

NEW

OMRON

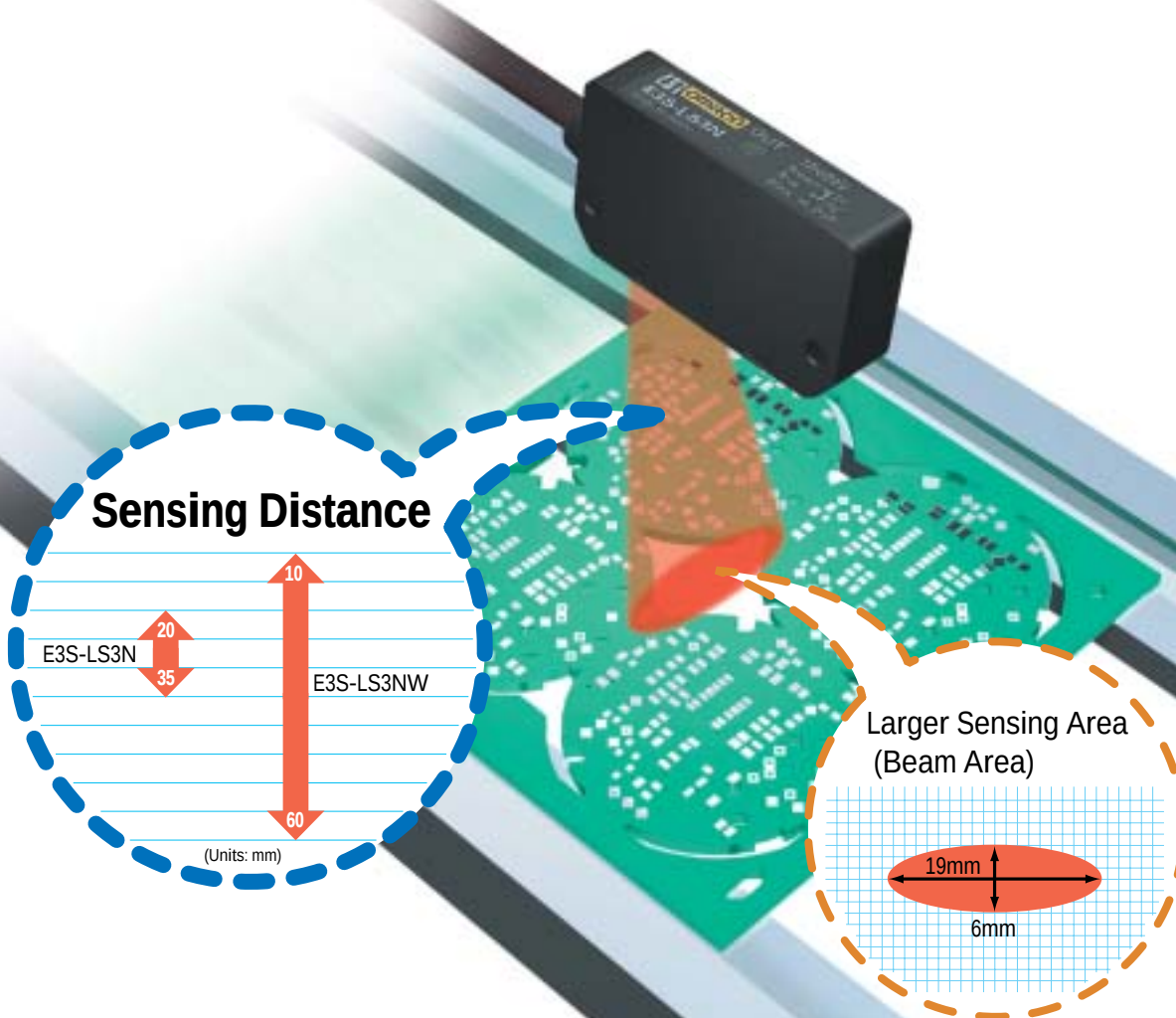
E3S-LS3N/-LS3NW

PCB Sensors

Sense the Difference!
Make a Difference!

Not affected by holes or notches

Stable Detection



*Larger spot.
Handles colors, holes,
and notches. Easier to use.
And provides more-consistent detection.*

Ordering Information

Red light

Sensing method	Appearance	Connection method	Sensing distance *	Output configuration	Model
Limited reflective		Pre-wired	20 to 35 mm 10 to 60 mm	Light ON	E3S-LS3N NEW E3S-LS3NW NEW

* For white paper : 80 × 80 mm

Output Circuits

Output	Model	State of output transistor	Timing chart	Output circuit
NPN	E3S-LS3N E3S-LS3NW	Light ON	Incident light No incident light Operation indicator (orange) ON OFF Output transistor ON OFF	

Ratings/Characteristics

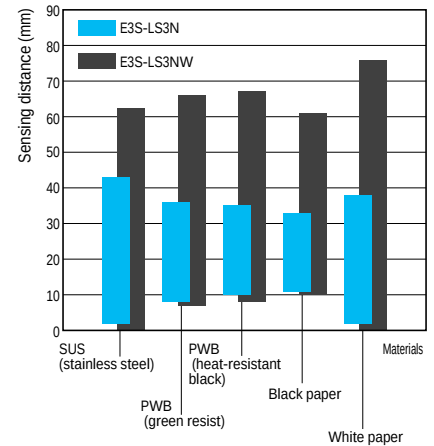
Sensing method		Limited reflective	
Model		E3S-LS3N	E3S-LS3NW
Sensing distance	white paper *	20 to 35 mm	10 to 60 mm
	black paper *	20 to 30 mm	15 to 50 mm
Light source (wavelength)		Red LED (660 nm)	
Supply voltage		12 to 24 VDC ± 10%, ripple (p-p) 10% max.	
Current consumption		25 mA max.	
Control output		Load power supply voltage: 24 VDC max., Load current: 50 mA max., Residual voltage: 1 V max. NPN open collector output	
Response time		1 ms max. for operation and reset respectively	
Ambient illumination (receiver side)		Incandescent lamp: 5,000 lux max.	
Ambient temperature		Operating: -10°C to 55°C (with no icing or condensation) Storage: -25°C to 70°C (with no icing or condensation)	
Ambient humidity		Operating: 35 to 85% (with no condensation) Storage: 35 to 95% (with no condensation)	
Insulation resistance		20 MΩ min. (at 500 VDC Megger)	
Dielectric strength (destruction)		1,000 VAC at 50/60 Hz for 1 minute	
Vibration resistance (destruction)		10 to 55 Hz with a 1.5-mm double amplitude for 2 hrs each in X, Y and Z directions	
Shock resistance (destruction)		500 m/s ² , for 3 times each in X, Y and Z directions	
Degree of protection		IEC60529 IP50	
Connection method		Pre-wired (standard cable length: 2 m)	
Weight (packed state)		Approx. 50 g	
Material	Case	Heat-resistant ABS	
	Lens	Acrylic	
Accessories		Instruction sheet	

* 80 × 80 mm

Engineering Data (Typical)

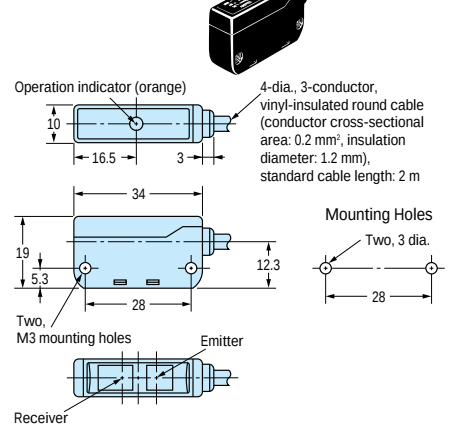
● Sensing distances vs. Materials

E3S-LS3N/-LS3NW



Dimensions (Units: mm)

E3S-LS3N



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