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Slot–type Photomicrosensor with connector or pre–wired models (Non–modulated)＊1

EE-SX672

Photomicrosensor, Slot type, Through-beam, T-shaped (slot center 7 mm), Sensing distance: 5 mm (slot width), Dark-ON/Light-ON (selectable), Indicator: Incident light, NPN output, Connector model

Type	Grooved Type (T-shaped) (Slot center 7 mm)
Luminous method	Non-modulated
Sensing method	Through-beam type
Sensing distance	Slot width: 5 mm
Control output (Output type)	NPN open collector output
Operation mode	Dark-ON/Light-ON (selectable)
Connection method	Connector type

Image

Ratings/Performance

As of July 25, 2024

|	
Type	Grooved Type (T-shaped) (Slot center 7 mm)
Luminous method	Non-modulated
Sensing method	Through-beam type
Sensing distance	Slot width: 5 mm
Operation mode	Dark-ON/Light-ON (selectable)
Standard sensing object	Opaque, 2 x 0.8 mm min.
Differential distance elements	0.025 mm max.
Light source (Peak wavelength)	Infrared LED (940 nm)
Indicator	Light indicator (red)
Power supply voltage	5 to 24 VDC ±10% ripple (p-p) 10 % max.
Current consumption	12 mA (L terminal open)
Control output — Output type	NPN open collector output
Control output — Load power supply voltage	5 to 24 VDC
Control output — Load curren	100 mA max.
Control output — Residual voltage	at 100 mA load current: 0.8 V max. at 40 mA load current: 0.4 V max.
Protection circuits	Output short-cut protection
Response frequency elements	1 kHz min. Average value: 3 kHz
Illumination on the surface receiver	Fluorescent light: 1000 lx max.
Ambient temperature	Operating: -25 to 55 ℃ (with no freezing or condensation) Storage: -30 to 80 ℃ (with no freezing or condensation)

Ambient humidity	Operating: 5 to 85 % (with no condensation) Storage: 5 to 95 % (with no condensation)
Vibration resistance	Destruction: 20 to 2000 Hz, peak acceleration 100 m/s^2, 1.5-mm double amplitude 2 h each in X, Y, and Z directions (4 min periods)
Shock resistance	Destruction: 500 m/s^2 for 3 times each in X, Y, and Z directions
Degree of protection	IP50
Connection method	Connector type (Direct soldering possible)
Weight	Package: Approx. 2.4 g
Material	Case: Polybutylene terephthalate (PBT) Emitter/Receiver Cover: Polycarbonate (PC)

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Dimensions
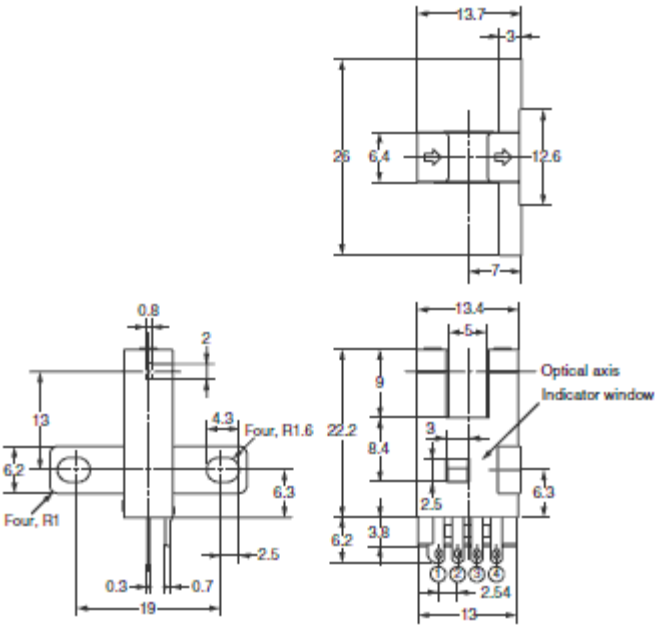
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Terminal array

Terminal Arrangement

(1)	⊕	Vcc
(2)	L	L
(3)	OUT	OUTPUT
(4)	⊖	GND (0 V)

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I/O Circuit diagram

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Output circuit

EE-SX67☐
EE-SX67☐A
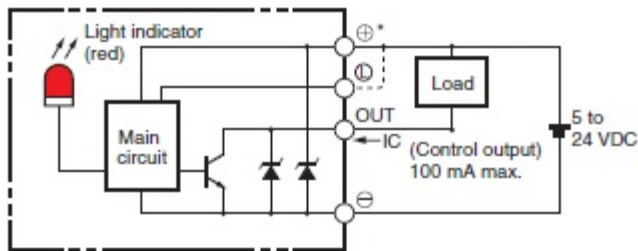
*The terminal arrangement depends on the model.
 Check the dimensional diagrams.

Timing chart

Output configuration	Timing charts	Terminal connections
Light-ON		Short-circuited between Ⓛ terminal and positive ⊕ terminal
Dark-ON		Open between Ⓛ terminal and positive ⊕ terminal *1 *2

*1. Do not connect the L terminal to 0 V when using dark-ON operation.
*2. If you do not use the L terminal wire ((2) pink) when you use a Connector with Cable for
     an EE-1006 or EE-1010-series Photomicrosensor, noise may affect the Photomicrosensor.
     To prevent the effects of noise, cut the unused L terminal wire at the base of the
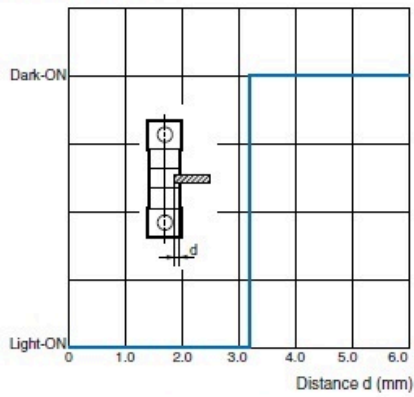   connector and wrap it with insulating tape to prevent it from coming in contact with other terminals.

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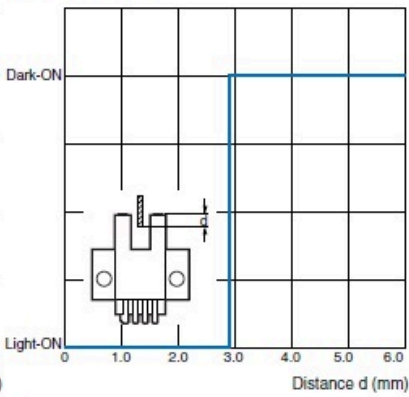**Engineering data (Reference value)**

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Sensing Position Characteristics
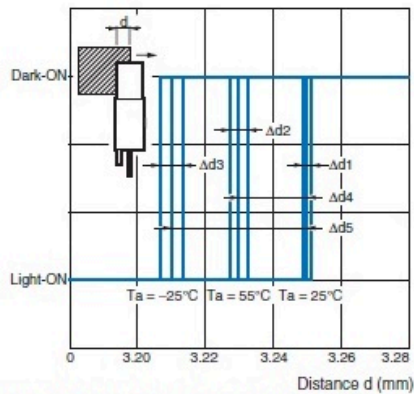### EE-SX47□/67□

Distance d (mm)

Sensing Position Characteristics
EE-SX47□/67□

Distance d (mm)

Repeated Sensing Position Characteristics
EE-SX47□/67□

Distance d (mm)

Vcc =12 V, No. of repetitions: 20, Δd1 = 0.002 mm,
Δd2 = 0.004 mm, Δd3 = 0.005 mm, Δd4 = 0.02 mm,
Δd5 = 0.04 mm
Note: The data applies to dark status. Operation may
      be affected by external light interference or light
      coming through the sensing object.

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