Rectangular, Long Sensing Distance Type Proximity Sensor

▣ Features

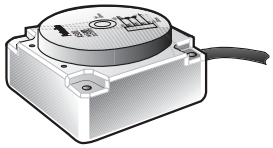
- Sensing up to as 50mm
- Improved the noise immunity with dedicated IC
- Built-in reverse polarity protection circuit, surge protection circuit, output short over current protection circuit
- Wide range of power supply: 12-48VDC (voltage range: 10-65VDC)
- Simultaneous output of Normally Open+Normally Closed
- Built-in power indicator and operation indicator
- IP67 protection structure (IEC standard)

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

CE

▣ Type

◎ DC 4-wire long distance type

Appearance	Model
	**AS80-50DN3**
	AS80-50DP3

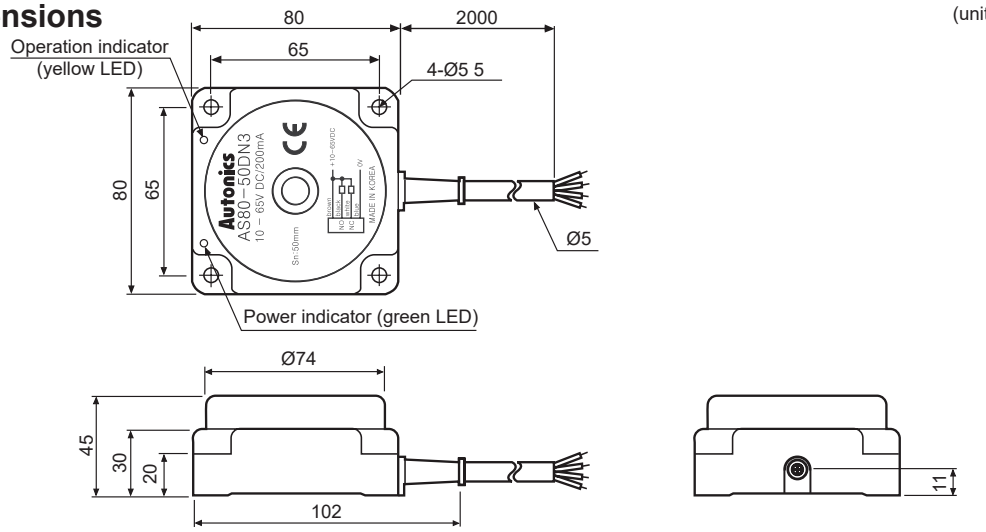
▣ Specification

Model		**AS80-50DN3**	**AS80-50DP3**
Sensing side		Upper side	
Sensing type		NPN Normally Open + Normally Closed	PNP Normally Open + Normally Closed
Sensing distance		50mm	
Hysteresis		Max. 15% of sensing distance	
Standard sensing target		150×150×1mm (iron)	
Set ing distance		0 to 35mm	
Power supply (operating voltage)		12-48VDC⎓ (10-65VDC⎓)	
Current consumption		Max. 20mA	
Response frequency※1		30Hz	
Residual voltage		Max. 2V	
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃	
Control output		Max. 200mA	
Insulation resistance		Over 50MΩ (at 500VDC megger)	
Dielectric strength		1,500VAC 50/60Hz for 1 min	
Vibration		1mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direc ion for 2 hours	
Shock		500m/s² (appox. 50G) in X, Y, Z direction for 3 times	
Indicator		Power indicator: Green LED, Operation indicator: Yellow LED	
Environ-ment	Ambient temperature	-25 to 70℃, storage: -30 to 80℃	
	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	
Cable		Ø5mm, 4-wire, 2m (AWG22, Core diameter: 0.08mm, Number of cores: 60, Insulator diameter: Ø1.25mm)	
Approval		CE	
Protection structure		IP67 (IEC standard)	
Unit weight		Approx. 470g	

※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 he distance.
※Environment resistance is rated at no freezing or condensation.

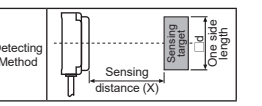
■ Dimensions

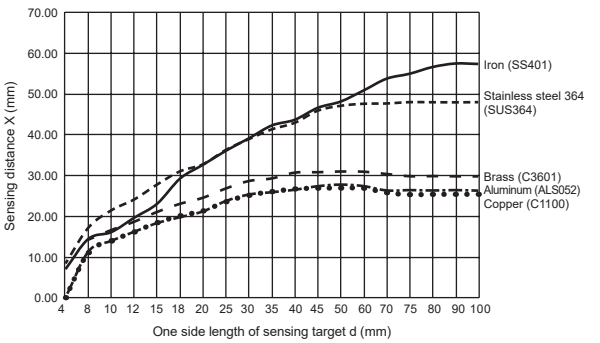
(unit: mm)



■ Sensing Distance Feature Data by Target Material and Size

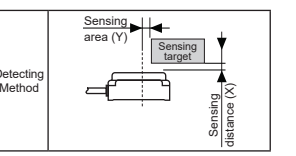
● **AS80-50D□**

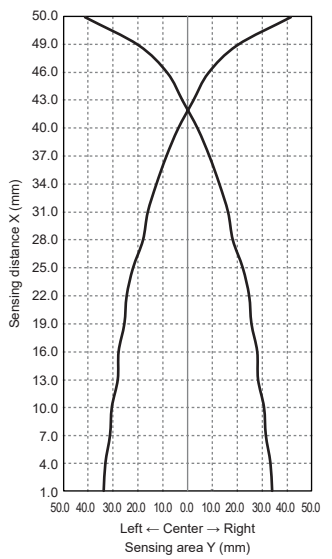




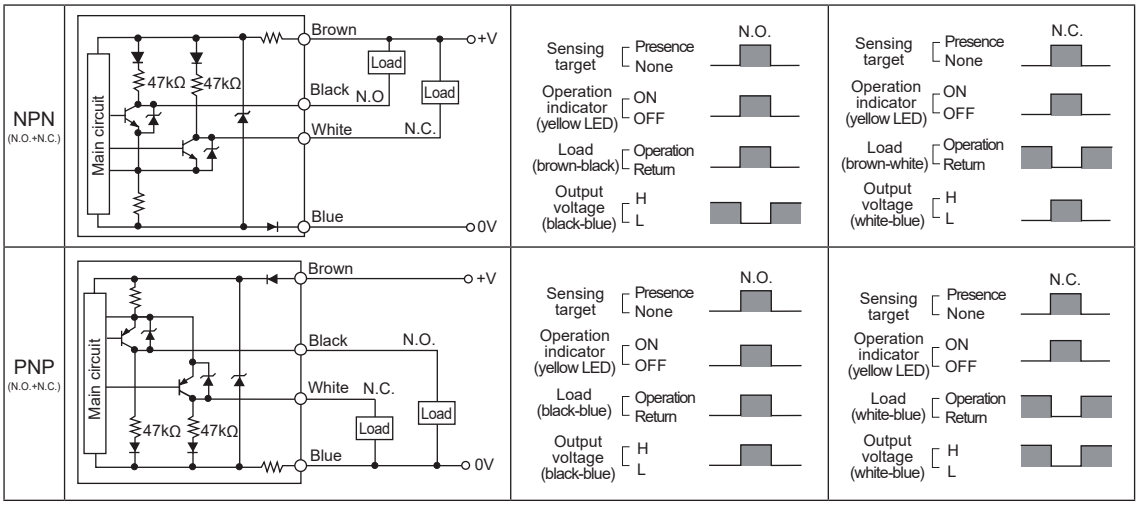
■ Sensing Distance Feature Data by Parallel (Left/Right) Movement

● **AS80-50D□**





▣ Control Output Diagram and Load Operation



▣ 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)

◎ 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)