# OMRON

# Distance-settable Photoelectric Sensors E3AS-HL Series

# E3AS-HL Series CMOS Photoelectric Sensor for precise part detection

- CMOS photoelectric sensor for advanced part detection capabilities
- Spot beam and line beam options for small part or uneven surfaces
- 500mm and 150mm sensing options fit for most sensing applications
- Antifouling coating prevents contamination on the sensing surface
- Ecolab certified in addition to IP67/69K/67G protection
- All models with IO-Link connectivity allowing users to collect and use measurement values (NPN type excluded)





For the most recent information on models that have been certified for safety standards, refer to your Omron website.

Refer to Safety Precautions on page 13.

Red light

# **Ordering Information**

# E3AS-HL models [Refer to Dimensions on page 15]

### Line beam type

			I	Model
Connection method	Sensing distance (white paper)	Output	NPN output	PNP output
	(mino papor)	IO-Link baud rate		COM3 (230.4 kbps) <sup>3</sup>
Pre-wired (2 m) <sup>1</sup>	35 mm	500 mm	E3AS-HL500LMN 2M	E3AS-HL500LMT 2M
M8 Connector			E3AS-HL500LMN M3	E3AS-HL500LMT M3
M12 Pre-wired Smartclick Connector (0.3m) <sup>2</sup>	ا الاسل	1	E3AS-HL500LMN-M1TJ 0.3M	E3AS-HL500LMT-M1TJ 0.3M
Pre-wired (2 m) <sup>1</sup>	35 mm 150 mm		E3AS-HL150LMN 2M	E3AS-HL150LMT 2M
M8 Connector			E3AS-HL150LMN M3	E3AS-HL150LMT M3
M12 Pre-wired Smartclick Connector (0.3m) <sup>2</sup>			E3AS-HL150LMN-M1TJ 0.3M	E3AS-HL150LMT-M1TJ 0.3M

#### Spot type

				Model
Connection method	Sensing distance (white paper)	Output	NPN output	PNP output
	(millo puper)	IO-Link baud rate		COM3 (230.4 kbps) <sup>3</sup>
Pre-wired (2 m) <sup>1</sup>	35 mm	500 mm	E3AS-HL500MN 2M	E3AS-HL500MT 2M
M8 Connector	<b></b>		E3AS-HL500MN M3	E3AS-HL500MT M3
M12 Pre-wired Smartclick Connector (0.3m) <sup>2</sup>	ا لا مر		E3AS-HL500MN-M1TJ 0.3M	E3AS-HL500MT-M1TJ 0.3M
Pre-wired (2 m) <sup>1</sup>	35 mm 150 mm		E3AS-HL150MN 2M	E3AS-HL150MT 2M
M8 Connector			E3AS-HL150MN M3	E3AS-HL150MT M3
M12 Pre-wired Smartclick Connector (0.3m) <sup>2</sup>			E3AS-HL150MN-M1TJ 0.3M	E3AS-HL150MT-M1TJ 0.3M

Note: 1. Models with 5-m cable length are also available with "5M" suffix. (Example: E3AS-HL500MN 5M/E3AS-HL500LMN 5M)
2. M8 Pre-wired Connector Models are also available. When ordering, add "-M3J 0.3M" to the end of the model number (e.g., E3AS-HL500MN-M3J 0.3M/E3AS-HL500LMN-M3J 0.3M).
3. COM2 (38.4kbps) Models are also available.

# Accessories (Sold Separately)

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

(Models for Connectors / Pre-wired Connectors)

A Sensor I/O Connector is not provided with the Sensor. It must be ordered separately as required.

Round Water-resistant Connectors XS3F-M8 series

Appearance	Cable specification	Cable diameter (mm)	Cable connection direction	Cable length (m)	Sensor I/O Connector model number	
M8 Connector Straight type	PVC cable			Straight	2	XS3F-M8PVC4S2M
and the second s		5 dia.	Straight	5	XS3F-M8PVC4S5M	
Right-angle type			J ula.	Right-angle	2	XS3F-M8PVC4A2M
			Tright-angle	5	XS3F-M8PVC4A5M	

Note: 1. The XS3W (Socket and Plug on Cable Ends) is also available. Refer to XS3 Series Datasheet (Cat. No. G147).

2. The connectors will not rotate after they are connected.

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

#### **Round Water-resistant Connectors XS2 series**

Appearance	Cable specification	Cable diameter (mm)	Cable connection direction	Cable length (m)	Sensor I/O Connector model number
M12 Connector Straight type		6 dia.	Straight	2	XS2F-M12PVC4S2M
a to w	PVC robot cable		Straight	5	XS2F-M12PVC4S5M
Right-angle type	PVC robot cable		Dight angle	2	XS2F-M12PVC4A2M
			Right-angle	5	XS2F-M12PVC4A5M

Note: 1. The XS2W (Socket and Plug on Cable Ends) is also available. Refer to XS2 on your OMRON website for details.

- 2. The connectors will not rotate after they are connected.
- 3. The cable is fixed at an angle of 180° from the sensor emitter/receiver surface.

### **Mounting Brackets**

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

Model M12 Pre-wired Pre-wired M8 Connector Appearance (material) Smartclick Connector L-shaped Mounting Bracket E39-L221 Yes Yes ---(SUS304) **Horizontal Protective Cover Bracket** E39-L222 Yes Yes (SUS304) Rear Mounting Bracket E39-L223 Yes Yes Yes<sup>2</sup> (SUS304) Robust Mounting Bracket E39-L224 Yes Yes (SUS304) L-shaped **Mounting Bracket** E39-L231 \_\_\_\_ 1 \_\_\_\_ 1 Yes<sup>3</sup> (SUS304) Horizontal Protective **Cover Bracket** E39-L232 \_\_\_\_ 1 \_\_\_\_ 1 Yes<sup>3</sup> (SUS304) Robust Mounting Bracket E39-L234 Yes<sup>3</sup> \_\_\_\_ 1 \_\_\_\_ 1 (SUS304) **Front Protection** Cover E39-E19<sup>4</sup> Yes Yes Yes 13

For E3AS-HL series [Refer to Dimensions on page 16]

Note: 1. Can be used for Pre-wired 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.

4. Front Protection Cover is Accessory for E3AS-HL. E3AS-F model and E3AS-L model cannot be installed.

### E3AS-HL series [Refer to Dimensions on page 19] A Mounting Bracket is not enclosed with the Sensor. Order a Mounting Bracket separately if required.

Appearance	Model (material)	Pre-wired	M12 Pre-wired Smartclick Connector	M8 Connector
Flexible Mounting Bracket	E39-L261 <sup>1</sup> (SUS304)	Yes	Yes	Yes
Post 50 mm	E39-L262	Yes	Yes	Yes
Post 100 mm	E39-L263	Yes	Yes	Yes
Air Blow Unit	E39-E16 <sup>2</sup>	Yes	Yes	Yes

Note: 1. The Flexible Mounting Bracket is not provided with a Post (E39-L262/E39-L263). It must be ordered separately. 2. The tube for air is not included.

# **Ratings and Specifications**

### E3AS-HL models

	Sen	sing method	Triangulation						
N	lodel	NPN Output	E3AS-HL500MN	E3AS-HL500LMN	E3AS-HL150MN	E3AS-HL150LMN			
Item	PNP C	Output/COM3	E3AS-HL500MT	E3AS-HL500LMT	E3AS-HL150MT	E3AS-HL150LMT			
Sensing dist	tance <sup>1</sup>		35 mm to the set distance		35 mm to the set distance				
Setting rang	je <sup>1</sup>		35 to 500 mm		35 to 150 mm				
Standard de	tectable differ	rence <sup>1</sup>	35 to 180 mm: 9 mm 180 to 300 mm: 18 mm 300 to 400 mm: 30 mm 400 to 500 mm: 45 mm at 10 m sec		35 to 50 mm: 1 mm 50 to 100 mm: 2 mm 100 to 150 mm: 4 mm at 10 m sec				
Display mini	imum unit valı	ue	1 mm		0.1 mm				
Spot size (re	eference value	) <sup>2</sup>	2.5 mm × 1.5 mm at distance of 500 mm	18 mm × 1.5 mm at distance of 500 mm	2.5 mm × 1.3 mm at distance of 150 mm	8 mm × 1.3 mm at distance of 150 mm			
Light source	e (wavelength)	)	Red laser (660 nm), Class1 (IEC/EN60825-1:2014)						
Power suppl	ly voltage		10 to 30 VDC (including 10% ripple (p-p)), Class2						
Current con	sumption		100 mA max.						
Control output		ut	Load power supply voltage 30 VDC max. (Class2), the total load current of the two outputs is 100 mA max. Residual voltage (Load current 10 mA max.: 1 VDC max., Load current 10 to 100 mA: 2 VDC max.) Open-collector output (NPN/PNP output depending on model) N.O. (Normally Open) / N.C. (Normally Close) selectable						
Input/	NPN		OUTPUT 1: NO (Normally open), OUTPUT 2: NC (Normally closed)						
output	PNP/C	OM3	OUTPUT 1: NO (Normally op	en)/COM□, OUTPUT 2: NC (I	Normally closed)				
-	External inpu	t	Laser OFF / Teaching / Zero reset selectable NPN ON time: 0 V short-circuit or 1.5 V or less, OFF time: Power supply voltage short-circuit or oper PNP ON time: Power supply voltage short-circuit or within power supply voltage - 1.5 V. OFF time: 0 V						
Response ti	me		1.5 ms / 10 ms / 50 ms select	table					
Threshold setting method Teaching m			Feaching method / Manual Operations / IO-Link communications						
Mutual inter	ference preve	A units max. (when using the mutual interference prevention function)							
Ambient illu	mination		at distance of 250 mm	: max., Sunlight: 25,000 lx max. nax., Sunlight: 10,000 lx max.	Receiver surface illuminan Incandescent lamp: 8,000	ce: lx max., Sunlight: 16,000 lx ma:			

Note: 1. Measured with OMRON's standard workpiece (White ceramic).

Defined by D46 method at the maximum sensing distance. Detection may be influenced if there is light leakage outside the defined region and the surroundings of the target object have a high reflectance in comparison to the target object. Also, when detecting a workpiece that is smaller than the spot size, a correct value may not be obtained.

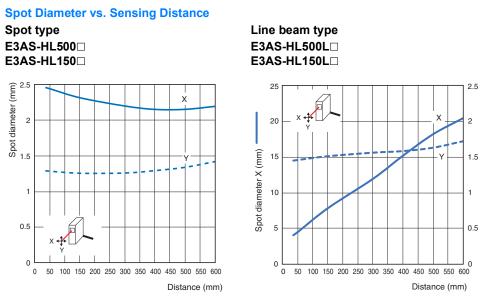
### E3AS-HL models

Series		E3AS-HL		
Protection circuits		Power supply reverse polarity protection, Output short-circuit protection, and Output reverse polarity protection		
Ambient temperature range		Operating: -10 to 50°C, Storage: -25 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		OLED Display (White), Power/Communication indicator (Green*), Operation indicator (Orange) * IO-Link Communication mode: blinking		
Connection method		Pre-wired (standard cable length: 2 m), M8 Connector, M12 Pre-wired Smartclick Connector (standard cable length: 0.3m)		
Weight	Pre-wired (2 m)	Approx. 180 g/approx. 110 g		
(packed state/	M8 Connector	Approx. 120 g/approx. 50 g		
Sensor only)	M12 Pre-wired Smartclick Connector (0.3m)	Approx. 150 g/approx. 80 g		
	Case	Stainless steel (SUS316L)		
Materials	Lens cover and Display	Methacrylic resin (PMMA) (Lens cover: Antifouling coating)		
	Indicator	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)), monitor output* (Detection level, Incident light level) * Only for E3AS-HL and E3AS-F		
	IO-Link specification	Ver. 1.1		
IO-Link Communication	Baud rate	COM3 (230.4 kbps)		
specifications	Data length	PD size: 4 bytes, OD size: 1 byte (M-sequence type: TYPE_2_V)		
	Minimum cycle time	COM3: 1.2 ms		
Accessories		Instruction manual, compliance sheet, index list (attached for IO-Link type only) E3AS-HL: FDA certification label and Warning label E3AS-F: FDA certification label Note: Mounting Brackets must be ordered separately.		

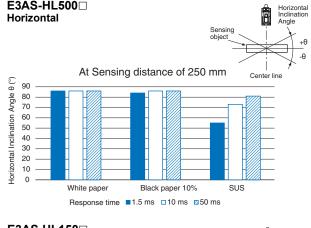
Note: The IP67G is the degree of protection which is defined according to the JIS (Japanese Industrial Standards). The IP67 indicates the same level of protection as defined by the IEC, and the G indicates that a device has resistance to oil.

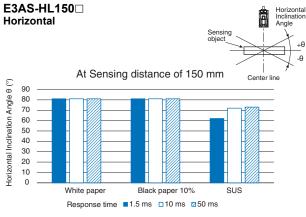
# **Engineering Data (Reference Value)**

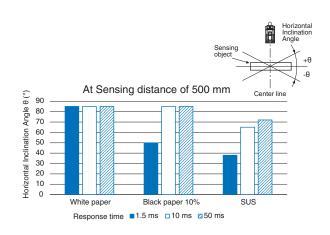
# E3AS-HL models



#### Sensing Object Angle Characteristics Spot type/Line beam type E3AS-HL500□



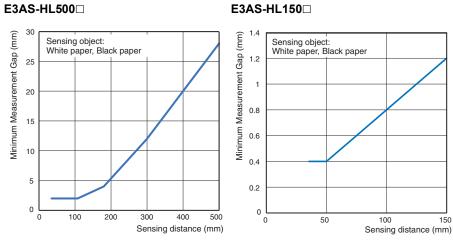




Spot diameter Y (mm)

### Minimum Measurement Gap Vs. Distance

# Spot type/Line beam type



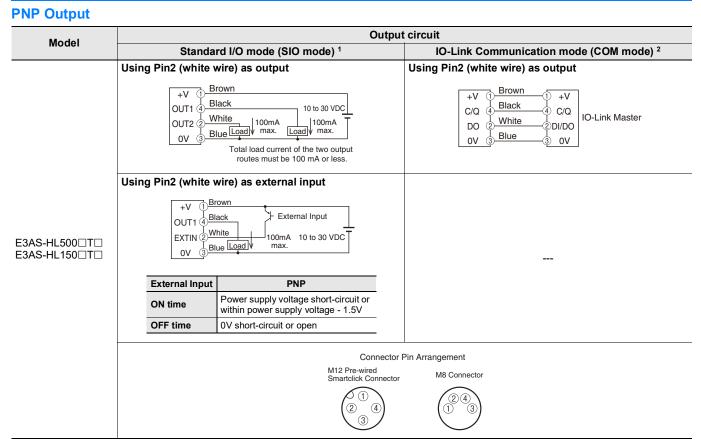
# I/O Circuit Diagrams/ Timing Charts

# E3AS-HL models

# **NPN Output**

Model	Timing chart					C	Dutput circuit
	Single Point Mode [Single	e]			Usi	ing Pin2 (white	wire) as output
	Ś			distance range shold		+V 1 Brown OUT14 OUT22 White OV 3 Blue	10 to 30 VDC
	Power/Communication indicator (green)	ON OFF ON					Total load current of the two output routes must be 100 mA or less.
	Operation indicator (orange)	OFF			Usi	ing Pin2 (white	wire) as external input
	Control output 1	ON OFF				+V DBrown	•
	Control output 2 *	ON OFF				OUT1 4 Black	Load 100mA max. 10 to 30 VDC
	Window BGS mode [Wind	dow BGS]				OV 3 Blue	+ External Input
	f	F	lated sensing	distance range			
		0	Near-side threshold	Far-side threshold		External Input ON time	NPN 0V short-circuit or 1.5V or less
						OFF time	Power supply voltage
E3AS-HL500⊡N⊡ E3AS-HL150⊡N⊡	Power/Communication indicator (green) Operation indicator (orange) Control output 1 Control output 2 *	ON OFF ON OFF ON OFF OFF					
	Window FGS mode [Wind	dow FGS]					
			Rated sensing Near-side threshold	g distance range Far-side threshold			
	Power/Communication indicator (green)	ON OFF					
	Operation indicator (orange)	ON OFF					
	Control output 1						
	Control output 2 *	OFF ON OFF					

Note: The initial value of control output 2 is reverse of control output 1.



**Note: 1.** Standard I/O mode is used as PNP ON/OFF output.

2. IO-Link Communication mode is used for communications with the IO-Link Master. C/Q performs IO-Link communications. Sensor output DO performs ON/OFF output.

#### Single Point Mode [Single]

	Timing	g charts	<b>Note: 1.</b> The initial	l value of control o	output 2 is reverse
Output mode		Rated sensing distance range	set up by able to se	function of the con the IO-Link comm elect ON delay, OF tion and select a ti	F delay, or one-
	Power/Communication ON		ON delay	OFF delay	One Shot
Standard I/O mode (SIO mode)	indicator (green) OFF Operation indicator (orange) OF Control output 1 <sup>2</sup> ON Control output 2 <sup>1</sup> , <sup>2</sup> ON OFF		Please contact you	Sensing Present object No OFF 0 NC OFF 0 r OMRON sales re	Sensing Present object Not NO ON 1 NO ON 1 NO OFF 0
IO-Link Communication mode (COM mode)	Power/Communication Flashing indicator (green) (1 second cycle) Operation indicator (orange) ON OFF Communication output 1 0		regarding the IÓ-Li		
(COM mode)	. 0				

#### Window BGS mode [Window BGS]

	Timing charts	
Output mode	Rated sensing distance range Near-side Far-side threshold threshold	- No
Standard I/O mode (SIO mode)	Power/Communication indicator (green)     ON OFF       Operation indicator (orange)     OFF       Control output 1 <sup>2</sup> ON OFF       Control output 2 <sup>1</sup> , <sup>2</sup> ON OFF	s
IO-Link Communication mode (COM mode)	Power/Communication indicator (green)     Flashing (1 second cycle)       Operation indicator (orange)     ON OFF       Communication output     1       Control output 2 1, 2     ON OFF	_ reg

- **te: 1.** The initial value of control output 2 is reverse of control output 1.
  - 2. The timer function of the control output can be set up by the IO-Link communications. (It is able to select ON delay, OFF delay, or oneshot function and select a timer time of 1 to 9,999 ms (T).)

ON delay	OFF delay	One Shot
Sensing Present object Not present	Sensing Present object Not present	Sensing Present object Not present
NO OFF 0	NO OFF 0	NO OFF 0
NC OFF 0	NC OFF 0	NC OFF 0

Please contact your OMRON sales representative egarding the IO-Link setup file (IODD file).

### Window FGS mode [Window FGS]

	Timing charts
Output mode	Rated sensing distance range Near-side Far-side threshold threshold
Standard I/O mode (SIO mode)	Power/Communication indicator (green)     ON OFF       Operation indicator (orange)     ON OFF       Control output 1 <sup>2</sup> ON OFF       Control output 2 <sup>1</sup> , 2     ON OFF
IO-Link Communication mode (COM mode)	Power/Communication indicator (green)     Flashing (1 second cycle)       Operation indicator (orange)     ON OFF       Communication output     1       Control output 2 1, 2     ON OFF

- **Note: 1.** The initial value of control output 2 is reverse of control output 1.
  - 2. The timer function of the control output can be set up by the IO-Link communications. (It is able to select ON delay, OFF delay, or oneshot function and select a timer time of 1 to 9,999 ms (T).)

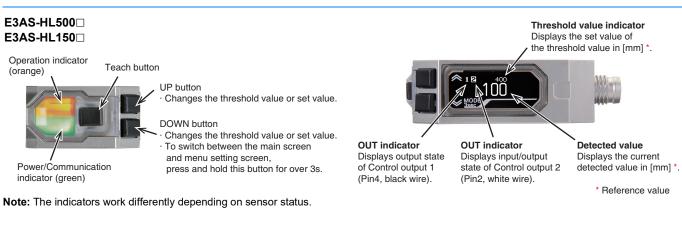
ON delay	OFF delay	One Shot
Sensing object NO OFF 0 OFF 0	Sensing Present object Present NO OFF 0 NC OFF 0	Sensing Present object Not Not OFF 0 NC OFF 0 OFF 0

Please contact your OMRON sales representative regarding the IO-Link setup file (IODD file).

Note: Shown above are the factory settings. Refer to the index list for the default settings at time of shipment from factory. PNP/COM output logic can be reversed by IO-Link communication.

The operation indicator (orange) lights up when control output 1 is ON or communication output is 1.

# Nomenclature



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# **Safety Precautions**

Be sure to read the precautions for all models in the website at: http://www.ia.omron.com/. Warning Indications E3AS-HL and E3AS-F models

	Warning level Indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury, or may result in serious injury or death. Additionally there may be significant property damage.	
	<b>Caution level</b> Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.	
Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.	
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction or undesirable effect on product performance.	

## **Meaning of Product Safety Symbols**

$\bigcirc$	General prohibition Indicates the instructions of unspecified prohibited action
	<b>Caution, fire</b> Indicates the possibility of fires under specific conditions.
	General caution Indicates unspecified general alert.
	<b>Caution, explosion</b> Indicates the possibility of explosion under specific conditions
	Laser Caution Indicates information related to laser safety
	<b>Disassembly prohibited</b> Prohibit the disassembly of a device because of the possibility of injuries due to electric shock.

# 

This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.



Do not use it exceeding the rated voltage. There is a possibility of failure and fire.



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Its component may be damaged and/or degree of protection may be degraded. Please do not apply high pressure water intensively at one place during cleaning.



Never use the product with an AC power supply. Otherwise, explosion may result.



To safely use laser products

## 

Do not expose your eyes to the laser beam either directly or indirectly (i.e., after reflection from a mirror or shiny surface). The laser beam has a high power density and exposure may result in loss of sight.

Do not disassemble this product. Doing so may cause exposure to the built-in light source which can damage eyes and skin. Never disassemble it.



Laser safety measures for laser equipment are stipulated by the country of use. Follow the instructions described below categorized in four cases.

1. Usage in Japan

The JIS C6802:2014 standard stipulates the safety precautions that users must take according to the class of the laser product. This product is classified into class 1 defined by this standard.

2. Usage in U.S.

This product is subjected to the U.S. FDA (Food and Drug Administration) laser regulations. This product is classified into Class 1 by the IEC 60825-1:2014 standard according to the regulations of Laser Notice No.56 of the FDA standard. This product is already reported to CDRH (Center for Devices and Radiological Health).

Accession Number: 1920014-001

When using a device equipped with the product in the U.S., attach an FDA certification label near the sensor mounted on customer equipment.

#### FDA certification label This leaser product complies with 21 CFR 1040, 10 and 1040, 11 except for deviations pursuant to Laser Notice No. 50, dated June 24,2007 OMRON Corporation Shlokoji Horikawa,Shimogyo-ku, Kyoto 600–6530 JAPAN Place of manufacture: Shanghal Factory,OMRON Corp. Manufactured In

3. Usage in China

This product is classified into Class 2 by the GB7247.1:2012 (IEC60825-1:2007) standard.

When using a device equipped with the product in China, attach a Warning label near the sensor mounted on customer equipment.



4. Usage in countries other than U.S. and China This product is classified into Class 1 by the IEC/EN 60825-1:2014 standard.

### **Precautions for Safe Use**

The following precautions must be observed to ensure safe operation.

- 1. Do not reverse the power supply connection or connect to an AC current
- 2. Do not short the load.
- 3. Be sure that before making supply the supply voltage is less than the maximum rated supply voltage (30 VDC).
- 4. Do not use the product in environments subject to flammable or explosive gases.
- 5. Do not use the product under a chemical or an oil environment without prior evaluation.
- 6. Do not attempt to modify the product.
- Do not touch the metal surface with your bare hands when the temperature is low. Touching the surface may result in a cold burn.
- 8. Burn injury may occur. The product surface temperature rises depending on application conditions, such as the ambient temperature and the power supply voltage. Attention must be paid during operation or cleaning.

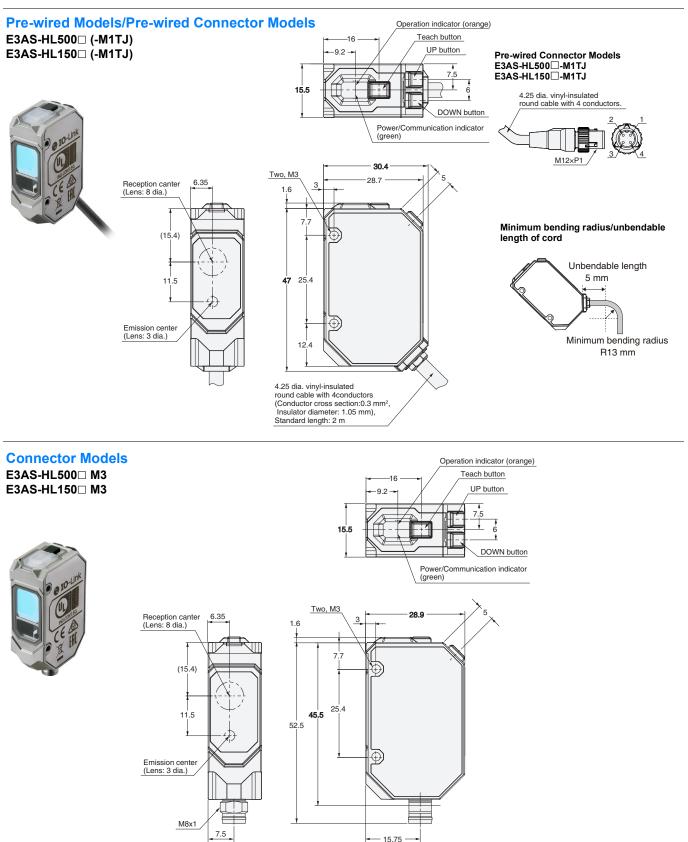
### **Precautions for Correct Use**

- 1. Do not hit the product using a hammer for installation.
- 2. The product must be installed with the specified torque or less. For M8 connector, the proper tightening torque is from 0.3 to 0.4 N·m. In case of M12 smartclick connector, manually tighten the connector.
- 3. Tightening torque for the mounting hole is 0.6 N·m or less (M3 screw)
- Do not use the product in any atmosphere or environment that 4. exceeds the ratings.
- 5. Output pulses may occur when the power supply is turned OFF. We recommend that you turn OFF the power supply to the load or load line first.
- 6. Use an extension cable less than 100 m long for Standard I/O mode and less than 20 m for IO-Link Communication mode.
- Do not pull on the cable with excessive strength. 8. Be sure to turn off the power supply when connecting or disconnecting the cable.
- 9. Please wait for at least 600 ms (E3AS-HL), 500 ms (E3AS-F), 100 ms (E3AS-L) after turning on the product's power until it is available for use.
- 10. Though this is type IP67, do not use in the water, rain or outdoors.
- 11. If the Sensor wiring is placed in the same conduits or ducts as high-voltage or high-power lines, inductive noise may cause malfunction or damage. Wire the cables separately or use a shielded cable.
- 12.Do not use the product in locations subject to direct sunlight.
- 13.Do not use the product where humidity is high and dew condensation may occur.
- 14.Do not use the product where corrosive gases may exist.
- 15. If high-pressure washing water and so on hits the button, it might lead to malfunctioning. So, consider use of the key lock function.
- 16.Do not apply high-pressure washing water directly to the sensor's light emitting / receiving surface from a short distance. As the antifouling feature may be impaired, keep a sufficient distance from the light emitting / receiving surface. 17.Do not use the product at a location subject to shock or vibration.
- 18. To use a commercially available switching regulator, FG (frame ground) must be grounded.
- 19.Do not use organic solvents (e.g. paint thinner and alcohol) for cleaning. Otherwise optical properties and protective structure may deteriorate.
- 20.Be sure to check the influence caused by surrounding environments such as background objects and LED lighting before using the product.
- 21.Do not exceed 100,000 writing operations of the EEPROM (nonvolatile memory). Setting information is written to the EEPROM when a threshold value change, teaching, or zero reset is executed.
- Please dispose in accordance with applicable regulations. 22

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# Dimensions

# Sensors



15

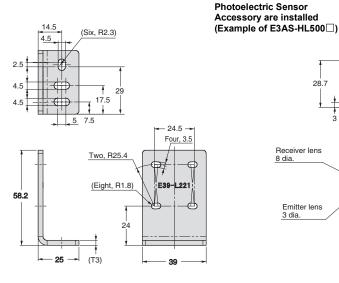
# Accessories (Sold Separately)

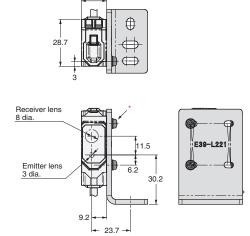
### **Mounting Brackets**

For E3AS-HL models

### E39-L221





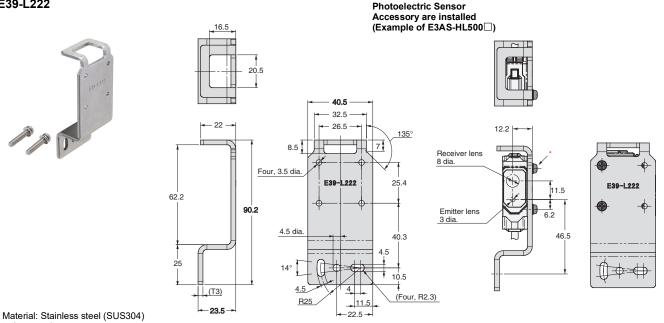


15.5

Material: Stainless steel (SUS304)

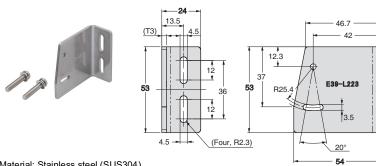
Accessories 2-M3-L10 Cross Recessed Pan Head Screws (Attached to SW+JIS W)

### E39-L222

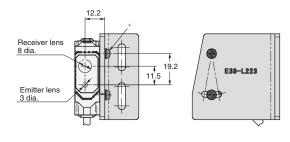


Accessories 2-M3-L10 Cross Recessed Pan Head Screws (Attached to SW+JIS W)

#### E39-L223



Photoelectric Sensor Accessory are installed (Example of E3AS-HL500)



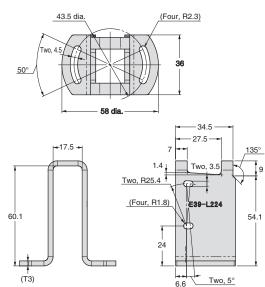
Material: Stainless steel (SUS304)

Accessories 2-M3-L10 Cross Recessed Pan Head Screws (Attached to SW+JIS W)

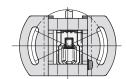
#### 16 OMRON

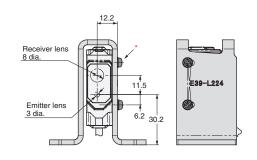
### E39-L224





Photoelectric Sensor Accessory are installed (Example of E3AS-HL500<sup>[]</sup>)



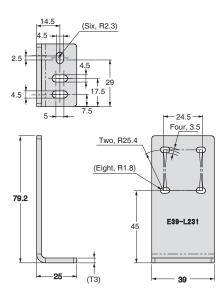


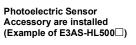
Material: Stainless steel (SUS304)

Accessories 2-M3-L10 Cross Recessed Pan Head Screws (Attached to SW+JIS W)

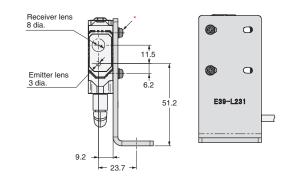
### E39-L231





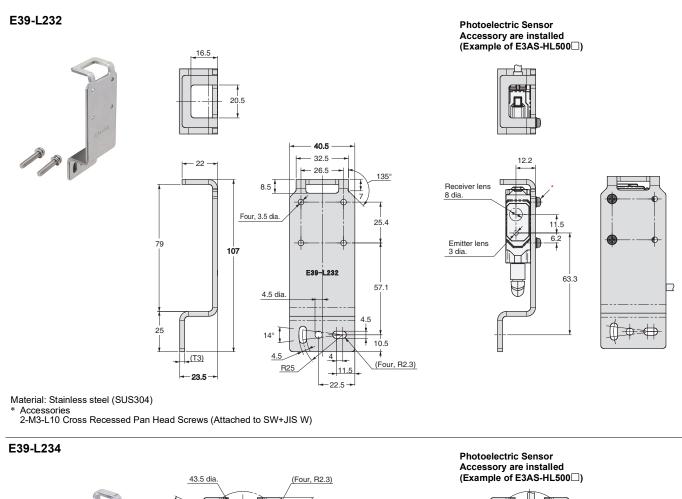


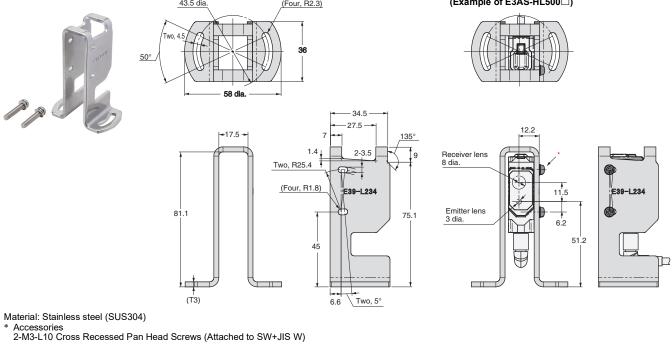


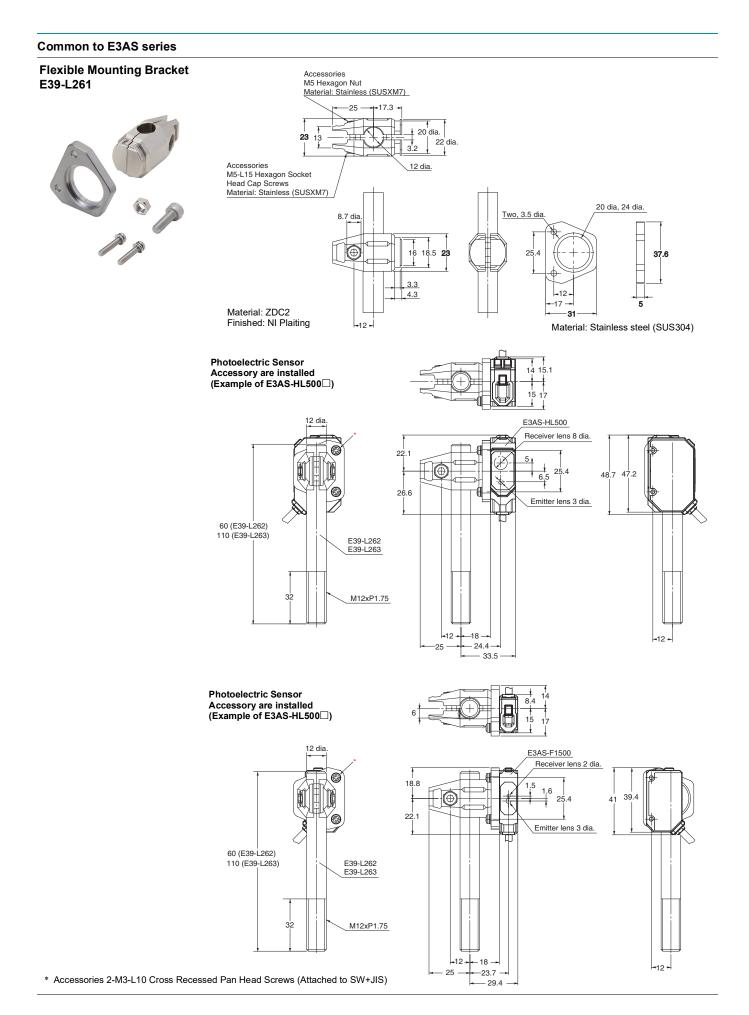


Material: Stainless steel (SUS304)

Accessories 2-M3-L10 Cross Recessed Pan Head Screws (Attached to SW+JIS W)



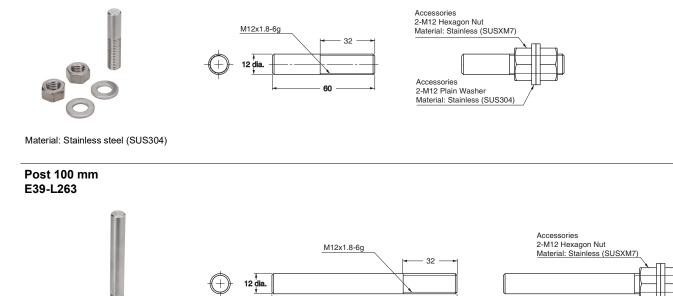




19

Accessories 2-M12 Plain Washer Material: Stainless (SUS304)

### Post 50 mm E39-L262

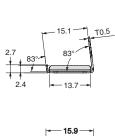


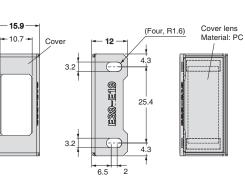
110

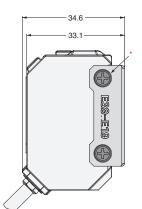
Material: Stainless steel (SUS304)

### E39-E19

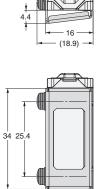








Photoelectric Sensor Accessory are installed (Example of E3AS-HL500□)



Material: Stainless steel (SUS304)

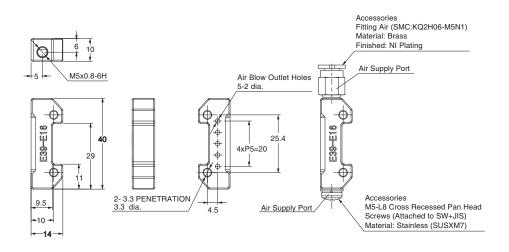
Accessories 2-M3-L10 Cross Recessed Pan Head Screws (Attached to SW+JIS W)

32

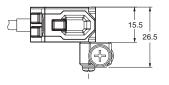
20.5

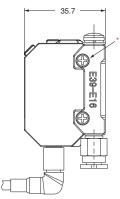
### Air Blow Unit E39-E16

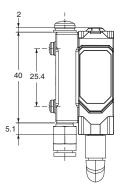


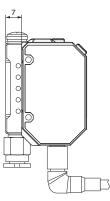


Photoelectric Sensor Accessory are installed (Example of E3AS-HL500)

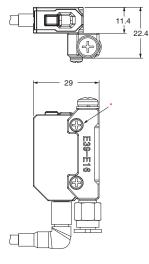


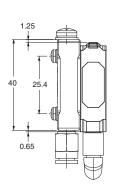


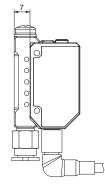




Photoelectric Sensor Accessory are installed (Example of E3AS-HL500<sup>[]</sup>)







Material: ZDC2

Finished: NI Plaiting
 \* Accessories 2-M3-L16 Cross Recessed Pan Head Screws (Attached to SW+JIS)

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#### OMRON AUTOMATION AMERICAS HEADQUARTERS • Chicago, IL USA • 847.843.7900 • 800.556.6766 • automation.omron.com

OMRON CANADA, INC. • HEAD OFFICE Toronto, ON, Canada • 416.286.6465 • 866.986.6766 • automation.omron.com

OMRON ELECTRONICS DE MEXICO • HEAD OFFICE Ciudad de México • 52.55.5901.4300 • 01.800.386.6766 • mela@omron.com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE San Pedro Garza García, N.L. • 81.12.53.7392 • 01.800.386.6766 • mela@omron. com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE Eugenio Garza Sada,León, Gto • 01.800.386.6766 • mela@omron.com

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#### OMRON ELETRÔNICA DO BRASIL LTDA • HEAD OFFICE São Paulo, SP, Brasil • 55 11 5171-8920 • automation.omron.com

OMRON ARGENTINA • SALES OFFICE Buenos Aires, Argentina • +54.11.4521.8630 • +54.11.4523.8483 mela@omron.com

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