








## Mounting Brackets [Refer to *Dimensions* on page 10.]

A Mounting Bracket is not enclosed with the Sensor. Order separately as needed.

Appearance	Model (material)	Applicable Sensor E3AS series			
		Pre-wired	M8 Pre-wired Connector	M12 Pre-wired Smartclick Connector	M8 Connector
<b>L-shaped Mounting Bracket</b> 	E39-L201 (SUS304)	Yes	Yes	Yes	---
<b>Horizontal Protective Cover Bracket</b> 	E39-L202 (SUS304)	Yes	Yes	Yes	---
<b>Rear Mounting Bracket</b> 	E39-L203 (SUS304)	Yes	Yes	Yes	Yes <sup>2</sup>
<b>Robust Mounting Bracket</b> 	E39-L204 (SUS304)	Yes	Yes	Yes	---
<b>L-shaped Mounting Bracket</b> 	E39-L211 (SUS304)	--- <sup>1</sup>	--- <sup>1</sup>	--- <sup>1</sup>	Yes <sup>3</sup>
<b>Horizontal Protective Cover Bracket</b> 	E39-L212 (SUS304)	--- <sup>1</sup>	--- <sup>1</sup>	--- <sup>1</sup>	Yes <sup>3</sup>
<b>Robust Mounting Bracket</b> 	E39-L214 (SUS304)	--- <sup>1</sup>	--- <sup>1</sup>	--- <sup>1</sup>	Yes <sup>3</sup>

1. Can be used for Pre-wired models, M8 Pre-wired Connector models, and M12 Pre-wired Smartclick Connector models. However, confirm the bracket shape in advance.
2. Confirm the installation environment and bracket shape of the Sensor I/O Connector to be connected.
3. Use an L-shaped Sensor I/O Connector. Straight types cannot be installed.

# E3AS-L Series

## Ratings and Specifications

Item	Model	Sensing method	Distance-settable	
		NPN output	E3AS-L200MN	E3AS-L80MN
		PNP output/ COM2	E3AS-L200MD	E3AS-L80MD
		PNP output/ COM3	E3AS-L200MT	E3AS-L80MT
Sensing distance		10 mm to the set distance (White paper or black paper 100 × 100 mm)		
Setting range		40 to 200 mm (White paper or black paper 100 × 100 mm)		20 to 80 mm (White paper or black paper 100 × 100 mm)
Spot diameter (reference value)		25 × 25 mm at distance of 200 mm		4 mm dia. (at distance of 80 mm)
Differential travel		10% max. of set distance		White paper: 2% max. of set distance Black paper: 5% max. of set distance
Reflectivity characteristic (black/white error)		10% max. of set distance		5% max. of set distance
Light source (wavelength)		Red LED (624 nm)		Red LED (650 nm)
Power supply voltage		10 to 30 VDC (including 10% ripple (p-p)), Class2		
Current consumption		35 mA max.		
Input/output	Control output		Load power supply voltage: 30 VDC max., Class2. Load current: 100 mA max. (Residual voltage: Load current of less than 10 mA: 1 V max. Load current of 10 to 100 mA: 2 V max.) Open-collector output (NPN/PNP output depending on model)	
	NPN	OUTPUT 1: NO (Normally open), OUTPUT 2: NC (Normally closed)		
	PNP/COM2 PNP/COM3	OUTPUT 1: NO (Normally open)/COM□, OUTPUT 2: NC (Normally closed)		
Protection circuits		Power supply reverse polarity protection, Output short-circuit protection, and Output reverse polarity protection		
Response time		Operate or reset: 1 ms max.		
Distance setting		Teaching method/IO-Link communications		
Ambient illumination (Receiver side)		Incandescent lamp: 3,000 lx max., Sunlight: 10,000 lx max.		
Ambient temperature range		Operating: -25 to 55°C, Storage: -40 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, 50/60 Hz for 1 min		
Vibration resistance		10 to 55 Hz with a 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions		
Shock resistance		500 m/s <sup>2</sup> for 3 times each in X, Y, and Z directions		
Degree of protection		IP67 (IEC60529) and IP67G <sup>1</sup> (JIS C 0920 Annex 1), IP69K (ISO20653)		
Indicators		Operation indicator (orange), Stability & Communication indicator (green <sup>2</sup> )		
Connection method		Pre-wired (standard cable length: 2 m), M8 Connector, M8 Pre-wired Connector (standard cable length: 0.3m), M12 Pre-wired Smartclick Connector (standard cable length: 0.3m)		
Weight (packed state/ Sensor only)	Pre-wired (2 m)		Approx. 135 g/approx. 90 g	
	M8 Connector		Approx. 75 g/approx. 30 g	
	M8 Pre-wired Connector (0.3 m)		Approx. 85 g/approx. 40 g	
	M12 Pre-wired Smartclick Connector (0.3m)		Approx. 95 g/approx. 50 g	
Materials	Case		Stainless steel (SUS316L)	
	Lens		Methacrylate resin (PMMA)	
	Display		Polyamide 11 (PA11)	
Main IO-Link functions		Operation mode switching between NO and NC, execution of teaching (2-point teaching, Background teaching), setup of the threshold, timer function of the control output and timer time selecting, Restore Factory Settings, Key Lock (Unlock, Lock, Lock (No Button))		
IO-Link Communication specifications	IO-Link specification		Ver. 1.1	
	Baud rate		COM2 (38.4 kbps), COM3 (230.4 kbps)	
	Data length		PD size: 1 byte, OD size: 1 byte (M-sequence type: TYPE_2_1)	
	Minimum cycle time		COM2: 3.5 ms, COM3: 1.2 ms	
Accessories		Instruction manual, compliance sheet and index list (attached for IO-Link type only), Note: Mounting Brackets must be ordered separately.		

- The IP67G is the degree of protection which is defined according to the JIS (Japanese Industrial Standards). The IP67 indicates the same level of protection as defined by the IEC, and the G indicates that a device has resistance to oil.
- IO-Link Communication mode: blinking