OMRON

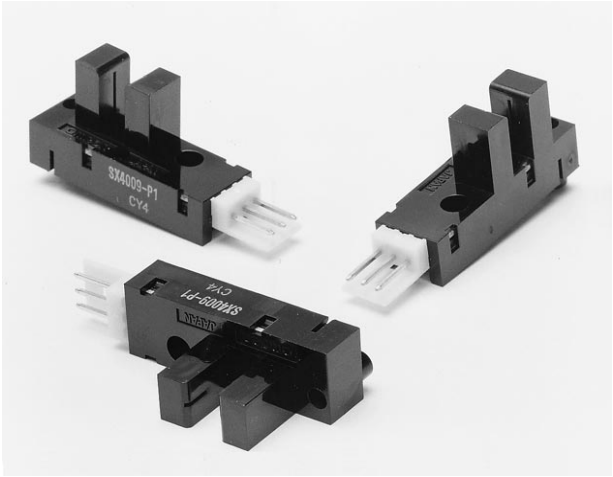
Back

Opto–Switch

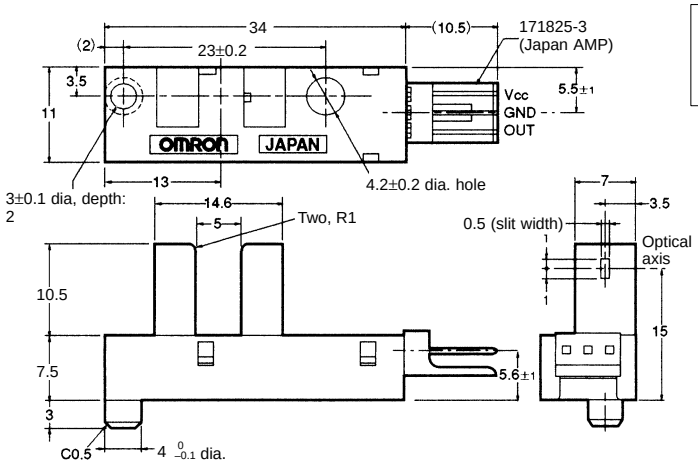
EE–SX4009–P1

Transmissive

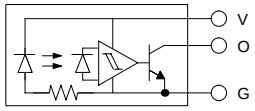
- Incorporates a photo–IC chip with a built-in detector element and amplifier.
- Incorporates a detector element with a built–in temperature compensation circuit.
- Easy to install with screw fixing.
- Connects to Omron EE–1005 and AMP's EI series connectors.



Dimensions



Internal Circuit



Terminal No.	Name
V	Supply voltage (Vcc)
O	Output (OUT)
G	Ground (GND)

Unless otherwise specified, the tolerances are as shown below.

Dimensions	Tolerance
4 mm max.	±0.2
4 < mm ≤ 16	±0.3
16 < mm ≤ 63	±0.5

Recommended Connectors:
Japan AMP 171822-3 (crimp-type connector)
172142-3 (crimp-type connector)
OMRON EE-1005 (with harness)

Specifications

■ Absolute Maximum Ratings (Ta = 25°C)

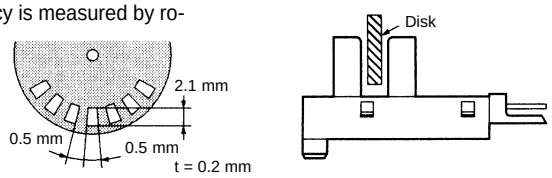
Item	Symbol	Rated value
Supply voltage	V_{CC}	10 V
Output voltage	V_{OUT}	28 V
Output current	I_{OUT}	16 mA
Permissible output dissipation	P_{OUT}	250 mW (see note)
Operating temperature	Topr	–25°C to 75°C
Storage temperature	Tstg	–40°C to 85°C
Soldering temperature	Tsol	---

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

■ Electrical and Optical Characteristics (Ta = 25°C)

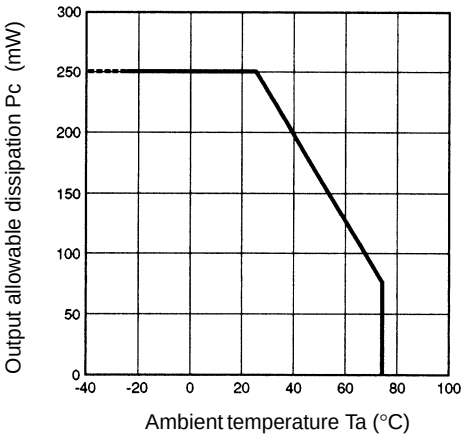
Item	Symbol	Value	Condition
Current consumption	I_{CC}	3.0 mA max.	With and without incident
Low-level output voltage	V_{OL}	0.3 V max.	I_{OUT} = 16 mA with incident
High-level output voltage	V_{OH}	(V_{CC} x 0.9) V min.	V_{OUT} = V_{CC} without incident, R_L = 47 kΩ
Response frequency	f	3 kHz min.	V_{OUT} = V_{CC}, R_L = 47 kΩ (see note)

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

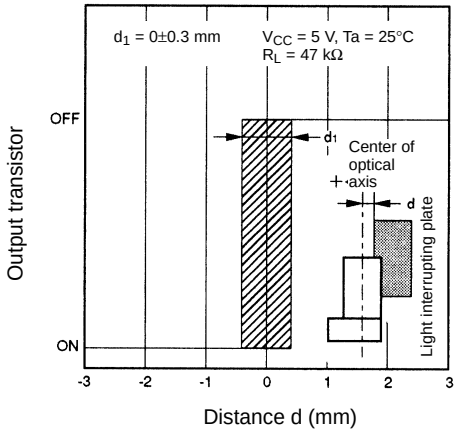


Engineering Data

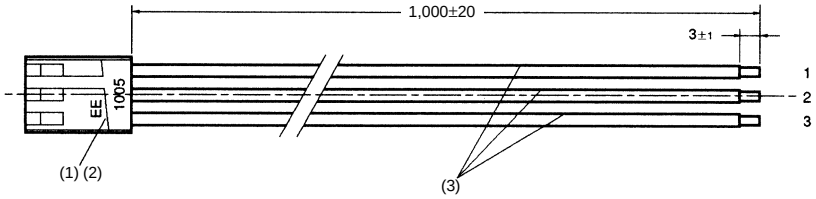
Output Allowable Dissipation vs. Ambient Temperature Characteristics



Sensing Position Characteristics (Typical)



EE-1005 Connector



No.	Name	Model	Quantity	Maker
1	Receptacle housing	171822-3	1	Japan AMP
2	Receptacle contact	170262-1	3	Japan AMP
3	Lead wire	UL1007 AWG24	3	---