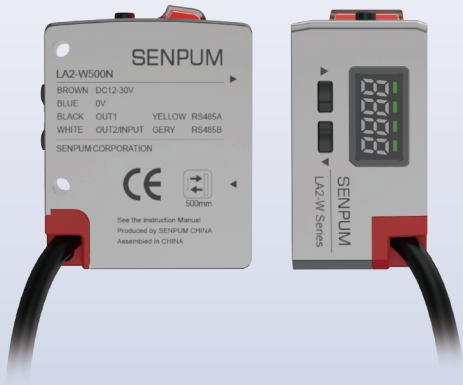


White Light Digital Display

Color Sensor

LA2-W/WS 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.



WeChat



WhatsApp

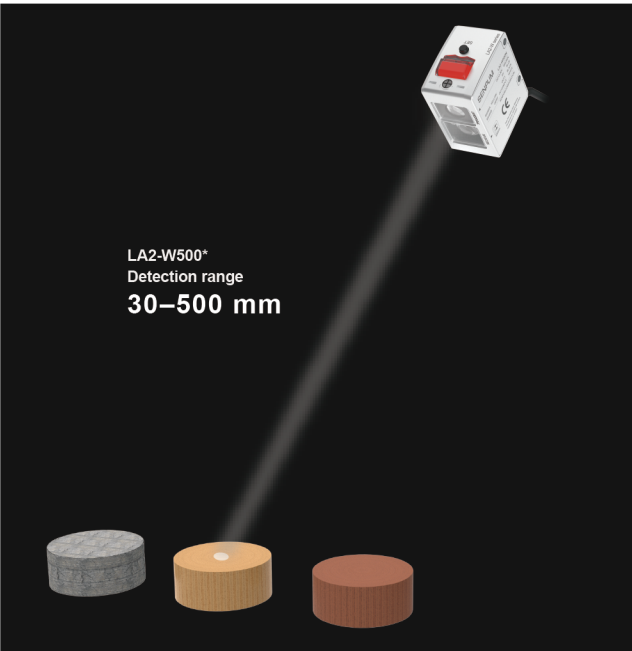


LINE

Stable detection even at a distance,

superb numerical stability

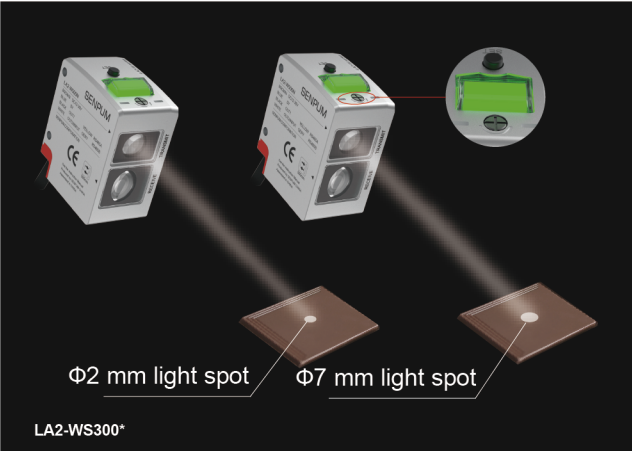
Stable detection is possible even at long distances thanks to the high-brightness “white light spot”.



Adjust the spot size on demand to support

small workpiece inspection

Adjust the small spot size by rotating the knob.



Stable detection even with highly reflective workpieces

Stable detection even when there is a change of state

or a change of distance

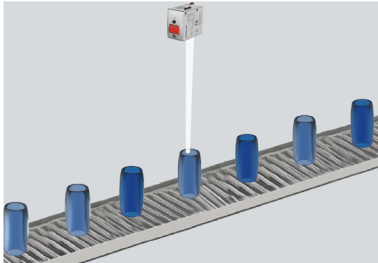
More Features

- Stable detection of appearance (color) differences.
- Clear display for checking the inspection status at a glance.
- Sturdy metal body with zinc casting shell, no need for protective cover.
- Realizes housing protection class IP67 and can be used in splash environments.

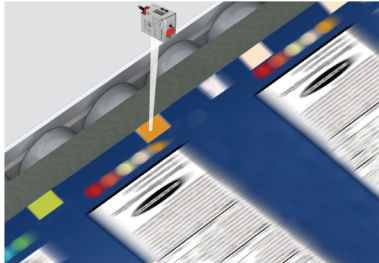
Applications



Targets of various shapes



Confirm the correct color difference



Mark detection on labels

Product List

Cable type

Type	Appearance	Detection distance	Spot size	Output method	Model
Cable type			Approx. 1.6 x 2.9 mm at 45 mm	NPN	LA2-W70N
				PNP	LA2-W70P
				NPN/PNP	LA2-W70
			Adjustable light spot Approx. $\Phi 2\pm 0.2$ mm at 90 mm Approx. $\Phi 5\pm 0.5$ mm at 200 mm Approx. $\Phi 7\pm 0.8$ mm at 300 mm	NPN	LA2-WS300N
				PNP	LA2-WS300P
				NPN/PNP	LA2-WS300
			Adjustable light spot Approx. $\Phi 3.5\pm 0.2$ mm at 100 mm Approx. $\Phi 9\pm 0.5$ mm at 250 mm Approx. $\Phi 18\pm 1$ mm at 500 mm	NPN	LA2-W500N
				PNP	LA2-W500P
				NPN/PNP	LA2-W500

Relay type

Type	Appearance	Detection distance	Spot size	Output method	Model
Relay type			Approx. 1.6 x 2.9 mm at 45 mm	NPN	LA2-W70CAN
				PNP	LA2-W70CAP
				NPN/PNP	LA2-W70CA
			Adjustable light spot Approx. $\Phi 2\pm 0.2$ mm at 90 mm Approx. $\Phi 5\pm 0.5$ mm at 200 mm Approx. $\Phi 7\pm 0.8$ mm at 300 mm	NPN	LA2-WS300CAN
				PNP	LA2-WS300CAP
				NPN/PNP	LA2-WS300CA
			Adjustable light spot Approx. $\Phi 3.5\pm 0.2$ mm at 100 mm Approx. $\Phi 9\pm 0.5$ mm at 250 mm Approx. $\Phi 18\pm 1$ mm at 500 mm	NPN	LA2-W500CAN
				PNP	LA2-W500CAP
				NPN/PNP	LA2-W500CA

Color Sensors

LA2-W/WS

LA-W

PC-W

PC-N

PC2-V

LA-F10

LU-N

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Proximity Sensors

Precision Contact Sensors

Area Sensors/
Safety Light Curtains

Laser Scanners

Digital Contact Sensors

Laser Displacement
Sensors

Laser Micrometers

Confocal Displacement
Sensors

Barcode Readers

AI Vision Sensors

RFID

Infrared Temperature
Sensors

Pressure Sensors

Flow Sensors

Magnetic Sensors

Ultrasonic Sensors

Magnetic Scales

Static Eliminators



LA2-W/WS

LA-W

PC-W

PC-N

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LU-N

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Static Eliminators



SEN-PUM
0369

LA2-W/WS

White Light Digital Display Color Sensor

Cable (sold separately)

Appearance	Sensor side	Cable termination	Material	Cable length	Model
	M8 6-Pin Straight	Loose wire	Highly flexible drag chain type	2 m	OW-LA2W2000
				5 m	OW-LA2W5000
				10 m	OW-LA2W10M
				20 m	OW-LA2W20M

Bracket (sold separately)

Type	Material/Weight	Model
 Standard mounting bracket For LA2-W series (with M3 screws x 2 pcs)	SUS304 Approx. 110 g	OW-LA2W001
 Compact mounting bracket (with M3 screws x 2 pcs)	SUS304 Approx. 50 g	OW-LA2W002
 Adjustable mounting bracket For LA2-W series (with M3 screws x 2 pcs)	SUS304 Approx. 110 g	OW-LA2W003
 Adjustable mounting bracket Fixing screws (105 mm)	Iron nickel plated Approx. 140 g	OW-LA2W004

Polarizing filter cover (sold separately)

Appearance	Model
	LA2-WA1

Specifications

Cable type

Type		Cable type		
Model	NPN	LA2-W70N	LA2-WS300N	LA2-W500N
	PNP	LA2-W70P	LA2-WS300P	LA2-W500P
	NPN/PNP	LA2-W70	LA2-WS300	LA2-W500
Detection distance	30–70 mm		30–300 mm	30–500 mm
Minimum spot diameter	Approx. 1.6 x 2.9 mm at 45 mm		Adjustable light spot Approx. Φ2±0.2 mm at 90 mm Approx. Φ5±0.5 mm at 200 mm Approx. Φ7±0.8 mm at 300 mm	Adjustable light spot Approx. Φ3.5±0.2 mm at 100 mm Approx. Φ9±0.5 mm at 250 mm Approx. Φ18±1 mm at 500 mm
Response time	200 us / 1 ms / 10 ms / 100 ms / 500 ms Switchable			
Light source	White LED			
Reduced mutual interference frequency	Setting of different frequencies, max. 2 units*1			
Timer	OFF/ON delay/OFF delay/One-shot			
Power voltage	12 to 30 VDC ±10%			
Current consumption	40 mA or less at 24 V (without load) 65 mA or less at 12 V (without load)		65 mA or less at 24 V (without load) 120 mA or less at 12 V (without load)	
Control output*2	NPN open collector/PNP open collector Switchable 30 V or less, 50 mA or less Residual voltage 2 V or less NO/NC Switchable			
External input*2	Tune/Stop transmit, switchable			
Protection circuit	Power reverse connection protection, power surge protection, output overcurrent protection, output surge protection, output reverse connection protection			
Housing protection level	IP65/IP67 (IEC60529)			
Ambient light	Incandescent lamp: 10,000 lux or less; Sunlight: 20,000 lux or less			
Ambient temperature	-20 to +55 °C (no freezing)			
Relative humidity	35 to 85% RH (no condensation)			
Shock resistance	1,000 m/s², 6 times in each of the X, Y, and Z directions			
Vibration resistance	10 to 55 Hz, Double amplitude 1.5 mm, 2 hours in each of the X, Y, and Z directions			
Cable length (mm)	2000 (Highly flexible drag chain type)			
Material	Zinc alloy			
Weight	Approx. 125 g (incl. 2 m cable)		Approx. 170 g (incl. 2 m cable)	

*1 The response time is delayed by approximately 20% for different frequencies set under the anti-interference function menu.

*2 OUT2 multiplexes the white line with the external input, and when the white line is set to output, there is no external input.

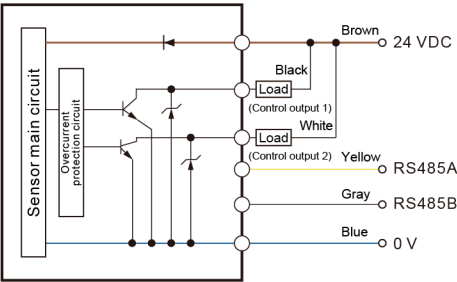
Relay type

Type		Relay type		
Model	NPN	LA2-W70CAN	LA2-WS300CAN	LA2-W500CAN
	PNP	LA2-W70CAP	LA2-WS300CAP	LA2-W500CAP
	NPN/PNP	LA2-W70CA	LA2-WS300CA	LA2-W500CA
Detection distance		30–70 mm	30–300 mm	30–500 mm
Minimum spot diameter		Approx. 1.6 x 2.9 mm at 45 mm	Adjustable light spot Approx. Φ2±0.2 mm at 90 mm Approx. Φ5±0.5 mm at 200 mm Approx. Φ7±0.8 mm at 300 mm	Adjustable light spot Approx. Φ3.5±0.2 mm at 100 mm Approx. Φ9±0.5 mm at 250 mm Approx. Φ18±1 mm at 500 mm
Response time		200 us / 1 ms / 10 ms / 100 ms / 500 ms Switchable		
Light source		White LED		
Reduced mutual interference frequency		Setting of different frequencies, max. 2 units*1		
Timer		OFF/ON delay/OFF delay/One-shot		
Power voltage		12 to 30 VDC ±10%		
Current consumption		40 mA or less at 24 V (without load) 65 mA or less at 12 V (without load)	65 mA or less at 24 V (without load) 120 mA or less at 12 V (without load)	
Control output*2		NPN open collector/PNP open collector Switchable 30 V or less, 50 mA or less Residual voltage 2 V or less NO/NC Switchable		
External input*2		Tune/Stop transmit, switchable		
Protection circuit		Power reverse connection protection, power surge protection, output overcurrent protection, output surge protection, output reverse connection protection		
Housing protection level		IP65/IP67 (IEC60529)		
Ambient light		Incandescent lamp: 10,000 lux or less; Sunlight: 20,000 lux or less		
Ambient temperature		-20 to +55 °C (no freezing)		
Relative humidity		35 to 85% RH (no condensation)		
Shock resistance		1,000 m/s², 6 times in each of the X, Y, and Z directions		
Vibration resistance		10 to 55 Hz, Double amplitude 1.5 mm, 2 hours in each of the X, Y, and Z directions		
Cable length (cm)		190±5 (Plug-in M8)		
Material		Zinc alloy		
Weight		Approx. 82 g (incl. 2 m cable)	Approx. 120 g	

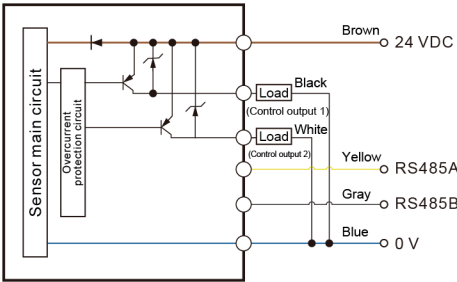
*1 The response time is delayed by approximately 20% for different frequencies set under the anti-interference function menu.
*2 OUT2 multiplexes the white line with the external input, and when the white line is set to output, there is no external input.

I/O Circuit Diagrams

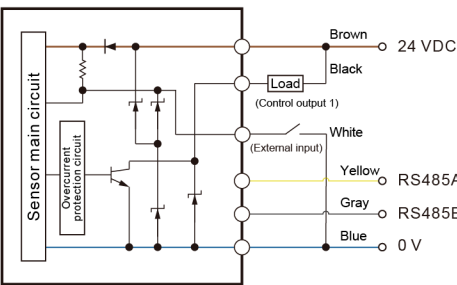
(1) When white wire is in output mode
NPN



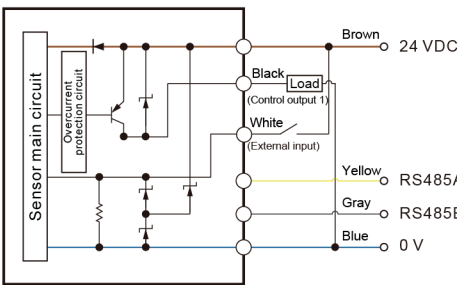
PNP



(2) When white wire is in external input mode
NPN



PNP



LA2-W/WS
LA-W
PC-W
PC-N
PC2-V
LA-F10
LU-N
Fiber Optic Sensors
Photoelectric Sensors
Color Sensors
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Ultrasonic Sensors
Magnetic Scales
Static Eliminators





LA2-W/WS

White Light Digital Display Color Sensor

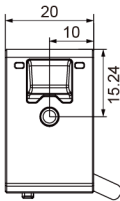
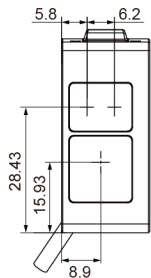
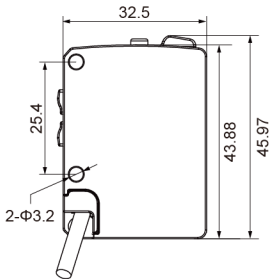
Dimensions

Unit: mm

Main unit

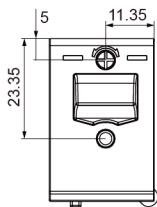
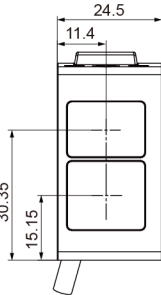
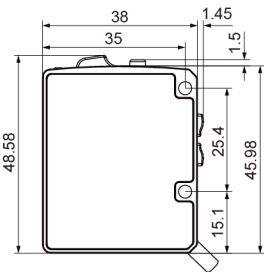
Cable type

LA2-W70N / LA2-W70P / LA2-W70



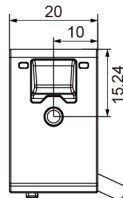
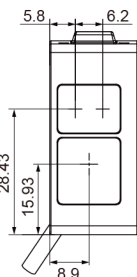
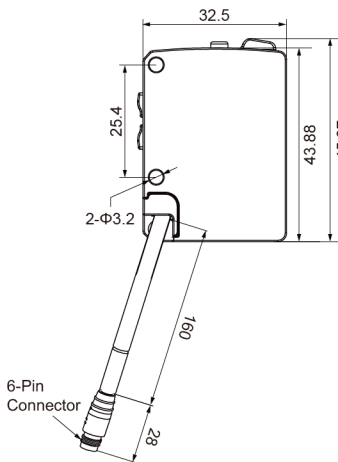
LA2-WS300N / LA2-WS300P / LA2-WS300

LA2-W500N / LA2-W500P / LA2-W500



Relay type

LA2-W70CAN / LA2-W70CAP / LA2-W70CA



LA2-WS300CAN / LA2-WS300CAP / LA2-WS300CA

LA2-W500CAN / LA2-W500CAP / LA2-W500CA

