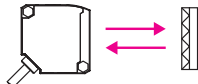
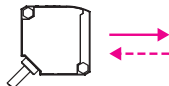


## Sensors

 Red light

## Sensors with Brackets and Reflectors (The model numbers contain ("-C."))

| Power supply voltage          | Sensing method                          | Appearance                                                                        | Sensing distance                                                                                                          | Output configuration | Model          |
|-------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|
| AC/DC power supply selectable | Through-beam *1<br>(Emitter + Receiver) |  |  40m                                     | Relay                | E3JK-TR11-C 2M |
|                               |                                         |                                                                                   |  5m                                      |                      | E3JK-TR12-C 2M |
|                               | Retro-reflective without MSR function   |  |  7m *2<br>[100mm]<br>(When using E39-R1) |                      | E3JK-RR11-C 2M |
|                               |                                         |                                                                                   |  11m<br>[100mm]<br>(When using E39-R2)   |                      |                |
|                               | Retro-reflective with MSR function      |                                                                                   |  6m *2<br>[100mm]<br>(When using E39-R1) |                      | E3JK-RR12-C 2M |
|                               |                                         |                                                                                   |  10m<br>[100mm]<br>(When using E39-R2)   |                      |                |
|                               | Diffuse-reflective                      |  |  2.5m                                    |                      | E3JK-DR11-C 2M |
|                               |                                         |                                                                                   |  300mm                                   |                      | E3JK-DR12-C 2M |

\*1. Through-beam Sensors are sold in sets that include both the Emitter and Receiver.

\*2. Values in parentheses indicate the minimum required distances between the Sensors and Reflectors.

## Accessories (Order Separately)

Reflectors (A Reflector is required for Retro-reflective Sensors.) [Refer to Dimensions on page 14.]

The E39-R1 is enclosed with Sensors with model numbers that contain "-C."

| Name       | Sensing distance (rated value) |                 | Model   | Quantity |
|------------|--------------------------------|-----------------|---------|----------|
| Reflectors | E3JK-R□11                      | 7 m [100 mm] *  | E39-R1  | 1        |
|            | E3JK-R□12                      | 6 m [100 mm] *  |         |          |
|            | E3JK-R□11                      | 9 m [100 mm] *  | E39-R1S | 1        |
|            | E3JK-R□12                      | 7 m [100 mm] *  |         |          |
|            | E3JK-R□11                      | 11 m [100 mm] * | E39-R2  | 1        |
|            | E3JK-R□12                      | 10 m [100 mm] * |         |          |

Note: Refer to Engineering Data on page 9 for details.

\*Values in parentheses indicate the minimum required distances between the Sensors and Reflectors.

## Mounting Bracket [Refer to Dimensions on page 14.]

A Mounting Bracket is enclosed with Sensors with model numbers that contain "-C."

| Appearance                                                                          | Model   | Quantity |
|-------------------------------------------------------------------------------------|---------|----------|
|  | E39-L40 | 1        |

Note: 1. When using a Through-beam Sensor, order one Mounting Bracket for the Receiver and one for the Emitter.

2. For details, refer to Mounting Brackets on E39-L/E39-S/E39-R which can be accessed from your OMRON website.

# E3JK

## Ratings and Specifications

| Sensing method                       |                     | Through-beam                                                                                            |                                                                                                                                                                                           |           |
|--------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Item                                 | Model               | E3JK-TR11-□                                                                                             | E3JK-TN11                                                                                                                                                                                 | E3JK-TP11 |
| Sensing distance                     |                     | 40 m                                                                                                    |                                                                                                                                                                                           |           |
| Standard sensing object              |                     | Opaque: 17-mm dia. min.                                                                                 |                                                                                                                                                                                           |           |
| Differential travel                  |                     | —                                                                                                       |                                                                                                                                                                                           |           |
| Directional angle                    |                     | Both Emitter and Receiver 3° min.                                                                       |                                                                                                                                                                                           |           |
| Light source (wavelength)            |                     | Red LED (624 nm)                                                                                        |                                                                                                                                                                                           |           |
| Power supply voltage                 |                     | 24 to 240 VDC ±10%,<br>ripple (p-p): 10% max.<br>24 to 240 VAC ±10%, 50/60 Hz                           | 10 to 30 VDC, including ripple (p-p): 10%                                                                                                                                                 |           |
| Power consumption                    | DC                  | 3 W max. (Emitter 1.5 W max.<br>Receiver 1.5 W max.)                                                    | 40 mA max. (Emitter 25 mA max. Receiver 15 mA max.)                                                                                                                                       |           |
|                                      | AC                  | 3 W max. (Emitter 1.5 W max.<br>Receiver 1.5 W max.)                                                    | —                                                                                                                                                                                         |           |
| Control output                       |                     | Relay output SPDT, 250 VAC,<br>3 A max. (cosφ= 1), 5 VDC,<br>10 mA min., Light-ON/Dark-ON<br>selectable | Load power supply voltage: 30 V max., Load current: 100 mA max.,<br>Residual voltage: 3 V max., open-collector output (NPN/PNP<br>output depending on model), Light-ON/Dark-ON selectable |           |
| Life expectancy (relay output)       | Mechanical          | 50,000,000 times min. (switching frequency: 18,000 times/h)                                             |                                                                                                                                                                                           |           |
|                                      | Electrical          | 100,000 times min. (switching frequency: 1,800 times/h)                                                 |                                                                                                                                                                                           |           |
| Response time                        |                     | 20 ms max.                                                                                              | 1 ms max.                                                                                                                                                                                 |           |
| Sensitivity adjustment               |                     | One-turn adjuster Receiver (E3JK-T□□□-D) only                                                           |                                                                                                                                                                                           |           |
| Ambient illumination (Receiver side) |                     | Incandescent lamp: 3,000 lx max., Sunlight: 11,000 lx max.                                              |                                                                                                                                                                                           |           |
| Ambient temperature range            |                     | Operating: -25°C to 55°C, Storage: -40°C to 70°C (with no icing or condensation)                        |                                                                                                                                                                                           |           |
| Ambient humidity range               |                     | Operating: 35% to 85%, Storage: 35% to 95% (with no condensation)                                       |                                                                                                                                                                                           |           |
| Insulation resistance                |                     | 20 MΩ min. at 500 VDC                                                                                   |                                                                                                                                                                                           |           |
| Dielectric strength                  |                     | 1,500 VAC, 50/60 Hz for 1 min                                                                           |                                                                                                                                                                                           |           |
| Vibration resistance                 | Destruction         | 10 to 55 Hz with a 1.5 mm double amplitude for 2 hours each in X, Y, and Z directions                   |                                                                                                                                                                                           |           |
|                                      | Malfunction         | 10 to 55 Hz with a 1.5 mm double amplitude for 2 hours each in X, Y, and Z directions                   |                                                                                                                                                                                           |           |
| Shock resistance                     | Destruction         | 500 m/s² for 3 times each in X, Y, and Z directions                                                     |                                                                                                                                                                                           |           |
|                                      | Malfunction         | 100 m/s² for 3 times each in X, Y, and Z directions                                                     | 500 m/s² for 3 times each in X, Y, and Z directions                                                                                                                                       |           |
| Degree of protection                 |                     | IEC 60529 IP64                                                                                          |                                                                                                                                                                                           |           |
| Connection method                    |                     | Pre-wired (standard length: 2 m)                                                                        |                                                                                                                                                                                           |           |
| Weight (packed state)                |                     | Approx. 350 g                                                                                           | Approx. 300 g                                                                                                                                                                             |           |
| Material                             | Case                | ABS (Acrylonitril Butadiene Styrene)                                                                    |                                                                                                                                                                                           |           |
|                                      | Lens/Display window | Methacrylic resin                                                                                       |                                                                                                                                                                                           |           |
|                                      | Adjuster            | POM                                                                                                     |                                                                                                                                                                                           |           |
|                                      | Cable               | PVC                                                                                                     |                                                                                                                                                                                           |           |
| Bending radius of cable              |                     | R18                                                                                                     |                                                                                                                                                                                           |           |
| Accessories                          |                     | Instruction manual and Mounting Bracket (E3JK-TR11-C only)                                              |                                                                                                                                                                                           |           |