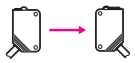
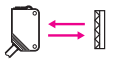
## Oil-resistive Sensors [Refer to *Dimensions on page 14.*]

Red light  Infrared light

| Sensing method | Appearance | Connection method | Sensing distance | Model NPN output | Model PNP output |
|---|---|---|---|---|---|
| Through-beam (Emitter + Receiver) *3 |  | Pre-wired (2 m) | 15 m | **E3Z-T61K 2M *4**<br>Emitter E3Z-T61K-L 2M<br>Receiver E3Z-T61K-D 2M | **E3Z-T81K 2M *4**<br>Emitter E3Z-T81K-L 2M<br>Receiver E3Z-T81K-D 2M |
| | | Pre-wired M8 connector | | **E3Z-T61K-M3J 0.3M**<br>Emitter E3Z-T61K-L-M3J 2M<br>Receiver E3Z-T61K-D-M3J 2M | **E3Z-T81K-M3J 0.3M**<br>Emitter E3Z-T81K-L-M3J 2M<br>Receiver E3Z-T81K-D-M3J 2M |
| Retro-reflective with MSR function |  *1 | Pre-wired (2 m) | *2<br>3 m (150 mm) | **E3Z-R61K 2M *4** | **E3Z-R81K 2M** |
| | | Pre-wired M8 connector | | **E3Z-R61K-M3J 0.3M** | **E3Z-R81K-M3J 0.3M** |
| Diffuse-reflective |  | Pre-wired (2 m) | 5 to 100 mm (wide view) | **E3Z-D61K 2M *4** | **E3Z-D81K 2M** |
| | | Pre-wired M8 connector | | **E3Z-D61K-M3J 0.3M** | **E3Z-D81K-M3J 0.3M** |
| | | Pre-wired (2 m) | 1 m | **E3Z-D62K 2M *4** | **E3Z-D82K 2M** |
| | | Pre-wired M8 connector | | **E3Z-D62K-M3J 0.3M** | **E3Z-D82K-M3J 0.3M** |

*1. The Reflector is sold separately. Select the Reflector model most suited to the application.
*2. The sensing distance specified is possible when the E39-R1S is used. Values in parentheses indicate the minimum required distance between the Sensor and Reflector.
*3. Through-beam Sensors are normally sold in sets that include both the Emitter and Receiver.
*4. M12 Standard Pre-wired Connector Models are also availavble.
When ordering, add "-M1J 0.3M" to the end of the model number (e.g., E3Z-T61-M1J 0.3M).
The cable is 0.3 m long.

## Accessories (Order Separately)

### Slit (A Slit is not provided with Through-beam Sensors) Order a Slit separately if required. [Refer to *Dimensions* on page 16.]

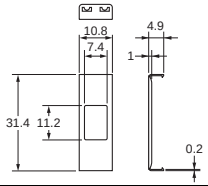
| Slit width | Sensing distance E3Z-T□□ | Sensing distance E3Z-T□□A | Minimum detectable object (Reference value) | Model | Contents |
|---|---|---|---|---|---|
| 0.5-mm dia. | 50 mm | 35 mm | 0.2-mm dia. | **E39-S65A** | One set (contains Slits for both the Emitter and Receiver) |
| 1-mm dia. | 200 mm | 150 mm | 0.4-mm dia. | **E39-S65B** | |
| 2-mm dia. | 800 mm | 550 mm | 0.7-mm dia. | **E39-S65C** | |
| 0.5 10 mm | 1 m | 700 mm | 0.2-mm dia. | **E39-S65D** | |
| 1 10 mm | 2.2 m | 1.5 m | 0.5-mm dia. | **E39-S65E** | |
| 2 10 mm | 5 m | 3.5 m | 0.8-mm dia. | **E39-S65F** | |

### Reflectors (Reflector required for Retroreflective Sensors) A Reflector is not provided with the Sensor. Be sure to order a Reflector separately. [Refer to *Dimensions* on *E39-L/E39-S/E39-R*]

| Name | Sensing distance * E3Z-R Rated value (sensing distance of 15 m) | E3Z-R Reference value (sensing distance of 10 m) | E3Z-R□K Rated value | E3Z-B□1/-B□6 Rated value | E3Z-B□2/-B□7 Rated value | Model | Quantity | Remarks |
|---|---|---|---|---|---|---|---|---|
| Reflector | 3 m (100 mm) | --- | 2 m (100 mm) | --- | --- | **E39-R1** | 1 | Retro-reflective models are not provided with Reflectors. The MSR function is enabled. |
| | 4 m (100 mm) | --- | 3 m (150 mm) | 500 mm (80 mm) | 2 m (500 mm) | **E39-R1S** | 1 | |
| | --- | 5 m (100 mm) | --- | --- | --- | **E39-R2** | 1 | |
| | --- | 2.5 m (100 mm) | --- | --- | --- | **E39-R9** | 1 | |
| | --- | 3.5 m(100 mm) | --- | --- | --- | **E39-R10** | 1 | |
| Fog Preventive Coating | --- | 3 m (100 mm) | --- | 500 mm (80 mm) | 2 m (500 mm) | **E39-R1K** | 1 | |
| Small Reflector | --- | 1.5 m (50 mm) | --- | --- | --- | **E39-R3** | 1 | |
| Tape Reflector | --- | 700 mm (150 mm) | --- | --- | --- | **E39-RS1** | 1 | |
| | --- | 1.1 m (150 mm) | --- | --- | --- | **E39-RS2** | 1 | |
| | --- | 1.4 m (150 mm) | --- | --- | --- | **E39-RS3** | 1 | |

Note: 1. If you use the Reflector at any distance other than the rated distance, make sure that the stability indicator lights properly when you install the Sensor.
2. Refer to *Reflectors* on *E39-L/E39-S/E39-R* for details.
* Values in parentheses indicates the minimum required distance between the Sensor and Reflector.

### Mutual Interference Protection Filter A Filter is not provided with the Sensor (for the through-beam E3Z-T□□A). Order a Filter separately if required.

| Sensing distance | Appearance/Dimensions | Model | Quantity | Remarks |
|---|---|---|---|---|
| 3 m |  | **E39-E11** | Two sets each for the Emitter and Receiver (total of four pieces) | Can be used with the E3Z-T□□A Through-beam models. The arrow indicates the direction of polarized light. Mutual interference can be prevented by altering the direction of polarized light from or to adjacent Emitters and Receivers. |

Note: The polarization directions of the Filters are offset by 90º to prevent interference. When you install the Emitter and Receiver, install them at the same angle to maintain this offset.

## Mounting Brackets

**A Mounting Bracket is not enclosed with the Sensor. Order a Mounting Bracket separately if required.**

**[Refer to *Dimensions* on *E39-L/E39-S/E39-R*]**

| Appearance | Model (material) | Quantity | Remarks | Appearance | Model (material) | Quantity | Remarks |
|---|---|---|---|---|---|---|---|
|  | **E39-L153 (SUS304)** *1 | 1 | Mounting Brackets |  | **E39-L98 (SUS304)** *2 | 1 | Metal Protective Cover Bracket |
|  | **E39-L104 (SUS304)** *1 | 1 | |  | **E39-L150 (SUS304)** | 1 | (Sensor adjuster) |
|  | **E39-L43 (SUS304)** *2 | 1 | Horizontal Mounting Brackets |  | **E39-L151 (SUS304)** | 1 | Easily mounted to the aluminum frame rails of conveyors and easily adjusted.<br>For left to right adjust-ment |
|  | **E39-L142 (SUS304)** *2 | 1 | Horizontal Protective Cover Bracket | | | | |
|  | **E39-L44 (SUS304)** | 1 | Rear Mounting Bracket |  | **E39-L144 (SUS304)** *2 | 1 | Compact Protective Cover Bracket (For E3Z only) |

Note: 1. When using Through-beam models, order one bracket for the Receiver and one for the Emitter.
2. Refer to *Mounting Brackets* on *E39-L/E39-S/E39-R* for details.

*1. Cannot be used for Standard Connector models with mounting surface on the bottom. In that case, use Pre-wired Connector models.
*2. Cannot be used for Standard Connector models.

## Sensor I/O Connectors (Sockets on One Cable End)

**(Models for Connectors and Pre-wired Connectors: A Connector is not provided with the Sensor. Be sure to order a Connector separately.)**

**[Refer to *Dimensions* for *XS3*.]**

| Size | Cable | Appearance | Cable type | | Model |
|---|---|---|---|---|---|
| M8 *1 | Standard | Straight *3  | 2 m | 4-wire | **XS3F-M421-402-A** |
| | | | 5 m | | **XS3F-M421-405-A** |
| | | L-shaped *3 *4  | 2 m | | **XS3F-M422-402-A** |
| | | | 5 m | | **XS3F-M422-405-A** |
| M8 | PUR (Polyure-thane) cable *2 | Straight *3  | 2 m | 4-wire | **XS3F-M421-402-L** |
| | | | 5 m | | **XS3F-M421-405-L** |
| | | L-shaped *3 *4  | 2 m | | **XS3F-M422-402-L** |
| | | | 5 m | | **XS3F-M422-405-L** |

Note: When using Through-beam models, order one connector for the Receiver and one for the Emitter.

*1. Refer to *Introduction to Sensor I/O Connectors* for details.
*2. The Sensor can be used in low-temperature environments (–25°C to –40°C). Do not use the Sensor in locations that are subject to oil.
*3. The connector will not rotate after connecting.
*4. The cable is fixed at an angle of 180° from the sensor emitter/receiver surface.