



A Wide Slot Width of 13 mm and Superior Resistance to Light Interference and Noise.

- Noise resistance equivalent to photomicrosensors with built-in amplifiers.
- Resistance to common noise at least 30 times that of previous models.
- Resistance to inverter noise at least 10 times that of previous models.
- Reverse polarity protection built in.



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

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

Ordering Information

Sensors

Infrared light

Appearance	Sensing method	Sensing distance (slot width)		Output type	Output configuration	Model
	Through-beam type (with slot)			NPN output	Dark-ON	EE-SPX303N
					Light-ON	EE-SPX403N

Accessories (Order Separately)

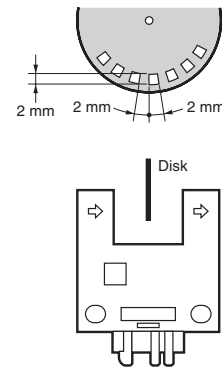
Type	Cable length	Model
Connector		EE-1001
		EE-1009
Connector with Cable	1 m	EE-1006 1M
		EE-1010 1M
	2 m	EE-1006 2M
		EE-1010 2M
Connector with Robot Cable	1 m	EE-1010-R 1M
	2 m	EE-1010-R 2M
NPN/PNP Conversion Connector	0.46 m (total length)	EE-2002

* Refer to *Accessories* for details.

Ratings and Specifications

Item	Models	EE-SPX303N, EE-SPX403N
Sensing distance		13 mm (slot width)
Sensing object		Opaque: 2.2 × 0.5 mm min.
Differential distance		0.05 mm max.
Light source		Infrared LED (pulse lighting) with a peak wavelength of 940 nm
Indicator		Light indicator (red)
Supply voltage		12 to 24 VDC ±10%, ripple (p-p): 5% max.
Current consumption		15 mA max.
Control output		NPN voltage output: Load power supply voltage: 12 to 24 VDC Load current: 80 mA max. OFF current: 0.5 mA max. 80 mA load current with a residual voltage of 2.0 V max. 10 mA load current with a residual voltage of 1.0 V max.
Protection circuits		Power supply reverse polarity protection, Output reverse polarity protection
Response frequency *		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
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/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. 4 g
Material		Polycarbonate

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



Engineering Data (Reference Value)

Sensing Position Characteristics

EE-SPX303N

