

## Rectangular, Flat Type Proximity Sensor

### ■ Features

- Easy to mount in narrow space by flat structure (height: 10mm)
- Improved the noise immunity with dedicated IC (DC type)
- Built-in reverse polarity protection circuit, output short over current protection circuit (DC type)
- Built-in surge protection circuit
- Red LED operation indicator
- IP67 protection structure (IEC standard)
- Replaceable for micro switches and limit switches




**⚠** Please read "Safety Considerations" in the instruction manual before using.




### ■ Type

#### ◎ DC 3-wire type

Appearance	Model
	PFI25-8DN
	PFI25-8DP
	PFI25-8DN2 ※
	PFI25-8DP2 ※

※ mark can be customized.

#### ◎ AC 2-wire type

Appearance	Model
	PFI25-8AO
	PFI25-8AC

### ■ Specification

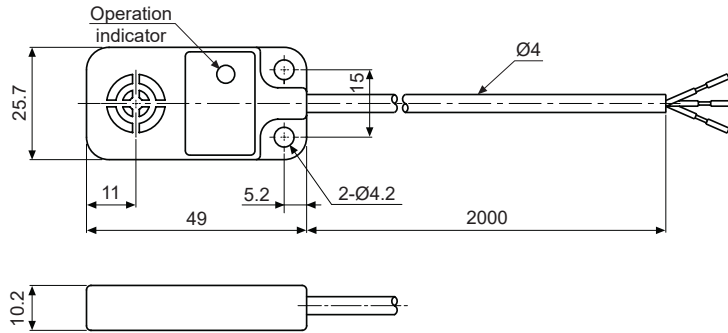
Model	PFI25-8DN PFI25-8DN2	PFI25-8DP PFI25-8DP2	PFI25-8AO PFI25-8AC
Sensing side	Upper side		
Sensing distance	8mm		
Hysteresis	Max. 10% of sensing distance		
Standard sensing target	25×25×1mm (iron)		
Setting distance	0 to 5.6mm		
Power supply (operating voltage)	12-24VDC== (10-30VDC==)		100-240VAC~ (85-264VAC~)
Current consumption/Leakage current	Max. 10mA		Max. 2.5mA
Response frequency*1	200Hz		20Hz
Residual voltage	Max. 1.5V		Max. 10V
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20°C		
Control output	Max. 200mA		5 to 150mA
Insulation resistance	Over 50MΩ (at 500VDC megger)		
Dielectric strength	1,500VAC 50/60Hz for 1 min		2,500VAC 50/60Hz for 1 min
Vibration	1mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours		
Shock	500m/s <sup>2</sup> (approx. 50G) in each X, Y, Z direction for 3 times		
Indicator	Operation indicator: Red LED		
Environment	Ambient temperature: -25 to 70°C, storage: -30 to 80°C		
	Ambient humidity: 35 to 95%RH, storage: 35 to 95%RH		
Protection circuit	Surge protection circuit, reverse polarity protection circuit, output short over current protection circuit		Surge protection circuit
Cable	Ø4mm, 3-wire, 2m		Ø4mm, 2-wire, 2m
	AWG22, Core diameter: 0.08mm, Number of cores: 60, Insulator out diameter: Ø1.25		
Material	Case: Poly Phenylene Sulfide, Standard cable (black): Polyvinyl chloride (PVC)		
Protection structure	IP67 (IEC standard)		
Approval	<b>CE</b>		
Unit weight	Approx. 70g		

\*1: The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

※Environment resistance is rated at no freezing or condensation.

# Rectangular, Flat Type

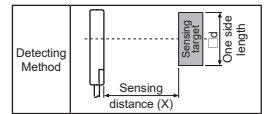
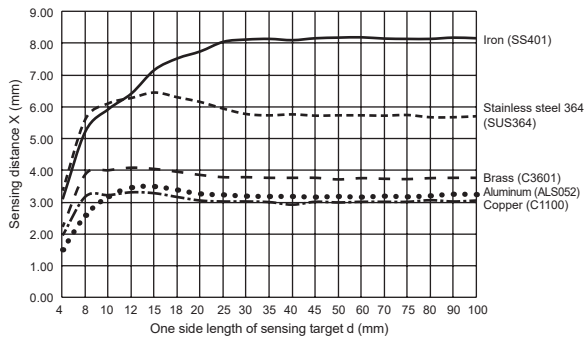
## ■ Dimensions



(unit: mm)

## ■ Sensing Distance Feature Data by Target Material and Size

### ● PFI25-8



SENSORS

CONTROLLERS

MOTION DEVICES

SOFTWARE

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) LiDAR

(D) Door/Area Sensors

(E) Vision Sensors

(F) Proximity Sensors

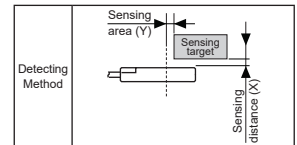
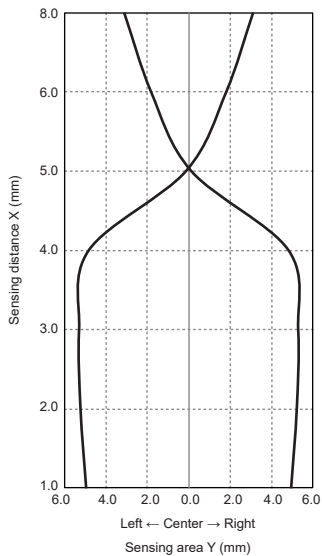
(G) Pressure Sensors

(H) Rotary Encoders

(I) Connectors/ Connector Cables/ Sensor Distribution Boxes/ Sockets

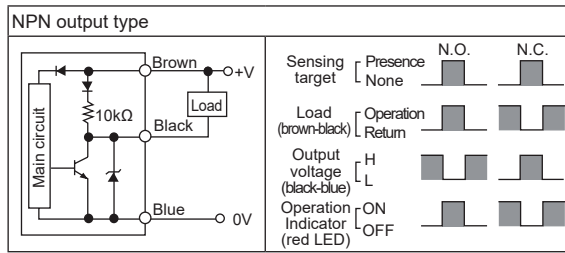
## ■ Sensing Distance Feature Data by Parallel (Left/Right) Movement

### ● PFI25-8

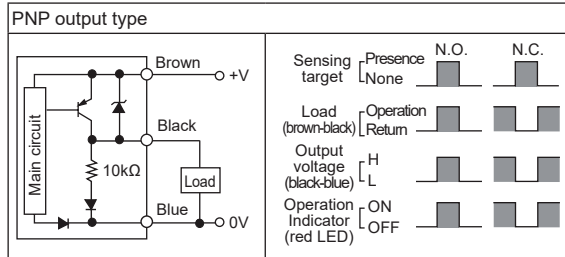
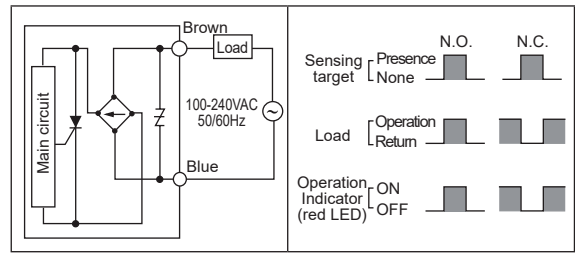


## Control Output Diagram and Load Operation

### DC 3-wire type



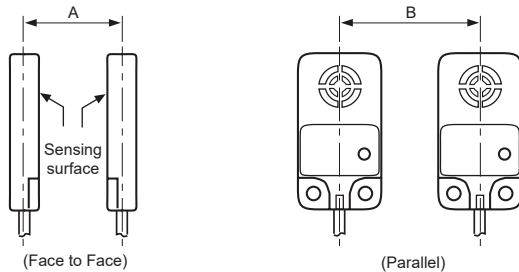
### AC 2-wire type



## Proper Usage

### Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

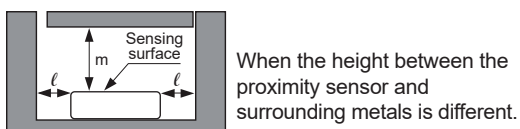
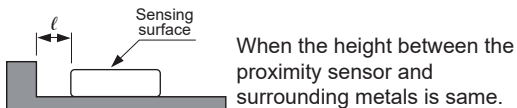


(unit: mm)

A	100
B	80

### Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



(unit: mm)

l	5
m	15