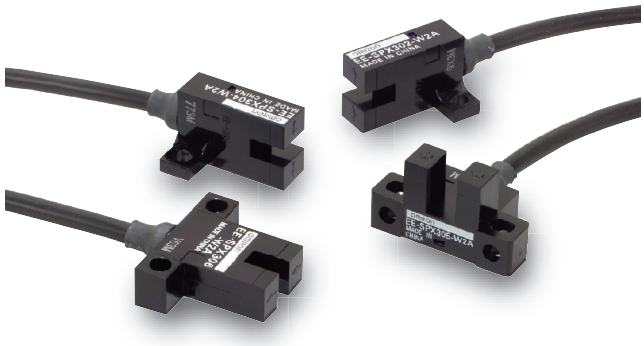
Slot-type Photomicrosensor with Cable
EE-SPX-W

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.

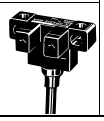


CE

⚠ Refer to *Precautions* on page 49.

Ordering Information

Infrared light

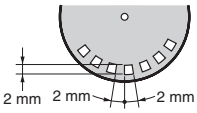
Appearance	Sensing method	Sensing distance (slot width)	Output type	Output configuration	Cable length	Model
	Through-beam type	3.6 mm	NPN output	Dark-ON	1 m	**EE-SPX302-W2A**
				Light-ON		**EE-SPX402-W2A**
		3.6 mm		Dark-ON		**EE-SPX304-W2A**
				Light-ON		**EE-SPX404-W2A**
		3.6 mm		Dark-ON		**EE-SPX306-W2A**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

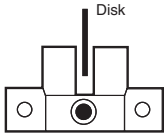
Note: The EE-SPX305-W2A/SPX405-W2A are not CE certified due to their internal structures. All other Photomicrosensors are CE certified.

Ratings/Characteristics

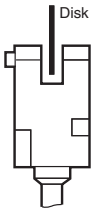
Item / Models	EE-SPX302-W2A, EE-SPX402-W2A EE-SPX304-W2A, EE-SPX404-W2A EE-SPX306-W2A, EE-SPX406-W2A	EE-SPX305-W2A EE-SPX405-W2A
Sensing distance	3.6 mm (slot width)	5 mm (slot width)
Sensing object	Opaque: 1 × 0.5 mm min.	Opaque: 2 × 0.8 mm min.
Differential distance	0.05 mm max.	
Light source	GaAs 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. 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	Operating: −10 to +55°C Storage: −25 to +65°C	
Ambient humidity	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 / Holder	Polycarbonate	

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

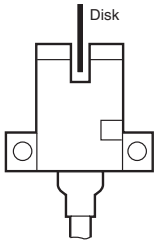




EE-SPX305-W2A



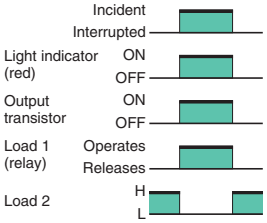
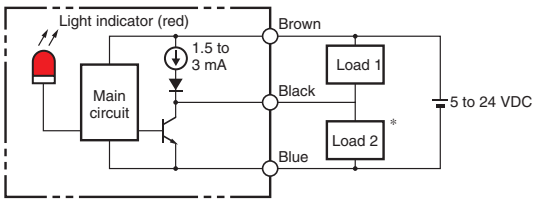
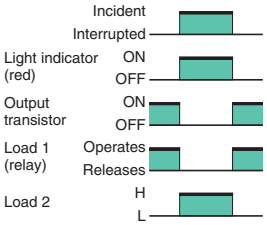
EE-SPX302-W2A



EE-SPX306-W2A

I/O Circuits

NPN Output

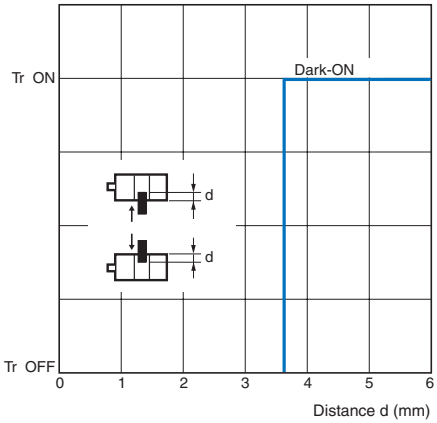
Model	Output configuration	Timing charts	Output circuit
EE-SPX402-W2A EE-SPX404-W2A EE-SPX405-W2A EE-SPX406-W2A	Light-ON		
EE-SPX302-W2A EE-SPX304-W2A EE-SPX305-W2A EE-SPX306-W2A	Dark-ON		

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

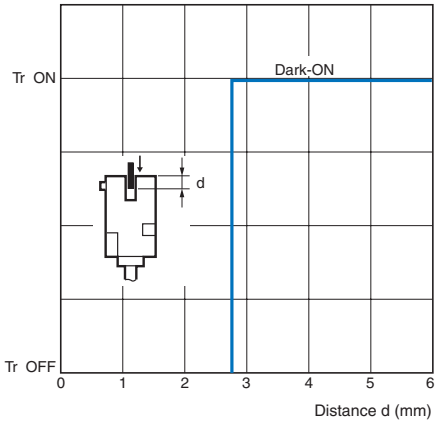
Engineering Data

Sensing Position Characteristics (Typical)

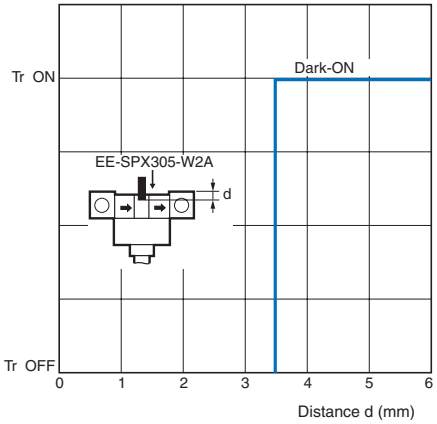
EE-SPX302-W2A
EE-SPX304-W2A
EE-SPX306-W2A



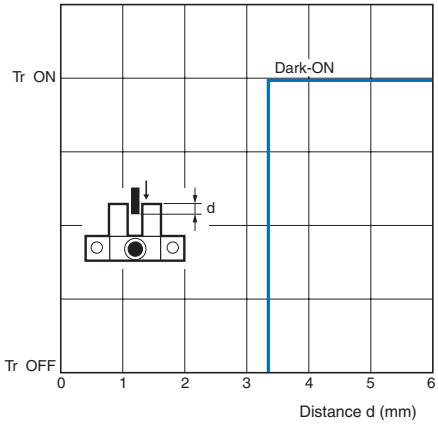
EE-SPX302-W2A
EE-SPX304-W2A
EE-SPX306-W2A



EE-SPX305-W2A



EE-SPX305-W2A



Precautions

Refer to *General Precautions* on page 23 to 28 for general precautions.

⚠ Warning

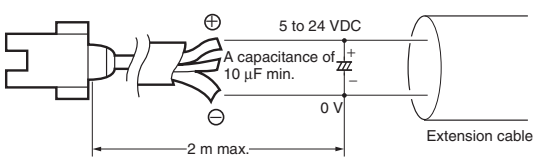
Do not use this product in sensing devices designed to provide human safety.

Precautions for Correct Use

Make sure that this product is used within the rated ambient environment conditions.

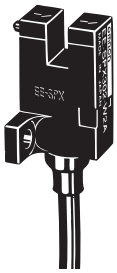
● **Wiring**

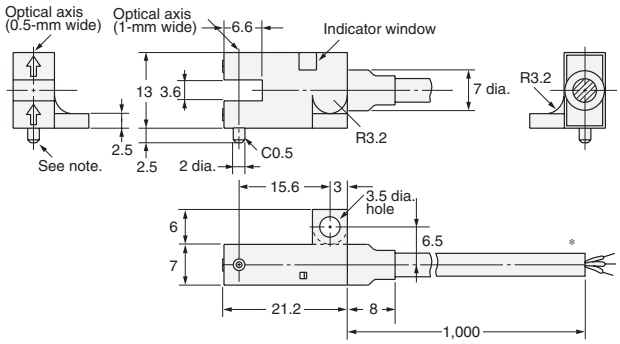
- When extending the cable, use an extension cable with conductors having a total cross-section area of 0.3 mm^2. The total cable length must be 2 m maximum.
- To use a cable length longer than 2 m, attach a capacitor with a capacitance of approximately 10 μF to the wires as shown below. The distance between the terminal and the capacitor must be within 2 m. (Use a capacitor with a dielectric strength that is at least twice the Sensor's power supply voltage.)



Dimensions (Unit: mm)

EE-SPX302-W2A
EE-SPX402-W2A

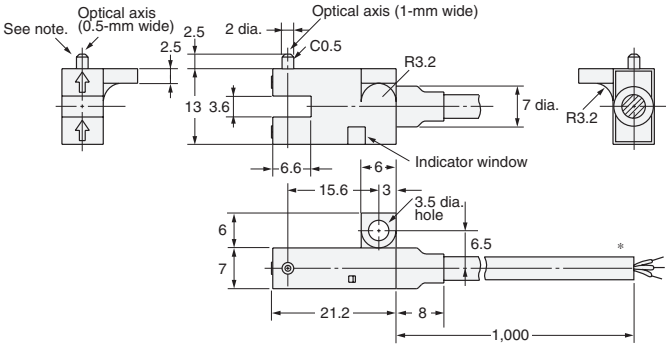




* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m

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.

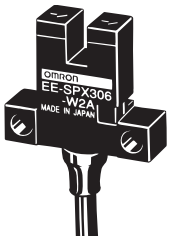
EE-SPX304-W2A
EE-SPX404-W2A

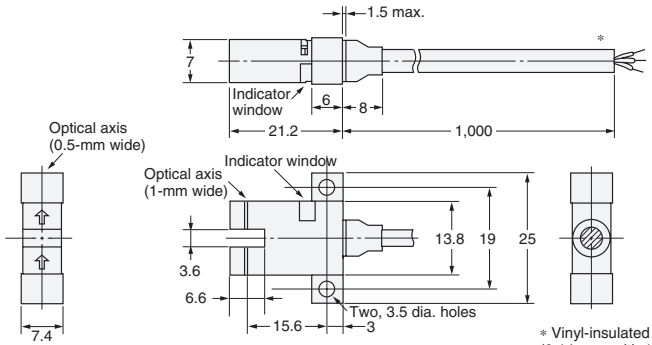


* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m

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.

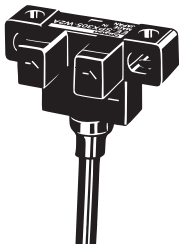
EE-SPX306-W2A
EE-SPX406-W2A

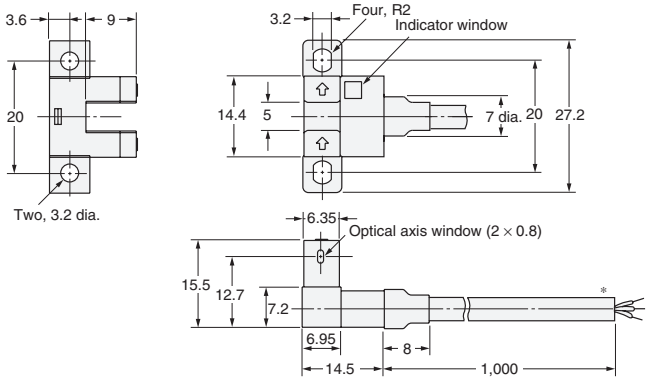




* Vinyl-insulated round cable of 3.5 dia., 3 cores, (0.14 mm² with 1.0-dia. insulator); Standard length: 1 m

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

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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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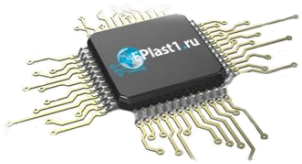
- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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