



Sensing distance	Supply voltage	Output
 3 to 10 cm, 5 to 25 cm	12 to 24 VDC	 80 mA 100 mA

## Photoelectric Sensor

## E3S-LS

### Focusable Sensors with Built-in DC Amplifiers

- Pinpoint focusable and area focusable models eliminate background objects.
- Ideal for precise detection of level/height, edges, small holes and openings, objects touching one another, objects inside transparent covers.



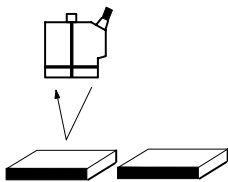
### Ordering Information

Sensing method	Sensing distance	Model	
		NPN output	PNP output
Area focusable reflective	5 to 25 cm (continuously variable)	E3S-LS20XE4	E3S-LS20XB4
Pinpoint focusable reflective	3 to 10 cm (continuously variable)	E3S-LS10XE4	E3S-LS10XB4
	3 ± 0.5 cm	E3S-LS3C1D E3S-LS3RC4	---

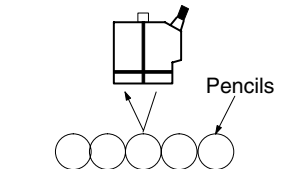
### Application Examples

#### E3S-LS10X

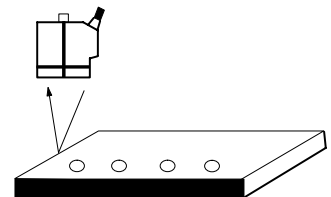
Sensing of objects utilizing their difference in luster.



Sensing of objects traveling in contiguous succession.

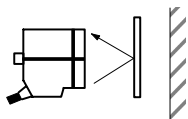


Sensing of small holes, narrow openings, or unevenness.

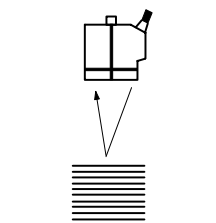


#### E3S-LS20X

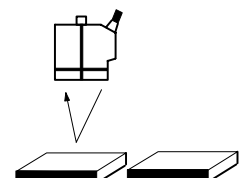
Sensing of objects utilizing their difference in luster.



Sensing of objects traveling in contiguous succession.



Sensing of small holes, narrow openings, or evenness.



# Specifications

## ■ Ratings/Characteristics

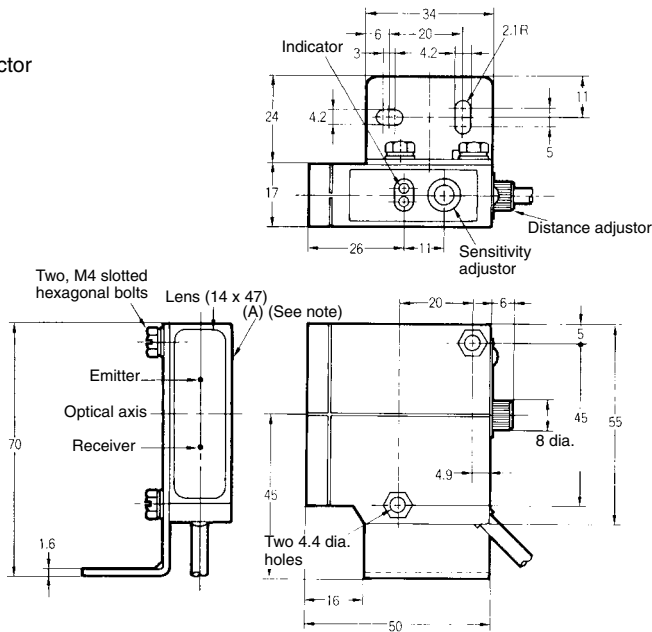
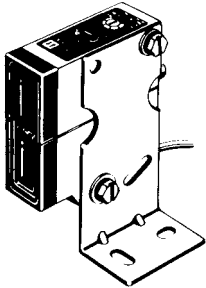
Item			E3S-LS10X□4	E3S-LS20X□4	E3S-LS3C1D	E3S-LS3RC4
Power supply voltage			12 VDC -10% to 24 VDC +10%, ripple (p-p): 10% max.		5 VDC -10% to 24 VDC +10%, ripple (p-p): 10% max.	12 VDC -10% to 24 VDC +10%, ripple (p-p): 10% max.
Current consumption			40 mA max.			
Sensing distance			3 to 10 cm (variable with distance adjuster)	5 to 25 cm (variable with distance adjuster)	3±0.5 cm	
Differential travel			0.5 mm max. at 3 cm 3 mm max. at 10 cm	5% max.	---	
Standard objects			1 x 1 cm white mat paper	5 x 7.5 cm white mat paper	1 x 1 cm white mat paper	
Control output	DC solid-state	Load	Model with suffix -E4: Model with suffix -B4:	80 mA max. 100 mA max.	30 mA max.	50 mA max.
		Voltage output	1.1 V max. at 80 mA	2 V max.		
Response time (ON, OFF)			1 ms max.		ON: 3 ms OFF: 100 ms	1 ms max.
Sensitivity			Adjustable		---	Adjustable
Operation mode			Wire-selectable (Refer to "Output Circuit.")		---	Wire-selectable (Refer to "Output Circuit.")
Indicators			Light indicator (red), stability indicator (green)		Operation indicator (red)	Light indicator (red)
Circuit protection			Short circuit			
Mutual interference protection			Provided		---	Provided
Enclosure rating	IEC 144	IP67			IP40	
	NEMA	1, 3, 4X, 6, 12			---	
Housing material			Metal		Plastic	
Light source			Red LED	Infrared LED		Red LED
Ambient temperature			Operating: -25 to 55 °C		Operating: -10 to 55 °C	

# Dimensions

**Note:** All units are in millimeters unless otherwise indicated.

**E3S-LS10X□4**  
**E3S-LS20X□4**

Cord: 4-mm dia., 18/0.12, 3-conductor  
Standard length: 2 m  
Weight: approx. 225 g



**Note:** A mounting bracket can be attached to side A.

**E3S-LS3C1D**  
**E3S-LS3RC4**

Cord: 4-mm dia., 18/0.12, 3-conductor  
Standard length: 2 m  
Weight: approx. 60 g

