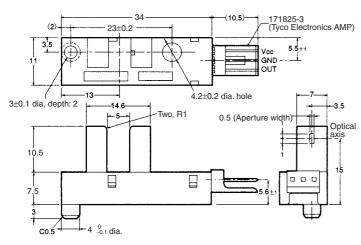
# MRON

# Photomicrosensor (Transmissive) EE-SX3009-P1/-SX4009-P1

A Be sure to read Precautions on page 24.

# Dimensions

Note: All units are in millimeters unless otherwise indicated.



### **Internal Circuit**

—  v
—0 G

Unless otherwise specified, the tolerances are as shown below.

Terminal No.	Name		Dimensions	Tolerance	
V	Power supply (Vcc)	upply	4 mm max.	±0.2	
O Output (OUT)			$4 < mm \le 16$	±0.3	
G			$16 < mm \le 63$	±0.5	

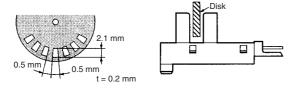
Recommended Mating Connectors: Tyco Electronics AMP 171822-3 (c

171822-3 (crimp connector) 172142-3 (crimp connector) EE-1005 (with harness) OMRON

# ■ Electrical and Optical Characteristics (Ta = 25°C, Vcc = 5 V ±10%)

Item	Symbol	Value	Condition
Current consumption	I <sub>CC</sub>	30 mA max.	With and without incident
Low-level output voltage	V <sub>OL</sub>	0.3 V max.	I <sub>OUT</sub> = 16 mA Without incident (EE-SX3009-P1) With incident (EE-SX4009-P1)
High-level output voltage	V <sub>OH</sub>	(V <sub>CC</sub> x 0.9) V min.	$V_{OUT} = V_{CC}$ With incident (EE-SX3009-P1) Without incident (EE-SX4009-P1), R <sub>L</sub> = 47 k $\Omega$
Response frequency	f	3 kHz min.	$V_{OUT} = V_{CC}, R_L = 47 \text{ k}\Omega \text{ (see note)}$

Note: The value of the response frequency is measured by rotating the disk as shown below.



#### EE-SX3009-P1/-SX4009-P1 Photomicrosensor (Transmissive) 60

# Features

- · Screw-mounting model.
- · High resolution with a 0.5-mm-wide sensing aperture.
- With a 5-mm-wide groove.
- Photo IC output signals directly connect with C-MOS and TTL.
- Connects to Tyco Electronics AMP's El-series connectors.
- Dark ON model (EE-SX3009-P1)
- Light ON model (EE-SX4009-P1)

# ■ Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Rated value	
Power supply voltage		V <sub>cc</sub>	10 V	
Output voltage		V <sub>OUT</sub>	28 V	
Output current		I <sub>OUT</sub>	16 mA	
Permissible output dissipation		P <sub>OUT</sub>	250 mW (see note)	
Ambient temper-	Operating	Topr	–25°C to 75°C	
ature	Storage	Tstg	–40°C to 85°C	
Soldering temperature		Tsol		

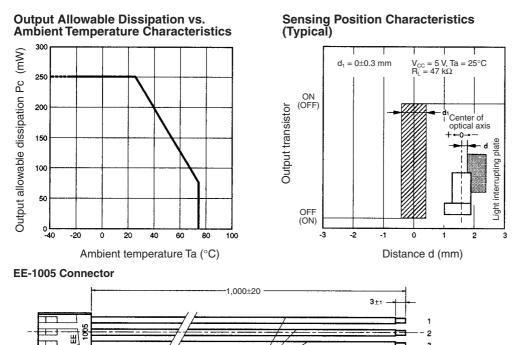
Note: Refer to the temperature rating chart if the ambient temperature exceeds 25°C.

# OMRON

# Engineering Data

(1) (2)

Note: The values in the parentheses apply to the EE-SX4009-P1.



			(3)	
No.	Name	Model	Quantity	Maker
1	Receptacle housing	171822-3	1	Tyco Elec- tronics AMP
2	Receptacle contact	170262-1	3	Tyco Elec- tronics AMP
3	Lead wire	UL1007 AWG24	3	

## Wiring

3

Connector circuit no.	Lead wire color	Output when connected to EE-SX4009-P1/EE-SX3009-P1
1	Red	V <sub>cc</sub>
2	Orange	GND
3	Yellow	OUT