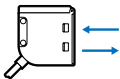
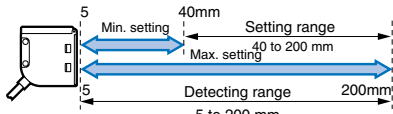
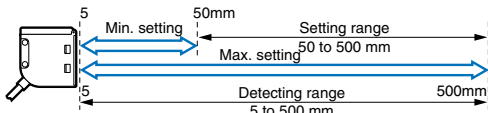


Ordering Information

Red light Infrared light

Shape	Sensing/Setting range	Model
		E3S-CL1
		E3S-CL2

Rating/performance

Sensing method		Distance-setting	
Item	Model	E3S-CL1	E3S-CL2
Sensing		5 to 200 mm (White paper 200 x 200 mm) (Setting distance 200 mm)	5 to 500 mm (White paper 200 x 200 mm) (Setting distance 500 mm)
Setting range		40 to 200 mm (White paper 200 x 200 mm)	50 to 500 mm (White paper 200 x 200 mm)
Differential distance		2% max.	10% max.
Reflectivity characteristics (black/white error) *1		2% max.	10% max.
Light source (wave length)		Red LED (700 nm)	Infrared LED (860 nm)
Power supply voltage		10 to 30 VDC [ripple (p-p) 10% included]	
Current consumption		35 mA max.	50 mA max.
Control output		Load supply voltage 30 VDC max., load current 100 mA max. (residual voltage NPN output: 1.2 V max., PNP output: 2.0 V max.) Open collector output type (NPN/PNP switch selectable) Light-ON/Dark-ON switch selectable	
Protective circuits		Reverse polarity protection, output short-circuit protection, mutual interference prevention	
Response time		Operation or reset: 1 ms max.	Operation or reset: 2 ms max.
Distance setting		6-turn endless adjuster (with indicator)	
Ambient illuminance		Incandescent lamp: 5,000 lux max. Sunlight 10,000 lux max.	
Ambient temperature		Operating/Storage: -25°C to 55°C (with no icing or condensation)	
Ambient humidity		Operating/Storage: 35% to 85%RH (with no condensation)	
Insulation resistance		20 MΩ min. at 500 VDC	
Dielectric strength		1,000 VAC at 50/60 Hz for 1 minute	
Vibration resistance		10 to 55 Hz, 1.5 mm double amplitude for 2 hours each in X, Y, and Z directions	
Shock resistance		Destruction: 500 m/s ² for 3 times each in X, Y, and Z directions	
Protective structure		IEC Standard IP67, NEMA 6P (limited to indoor use) *2	IEC Standard IP67, NEMA 6P (limited to indoor use)
Connection method		Pre-wired models (standard length: 2 m)	
Weight (Packed state)		Approx. 170 g	
Ma- terial	Case	Zinc diecast	
	Operation panel cover	Polyethyl sulfon	
	Lens	Acrylics	
	Mounting Brackets	Stainless steel (SUS304)	
Accessories		Mounting bracket, hexagon bolt M4 x 12 (with spring washer, flat washer), adjusting screwdriver, instruction manual	

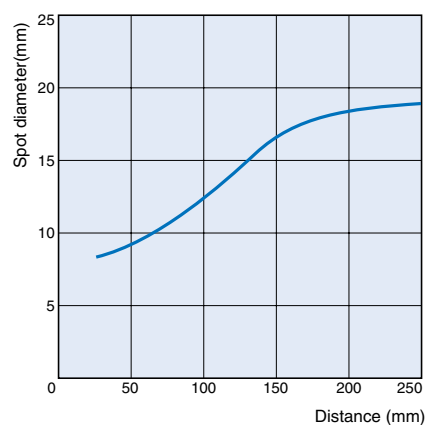
*1. Sensing distance difference between standard white paper (reflectivity 90%) and standard black paper (reflectivity 5%)

*2. NEMA (National Electrical Manufacturers Association) Standards

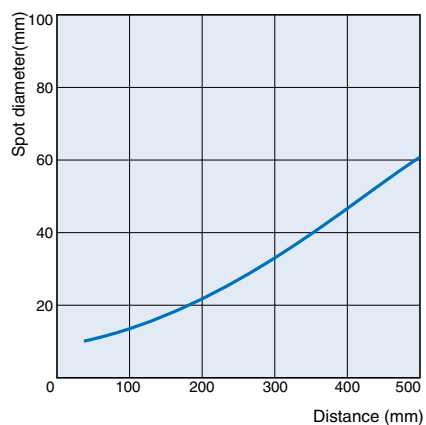
Characteristic data (typical)

Spot Diameter vs. Sensing Distance

E3S-CL1

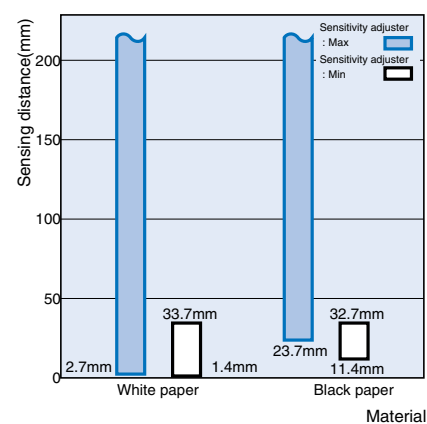


E3S-CL2



Short distance characteristic

E3S-CL1



E3S-CL2

