

Digital display optical fiber sensors **FD2** series

Features

- ◆ Leading dual monitor mode;
- ◆ Build-in high-speed digital processing chip;
- ◆ Automatic and manual correction and calibration optional.



Part number

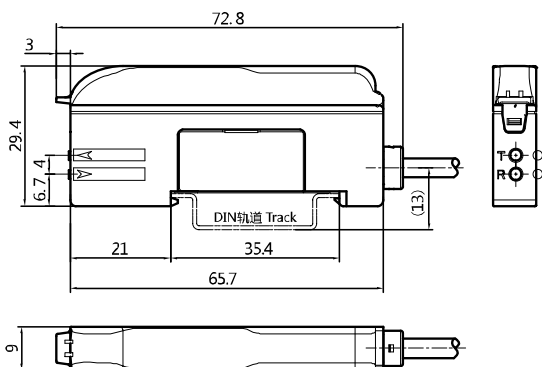
NPN NO/NC FD2-NB11R

PNP NO/NC FD2-PB11R

Technical specifications

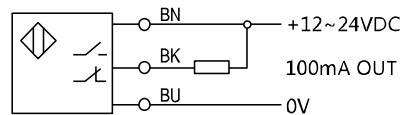
Power supply	DC 12-24V	Output indicate	4 LED digital display、LED bar display
Current consumption	<60mA	Ambient temperature	-10℃~+50℃ (Does not freeze)
Voltage drop	<1V	High voltage resistance	1000V/AC 50/60Hz 60s
Load current	<100mA	Insulation resistance	≥50MΩ(500VDC)
Response time	<200us(FINE), <300us(TURBO), <550us(SUPER)	Anti-vibration	Amplitude 0.5mm, frequency 10...50Hz
Detection accuracy	>0.01mm (Depends on specific)	Anti-shock	500m/s ² (50G) for 3 times X,Y,Z direction
Light source	660nm red visible light	Protection degree	IP54
Ambient light	Incandescent lamp 3000lux、sunlight 10000lux	Housing material	PC+ABS
Circuit protection	Surge、Reverse polarity and overland protection	Connection	2m PVC cable
Function	Emitter power optional FINE/TURBO/SUPER, output time delay optional		

Dimensions

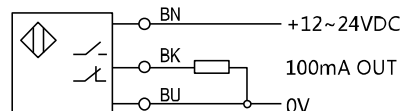


Wiring diagram

FD2-NB11R



FD2-PB11R



Optical fiber amplifier **FD1** series

Features

- ◆ Sensing distance can be set by key(Self learning);
- ◆ Stability indicator;
- ◆ Light on/Dark on optional;
- ◆ Output can be set, NO delay or OFF delay 100ms;
- ◆ Reverse polarity protection, shock protection, overland protection and short-circuit protection.



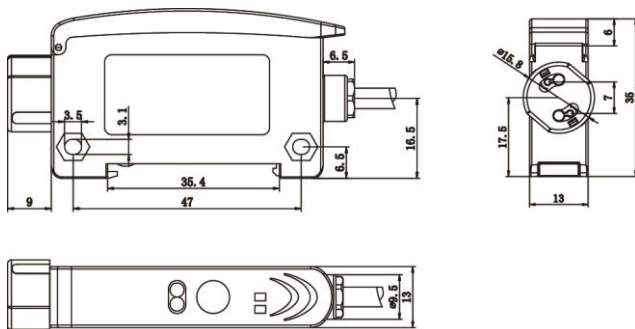
Part number

NPN+PNP L.ON/D.ON FD1-NPR

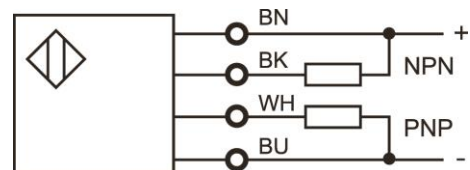
Technical specifications

Limiting voltage	DC 10-30V	Distance regulation	Key
Fluctuation voltage	<10%	Response time	<1m
Current consumption	<40mA	Temperature drift	<10%
Leak current	<0.1mA	Ambient temperature	0°C~50°C
Output mode	NPN+PNP; L.ON/D.ON Dial switch optional	Light source	Visible red light
Power Supply Protection	Polarity protection, shock protection	Dielectric property	<0.2mA (500VAC, 60s)
Output protection	Overload protection, short-circuit protection	Repeated accuracy	<5%
Voltage drop	<2.5V (@I _{LOAD} =100mA)	Protection degree	IP54
Rated load current	100mA	Connection	2m PVC cable
Min load current	1mA	Housing material	PC+ABS
Hysteresis	3%-20%		
Anti-vibration	Amplitude: 1mm; Frequency: 10~55Hz; Sweep frequency cycle: 5min)		
Anti-shock	Shock (Impulse) wave shape: Half sine; Peak speed: 30g _{nr} ; Pulse duration: 11ms		
Efficient operation distance	1~80mm(90% reflective rate, 100*100mm white card, with fiber cable PRC-610 for test)		
Indicator display	Output indicator; power indicator; stability indicator, short-circuit/overland indicator, setting indicator		
Output delay	There are two ways for setting: NORM; OFF delay 100ms		
EMC-ESD	±4kV CD/±8kV AD (IEC61000-4-2)		
EMC-Burst	±2kV 5kHz (IEC61000-4-4)		
EMC-HF radiated/conducted	3V/m (IEC61000-4-3) /3V (IEC61000-4-6)		

Dimensions



Wiring diagram



Fiber PFR series



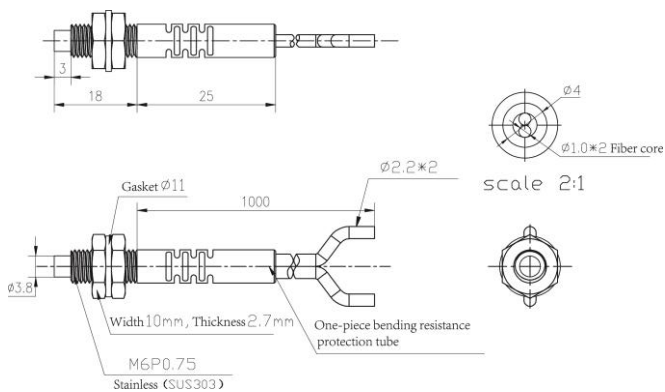
Features

- ◆ Standard threaded mounting, easy and convenient;
- ◆ Made of stainless steel, with high durability;
- ◆ Suitable for installation in narrow spaces, with high detection accuracy.

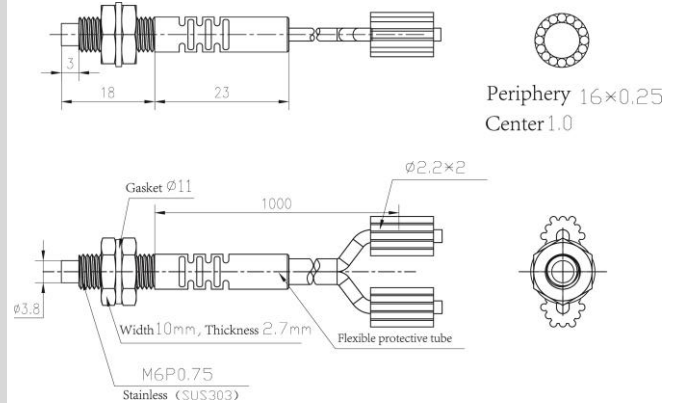
Diffuse reflection

Item code	Size	Shape	Min bending radius	Sensing distance (mm)	Min detected target (mm)
PFR-610	M6		R25	FINE:110	φ0.2
				TURBO:190	
				SUPER:290	
PFR-610	M6		R25	FINE:80	φ0.1
				TURBO:170	
				SUPER:280	
PFRD-410	M4		R15	FINE:40	φ0.1
				TURBO:90	
				SUPER:240	
PFR-410	M4		R15	FINE:40	φ0.1
				TURBO:70	
				SUPER:160	
PFRD-310	M3		R15	FINE:40	φ0.1
				TURBO:70	
				SUPER:120	
PFR-310	M3		R15	FINE:40	φ0.05
				TURBO:80	
				SUPER:120	

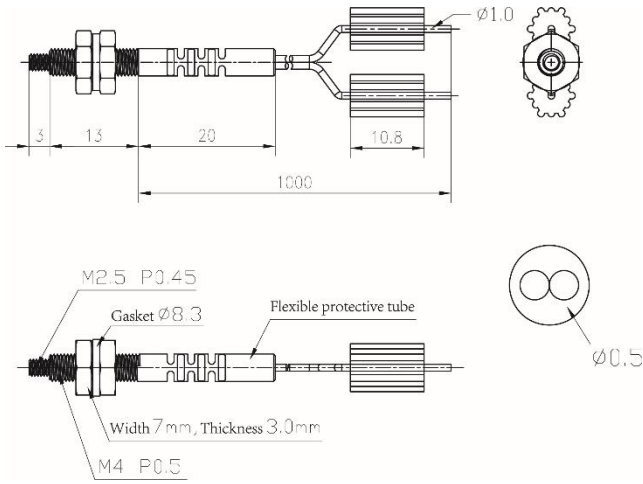
Dimension: PFR-610



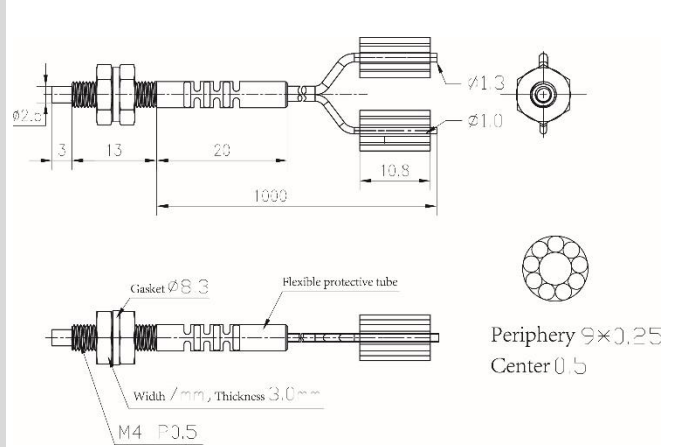
Dimension: PFR-610



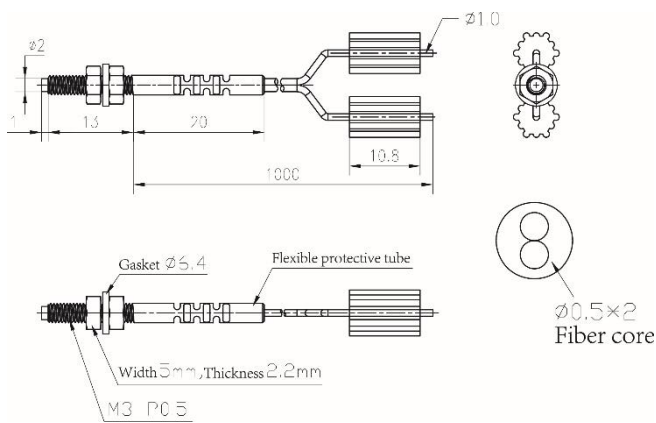
Dimension: PFRD-410



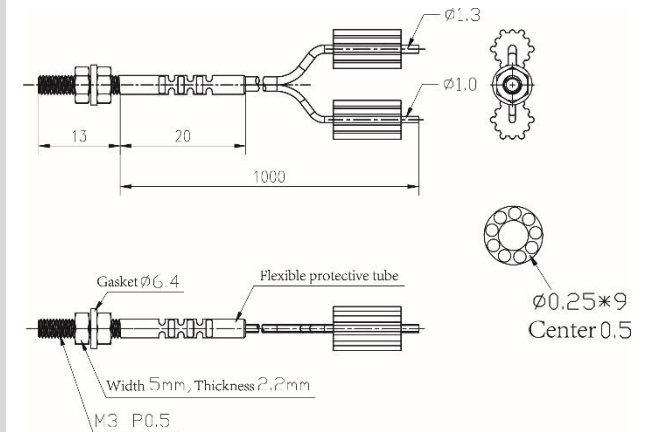
Dimension: PFRC-410



Dimension: PFRD-310



Dimension: PFRC-310






Fiber **PFT** series



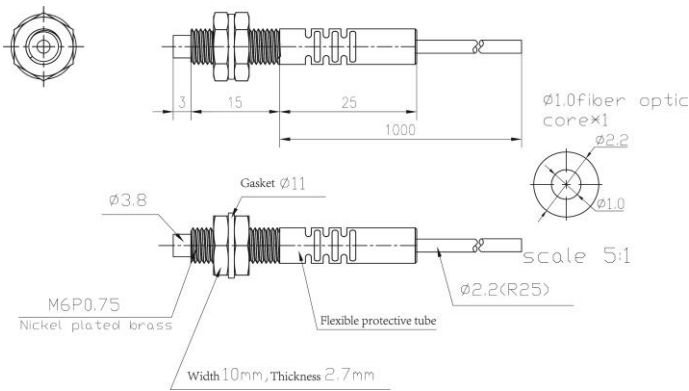
Features

- ◆ Standard threaded mounting, easy and convenient;
- ◆ Made of stainless steel, with high durability;
- ◆ Suitable for installation in narrow spaces, with high detection accuracy.

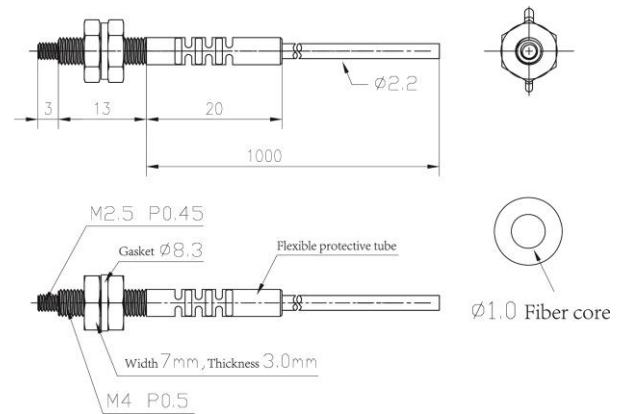
Through beam

Item code	Size	Shape	Min bending radius	Sensing distance (mm)	Min detected target (mm)
PFT-610	M6		R25	FINE:300	φ0.5
				TURBO:500	
				SUPER:800	
PFT-410	M4		R25	FINE:300	φ0.5
				TURBO:500	
				SUPER:800	
PFT-310	M3		R25	FINE:200	φ0.5
				TURBO:400	
				SUPER:700	

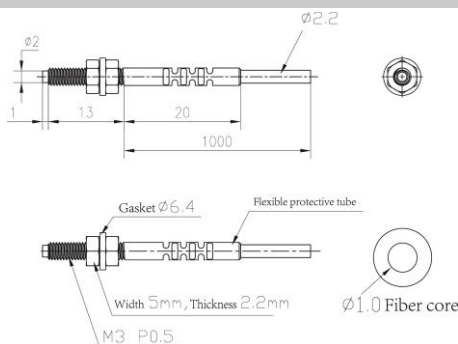
Dimension: PFT-610



Dimension: PFT-410



Dimension: PFT-310



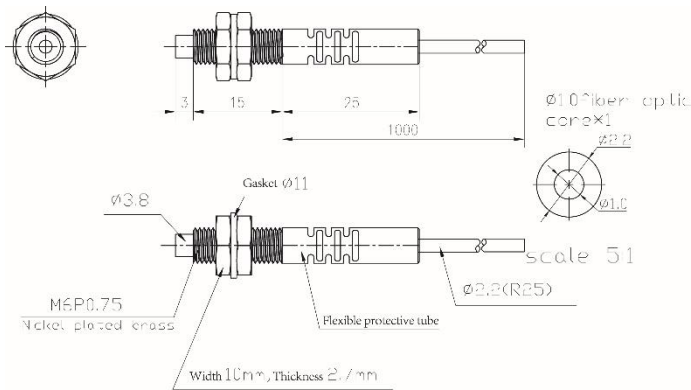
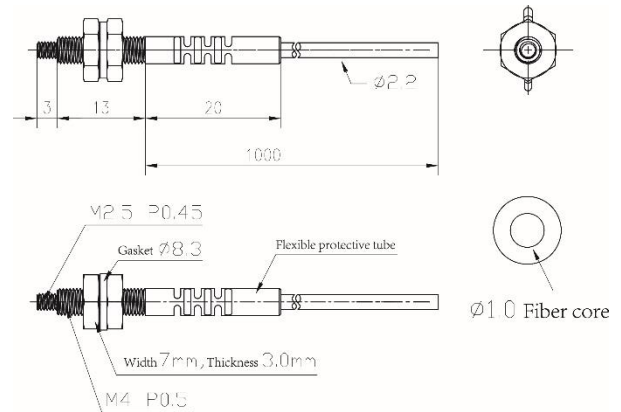
Fiber head **PFT** series

Features

- ◆ Standard threaded mounting, easy and convenient;
- ◆ Made of stainless steel, with high durability;
- ◆ Suitable for installation in narrow spaces, with high detection accuracy.

Through beam

Item code	Size	Shape	Min bending radius	Sensing distance (mm)	Min detected target (mm)
PFT-610	M6		R25	280	φ0.5
PFT-410	M4		R25	250	φ0.5
PFT-310	M3		R25	200	φ0.5

Dimension: PFT-610

Dimension: PFT-410

Dimension: PFT-310
