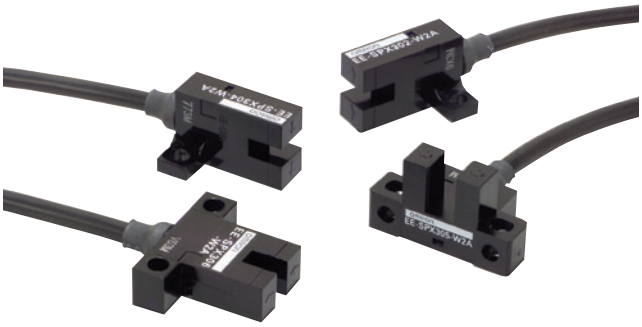
Slot-type Photomicrosensor with Cable

EE-SPX-W

CSM_EE-SPX-W_DS_E_4_2

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.

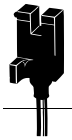
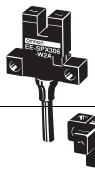
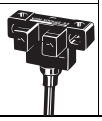


⚠ Be sure to read *Safety Precautions* on page 3.

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Ordering Information

Infrared light

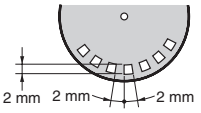
Appearance	Sensing method	Sensing distance (slot width)	Output type	Output configuration	Cable length	Model
	Through-beam type	3.6 mm	NPN output	Dark-ON	1 m	**EE-SPX302-W2A 1M**
				Light-ON		**EE-SPX402-W2A 1M**
		3.6 mm		Dark-ON		**EE-SPX304-W2A 1M**
				Light-ON		**EE-SPX404-W2A 1M**
		3.6 mm		Dark-ON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

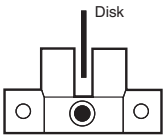
* These models (EE-SPX305/405-W2A only) are not conformed to CE standards.

Ratings and Specifications

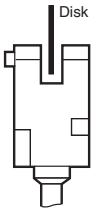
Item \ Models	EE-SPX302-W2A, EE-SPX402-W2A EE-SPX304-W2A, EE-SPX404-W2A EE-SPX306-W2A, EE-SPX406-W2A	EE-SPX305-W2A EE-SPX405-W2A
Sensing distance	3.6 mm (slot width)	5 mm (slot width)
Sensing object	Opaque: 1 × 0.5 mm min.	Opaque: 2 × 0.8 mm min.
Differential distance	0.05 mm max.	
Light source	GaAs infrared LED (pulse lighting) with a peak wavelength of 940 nm	
Indicator *1	Light indicator (red)	
Supply voltage	5 to 24 VDC ±10%, ripple (p-p): 5% max.	
Current consumption	Average: 15 mA max.; Peak: 50 mA max.	
Control output	NPN voltage output: Load power supply voltage: 5 to 24 VDC Load current: 80 mA max. OFF current: 0.5 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 frequency *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	
Degree of protection	IEC IP50	
Connecting method	Pre-wired (standard cable length: 1 m)	
Weight	18.5 g	
Material Case / 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.

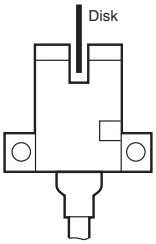




EE-SPX305-W2A



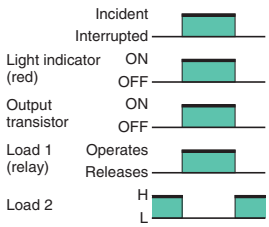
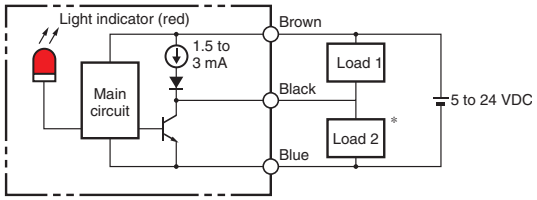
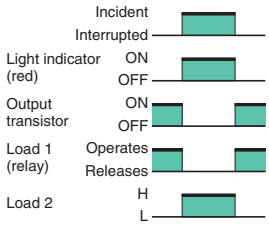
EE-SPX302-W2A



EE-SPX306-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		
EE-SPX302-W2A EE-SPX304-W2A EE-SPX305-W2A EE-SPX306-W2A	Dark-ON		

* Voltage output (when the sensor is connected to a transistor circuit)