

## C-1-9 Sensor Specification

### C-1-9. 1 Proximity Switch

#### Use of OMRON E2S-W13, E2S-W14

| Item   | E2S-W13 type  | E2S-W14 type   |
|--|---|----------------|
| Setting surface                                    | Front face  |                |
| Sensing distance                                   | 1.6 mm ±15%   |                |
| Setting distance                                   | 0 to 1.2 mm   |                |
| Differential travel                                | 10% max. of sensing distance                                      |                |
| Detectable object type                             | Ferrous metal   |                |
| Standard sensing object                            | Iron, 12 × 12 × 1 mm  |                |
| Response frequency                                 | 1 kHz min.  |                |
| Power supply voltage (operating voltage range)     | 12 to 24 VDC; ripple (p-p), 10% max (10 to 30 VDC)                |                |
| Current consumption                                | 13 mA max. at 24 VDC with no load                                 |                |
| Control output (Switching Capacity)                | NPN open collector output, 50 mA max. (30 VDC max.)               |                |
| Control output (Residual voltage)                  | 1.0 V max. with a load current of 50 mA and a cable length of 1 m |                |
| Indicator  | Operation indicator (orange)                                      |                |
| Operating status (with sensing object approaching) | NO (a-contact)  | NC (b-contact) |
| Wire lead length                                   | 1000 mm   |                |

Notes: 1) Do not make a wrong connection.  
2) Please contact NSK for PNP output type.

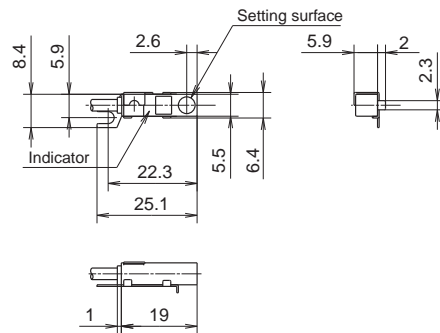
| Movement mode | Output type | Type         | Time chart | Output circuit                          |
|---------------|-------------|--------------|------------|---|
| NO            | NPN         | E2S-W13 type |            | <p>* (Maximum load current : 50 mA)</p> |
|               |             | E2S-W14 type |            |   |
| NC            | NPN         | E2S-W14 type |            | <p>* (Maximum load current : 50 mA)</p> |

E2S-W13 (a-contact)

E2S-W14 (b-contact)

The external appearances are the same.

A connector is mounted to the sensor in the right figure.



### C-1-9. 2 Photo Sensor

#### Use of OMRON EE-SX674

| Item                                 | EE-SX674 type  |
|--------------------------------------|--|
| Slot width                           | 5 mm   |
| Standard reference object            | Opaque, 2 × 0.8 mm   |
| Differential distance                | 0.025 mm   |
| Light source                         | GaAs infrared LED with a peak wavelength of 940 nm                                 |
| Indicator (Without detecting object) | ON GaP red LED (peak emission wavelength, 690 nm)                                  |
| Supply voltage                       | 5 to 24 VDC ±10%; ripple (p-p), 10% max.   |
| Current consumption                  | 35 mA max.   |
| Control output                       | NPN open collector output models, At 5 to 24 VDC, 100 mA load current              |
| Response frequency                   | 1 kHz max. (3 kHz typ.)  |
| Ambient illumination                 | Fluorescent light, 1 000 lx max.   |
| Ambient temperature                  | Operating, -25°C to 55°C (-13°F to 131°F); Storage, -30°C to 80°C (-22°F to 176°F) |
| Ambient humidity                     | Operating, 5 to 85% RH; Storage, 5 to 95% RH                                       |
| Connecting method                    | EE-1001/1006 Connectors, soldering terminals                                       |

Notes: 1) Do not make a wrong connection.  
2) Please contact NSK for PNP output type.

| Type          | Movement mode | Time chart | Connection terminal                        | Output circuit |
|---------------|---------------|------------|--|----------------|
| EE-SX674 type | Light-ON      |            | When terminals L and ⊕ are short circuited |                |
|               | Dark-ON       |            | When terminals L and ⊕ are open circuited  |                |

EE-SX674 (Sensor)

EE-1001 (Connector)

A connector is mounted to the sensor in the right figure.

