

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, over-current protection circuit
- Wide range of power supply: 12-48VDC (voltage range: 10-65VDC)
- Simultaneous output of Normal Open+Normal Close
- Built-in power indicator and operation indicator
- IP67 protection structure (IEC standard)



! Please read "Caution for your safety" in operation manual before using.



■ 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)	
Setting 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°C	
Control output	Max. 200mA	
Insulation resistance	Over 50MΩ (at 500VDC megger)	
Dielectric strength	1,500VAC 50/60Hz for 1 minute	
Vibration	1mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours	
Shock	500m/s ² (approx. 50G) in X, Y, Z direction for 3 times	
Indicator	Power indicator: green LED, Operation indicator: yellow 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, 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	

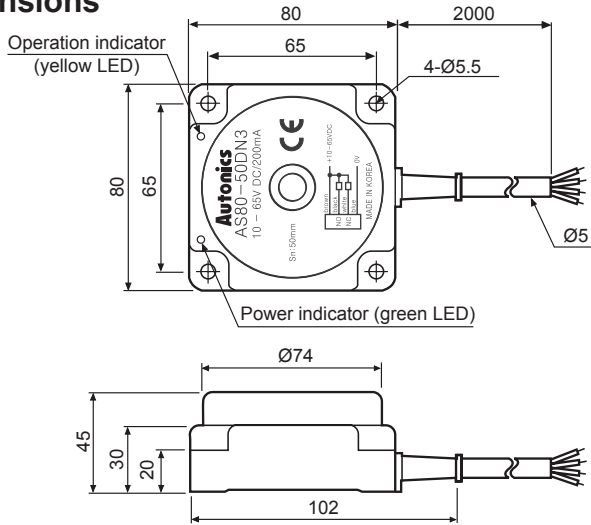
*1: The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

*Environment resistance is rated at no freezing or condensation.

Rectangular, Long Sensing Distance Type

Dimensions

(unit: mm)



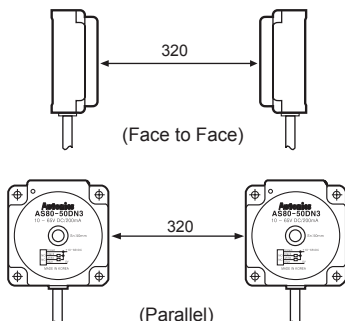
Control Output Diagram And Load Operation

		N.O.		N.C.			
NPN (N.O.+N.C.)		Sensing target	Presence	None	Presence	None	
		Operation indicator (yellow LED)	ON	OFF	ON	OFF	
PNP (N.O.+N.C.)		Sensing target	Presence	None	Presence	None	
		Operation indicator (yellow LED)	ON	OFF	ON	OFF	
		Load (brown-black)	Operation	Return	Operation	Return	
		Output voltage (black-blue)	H	L	Output voltage (white-blue)	H	L

Mutual-Interference & Influence By Surrounding Metals

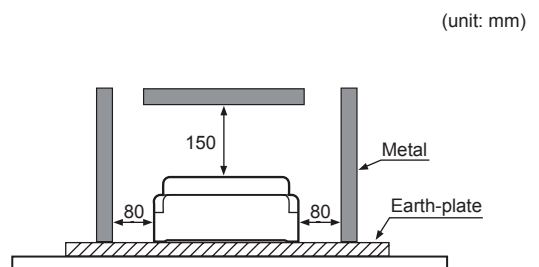
© Mutual-interference

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.



© 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.



- (A) Photoelectric Sensors
- (B) Fiber Optic Sensors
- (C) Door/Area Sensors
- (D) Proximity Sensors
- (E) Pressure Sensors
- (F) Rotary Encoders
- (G) Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets
- (H) Temperature Controllers
- (I) SSRs / Power Controllers
- (J) Counters
- (K) Timers
- (L) Panel Meters
- (M) Tacho / Speed / Pulse Meters
- (N) Display Units
- (O) Sensor Controllers
- (P) Switching Mode Power Supplies
- (Q) Stepper Motors & Drivers & Controllers
- (R) Graphic/ Logic Panels
- (S) Field Network Devices
- (T) Software