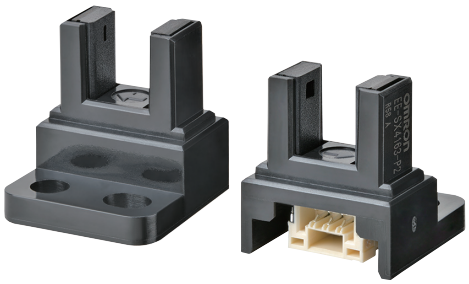
Photomicrosensor (Transmissive)

EE-SX3173/4173-P Series

Built-in Photomicrosensor
Connector Type



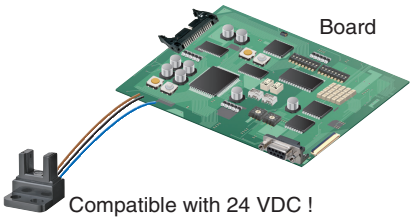
- Mounted with M3 screws
- 5 VDC and 24 VDC power supply types are available
- Photo IC output (Dark-ON/Light-ON)
- Connector with secure lock compatible with JST GHR-03
- Equipped with a Zener diode, which increases noise immunity (for EE-SX3173/4173-P3-Z only)
- Connector with cable is also available (order separately) EE-5002 1M (Refer to page 7.)

⚠ Be sure to read Safety Precautions on page 4.

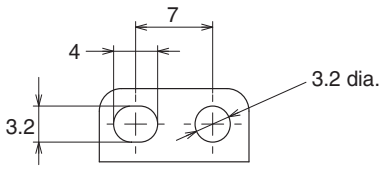
Features

Models available

Power supply voltage: In addition to the conventional 5 VDC supply, model also available with 24 VDC supply best for large devices

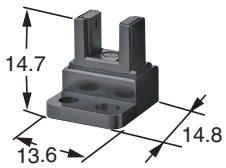


Mounting: New model available with M3 screws



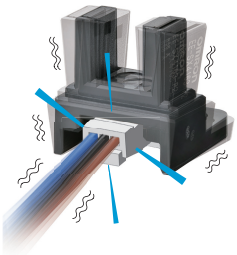
Downsizing

Smallest class in the industry ✻: Downsizing of products with unique optical elements is realized
✻ As of August 2018, according to research by our company



Environment resistance

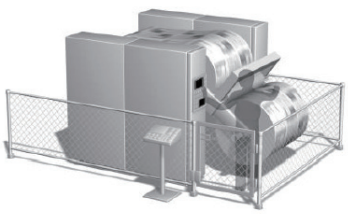
Connection: Equipped with connectors with locks for resistance against vibration and shock



Application Examples

Packaging Machine

Analysis and Measurement Equipment



Printing Equipment

ATM

Model Number Structure

EE-SX□□□□-P□-□
(1)(2)(3)(4)(5) (6) (7)

(1) Sensing method
X: Transmissive

(2) Operating mode
3: Dark-ON
4: Light-ON

(3) Structure
1: Standard structure

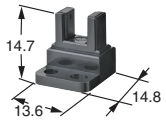
(4) Mounting screw size
7: M3

(5) Appearance
3: L-shaped mounting

(6) Power supply voltage
2: 5 VDC
3: 24 VDC

(7) Protection circuit
Z: Available

Ordering Information

Appearance	Sensing method	Connecting method	Sensing distance	Aperture size H x W (mm)	Output type	Power supply voltage	Operating mode	Model
	Transmissive (slot type)	Connector	**5 mm** (Slot width)	Emitter 1.4 × 1.4 Detector 1.4 × 0.5	Photo IC	24 VDC	Dark-ON	**EE-SX3173-P3-Z**
							Light-ON	**EE-SX4173-P3-Z**
						5 VDC	Dark-ON	**EE-SX3173-P2**
							Light-ON	**EE-SX4173-P2**

Ratings, Characteristics and Exterior Specifications

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rated value		Unit	Remarks
		EE-SX3173-P3-Z EE-SX4173-P3-Z	EE-SX3173-P2 EE-SX4173-P2		
Power supply voltage	V_{CC}	26.4 DC	5.5 DC	V	---
Output voltage	V_{OUT}	26.4	13.2	V	---
Output current	I_{OUT}	16		mA	---
Permissible output dissipation	P_{OUT}	80		mW	Fig 1.
Operating temperature	T_{opr}	-25 to +55		°C	✻
Storage temperature	T_{stg}	-30 to +80		°C	✻
Soldering temperature	T_{sol}	---		°C	---

✻ Reduce the voltage and current, if necessary, by reference to the temperature rating chart (Fig. 1.), even if the temperature is within the specified range. The product should be used without freezing or condensation.

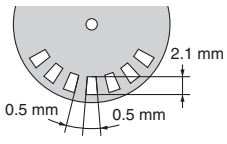
Exterior Specifications

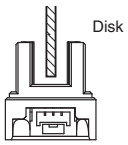
Item		Appearance: L-shaped mounting
		EE-SX3173-P3-Z EE-SX4173-P3-Z EE-SX3173-P2 EE-SX4173-P2
Connecting method		Connector
Weight		Approx. 1.5 g
Materials	**Case**	Polybutylene terephthalate (PBT)
	Emitter/ receiver	Polyphenylene sulfide (PPS) fiber

Electrical and Optical Characteristics (Ta = 25°C)

Item	Symbol	Value	
		24 VDC model	5 VDC model
	Dark-ON	**EE-SX3173-P3-Z**	**EE-SX3173-P2**
	Light-ON	**EE-SX4173-P3-Z**	**EE-SX4173-P2**
Power supply voltage	V_{CC}	24 ±10%V Ripple (p-p) 10%	5 ±10%V Ripple (p-p) 10%
Current consumption	I_{CC}	15 mA max. (With and without incident)	25 mA max. (With and without incident)
Low-level output voltage	V_{OL}	0.3 V max. (I_{OUT} = 16 mA) (Dark-ON: Without incident, Light-ON: With incident)	
High-level output voltage	V_{OH}	(Vcc x 0.9 V min. (V_{OUT} = V_{CC}, R_L = 47 kΩ)) (Dark-ON: With incident, Light-ON: Without incident)	
Sensing object	---	1.4 × 0.5 min. ✻**1**	
Response frequency	f	3kHz min. (V_{OUT} = V_{CC}, I_{OUT} = 16 mA ✻**2**)	
Operating ambient light	---	1000 lx max. ✻**3**	
Peak emission wavelength	λ_P	855 nm	940 nm

✻**1.** Objects that do not allow infrared light to pass through them.
✻**2.** The value of the response frequency is measured by rotating the disk as shown below.





✻**3.** When fluorescent light is used.