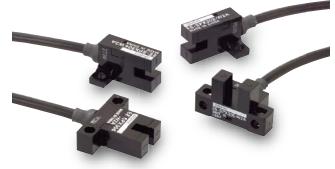
EE-SPX-W

Photomicrosensor with built-in amplifier and attached cable reduces external light interference.

- Light modulation effectively reduces external light interference.
- Wide operation voltage range: 5 to 24 VDC
- Easy operation monitoring with bright light indicator.



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Be sure to read *Safety Precautions* on page 3.

Ordering Information

Infrared light

Appearance	Sensing method	Sensing distance (slot width)	Output type	Output configuration	Cable length	Model
	Through-beam type		nm	Dark-ON		EE-SPX302-W2A
		3.6 mm		Light-ON	- 1 m	EE-SPX402-W2A
				Dark-ON		EE-SPX304-W2A
		3.6 mm	NPN output	Light-ON		EE-SPX404-W2A
				Dark-ON		EE-SPX306-W2A
		3.6 mm		Light-ON		EE-SPX406-W2A
		_		Dark-ON		EE-SPX305-W2A *
		5 mm		Light-ON		EE-SPX405-W2A *

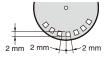
^{*} These models (EE-SPX305/405-W2A only) are not conformed to CE standards.

OMRON

Ratings and Specifications

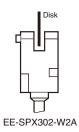
Models		EE-SPX302-W2A, EE-SPX402-W2A EE-SPX304-W2A, EE-SPX404-W2A EE-SPX306-W2A, EE-SPX406-W2A	EE-SPX305-W2A EE-SPX405-W2A		
Sensing distance		3.6 mm (slot width)	5 mm (slot width)		
Sensing object		Opaque: 1 × 0.5 mm min.	Opaque: 2 × 0.8 mm min.		
Differential distance		0.05 mm max.			
Light source		GaAs infrared LED (pulse lighting) with a peak wavelength of 940 nm			
Indicator *1		Light indicator (red)			
Supply volta	ge	5 to 24 VDC ±10%, ripple (p-p): 5% max.			
Current consumption		Average: 15 mA max.; Peak: 50 mA max.			
Control outp	ut	NPN voltage output: Load power supply voltage: 5 to 24 VDC Load current: 80 mA max. 80 mA load current with a residual voltage of 1.0 V max. 10 mA load current with a residual voltage of 0.4 V max.			
Response fre	equency *2	500 Hz min.			
Ambient illumination		3,000 lx max. with incandescent light or sunlight on the surface of the receiver			
Ambient temperature range		Operating: -10 to +55°C Storage: -25 to +65°C			
Ambient humidity range		Operating: 5% to 85% Storage: 5% to 95%			
Vibration resistance		Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 h each in X, Y, and Z directions			
Shock resistance		Destruction: 500 m/s² for 3 times each in X, Y, and Z directions			
Enclosure rating		IEC IP50			
Connecting method		Pre-wired (standard cable length: 1 m)			
Weight		18.5 g			
Material	Case	Delvise when etc			
	Holder	Polycarbonate			

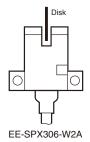
- *1. The indicator is a GaP red LED (peak wavelength: 700 nm).
 *2. The response frequency was measured by detecting the following rotating disk.





EE-SPX305-W2A





I/O Circuit Diagrams

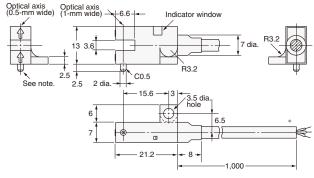
NPN Output

Model	Output configuration	Timing charts	Output circuit		
EE-SPX402-W2A EE-SPX404-W2A EE-SPX405-W2A EE-SPX406-W2A	Light-ON	Incident Interrupted Light indicator ON (red) OFF Output ON transistor OFF Load 1 Operates (relay) Releases Load 2 H L	Light indicator (red) 1.5 to 3 mA Black Black 5 to 24 VDC		
EE-SPX302-W2A EE-SPX304-W2A EE-SPX305-W2A EE-SPX306-W2A	Dark-ON	Incident Interrupted Light indicator ON (red) OFF Output ON transistor OFF Load 1 Operates (relay) Releases Load 2 H	* Voltage output (when the sensor is connected to a transistor circuit)		

Dimensions (Unit: mm)

EE-SPX302-W2A EE-SPX402-W2A



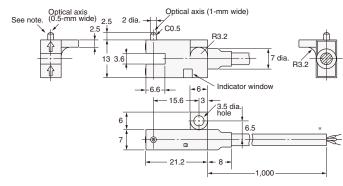


* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m

Note: The lug is used to prevent turning and to indicate the optical axis. When installing, make a fixed hole of 2.1 to 2.3 mm dia.

EE-SPX304-W2A EE-SPX404-W2A



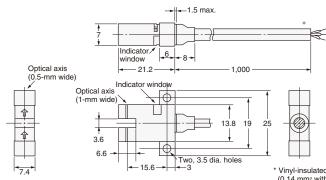


* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m

Note: The lug is used to prevent turning and to indicate the optical axis. When installing, make a fixed hole of 2.1 to 2.3 mm dia.

EE-SPX306-W2A EE-SPX406-W2A

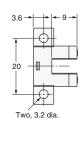


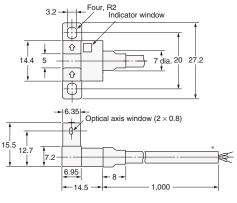


* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m

EE-SPX305-W2A EE-SPX405-W2A







* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m