NEW

Slot-type Photomicrosensor

EE-SX97

A Standard Photomicrosensor with High Performance

Built-in connector enables downsizing and easier connection.

EE-SX974

EE-SX975

EE-SX976

EE-SX977

EE-SX971

EE-SX972

EE-SX970

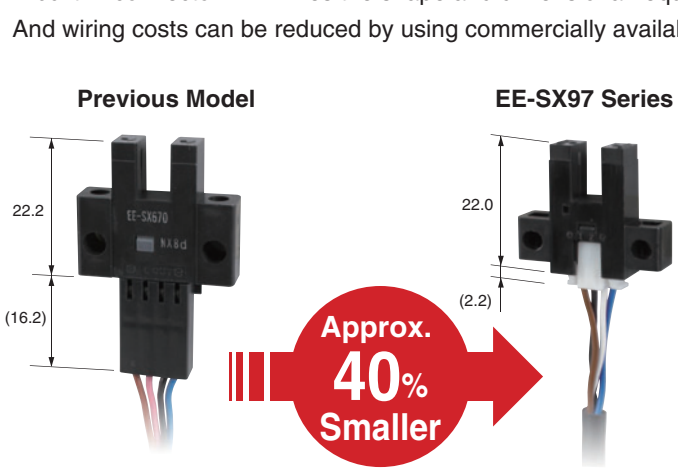
- A built-in connector minimizes the shape and dimensional requirements.
- Two outputs: light-ON and dark-ON.
- Safer operation with built-in power supply reverse polarity protection.
- Output overcurrent protection with a thermal shutdown circuit (patent pending).
- Highly visible indicator.

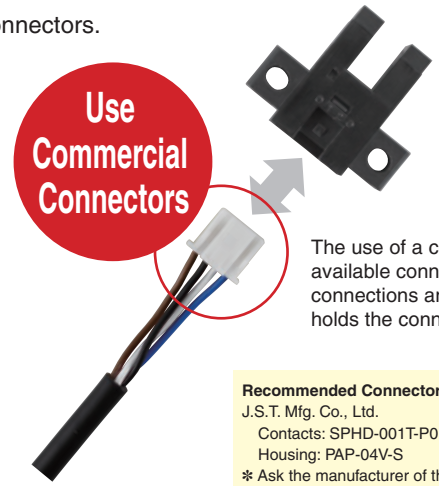
realizing

High Performance That's Easy to Use

Built-in Connector for Downsizing and Easier Connection

A built-in connector minimizes the shape and dimensional requirements.
And wiring costs can be reduced by using commercially available connectors.



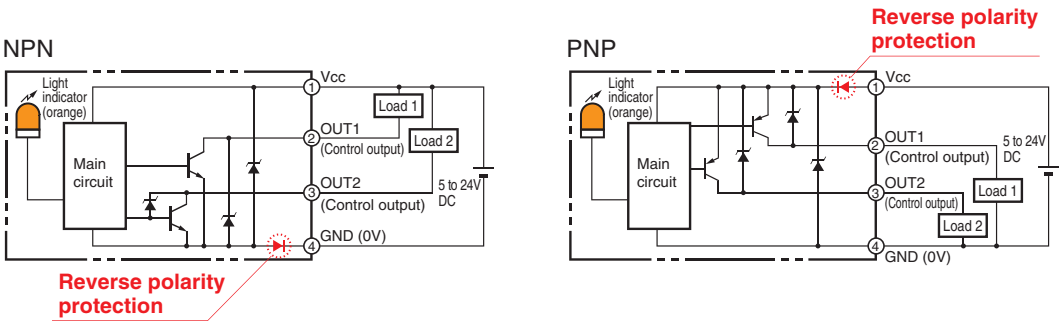


The use of a commercially available connector simplifies connections and the positive lock holds the connector in place.

Recommended Connector:
J.S.T. Mfg. Co., Ltd.
Contacts: SPHD-001T-P0.5,
Housing: PAP-04V-S
✻ Ask the manufacturer of the connector for details.

Safer Operation with Built-in Power Supply Reverse Polarity Protection

The built-in power supply reverse polarity protection protects against reverse connection of the power supply or outputs for safer operation at the assembly site.



Two Outputs: Light-ON and Dark-ON

All models provide both a light-ON and dark-ON output so that the output can be switched according to the application simply by changing the wiring.

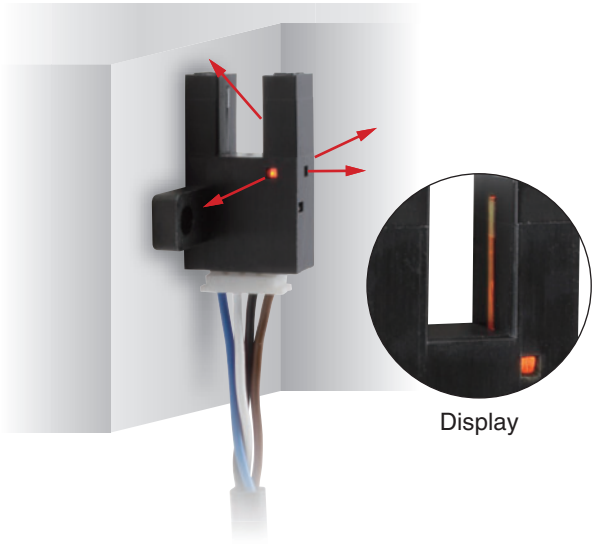
Patent pending

Built-in Thermal Shutdown Circuit

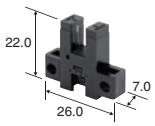
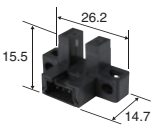
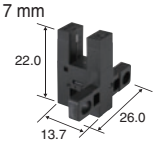
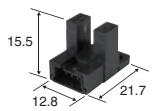
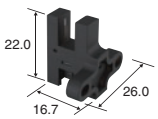
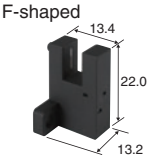
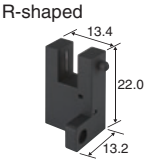
Control output 2 on models with NPN outputs is protected from output overcurrents by a built-in thermal shutdown circuit.

Easy-to-see Indicator

The indicator can be seen from up to four directions to enable installation in more locations.



Ordering Information

Appearance	Sensing method	Connecting method	Sensing distance	Operating mode	Indicator mode	Model	
						NPN	PNP
Standard 	Throughbeam type (with slot)	Connector model (4 poles)	5 mm (slot width)	Dark-ON/ Light-ON (2 outputs)	Incident light	**EE-SX970-C1**	**EE-SX970P-C1**
L-shaped 						**EE-SX971-C1**	**EE-SX971P-C1**
T-shaped, slot center 7 mm 						**EE-SX972-C1**	**EE-SX972P-C1**
Close-mounting 						**EE-SX974-C1**	**EE-SX974P-C1**
T-shaped, slot center 10 mm 						**E-SX975-C1**	**EE-SX975P-C1**
F-shaped 						**EE-SX976-C1**	**EE-SX976P-C1**
R-shaped 						**EE-SX977-C1**	**EE-SX977P-C1**

Note: Please refer to website **(www.ia.omron.com/)** for more information about dimensions.

Accessories

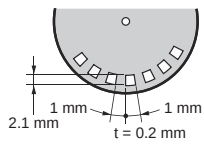
Type	Cable length	Model
Connector with Cable	1 m	**EE-1017 1M**
	3 m	**EE-1017 3M**
Connector with Robot Cable	1 m	**EE-1017-R 1M**
	3 m	**EE-1017-R 3M**

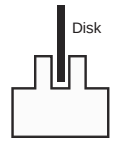
Ratings and Specifications

Item	Type	Standard	L-shaped	T-shaped, slot center 7 mm	Close-mounting	T-shaped, slot center 10 mm	F-shaped	R-shaped
	NPN	EE-SX970-C1	EE-SX971-C1	EE-SX972-C1	EE-SX974-C1	EE-SX975-C1	EE-SX976-C1	EE-SX977-C1
	PNP	EE-SX970P-C1	EE-SX971P-C1	EE-SX972P-C1	EE-SX974P-C1	EE-SX975P-C1	EE-SX976P-C1	EE-SX977P-C1
Sensing distance		5 mm (slot width)						
Sensing object		Opaque: 2 × 0.8 mm min.						
Differential distance		0.025 mm max. ✻1						
Light source (Peak wavelength)		Infrared LED with a peak wavelength of 940 nm						
Indicator		Light indicator (orange LED)						
Supply voltage		5 to 24 VDC ±10%, ripple (p-p): 10% max.						
Current consumption		21 mA max.						
Control output		Load power supply voltage: 5 to 24 VDC, Load current: 50 mA max., Off-state current : 0.5mA max, 50 mA load current with a residual voltage of 1.0 V max., 5 mA load current with a residual voltage of 0.4 V max.						
Protection circuit		Power supply reverse polarity protection, output reverse polarity protection, overcurrent protection (only OUT2 on models with NPN output)						
Response frequency		1 kHz min. (3 kHz average) ✻2						
Ambient illumination		1,000 lx max. with fluorescent light on the surface of the receiver						
Ambient temperature range		Operating: -25 to 55°C Storage: -30 to 80°C (with no icing or condensation)						
Ambient humidity range		Operating: 5% to 85% Storage: 5% to 95% (with no icing or condensation)						
Vibration resistance (Destruction)		10 to 2,000 Hz 0.75-mm single amplitude (15-min periods, 10 cycles) each in X, Y, and Z directions						
Shock resistance (Destruction)		Destruction: 500 m/s^2 for 3 times each in X, Y, and Z directions						
Degree of protection		IEC 60529 IP50						
Connecting method		Connector						
Weight (Packed state)		Approx. 3 g						
Material	**Case/Cover**	Polybutylene terephthalate (PBT)						
	Emitter/Receiver	Polycarbonate (PC)						

✻1. The differential distance is the value when a sensing object is moved in a lateral direction to the slot.

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





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E404-E1-01 12/10 Note: Specifications are subject to change.