AS Series
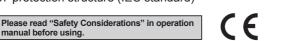
Rectangular, Long Sensing Distance Type Proximity Sensor
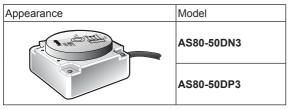
▣ Features

- 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 Normally Open+Normally Closed
- Built-in power indicator and operation indicator
- IP67 protection structure (IEC standard)

⚠	Please read "Safety Considerations" in operation manual before using.

CE

▣ Type

◎ **DC 4-wire long distance type**

Appearance	Model
	AS80-50DN3
	AS80-50DP3

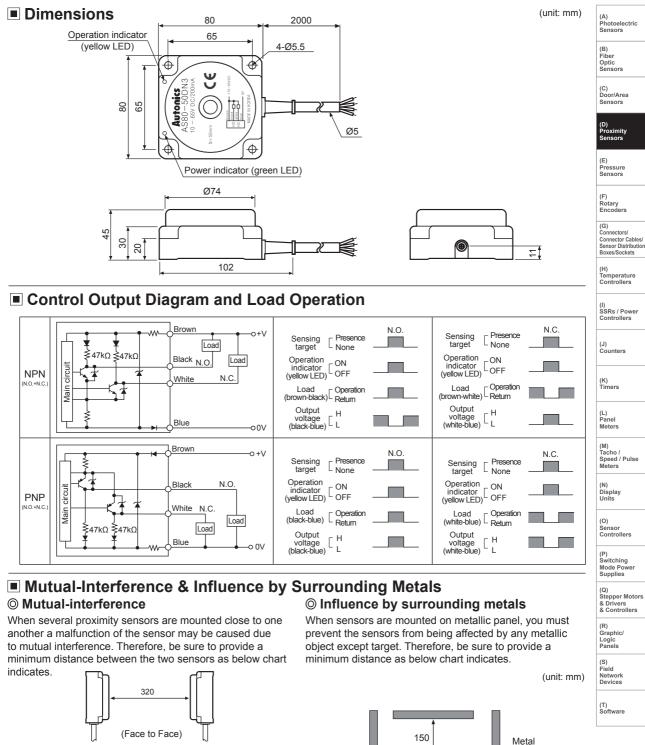### ▣ Specification

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)	
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℃	
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/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, 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.
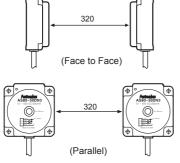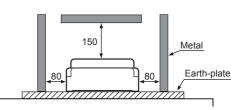※Environment resistance is rated at no freezing or condensation.

Rectangular, Long Sensing Distance Type

■ Dimensions

(unit: mm)

Operation indicator (yellow LED)

4-Ø5.5

80
65
80
65

Autonics
AS80–50DN3
10 ~ 65V DC/200mA
MADE IN KOREA
Sn: 50mm

CE

2000

Ø5

Power indicator (green LED)

Ø74
45
30
20
102
11

(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

■ Control Output Diagram and Load Operation

NPN (N.O.+N.C.)

Brown
Load
47kΩ 47kΩ
Black N.O. Load
White N.C.
Main circuit
Blue
+V
0V

	N.O.
Sensing target ┌ Presence └ None	
Operation indicator (yellow LED) ┌ ON └ OFF	
Load (brown-black) ┌ Operation └ Return	
Output voltage (black-blue) ┌ H └ L	

	N.C.
Sensing target ┌ Presence └ None	
Operation indicator (yellow LED) ┌ ON └ OFF	
Load (brown-white) ┌ Operation └ Return	
Output voltage (white-blue) ┌ H └ L	

PNP (N.O.+N.C.)

Brown
Black N.O.
White N.C.
Main circuit
47kΩ 47kΩ
Load Load
Blue
+V
0V

	N.O.
Sensing target ┌ Presence └ None	
Operation indicator (yellow LED) ┌ ON └ OFF	
Load (black-blue) ┌ Operation └ Return	
Output voltage (black-blue) ┌ H └ L	

	N.C.
Sensing target ┌ Presence └ None	
Operation indicator (yellow LED) ┌ ON └ OFF	
Load (white-blue) ┌ Operation └ Return	
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.

320

(Face to Face)

320

(Parallel)

◎ 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)

150
80
80
Metal
Earth-plate