

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

EE-SX672-WR 1M



Image

Slot-type Photomicrosensor with Cable, Dark-ON/Light-ON (selectable), Pre-wired models, 1 m

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	Pre-wired models

Ratings/Performance

As of March 13, 2024

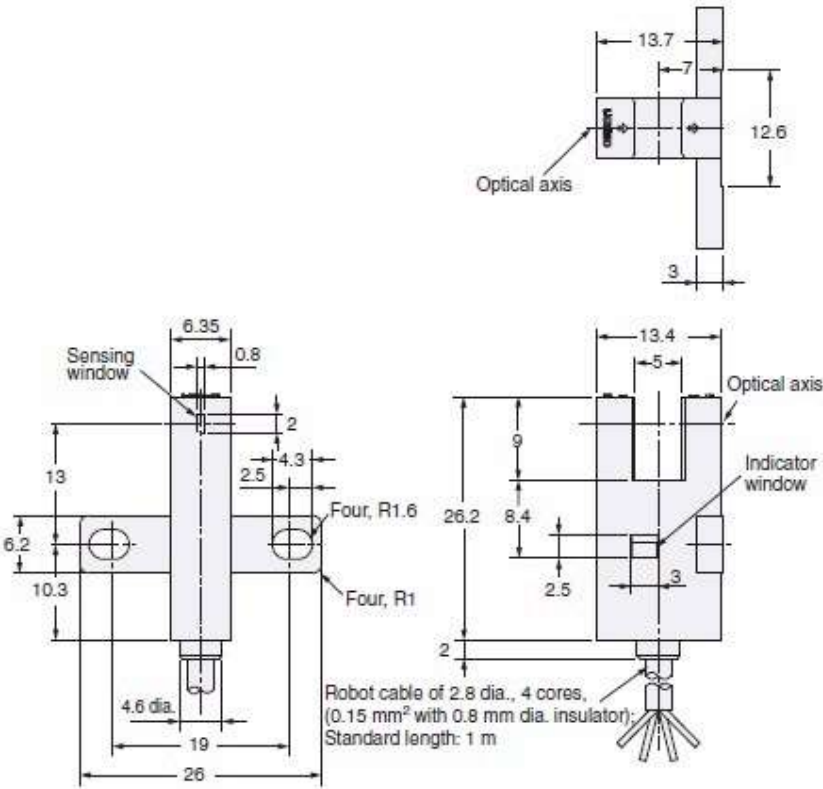
Type		Grooved Type (T-shaped) (Slot center 7 mm)
Luminous method		Non-modulated
Sensing method		Through-beam type
Sensing distance		Slot width: 5 mm
Operation mode		Dark-ON/Light-ON (selectable)
Standard sensing object		Opaque, 2 x 0.8 mm min.
Differential distance elements		0.025 mm max.
Light source (Peak wavelength)		Infrared LED (940 nm)
Indicator		Light indicator (red)
Power supply voltage		5 to 24 VDC \pm 10% ripple (p-p) 10 % max.
Current consumption		35 mA
Control output	Output type	NPN open collector output
	Load power supply voltage	5 to 24 VDC
	Load current	100 mA max.
	Residual voltage	at 100 mA load current: 0.8 V max. at 40 mA load current: 0.4 V max.
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 °C (with no freezing or condensation) Storage: -30 to 80 °C (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	Pre-wired models
Cable length	1 m
Weight	Package: Approx. 17.8 g
Material	Case: Polybutylene terephthalate (PBT) Emitter/Receiver Cover: Polycarbonate (PC)

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Dimensions

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Terminal array

Terminal Arrangement

Brown	(1)	Vcc
Pink	(2)	L
Blue	(3)	GND (0 V)
Black	(4)	OUTPUT

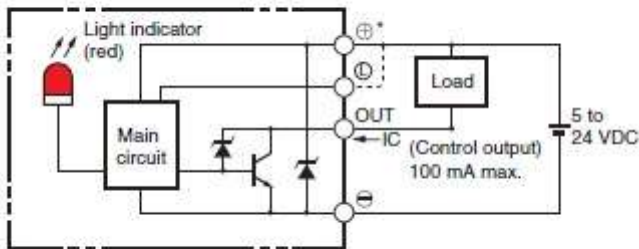
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I/O Circuit diagram

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Output circuit

EE-SX67□-WR



*The terminal arrangement depends on the model.
Check the dimensional diagrams.

Timing chart

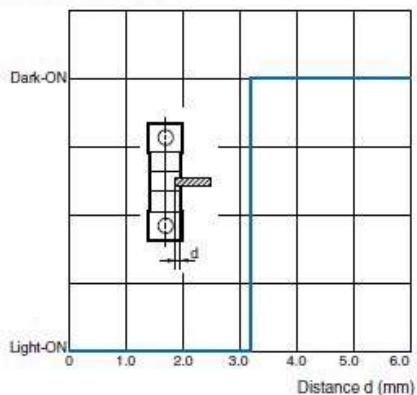
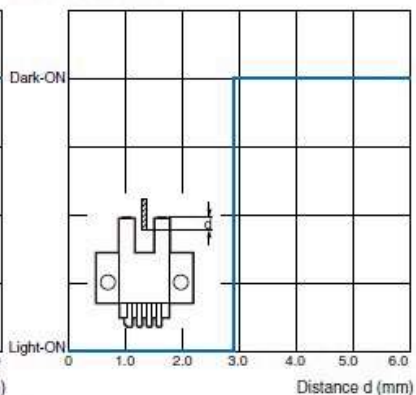
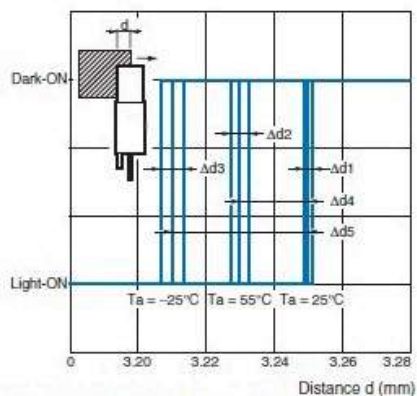
Output configuration	Timing charts	Terminal connections
Light-ON		Short-circuited between ⊖ terminal and positive ⊕ terminal
Dark-ON		Open between ⊖ terminal and positive ⊕ terminal *1 *2

*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□****Sensing Position Characteristics****EE-SX47□/67□****Repeated Sensing Position Characteristics****EE-SX47□/67□**

$V_{CC} = 12\text{ V}$, No. of repetitions: 20, $\Delta d1 = 0.002\text{ mm}$,
 $\Delta d2 = 0.004\text{ mm}$, $\Delta d3 = 0.005\text{ mm}$, $\Delta d4 = 0.02\text{ mm}$,
 $\Delta d5 = 0.04\text{ mm}$

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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