Rectangular, Flat Type Proximity Sensor

▣ Features

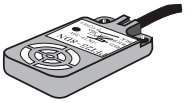
- Easy to mount in narrow space by flat structure (height: 10mm)
- Improved the noise immunity with dedicated IC (DC type)
- Built-in reverse polarity protection circuit, output short over current protection circuit (DC type)
- Built-in surge protection circuit
- Red LED operation indicator
- IP67 protection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

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

CE

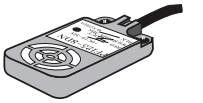
▣ Type

◎ 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

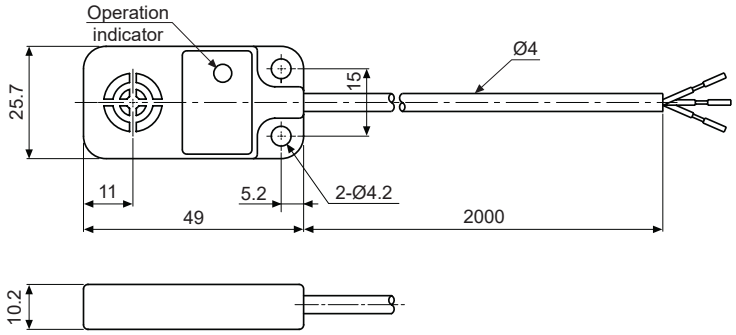
Model		**PFI25-8DN** **PFI25-8DP** **PFI25-8AO** **PFI25-8DN2** **PFI25-8DP2** **PFI25-8AC**	
Sensing side		Upper side	
Sensing distance		8mm	
Hysteresis		Max. 10% of sensing distance	
Standard sensing target		25×25×1mm (iron)	
Setting distance		0 to 5.6mm	
Power supply (opera ing voltage)		12-24VDC⎓ (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℃	
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
Vibra ion		1mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours	
Shock		500m/s² (approx. 50G) in each X, Y, Z direction for 3 times	
Indicator		Operation indicator: Red LED	
Environ-ment	Ambient temperature	-25 to 70℃, storage: -30 to 80℃	
	Ambient humidity	35 to 95%RH, storage: 35 to 95%RH	
Protec ion 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)	
Protec ion structure		IP67 (IEC standard)	
Approval		CE	
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.

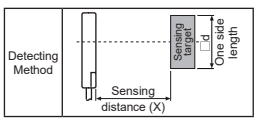
▣ Dimensions

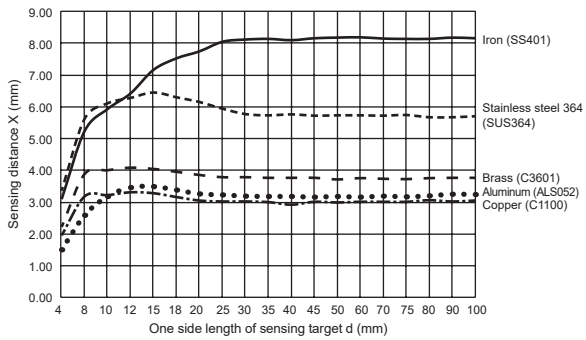
(unit: mm)



▣ Sensing Distance Feature Data by Target Material and Size

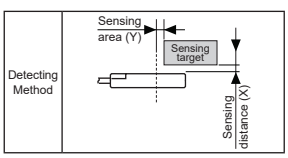
● **PFI25-8□**

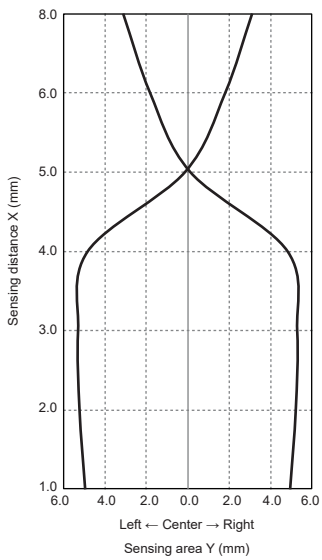




▣ Sensing Distance Feature Data by Parallel (Left/Right) Movement

● **PFI25-8□**

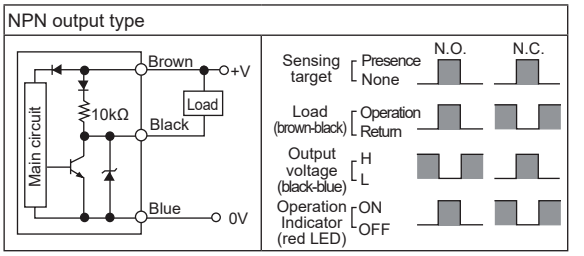




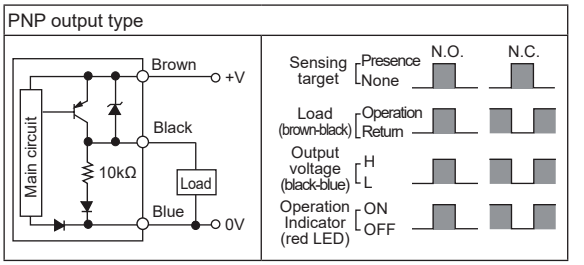
▣ Control Output Diagram and Load Operation

◎ DC 3-wire type

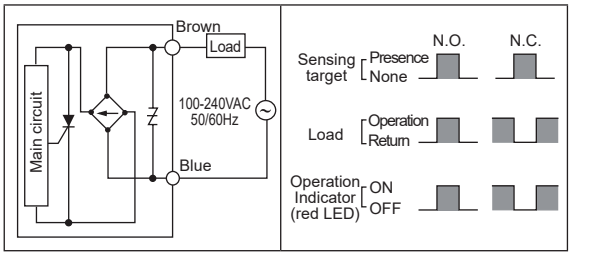
NPN output type



PNP output type



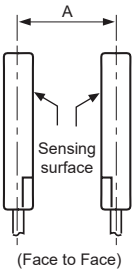
◎ AC 2-wire type



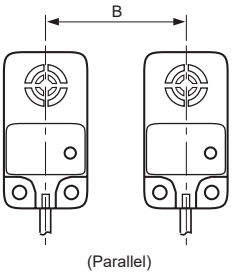
▣ Proper Usage

◎ 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.



(Face to Face)



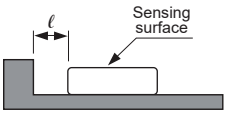
(Parallel)

(unit: mm)

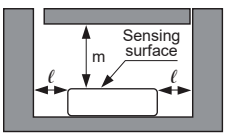
A	100
B	80

◎ 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.



When the height between the proximity sensor and surrounding metals is same.



When the height between the proximity sensor and surrounding metals is different.

(unit: mm)

ℓ	5
m	15