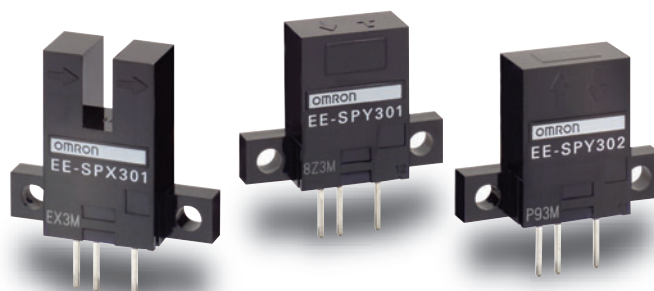


Photomicrosensor with light modulation is not influenced by external light.

- Voltage-output models with wide operating voltage range (5 to 24 VDC).
- Fitted with an easy-to-adjust optical axis mark.
- Easy adjustment and optical axis monitoring with a light indicator.



Be sure to read *Safety Precautions* on page 5.

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

Ordering Information

Sensors

 Infrared light

Appearance	Sensing method	Sensing distance		Output type	Output configuration	Model
	Through-beam type (with slot)		3.6 mm (slot width)	NPN output	Dark-ON	EE-SPX301
					Light-ON	EE-SPX401
Horizontal type 	Reflective type		 5 mm		Dark-ON	EE-SPY301
					Light-ON	EE-SPY401
Vertical type 	Reflective type		 5 mm		Dark-ON	EE-SPY302
					Light-ON	EE-SPY402

Accessories (Order Separately)

Type	Cable length	Model	Remarks
Connector		EE-1002	
	Connector with Cable	EE-1003	
NPN/PNP Conversion Connector	0.46 m (total length)	EE-2001	
Connector Hold-down Clip		EE-1003A	For EE-1003 only.

* Refer to *Accessories* for details.

Ratings and Specifications

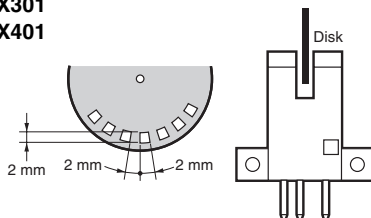
Sensing method		Through-beam type (with slot)	Reflective type
Item	Models	EE-SPX301, EE-SPX401	EE-SPY301, EE-SPY401 EE-SPY302, EE-SPY402
Sensing distance		3.6 mm (slot width)	5 mm (Reflection factor: 90%; white paper 15 × 15 mm) *1
Sensing object		Opaque: 1 × 0.5 mm min.	---
Differential distance		0.05 mm max.	0.2 mm max. (with a sensing distance of 3 mm, horizontally)
Light source		GaAs infrared LED with a peak wavelength of 940 nm	
Indicator *2		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 *3		500 Hz min.	100 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 (with no icing)	
Ambient humidity range		Operating: 5% to 85% Storage: 5% to 95% (with no condensation)	
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/s ² for 3 times each in X, Y, and Z directions	
Degree of protection		IEC IP50	
Connecting method		Special connector (soldering not possible)	
Weight		Approx. 2.6 g	
Material	Case	Polycarbonate	

*1. Operation may not be possible near the Sensor.

*2. The indicator is a GaP red LED (peak wavelength: 700 nm).

*3. The response frequency was measured by detecting the following rotating disk.

EE-SPX301
EE-SPX401



EE-SPY30□
EE-SPY40□

