

Rectangular Inductive Proximity Sensors



PS Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Excellent noise immunity with specialized sensor IC
- Built-in surge protection circuit, output short over current protection circuit, reverse polarity protection
- Simple operation, reliable performance, and high durability
- Alternate frequency models allow adjacent installation of multiple sensors without interference (PSN17-□-F model)
- Operation indicator (red LED)
- IP67 protection structure (IEC standard)

Ordering Information

This is only for reference.

For selecting the specific model, follow the Autonics web site.

PS ① - ② D ③ ④

① Sensing side length

Number: Side length of head (unit: mm)

③ Control output

N: NPN Normally Open
N2: NPN Normally Closed
P: PNP Normally Open
P2: PNP Normally Closed

② Sensing distance

Number: Sensing distance (unit: mm)

④ Sensing side

No-mark: Standard type
U: Upper side type

Product Components

Sensing side length	8 mm	12 mm	50 mm
Bracket	1 ×	1 ×	-
Bolt	M3 × 1	M3 × 2	M4 × 4
Nut	M3 × 1	M3 × 2	-
Spring washer	1 ×	-	-
Flat washer	1 ×	-	-

Specifications

Installation	Standard type / Upper side type		
	PS08-2.5D□-□	PS12-4D□-□	PS50-30D□
Model	PS08-2.5D□-□	PS12-4D□-□	PS50-30D□
Sensing side length	8 mm	12 mm	50 mm
Sensing distance	2.5 mm	4 mm	30 mm
Setting distance	0 to 1.75 mm	0 to 2.8 mm	0 to 21 mm
Hysteresis	≤ 10 % of sensing distance (sensing side length 8 mm: ≤ 20 %)		
Standard sensing target: iron	8 × 8 × 1 mm	12 × 12 × 1 mm	90 × 90 × 1 mm
Response frequency ⁰¹⁾	1 kHz	500 Hz	50 Hz
Affection by temperature	≤ ± 10 % for sensing distance at ambient temperature 20 °C (sensing side length 8 mm: ≤ ± 15 %)		
Indicator	Operating indicator (red)		
Approval	CE EAC	CE EAC	CE EAC
Unit weight (package)	≈ 16 g (≈ 30 g)	≈ 62 g (≈ 77 g)	≈ 220 g (≈ 256 g)

01) 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.

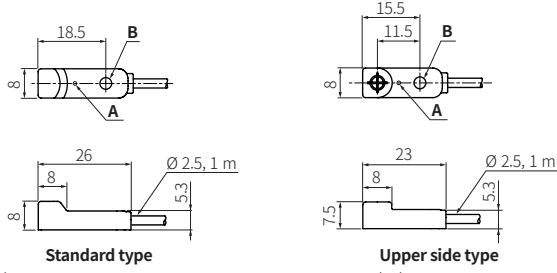
Power supply	12 - 24 VDC≐ (ripple P-P: ≤ 10 %), operating voltage: 10 - 30 VDC≐
Current consumption	≤ 10 mA
Control output	Sensing side length 8 mm: ≤ 100 mA Sensing side length 12 mm, 50 mm: ≤ 200 mA
Residual voltage	Sensing side length 8 mm: ≤ 1.0 V Sensing side length 12 mm, 50 mm: ≤ 1.5 V
Protection circuit	Surge protection circuit, output short over current protection circuit, reverse polarity protection
Insulation resistance	≥ 50 MΩ (500 VDC≐ megger)
Dielectric strength	Between all terminals and case: 1,500 VAC~ 50 / 60Hz for 1 minute (sensing side length 8 mm - between all terminals and case: 1,000 VAC~ 50 / 60Hz for 1 minute
Vibration	1 mm double amplitude at frequency 10 to 55 Hz in each of X, Y, Z directions for 2 hours
Shock	500 m/s ² (≈ 50 G) X, Y, Z directions for 3 times
Ambient temp.	-25 to 70 %RH, storage: -30 to 80 %RH (no freezing or condensation)
Ambient humi.	35 to 95 %RH, storage: 35 to 95 %RH (no freezing or condensation)
Protection rating	IP67 (IEC standards)
Connection	Cable type
Cable spec.	Sensing side length 8 mm: Ø 2.5 mm, 3-wire, 1 m Sensing side length 12 mm: Ø 4 mm, 3-wire, 2 m Sensing side length 50 mm: Ø 5 mm, 3-wire, 2 m
Wire spec.	Ø 2.5 mm cable : AWG 28 (0.08 mm, 19-core), insulator diameter: Ø 0.9 mm Ø 4 mm, Ø 5 mm cable : AWG 22 (0.08 mm, 60-core), insulator diameter: Ø 1.25 mm
Material	Sensing side length 8 mm Case: PC, Sensing side length 12 mm Case: Heat-resistant ABS, Sensing side length 50 mm Case: PBT, standard cable (black): polyvinyl chloride (PVC)

Dimensions

• Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

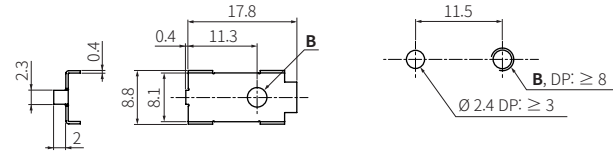
A	Operation indicator (red)	B	Tap hole
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PS08

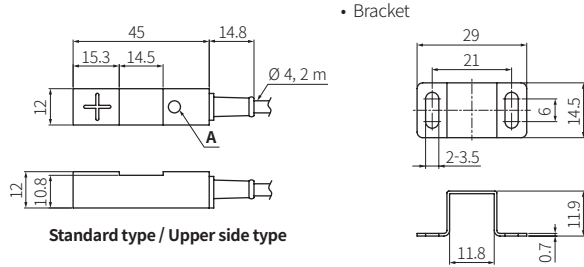


• Bracket

• Mounting hole cut-out

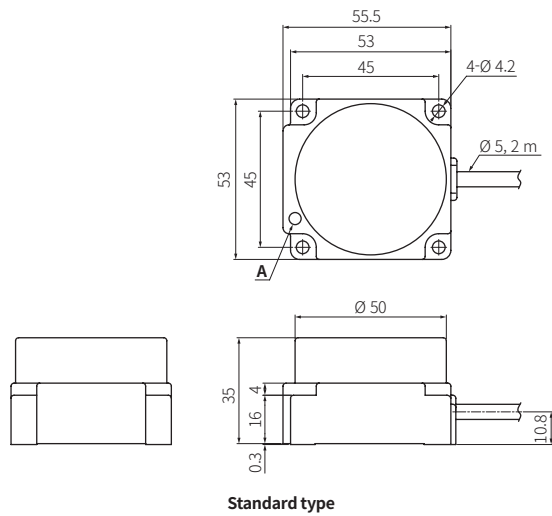


PS12



• Bracket

PS50



Standard type