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.

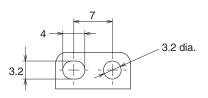
Features

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

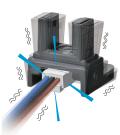
Smallest class in the industry \star : Downsizing of products with unique optical elements is realized

* 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

 $\begin{array}{c|c} \textbf{EE-SX} & \square & \square & \square & -P & -\square \\ \hline (1)(2)(3)(4)(5) & (6) & (7) \end{array}$

(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

(6) Power supply voltage

(7) Protection circuit

3: L-shaped mounting

2: 5 VDC 3: 24 VDC 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
14.7	Transmissi ve (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
							Dark-ON	EE-SX3173-P2
							Light-ON	EE-SX4173-P2

Ratings, Characteristics and Exterior Specifications

Absolute Maximum Ratings (Ta = 25°C)

			_		
	Symbol	Rated			
Item		EE-SX3173-P3-Z EE-SX4173-P3-Z	EE-SX3173-P2 EE-SX4173-P2	Unit	Remarks
Power supply voltage	Vcc	26.4 DC	5.5 DC	٧	
Output voltage	Vоит	26.4	13.2	V	
Output current	Іоит	16		mA	
Permissible output dissipation	Роит	80		mW	Fig 1.
Operating temperature	Topr	-25 to +55		°C	*
Storage temperature	T _{stg}	-30 to +80		°C	*
Soldering temperature	Tsol			°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

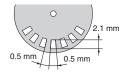
Appearance		L-shaped mounting		
Item		EE-SX3173-P3-Z EE-SX4173-P3-Z EE-SX3173-P2 EE-SX4173-P2		
Connecting method		Connector		
Weight		Approx. 1.5 g		
Materials	Case	Polybutylene terephthalate (PBT)		
	Emitter/ receiver	Polyphenylene sulfide (PPS) fiber		

Electrical and Optical Characteristics

(Ta = 25°C)

	Cumbal	Value				
Item	Symbol	24 VDC model	5 VDC model			
iteiii	Dark-ON	EE-SX3173-P3-Z	EE-SX3173-P2			
	Light-ON	EE-SX4173-P3-Z	EE-SX4173-P2			
Power supply voltage	Vcc	24 ±10%V Ripple (p-p) 10%	5 ±10%V Ripple (p-p) 10%			
Current consumption	lcc	15 mA max. (With and without incident)	25 mA max. (With and without incident)			
Low-level output voltage	Vol	0.3 V max. (Iouт = 16 mA) (Dark-ON: Without incident, Light-ON: With incident)				
High-level output voltage	Vон	(Vcc x 0.9 V min. (Voυτ = Vcc, RL = 47 kΩ)) (Dark-ON: With incident, Light-ON: Without incident)				
Sensing object		1.4 × 0.5 min. *1				
Response frequency	f	3kHz min. (Vоит = Vcc, louт = 16 mA *2)				
Operating ambient light		1000 lx max. *3				
Peak emission wavelength	λр	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.