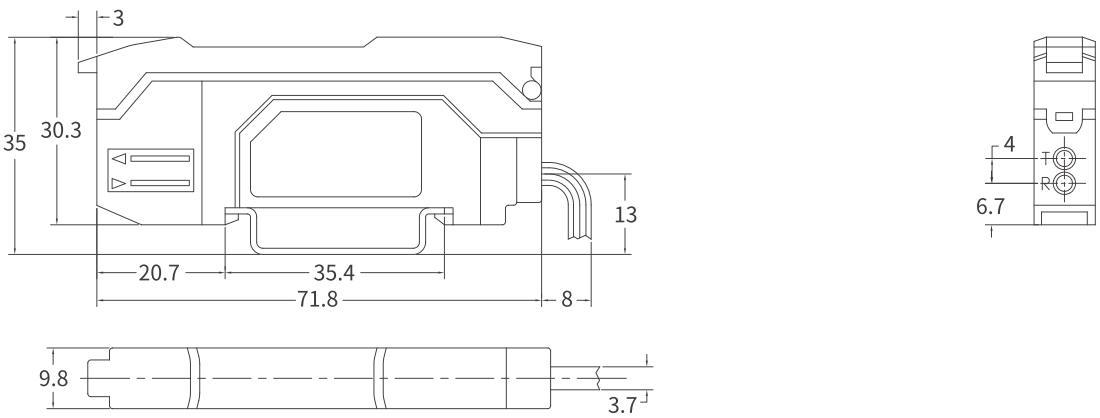
Official Website

Specifications

Model specification	FD3-NI11R	FD3-PI11R
Supply voltage	12...24VDC±10%, Ripple (P-P):≤10%	
Voltage drop	≤1.5V	
Load current	≤100mA	
Output status	NO/NC Optional	
Response time	50μs (HIGH SPEED) / 250μs (FINE) / 8ms (SUPER) / 8ms (MEGA)	
Analog output	Current output: 4-20mA	
Power consumption *	NPN:≤900mW	PNP:≤950mW
Circuit protection	Short circuit protection, overload protection, reverse polarity protection	
Light source	Red LED(650nm)	
Delay function	Off-delay timer/On-delay timer/Single timer	
Anti ambient light	Incandescent light:≤20,000 lux;Day light :≤30,000 lux	
Ambient temperature	-20...55°C (No freezing)	
Environment humidity	35...85%RH (No condensation)	
Vibration resistance	10...55Hz, double amplitude 1.5mm (2 hours each in X, Y, Z directions)	
Impulse withsand	500m/s², 3 times each in X, Y, Z directions	
Housing material	PC	
Connection	3-core (BN/BU/BK) 0.34mm² 2m PVC cable	
Weight	About 66g	

*High speed mode makes an increase of 160mW (7mA) power consumption

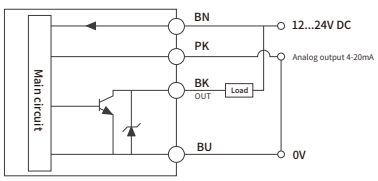
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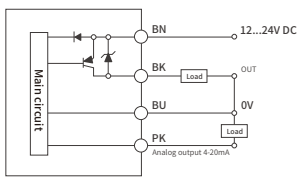
Wiring diagram

Toggle the power selection switch to output two different channel (NPN/PNP) type switching modes

NPN:FD3-NI11R



PNP:FD3-PI11R



FD1
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Glass through-beam
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Naming rules

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Optical Fiber and Related Accessories

Optical fiber naming rules

P□□ □ - □ □ □□ - □ - □

① ② ③ ④ ⑤ ⑥ ⑦

1.Classification code

PFR：Diffuse reflection fiber
PFT：Through-beam fiber
PGR：Glass diffuse reflection fiber
PGT：Glass through-beam fiber

2.Fiber core size

N/A：1.0mm/ϕ2.2
B：0.25mm/ϕ1.3
C：0.25mm x16/ϕ2.2
0.25mm x9/ϕ1.3
D：0.5mm/ϕ1.25
S：0.5mm/ϕ1.0
S2：0.5mm/2.2
J：0.75mm/ϕ1.25
X：1.5mm/ϕ2.2

3.Shape

N/A：Metal thread
Q：No thread

4.Fiber head size

1：Outer diameter 1mm
1.5：Outer diameter 1.5mm
2：Outer diameter 2mm
3：Outer diameter 3mm
4：Outer diameter 4mm

5.Cable length

05：Fiber length 50cm
10：Fiber length 100cm
20：Fiber length 200cm
30：Fiber length 300cm

6.Convex tube

N/A：No convex tube
I：Convex tube10mm
S：Convex tube20mm
M：Convex tube40mm
L：Convex tube90mm

7.Special function

V：90° right angle
JC：Integrated bracket
N：Tension enhancement

Focusing mirror naming rules

□□□ - □ □ □ □ □

① ② ③ ④ ⑤ ⑥

1.Classification code

PFL：Fiber Optic Lenses

2.Model

R：Diffuse reflection
T：Through-beam

3.Matching size

3：M3
4：M4
6：M6

4.Light output method

S：Direct light
V：Side light

5.Temperature resistance

A：Below 100°C
B：100-200°C
C：200-300°C
D：300-400°C

6.Product No.

01 02 03 04...

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Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
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Naming rules

Official Website

Optical Fiber and Related Accessories

Optical fiber quick selection

Appearance	Type	Type	Size	Cable length	Minimum bend radius	Detection distance	Heat resistance	Model
	Diffuse reflection	Dual core	M6	1m	R25	190mm	- 40~70°C	PFR-610
				2m				PFR-620
			M4	1m	R15	90mm	- 40~70°C	PFRD-410
				2m				PFRD-420
			M3	1m	R15	70mm	- 40~70°C	PFRD-310
				2m	R10			PFRD-320
				2m	R10	70mm	- 40~70°C	PFRD-320-S
		Coaxial	M6	1m	R25	170mm	- 40~70°C	PFRC-610
				2m				PFRC-620
			M4	1m	R15	70mm	- 40~70°C	PFRC-410
			M3	1m	R15	70mm	- 40~70°C	PFRC-310
		Right angle	M6	1m	R2	170mm	- 40~70°C	PFR-610-V
				2m				PFR-620-V
			M4	1m	R2	70mm	- 40~70°C	PFR-410-V
				2m				PFR-420-V
		Strength enhancement	M6	2m	R25	190mm	- 40~70°C	PFR-620-N
		Array		2m	R5	25mm	- 40~70°C	PFR-S01
	Through-beam	Single core	M6	1m	R25	500mm	- 40~70°C	PFT-610
			M4	1m	R25	500mm	- 40~70°C	PFT-410
				3m				PFT-430
			M3	1m	R25	400mm	- 40~70°C	PFT-310
		Right angle	M6	2m	R2	500mm	- 40~70°C	PFT-620-V
				1m				PFT-610-V
			M4	2m	R2	500mm	- 40~70°C	PFT-420-V
				1m				PFT-410-V
		Array		2m	R2	1200mm	- 40~70°C	PFT-R01
				2m		2000mm		PFT-R02

FD1
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Glass diffuse
Glass through-beam
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Optical Fiber and Related Accessories

Appearance	Type	Type	Size	Cable length	Minimum bend radius	Detection distance	Heat resistance	Model
	Glass diffuse reflection	Single core	M6	2m	R25	150mm	- 40~350°C	PGR-620
		Right angle	M4	1m	R25	120mm	- 40~350°C	PGR-410-V
				2m				PGR-420-V
			M6	2m	R25	150mm	- 40~350°C	PGR-620-V
	Glass through-beam	Single core	M4	2m	R25	500mm	- 40~350°C	PGT-420

Focusing mirror quick selection

Appearance	Matching type	Size	Light spot size	Heat resistance	Material	Model
	Diffuse reflection fiber	M4	Φ1mm@20mm	-40...+70°C	Housing: Aluminium Lens section: Glass	PFL-R4SA01
	Through-beam fiber	M4		-60...+350°C	Housing: Aluminium Lens section: Glass	PFL-T4SD01

FD1

FD2

FD3

Diffuse

Through-beam

Glass diffuse

Glass through-beam

Focusing mirror

Product Family

Naming rules

Official Website

Memo

FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

Fiber Optic Sensor

Optical Fiber Diffuse Reflection Series



- **Standard Thread Shape for Easy Installation**
- **Fiber Optic Head Made of Stainless Steel for High Durability**
- **Suitable for Installation in Confined Spaces with High Detection Precision**

For specifications, certification, usage, and model list.
please scan the product QR code

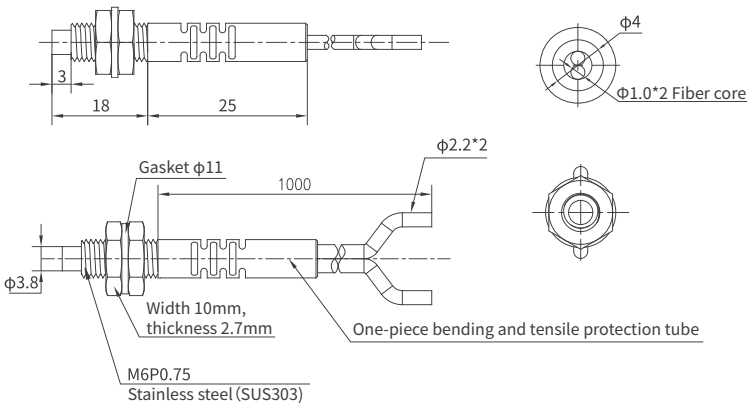
Selection List

Appearance	Type	Type	Size	Cable length	Minimum bend radius	Detection distance	Heat resistance	Model
	Diffuse reflection	Dual core	M6	1m	R25	190mm	- 40~70°C	PFR-610
				2m				PFR-620
			M4	1m	R15	90mm	- 40~70°C	PFRD-410
				2m				PFRD-420
			M3	1m	R15	70mm	- 40~70°C	PFRD-310
				2m	R10			PFRD-320
				2m	R10	70mm	- 40~70°C	PFRD-320-S
		Coaxial	M6	1m	R25	170mm	- 40~70°C	PFRC-610
				2m				PFRC-620
			M4	1m	R15	70mm	- 40~70°C	PFRC-410
			M3	1m	R15	70mm	- 40~70°C	PFRC-310
		Right angle	M6	1m	R2	170mm	- 40~70°C	PFR-610-V
				2m				PFR-620-V
			M4	1m	R2	70mm	- 40~70°C	PFR-410-V
				2m				PFR-420-V
		Strength enhancement	M6	2m	R25	190mm	- 40~70°C	PFR-620-N
		Array		2m	R5	25mm	- 40~70°C	PFR-S01

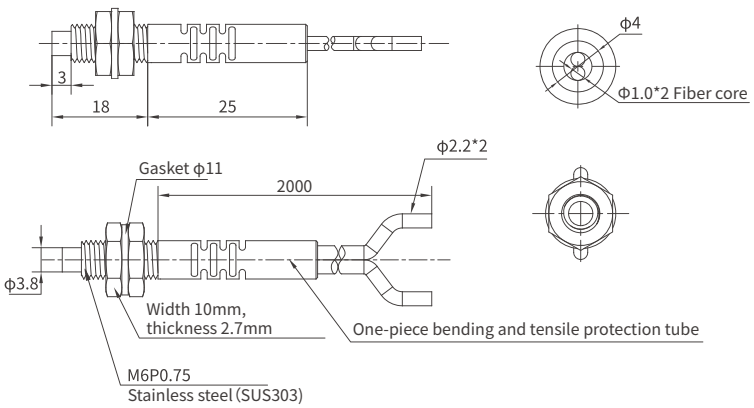
Specifications/Dimensions

Dual core

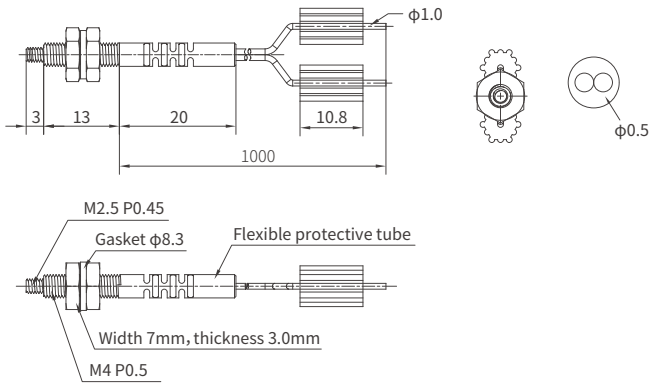
Part number		PFR-610
Fiber optic head size		M6
Fiber core size		ϕ1.0*2
Minimum bending radius		R25
Detection distance	FD1	100mm
	FD2/FD3	190mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		1000mm



Part number		PFR-620
Fiber optic head size		M6
Fiber core size		ϕ1.0*2
Minimum bending radius		R25
Detection distance	FD1	100mm
	FD2/FD3	190mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		2000mm



Part number		PFRD-410
Fiber optic head size		M4
Fiber core size		Φ0.5*2
Minimum bending radius		R15
Detection distance	FD1	60mm
	FD2/FD3	90mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		1000mm

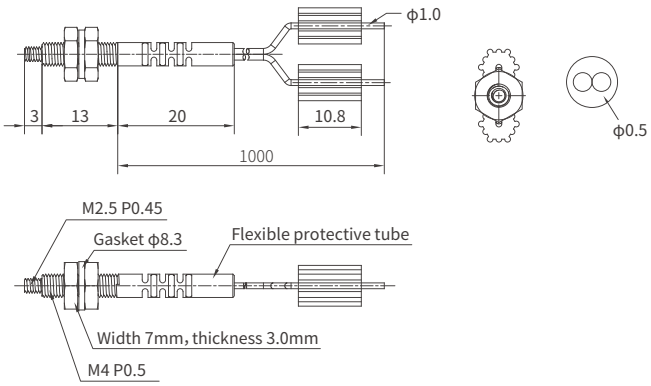


Official Website

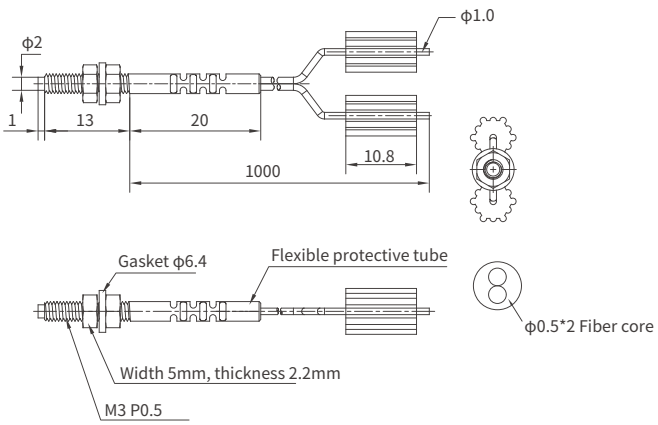
Specifications/Dimensions

Fiber Optic Sensor

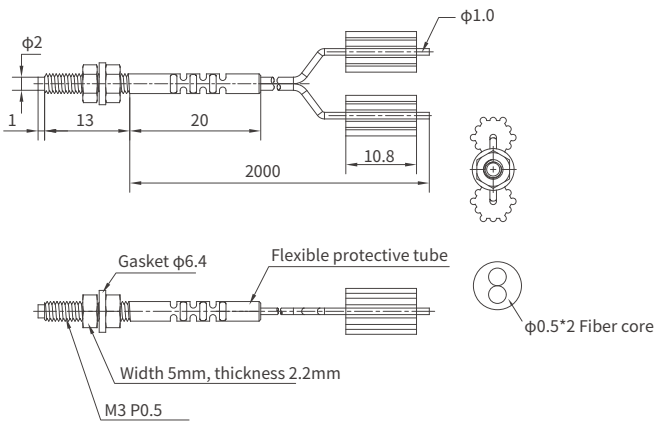
Part number		PFRD-420
Fiber optic head size		M4
Fiber core size		Φ0.5*2
Minimum bending radius		R15
Detection distance	FD1	60mm
	FD2/FD3	90mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		2000mm



Part number		PFRD-310
Fiber optic head size		M3
Fiber core size		Φ0.5*2
Minimum bending radius		R15
Detection distance	FD1	40mm
	FD2/FD3	70mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		1000mm



Part number		PFRD-320
Fiber optic head size		M3
Fiber core size		Φ0.5*2
Minimum bending radius		R15
Detection distance	FD1	36mm
	FD2/FD3	70mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		2000mm

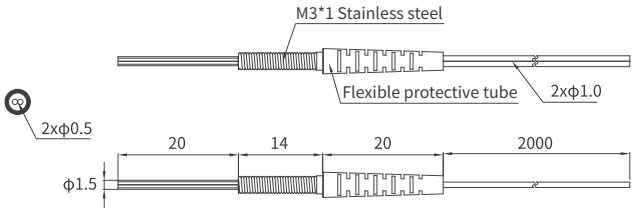


FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

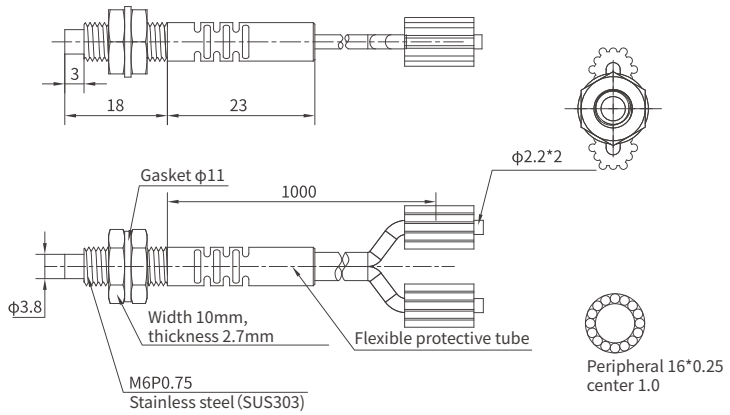
Specifications/Dimensions

Part number		PFRD-320-S
Fiber optic head size		M3
Fiber core size		Φ0.5*2
Minimum bending radius		R15
Detection distance	FD1	36mm
	FD2/FD3	70mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		2000mm

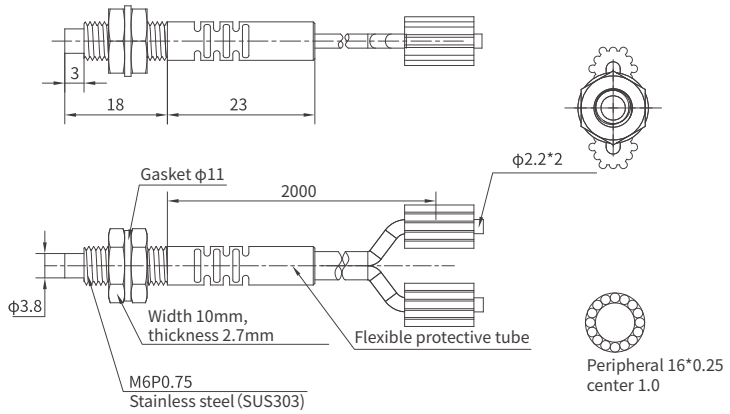


Coaxial

Part number		PFRC-610
Fiber optic head size		M6
Fiber core size		Φ0.25*16
Minimum bending radius		R25
Detection distance	FD1	90mm
	FD2/FD3	170mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		1000m



Part number		PFRC-620
Fiber optic head size		M6
Fiber core size		Φ0.25*16
Minimum bending radius		R25
Detection distance	FD1	90mm
	FD2/FD3	170mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		2000mm

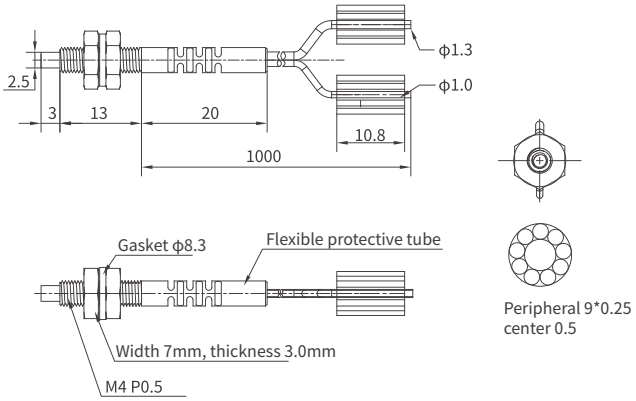


FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

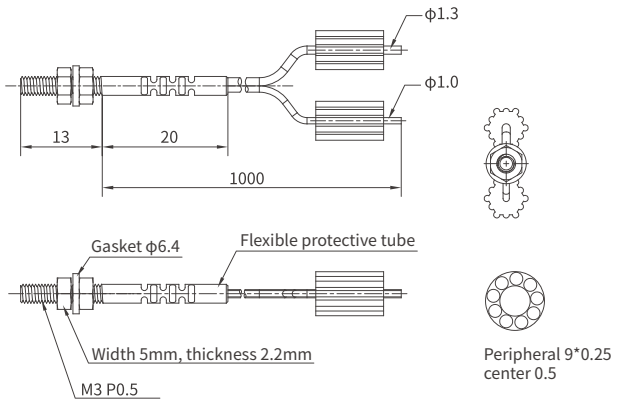
Official Website

Specifications/Dimensions

Part number		PFRC-410
Fiber optic head size		M4
Fiber core size		Φ0.25*9
Minimum bending radius		R15
Detection distance	FD1	40mm
	FD2/FD3	70mm
Min target		ϕ0.1
Heat resistance		- 40~70°C
Cable length		1000mm

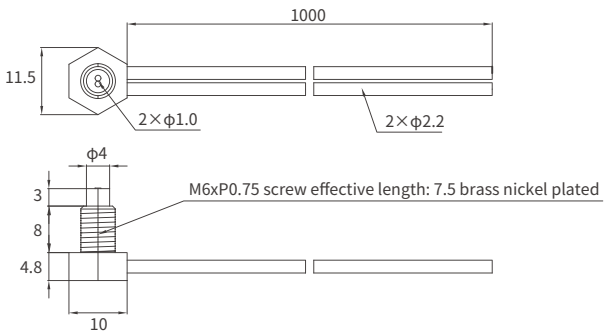


Part number		PFRC-310
Fiber optic head size		M3
Fiber core size		Φ0.25*9
Minimum bending radius		R15
Detection distance	FD1	40mm
	FD2/FD3	70mm
Min target		ϕ0.05
Heat resistance		- 40~70°C
Cable length		1000mm



Right angle

Part number	PFR-610-V
Fiber optic head size	M6
Fiber core size	Φ1.0*2
Minimum bending radius	R2
Detection distance	190mm
Min target	ϕ0.1
Heat resistance	- 40~70°C
Cable length	1000mm



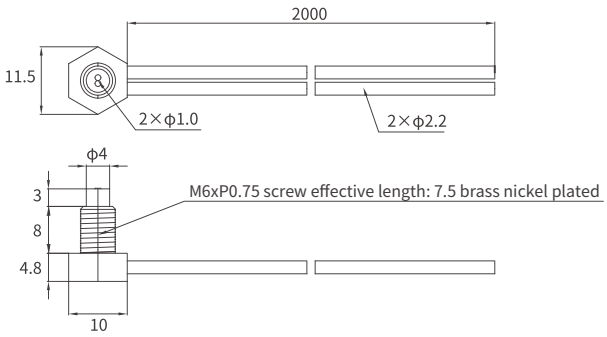
FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

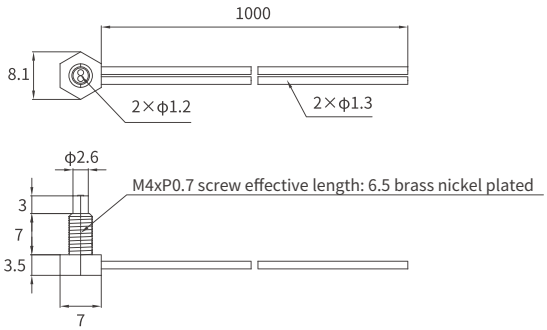
Specifications/Dimensions

Fiber Optic Sensor

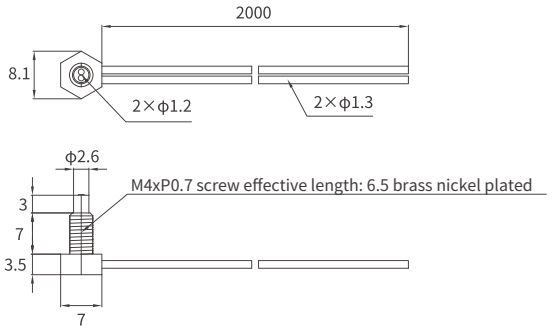
Part number	PFR-620-V
Fiber optic head size	M6
Fiber core size	Φ1.0*2
Minimum bending radius	R2
Detection distance	190mm
Min target	ϕ0.1
Heat resistance	- 40~70°C
Cable length	2000mm



Part number	PFR-410-V
Fiber optic head size	M4
Fiber core size	Φ1.2*2
Minimum bending radius	R2
Detection distance	90mm
Min target	ϕ0.1
Heat resistance	- 40~70°C
Cable length	1000mm

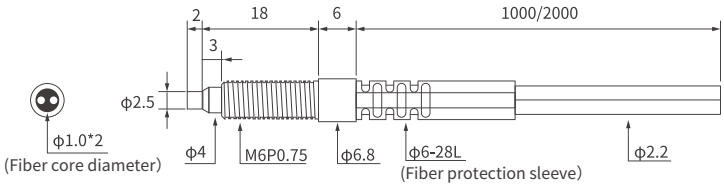


Part number	PFR-420-V
Fiber optic head size	M4
Fiber core size	Φ1.2*2
Minimum bending radius	R2
Detection distance	90mm
Min target	ϕ0.1
Heat resistance	- 40~70°C
Cable length	2000mm



Tension enhancement

Part number	PFR-620-N
Fiber optic head size	M6
Fiber core size	Φ1.0*2
Minimum bending radius	R25
Detection distance	200mm
Min target	ϕ0.2
Heat resistance	- 40~70°C
Cable length	2000mm

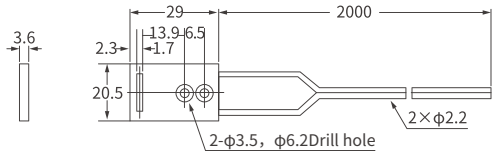


Official Website

Specifications/Dimensions

Area

Part number	PFT-S01
Detection area	3*40
Minimum bending radius	R5
Detection distance	40mm
Heat resistance	- 40~70°C
Cable length	2000mm



FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

Memo

FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

Fiber Optic Sensor

Fiber Optic Head Through-beam Series



- **Standard Thread Shape for Easy Installation**
- **Fiber Optic Head Made of Stainless Steel for High Durability**
- **Suitable for Installation in Confined Spaces with High Detection Precision**

For specifications, certification, usage, and model list.
please scan the product QR code

Selection List

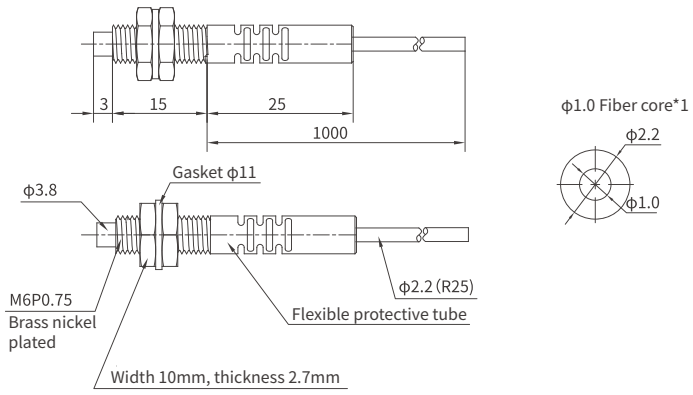
Appearance	Type	Type	Size	Cable length	Minimum bend radius	Detection distance	Heat resistance	Model
	Through-beam	Single core	M6	1m	R25	500mm	- 40~70°C	PFT-610
			M4	1m	R25	500mm	- 40~70°C	PFT-410
				3m				PFT-430
			M3	1m	R25	400mm	- 40~70°C	PFT-310
		Right angle	M6	2m	R2	500mm	- 40~70°C	PFT-620-V
				1m				PFT-610-V
			M4	2m	R2	500mm	- 40~70°C	PFT-420-V
				1m				PFT-410-V
		Array		2m	R2	1200mm	- 40~70°C	PFT-R01
				2m		2000mm		PFT-R02

Official Website

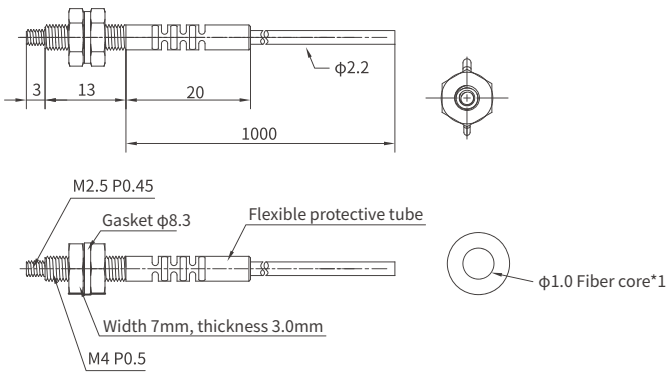
Specifications/Dimensions

Dual core

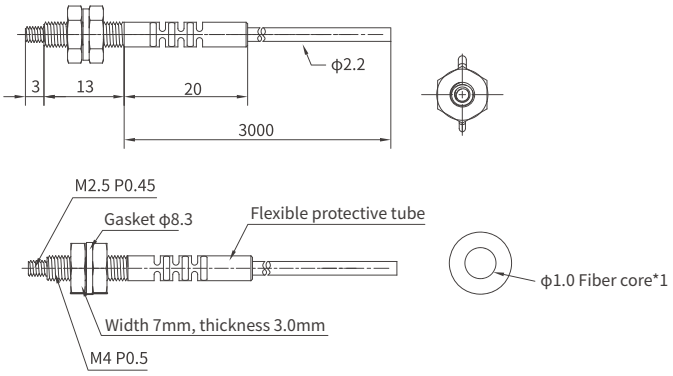
Part number		PFT-610
Fiber optic head size		M6
Fiber core size		Φ1.0
Minimum bending radius		R25
Detection distance	FD1	280mm
	FD2/FD3	500mm
Min target		ϕ0.5
Heat resistance		- 40~70°C
Cable length		1000mm



Part number		PFT-410
Fiber optic head size		M4
Fiber core size		Φ1.0
Minimum bending radius		R25
Detection distance	FD1	250mm
	FD2/FD3	500mm
Min target		ϕ0.5
Heat resistance		- 40~70°C
Cable length		1000mm



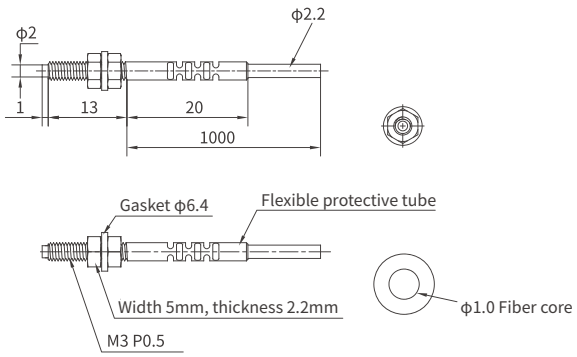
Part number		PFT-430
Fiber optic head size		M4
Fiber core size		Φ1.0
Minimum bending radius		R25
Detection distance	FD1	250mm
	FD2/FD3	500mm
Min target		ϕ0.5
Heat resistance		- 40~70°C
Cable length		3000mm



Official Website

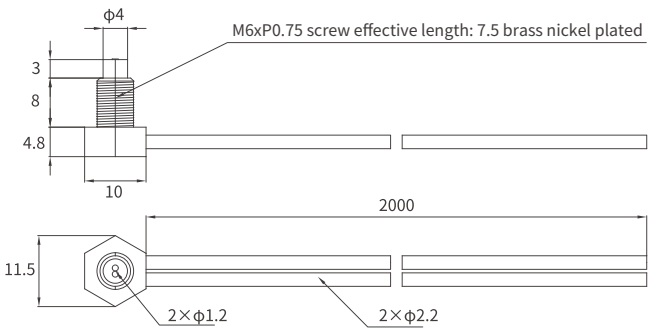
Specifications/Dimensions

Part number		PFT-310
Fiber optic head size		M3
Fiber core size		Φ1.0
Minimum bending radius		R25
Detection distance	FD1	200mm
	FD2/FD3	400mm
Min target		ϕ0.5
Heat resistance		- 40~70°C
Cable length		1000mm

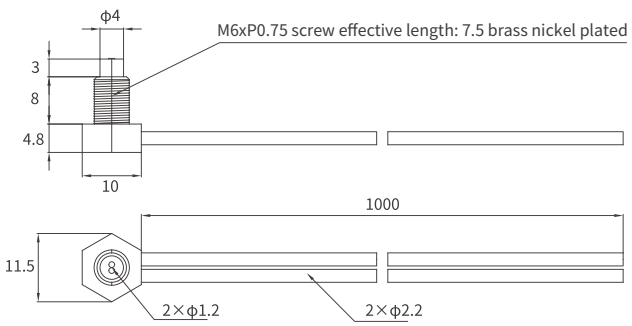


Right angle

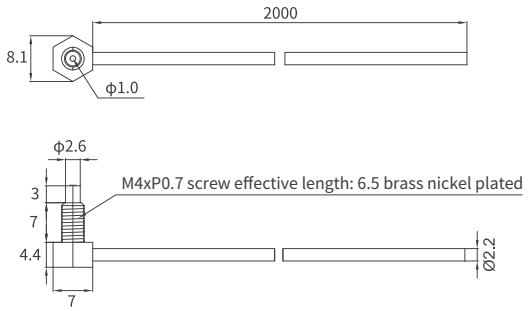
Part number	PFT-620-V
Fiber optic head size	M6
Fiber core size	Φ1.2*2
Minimum bending radius	R2
Detection distance	500mm
Min target	ϕ0.5
Heat resistance	- 40~70°C
Cable length	2000mm



Part number	PFT-610-V
Fiber optic head size	M6
Fiber core size	Φ1.2*2
Minimum bending radius	R2
Detection distance	500mm
Min target	ϕ0.5
Heat resistance	- 40~70°C
Cable length	1000mm



Part number	PFT-420-V
Fiber optic head size	M4
Fiber core size	Φ1.0
Minimum bending radius	R2
Detection distance	500mm
Min target	ϕ0.5
Heat resistance	- 40~70°C
Cable length	2000mm

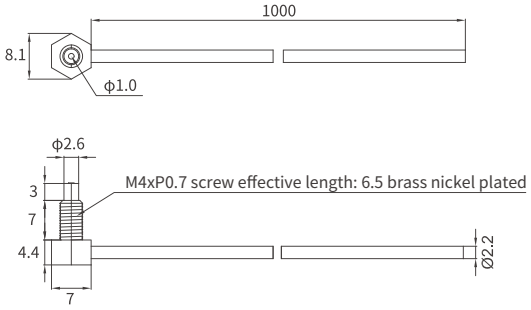


FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

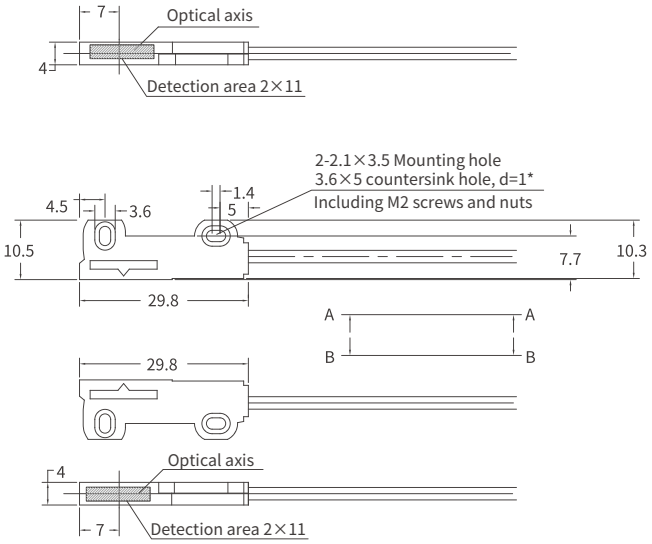
Specifications/Dimensions

Part number	PFT-410-V
Fiber optic head size	M4
Fiber core size	Φ1.0
Minimum bending radius	R2
Detection distance	500mm
Min target	ϕ0.5
Heat resistance	- 40~70°C
Cable length	1000mm

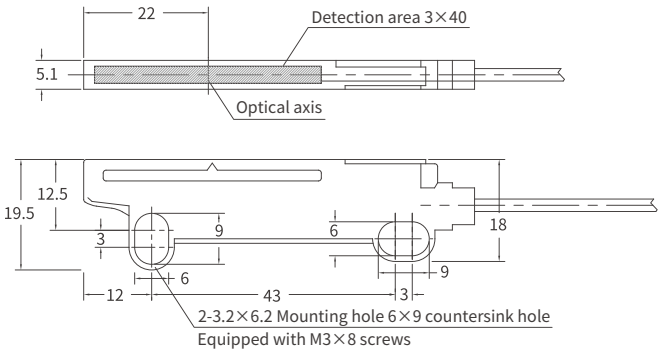


Array

Part number	PFT-R01
Detection area	2*11
Minimum bending radius	R2
Detection distance	1200mm
Heat resistance	- 40~70°C
Cable length	2000mm



Part number	PFT-R02
Detection area	3*40
Minimum bending radius	R2
Detection distance	2000mm
Heat resistance	- 40~70°C
Cable length	2000mm



FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Fiber Optic Head Glass Diffuse Series



- **Standard Thread Shape for Easy Installation**
- **Fiber Optic Head Made of Stainless Steel for High Durability**
- **Suitable for Installation in Confined Spaces with High Detection Precision**

Selection List

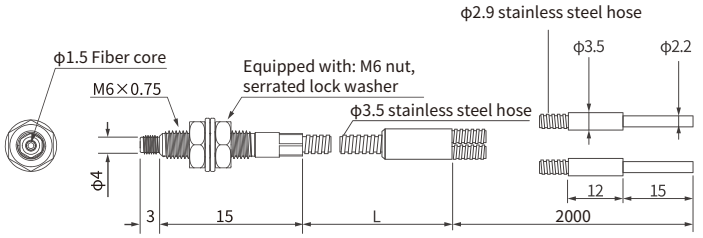
Appearance	Type	Type	Size	Cable length	Minimum bend radius	Detection distance	Heat resistance	Model
	Glass diffuse reflection	Single core	M6	2m	R25	150mm	- 40~350°C	PGR-620
		Right angle	M4	1m	R25	120mm	- 40~350°C	PGR-410-V
				2m				PGR-420-V
			M6	2m	R25	150mm	- 40~350°C	PGR-620-V

Official Website

Specifications/Dimensions

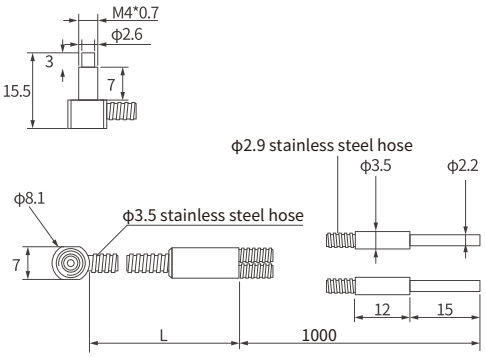
Single core

Part number	PGR-620
Fiber optic head size	M6
Fiber core size	Φ1.5
Minimum bending radius	R25
Detection distance	400mm
Min target	φ0.005
Heat resistance	- 55~350°C
Cable length	2000mm

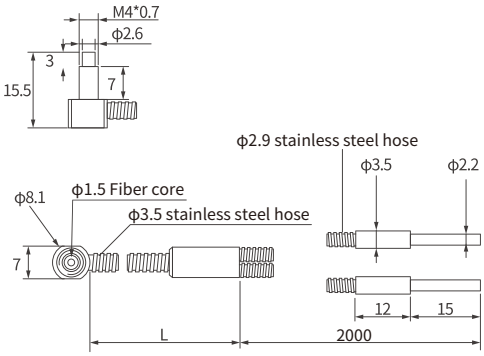


Right angle

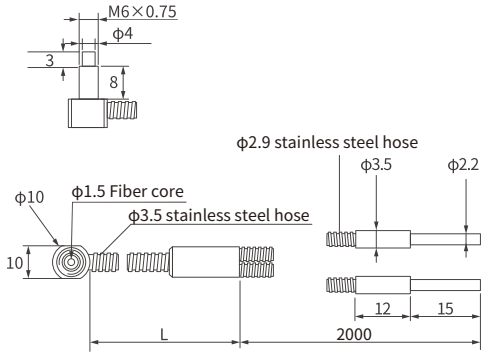
Part number	PGR-410-V
Fiber optic head size	M4
Fiber core size	Φ1.5
Minimum bending radius	R25
Detection distance	120mm
Min target	φ0.5
Heat resistance	- 40~350°C
Cable length	1000mm



Part number	PGR-420-V
Fiber optic head size	M4
Fiber core size	Φ1.5
Minimum bending radius	R25
Detection distance	120mm
Min target	φ0.5
Heat resistance	- 40~350°C
Cable length	2000mm



Part number	PGR-620-V
Fiber optic head size	M6
Fiber core size	Φ1.5
Minimum bending radius	R25
Detection distance	400mm
Min target	φ0.005
Heat resistance	- 55~350°C
Cable length	2000mm



Official Website

Fiber Optic Head Glass Through-beam Series



- **Standard Thread Shape for Easy Installation**
- **Fiber Optic Head Made of Stainless Steel for High Durability**
- **Suitable for Installation in Confined Spaces with High Detection Precision**

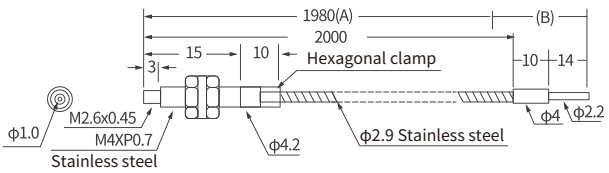
Selection List

Appearance	Type	Type	Size	Cable length	Minimum bend radius	Detection distance	Heat resistance	Model
	Glass through-beam	Single core	M4	2m	R25	500mm	- 40~350°C	PGT-420

Specifications/Dimensions

Single core

Part number	PGT-420
Fiber optic head size	M4
Fiber core size	Φ1.0
Minimum bending radius	R25
Detection distance	500mm
Min target	ϕ0.5
Heat resistance	- 40~350°C
Cable length	2000mm



FD1
FD2
FD3
Diffuse
Through-beam
Glass diffuse
Glass through-beam
Focusing mirror
Product Family
Naming rules

Official Website

Focusing Mirror Series



- **Standard thread shape, easy to install and use**
- **Aluminum housing, more resistant to the environment**
- **Increase the optical fiber detection distance**
- **Reduce the spot size**

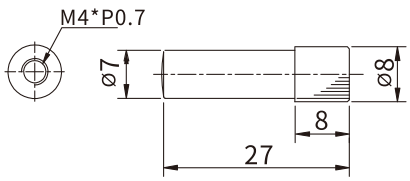
Selection List

Appearance	Adaptation type	Size	Light spot size	Heat resistance	Material	Model
	Diffuse reflection fiber	M4	Φ1mm@20mm	-40...+70°C	Housing: Aluminium Lens section: Glass	PFL-R4SA01
	Through-beam fiber	M4		-60...+350°C	Housing: Aluminium Lens section: Glass	PFL-T4SD01

Specifications/Dimensions

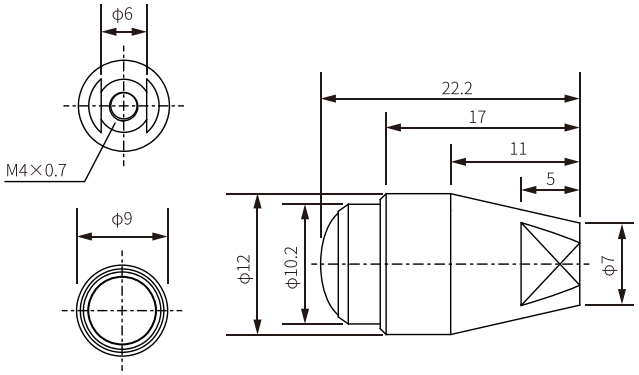
diffuse reflection

Part number	PFL-R4SA01
Detection distance can be extended	⩽20mm
Heat resistance	- 40~+70°C
Housing	Aluminum
Lens	Glass



Through-beam

Part number	PFL-T4SD01
Detection distance can be extended	⩽7000mm
Heat resistance	-60...+350°C
Housing	Aluminum
Lens	Glass



FD1
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Glass diffuse
Glass through-beam
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