Mounting Brackets [Refer to *Dimensions* on page 12.]

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

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

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-F Series

Ratings and Specifications

Item				
Model	Sensing method	TOF (Time of flight)		
	Type	Metal case (□: M), Plastic case (□: P)		
	NPN output	E3AS-F1500I□N	E3AS-F1000I□N	
	PNP output/ COM2	E3AS-F1500I□D	E3AS-F1000I□D	
	PNP output/ COM3	E3AS-F1500I□T	E3AS-F1000I□T	
Sensing distance		50 mm to the set distance (White paper or black paper 200 × 200 mm)	50 mm to the set distance (White paper or black paper 200 × 200 mm)	
Setting range		100 to 1,500 mm (White paper 200 × 200 mm) 100 to 1,000 mm (Black paper 200 × 200 mm)	100 to 1,000 mm (White paper 200 × 200 mm) 100 to 500 mm (Black paper 200 × 200 mm)	
Spot diameter (reference value)		95 mm dia. (at distance of 1,000 mm)		
Differential travel		15% max. of set distance (Set distance 200 mm min.)		
Reflectivity characteristic (black/white error)		10% max. of set distance (Set distance 200 mm min.)		
Light source (wavelength)		Infrared laser (940 nm) Class1 (IEC/EN60825-1:2014)		
Power supply voltage		10 to 30 VDC (including 10% ripple (p-p)), Class2		
Current consumption		30 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: 150 ms max.	Operate or reset: 90 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: -20 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^2 for 3 times each in X, Y, and Z directions		
Degree of protection		IP67 (IEC60529) and IP67G[1] (JIS C 0920 Annex 1), IP69K (ISO20653)		
Indicators		Operation indicator (orange), stability/communication indicator (green [2])		
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)	Metal case type: Approx. 135 g/approx. 90 g Plastic case type: Approx. 115 g/approx. 70 g		
	M8 Connector	Metal case type: Approx. 75 g/approx. 30 g Plastic case type: Approx. 60 g/approx. 15 g		
	M8 Pre-wired Connector (0.3m)	Metal case type: Approx. 85 g/approx. 40 g Plastic case type: Approx. 70 g/approx. 25 g		
	M12 Pre-wired Smartclick Connector (0.3m)	Metal case type: Approx. 95 g/approx. 50 g Plastic case type: Approx. 75 g/approx. 30 g		
Materials	Case	Metal case type: Main unit/mounting part/connector part Stainless steel (SUS316L) Plastic case type: Main unit Polybutylene terephthalate (PBT) /polycarbonate (PC), Mounting part/connector part Nickel-plated brass		
	Lens	Methacrylate resin (PMMA)		
	Display	Metal case type: Polyamide 11 (PA11) Plastic case type: Polyethersulfone (PES)		
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, monitor output (Detection level, Incident light level), 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: 4 bytes, OD size: 1 byte (M-sequence type: TYPE_2_V)		
	Minimum cycle time	COM2: 3.5 ms, COM3: 1.2 ms		
Accessories		Instruction manual, compliance sheet, index list (attached for IO-Link type only) and FDA certification label Note: Mounting Brackets must be ordered separately.		

1. 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.
2. IO-Link mode: blinking