

Digital Display Color Sensor PC-W 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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LINE

High-definition digital display, simple and convenient operation

Button operation, compared to the two colors to set, stable distinction between different colors of the object.



Excellent impact resistance of the metal housing

Laser spot, detection distance can be customized according to requirements.



Minimum detection spot under 0.5 mm

Stable detection even for very small objects.

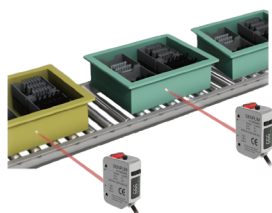
Minimum detection spot under

0.5 mm

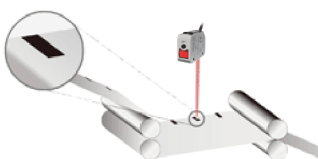
More Features

- Detection distance, sensitivity, and normally open or closed can be adjusted
- High-quality red laser light source, easy to identify different color objects
- Ultra-long detection distance, up to 1 m or more
- Linear laser can meet the detection of most shapes of objects

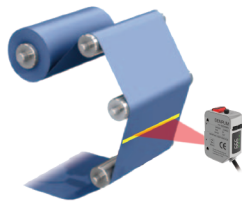
Applications



Distinguish between different colors of material boxes



Color-coded bit detection



Pole roll material stop detection

Product List

Cable type

Type	Appearance	Detection distance (mm)		Spot size	Output type	Model
		White non-glossy cardboard	Black non-glossy cardboard			
Standard type		MEGA: 0-3000 FINE: 0-1000 HSPD: 0-700	MEGA: 7-800 FINE: 7-350 HSPD: 7-200	Approx. Φ2 mm at 1000 mm	NPN	PC-WB3000N
					PNP	PC-WB3000P
Small spot type		MEGA: 0-700 FINE: 0-300 HSPD: 0-200	MEGA: 7-200 FINE: 7-80 HSPD: 7-50	Approx. Φ0.5 mm at 100 mm	NPN	PC-WB700N
					PNP	PC-WB700P
Line spot type		MEGA: 0-3000 FINE: 0-1000 HSPD: 0-700	MEGA: 7-800 FIN: 7-350 HSPD: 7-200	Approx. 1.5*120 mm at 1000 mm	NPN	PC-WS3000N
					PNP	PC-WS3000P

Relay type

Type	Appearance	Detection distance (mm)		Spot size	Output type	Model
		White non-glossy cardboard	Black non-glossy cardboard			
Standard type		MEGA: 0-3000 FINE: 0-1000 HSPD: 0-700	MEGA: 7-800 FINE: 7-350 HSPD: 7-200	Approx. Φ2 mm at 1000 mm	NPN	PC-WB3000CAN
					PNP	PC-WB3000CAP
Small spot type		MEGA: 0-700 FINE: 0-300 HSPD: 0-200	MEGA: 7-200 FINE: 7-80 HSPD: 7-50	Approx. Φ0.5 mm at 100 mm	NPN	PC-WB700CAN
					PNP	PC-WB700CAP
Line spot type		MEGA: 0-3000 FINE: 0-1000 HSPD: 0-700	MEGA: 7-800 FIN: 7-350 HSPD: 7-200	Approx. 1.5*120 mm at 1000 mm	NPN	PC-WS3000CAN
					PNP	PC-WS3000CAP

Cable (sold separately)

Appearance	Sensor side	Cable termination	Cable length	Model
	M8 4-Pin Straight	Loose wire	2 m	OW-PCW2000
			5 m	OW-PCW5000
			10 m	OW-PCW10M
			20 m	OW-PCW20M

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

PC2-V

LA-F10

LU-N

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Static Eliminators



SEN-PUM
0379

PC-W

Digital Display Color Sensor

Specifications

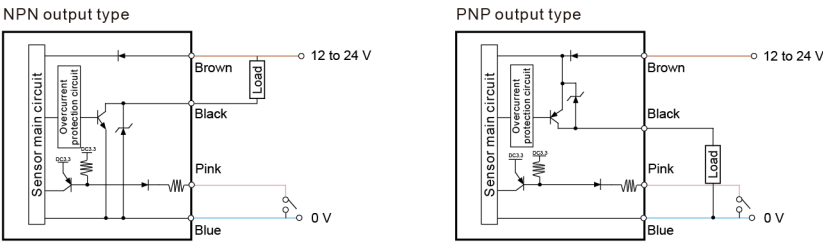
Cable type

Type		Reflective type					
		Standard type		Small spot type		Line spot type	
Model	NPN	PC-WB3000N		PC-WB700N		PC-WS3000N	
	PNP	PC-WB3000P		PC-WB700P		PC-WS3000P	
Detected objects		White non-glossy cardboard	Black non-glossy cardboard	White non-glossy cardboard	Black non-glossy cardboard	White non-glossy cardboard	Black non-glossy cardboard
Detection distance (mm)	MEGA	0-3000	7-800	0-700	7-200	0-3000	7-800
	FINE	0-1000	7-350	0-300	7-80	0-1000	7-350
	HSPD	0-700	7-200	0-200	7-50	0-700	7-200
Spot size		Approx. Φ2 mm at 1000 mm		Approx. Φ0.5 mm at 100 mm		Approx. 1.5*120 mm at 1000 mm	
Light source	Type	Red laser					
	Laser classification	Class 1 laser products (IEC60825-1)					
Mutual interference prevention function		4 units (when using the anti-jamming function)					
Timer		Delayed shutdown/ON delay/OFF delay/One-shot					
Power voltage		12 to 30 VDC ±10%, Ripple Voltage (P-P): 10% max					
Power consumption		400 mW or less (15 mA or less at 24 V, 25 mA or less at 12 V)					
Control output		NPN output maximum load current: 100 mA, Residual voltage: less than 1.5 V; PNP output maximum load current: 100 mA, Residual voltage: less than 1.5 V					
Response time		1 ms (Fine) / 200 μs (Hspd) / 16 ms (Mega)					
Protection circuit		Power reverse connection protection, power surge protection, output short circuit protection					
Housing rating		IP67 (IEC60529)					
Ambient light		Incandescent lamp: Maximum 10,000 lux; Sunlight: Maximum 10,000 lux					
Ambient temperature		-20 to +55 °C (no freezing)					
Relative humidity		35 to 85% RH (no condensation)					
Shock resistance		1,000 m/s ² , 3 times in each of the X and Z directions					
Vibration resistance		10 to 55 Hz, Amplitude 1.5 mm, 2 hours in each of the X, Y, and Z directions					
Material		Housing: Zinc alloy; Indicator cover: PC; Lens cap: PMMA; Button: ABS; Cable (2 m cable type only): PVC					
Weight		Approx. 90 g (including 2 m cable)					

Relay type

Type		Reflective type					
		Standard type		Small spot type		Line spot type	
Model	NPN	PC-WB3000CAN		PC-WB700CAN		PC-WS3000CAN	
	PNP	PC-WB3000CAP		PC-WB700CAP		PC-WS3000CAP	
Detected objects		White non-glossy cardboard	Black non-glossy cardboard	White non-glossy cardboard	Black non-glossy cardboard	White non-glossy cardboard	Black non-glossy cardboard
Detection distance (mm)	MEGA	0-3000	7-800	0-700	7-200	0-3000	7-800
	FINE	0-1000	7-350	0-300	7-80	0-1000	7-350
	HSPD	0-700	7-200	0-200	7-50	0-700	7-200
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Response time		1 ms (Fine) / 200 μs (Hspd) / 16 ms (Mega)					
Protection circuit		Power reverse connection protection, power surge protection, output short circuit protection					
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Vibration resistance		10 to 55 Hz, Amplitude 1.5 mm, 2 hours in each of the X, Y, and Z directions					
Material		Housing: Zinc alloy; Indicator cover: PC; Lens cap: PMMA; Button: ABS; Cable (2 m cable type only): PVC					
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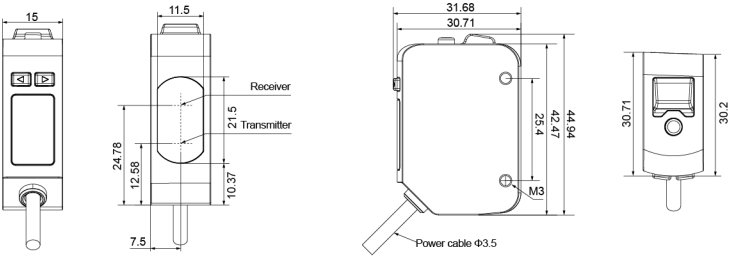
I/O Circuit Diagrams



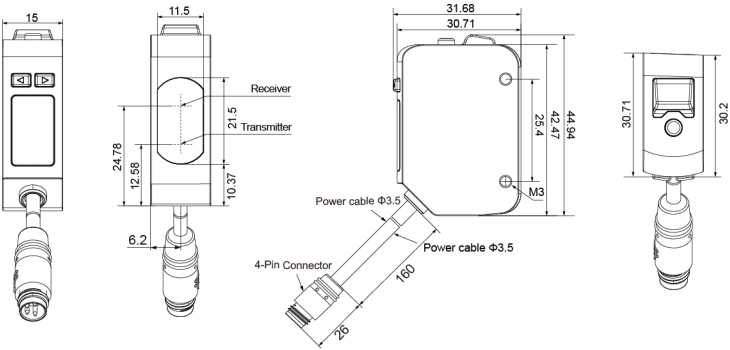
Dimensions

Cable type
PC-WB3000N/P PC-WB700N/P PC-WS3000N/P

Unit: mm



Relay type
PC-WB3000CAN/CAP PC-WB700CAN/CAP PC-WS3000CAN/CAP



Cable (sold separately)
OW-PCW2000 / OW-PCW5000
OW-PCW10M / OW-PCW20M



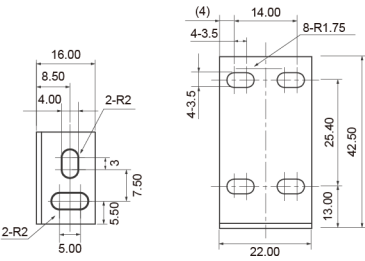
Pin definition



No.	Jacket color
①	Brown
②	Pink
③	Blue
④	Black

Cable	L (Cable length)
OW-PCW2000	2 m
OW-PCW5000	5 m
OW-PCW10M	10 m
OW-PCW20M	20 m

Bracket (sold separately)
N-100



Color Sensors

- LA2-W/WS
- LA-W
- PC-W
- PC-N
- PC2-V
- LA-F10
- LU-N

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