

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

Red light Infrared light

Sensing method	Appearance	Connection method	Sensing distance	Model	
				NPN output	PNP output
Through-beam (Emitter + Receiver) *3		Pre-wired (2 m)		E3Z-T61K 2M *4 Emitter E3Z-T61K-L 2M Receiver E3Z-T61K-D 2M	E3Z-T81K 2M *4 Emitter E3Z-T81K-L 2M Receiver E3Z-T81K-D 2M
		Pre-wired M8 connector		E3Z-T61K-M3J 0.3M Emitter E3Z-T61K-L-M3J 2M Receiver E3Z-T61K-D-M3J 2M	E3Z-T81K-M3J 0.3M Emitter E3Z-T81K-L-M3J 2M Receiver E3Z-T81K-D-M3J 2M
Retro-reflective with MSR function		Pre-wired (2 m)		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)		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)		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 available.

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. The applicable Sensor I/O Connector is the XS2 Series. For details, refer to the XS2 information available on the OMRON website.

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		Minimum detectable object (Reference value)	Model	Contents
	E3Z-T□□	E3Z-T□□A			
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 *					Model	Quantity	Remarks
	E3Z-R		E3Z-R□K	E3Z-B□1/-B□6	E3Z-B□2/-B□7			
	Rated value (sensing distance of 15 m)	Reference value (sensing distance of 10 m)	Rated value	Rated value	Rated value			
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. For details, refer to Reflectors on the E39-L/E39-S/E39-R information available on the OMRON website.

* 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 90° 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.
	E39-L142 (SUS304) *2	1	Horizontal Protective Cover Bracket				For left to right adjustment
	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. For details, refer to *Mounting Brackets* on the *E39-L/E39-S/E39-R* information available on the OMRON website.

*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	Standard	Straight *2 	2 m	XS3F-M421-402-A
			5 m	XS3F-M421-405-A
		L-shaped *2 *3 	2 m	XS3F-M422-402-A
			5 m	XS3F-M422-405-A
	PUR (Polyurethane) cable *1	Straight *2 	2 m	XS3F-M421-402-L
			5 m	XS3F-M421-405-L
		L-shaped *2 *3 	2 m	XS3F-M422-402-L
			5 m	XS3F-M422-405-L
	Vibration-proof robot cable	Straight *2 	2 m	XS3F-M421-402-R
			5 m	XS3F-M421-405-R
		L-shaped *2 *3 	2 m	XS3F-M422-402-R
			5 m	XS3F-M422-405-R

Note: 1. When using Through-beam models, order one connector for the Receiver and one for the Emitter.

2. For details, refer to the *XS3* information available on the OMRON website.

*1. 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.

*2. The connector will not rotate after connecting.

*3. The cable is fixed at an angle of 180° from the sensor emitter/receiver surface.