

Background Suppression Standard Laser Sensor LA-ZB Series



Ask SENPUM

+86-755-83330055

Fast Delivery Standard Models



Most products are in stock. Upon receiving your order, we will arrange prompt shipment to minimize your downtime-related costs and losses.



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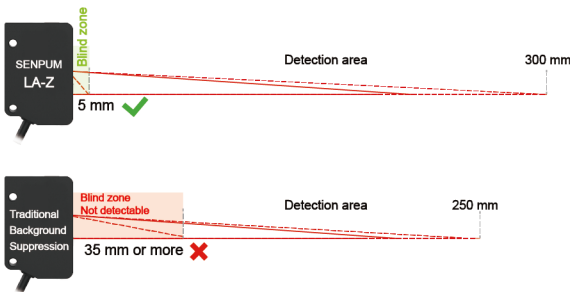
WhatsApp



LINE

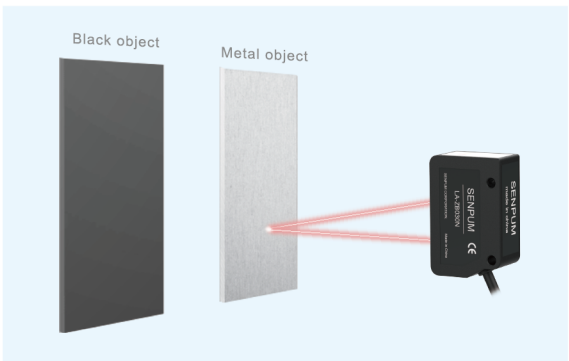
Ultra-small blind zone under 5 mm

It solves the issue of traditional sensors being unable to detect at close range, significantly improving the product's practicality.



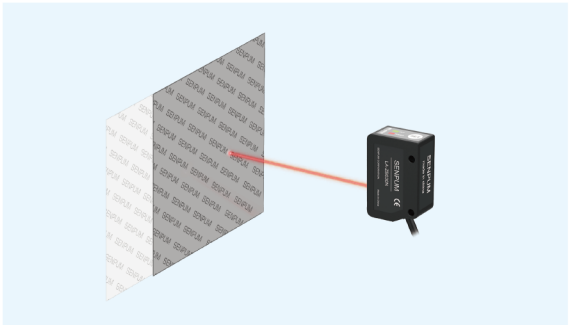
True black and white equidistant, completely color independent

The actual detection distance is unaffected whether the detected object is black, white or any other color.



Competent detection in complex environments

Segment differences can be detected even when the target is the same or similar to the background color.



Ultra-small 0.5 mm laser spot

Spot size can be selected to meet the needs of different occasions; the smallest spot is only $\Phi 0.5$ mm, which is more suitable for the detection of small objects.



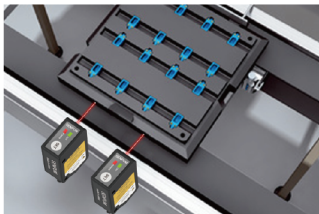
- Metal housing for better impact resistance.
- Highly accurate and stable resolution of object segment differences.
- Strongly reflective objects or metal objects can also be detected.
- Even light-colored objects with high reflectivity can be detected.

More Features

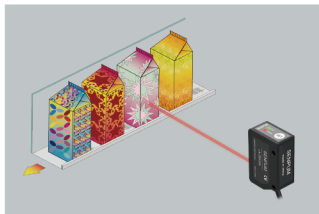
Applications



Angle-independent detection



Black pallet positioning detection



Unaffected by object color changes

Product List

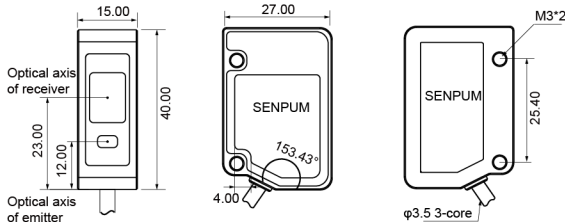
Type	Appearance	Detection distance (mm)	Spot size (mm)	Model	
				NPN	PNP
Standard spot	 2 m cable	 100	Approx. $\Phi 2$ at 100 mm	LA-ZB010N	LA-ZB010P
Small spot			Approx. $\Phi 1$ at 100 mm	LA-ZB010LN	LA-ZB010LP
Ultra-small spot	 2 m cable	 60	Approx. $\Phi 0.5$ at 60 mm	LA-ZB006SN	LA-ZB006SP
Standard spot	 2 m cable	 300	Approx. $\Phi 2.5$ at 300 mm	LA-ZB030N	LA-ZB030P

Specifications

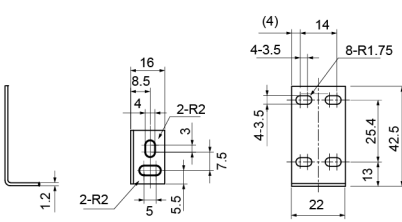
Type		Reflective type			
		Standard spot	Small spot	Ultra-small spot	Standard spot
Model	NPN	LA-ZB010N	LA-ZB010LN	LA-ZB006SN	LA-ZB030N
	PNP	LA-ZB010P	LA-ZB010LP	LA-ZB006SP	LA-ZB030P
Detection distance (mm)		100		60	300
Setting distance (mm)		25–100		25–60	25–300
Light source		650 nm red laser			
Laser class (IEC/FDA)		class1/class I			
Spot size (mm)		Approx. $\Phi 2$ at 100 mm	Approx. $\Phi 1$ at 100 mm	Approx. $\Phi 0.5$ at 60 mm	Approx. $\Phi 2.5$ at 300 mm
Power voltage		12 to 24 VDC $\pm 10\%$, Ripple Voltage (P-P): 10% max			
Control output		NPN or PNP open collector: up to 100 mA (30 V)			
Current consumption		30 mA max.			
Response time		1.5 ms			
Differential distance		5% or less			10% or less
Sensitivity adjustment		Button setting			
Output type		LIGHT-ON/DARK-ON			
Indicator		Output and power supply: Red LED; Stabilized operation: Green LED			
Circuit protection		Reverse current protection, overcurrent protection, overvoltage protection			
Protection class		IP67			
Ambient light		Incandescent lamp: Maximum 3,000 lux; Sunlight: Maximum 100,000 lux			
Ambient temperature		-10 to +50 °C (no freezing)			
Relative humidity		35 to 85% RH (no condensation)			
Shock resistance		Approx. 500 m/s ² (50 G) in X/Y/Z direction			
Vibration resistance		10 to 55 Hz, Amplitude 1.5 mm, 2 hours in each of the X, Y, and Z directions			
Material		Aluminum			
Weight		Approx. 59 g			

Dimensions

LA-ZB010N/P LA-ZB010LN/P LA-ZB006SN/P LA-ZB030N/P

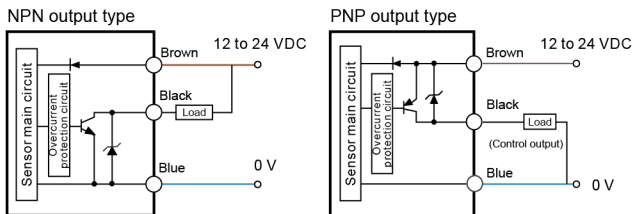


N-100 (sold separately)



Unit: mm

I/O Circuit Diagrams



Bracket (sold separately)

N-100

