

Mounting Brackets

Shape	Model	Quantity	Remarks	Appearance	Model	Quantity	Remarks
	E39-L153	1	Mounting Brackets		E39-L98	1	Metal Protective Cover Bracket *1
	E39-L104	1			E39-L150	One set	(Sensor adjuster)
	E39-L43	1	Horizontal Mounting Bracket *1		E39-L151	One set	Easily mounted to the aluminum frame rails of conveyors and easily adjusted. For left to right adjustment
	E39-L142	1	Horizontal Protective Cover Bracket *1				
	E39-L44	1	Rear Mounting Bracket		E39-L144	1	Compact Protective Cover Bracket *1

*1. Cannot be used for Standard Connector models.

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

Sensor I/O Connectors

General Purpose

Size	Cable	Appearance	Cable type		Model
M8 (4 pins)	Standard	Straight 	2 m	4-wire type	XS3F-M421-402-A
			5 m		XS3F-M421-405-A
		L-shaped 	2 m		XS3F-M422-402-A
			5 m		XS3F-M422-405-A
M12 (For -M1J models)		Straight 	2 m	3-wire type	XS2F-D421-DC0-A
			5 m		XS2F-D421-GC0-A
		L-shaped 	2 m		XS2F-D422-DC0-A
			5 m		XS2F-D422-GC0-A
		Straight 	2 m	4-wire type	XS2F-D421-D80-A
			5 m		XS2F-D421-G80-A
		L-shaped 	2 m		XS2F-D422-D80-A
			5 m		XS2F-D422-G80-A

Note: Depending on the connector specification, the IP67 performance applies. When using high-pressure washing, use a suitable connector.

Detergent resistant sensor I/O connectors

Please contact your OMRON representative for sensor connectors with stainless steel nuts.

Rating and Specifications

Sensor method		Through-beam		Retroreflective model (with M.S.R. function)	Diffuse-reflective Models	
Item	Model	NPN output	E3ZM-T61 E3ZM-T66	E3ZM-T63 E3ZM-T68	E3ZM-R61 E3ZM-R66	E3ZM-D62 E3ZM-D67
		PNP output	E3ZM-T81 E3ZM-T86	E3ZM-T83 E3ZM-T88	E3ZM-R81 E3ZM-R86	E3ZM-D82 E3ZM-D87
Sensing distance		15 m	0.8 m	4 m [100 mm] (Using E39-R1S) 3 m [100 mm] (Using E39-R1)	1 m (White paper 300 x 300 mm)	
Spot Diameter (typical)		---				
Standard sensing object		Opaque: 12 mm dia. min.	Opaque: 2 mm dia. min.	Opaque: 75 mm dia. min.	---	
Differential travel		---			20% max. of sensing distance max.	
Black/white error		---				
Directional angle		Emitter and Receiver: 3° to 15°		Sensor: 3° to 10° Reflector: 30°	---	
Light source (wave length)		Infrared LED (870 nm)		Red LED (660 nm)	Infrared LED (860 nm)	
Power supply voltage		10 to 30 VDC, including 10% ripple (p-p)				
Current consumption		Emitter, Receiver: 20 mA max. each		25 mA max.		
Control output		Load power supply voltage: 30 VDC max., Load current: 100 mA max. (Residual voltage: 2 V max.) Open-collector output (NPN/PNP output depending on model) Light-ON/Dark-ON switch selectable				
Protection circuits		Reversed power supply polarity protection, Output short-circuit protection, and Reversed output polarity protection		Reversed power supply polarity protection, Output short-circuit protection, Mutual interference prevention, and Reversed output polarity protection		
Response time		Operate or reset: 1 ms max.				
Sensitivity adjustment		One-turn adjuster				
Ambient illumination (Receiver side)		Incandescent lamp: 3,000 lx max. Sunlight 10,000 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		1,000 VAC at 50/60 Hz for 1 min				
Vibration resistance		Destruction: 10 to 55 Hz, 1.5 mm double amplitude for 2 hours each in X, Y, and Z directions				
Shock resistance		Destruction: 500 m/s ² 3 times each in X, Y, and Z directions				
Degree of protection *1		IEC: IP67, DIN 40050-9: IP69K				
Connection method		Pre-wired cable (standard length: 2 m) Standard M8 4-pin Connector				
Indicator		Operation indicator (yellow), Stability indicator (green) (Emitter has only power supply indicator (green).)				
Weight (packed state)	Pre-wired cable	Approx. 150 g		Approx. 90 g		
	Standard Connector	Approx. 60 g		Approx. 40 g		
Materials	Case	SUS316L				
	Lens	Methacrylic resin				
	Display	PES (polyether sulfone)				
	Sensitivity adjustment and operation switch	PEEK (polyether ether ketone)				
	Seals	Fluoro rubber				
Accessories		Instruction sheet (Note: Reflectors and Mounting Brackets are sold separately.)				

*1. IP69K Degree of Protection Specification IP69K is a protection standard against high temperature and high-pressure water defined in the German standard DIN 40050, Part 9. The test piece is sprayed with water at 80°C at a water pressure of 80 to 100 BAR using a specified nozzle shape. The distance between the test piece and nozzle is 10 to 15 cm, and water is sprayed horizontally for 30 seconds each at 0°, 30°, 60°, and 90° while rotating the test object on a horizontal plane.

