

I/O Circuits

NPN Output

Model	Output configuration	Timing charts	Output circuit
EE-SPZ401-A	Light-ON	Incident Interrupted Light indicator (red) ON OFF Output transistor ON OFF Load 1 (relay) Operates Releases Load 2 H L	<p>* Voltage output (when the sensor is connected to a transistor circuit)</p>
EE-SPZ301-A	Dark-ON	Incident Interrupted Light indicator (red) ON OFF Output transistor ON OFF Load 1 (relay) Operates Releases Load 2 H L	

Safety Precautions

Refer to *Warranty and Limitations of Liability*.

**⚠ WARNING**

This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.

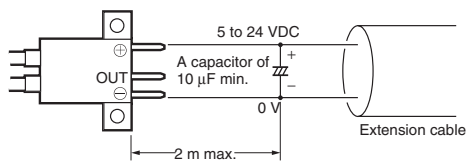


**Precautions for Correct Use**

Make sure that this product is used within the rated ambient environment conditions.

● **Wiring**

- Connection is made using a connector. Do not solder to the pins (leads).
- When extending the cable, use an extension cable with conductors having a total cross-section area of 0.3 mm<sup>2</sup>. The total cable length must be 2 m maximum.
- To use a cable length longer than 2 m, attach a capacitor with a capacitance of approximately 10 μF to the wires as shown below. The distance between the terminal and the capacitor must be within 2 m. (Use a capacitor with a dielectric strength that is at least twice the Sensor's power supply voltage.)



- Make sure the total length of the power cable connected to the product is less than 10 m even if a capacitor is inserted.

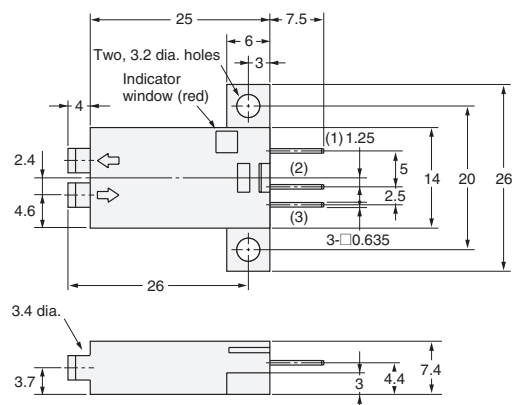
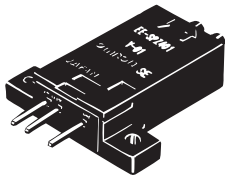
(Unit: mm)

## Dimensions

Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

## Sensors

EE-SPZ301-A  
EE-SPZ401-A



### Terminal Arrangement

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

\* Refer to *Accessories* for details.

\* Refer to the *E39-L/E39-S/E39-R Datasheet* for information on Reflectors.