Compact Photoelectric Sensor with Built-in Amplifier

E3Z-D62 2M

Image

Diffuse-reflective, Sensing distance White paper 300 x 300 mm: 1 m, Light-ON/Dark-ON selectable, NPN, Pre-wired models (2 m), Infrared LED (860 nm)

Sensing method	Diffuse-reflective
Sensing distance	White paper 300 x 300 mm: 1 m
Light source	Infrared LED (860 nm)
Connection method	Pre-wired models

Ratings/Performance

As of April 20, 2022

Shape	Square type
Sensing method	Diffuse-reflective
Sensing distance	White paper 300 x 300 mm: 1 m
Differential distance	20% max. of sensing distance
Light source	Infrared LED (860 nm)
Power supply voltage	12 to 24 VDC±10% ripple (p-p) 10% max.
Current consumption	30 mA max.
Control output	NPN open collector 26.4 VDC max. 100 mA max. Residual voltage: 1 V max. (Load current Less than 10 mA) Residual voltage: 2 V max. (Load current 10 to 100 mA)
Operation mode	Light-ON/Dark-ON selectable
Protective circuit	Output short-circuit protection, Output reverse polarity protection, Power supply reverse polarity protection
Response time	Operate or reset: 1 ms max.
Sensitivity setting	Single-turn adjustment
Ambient illuminance	Incandescent lamp: 3,000 lx max. Sunlight: 10,000 lx max.
Ambient temperature range (Operating)	-25 to 55 ℃ (with no icing)
Ambient temperature range (Storage)	-40 to 70 ℃ (with no freezing or condensation)
Ambient humidity range (Operating)	35 to 85% (with no condensation)
Ambient humidity range (Strage)	35 to 95% (with no condensation)
Insulation resistance	20 MΩ min. (500 VDC megger)

Dielectric strength	1000 VAC 50/60 Hz 1 min
Vibration resistance	Destruction: 10 to 55 Hz, 1.5 mm double amplitude each in X, Y, and Z directions for 2 h
Shock resistance	Destruction: 500 m/s^2 3 times each in X, Y and Z directions
Degree of protection	IEC: IP67
Connection method	Pre-wired models (Cable length 2 m)
Indicator	Operation indicator (orange), Stability indicator (green)
Weight	Package: Approx. 65 g
Accessories	Instruction manual
Material	Case: Polybutylene terephthalate (PBT) Lens: Denatured Polyarylate

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Dimensions

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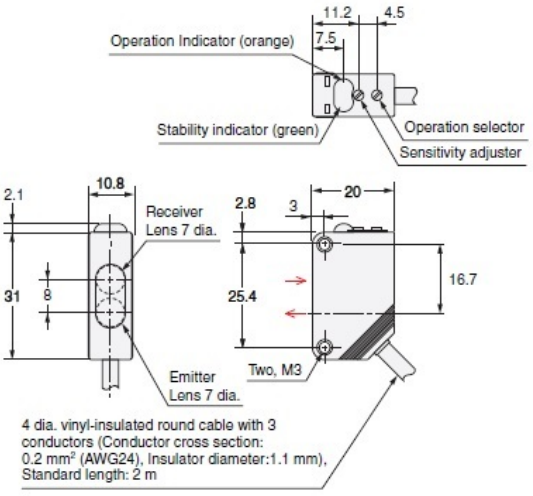
Retro-reflective Models
Pre-wired Models

E3Z-R61(K)	E3Z-B61
E3Z-R81(K)	E3Z-B81
E3Z-D61(K)	E3Z-B62
E3Z-D81(K)	E3Z-B82
E3Z-D62(K)	E3Z-L63
E3Z-D82(K)	E3Z-L83
E3Z-L61	
E3Z-L81	



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Output circuit diagram

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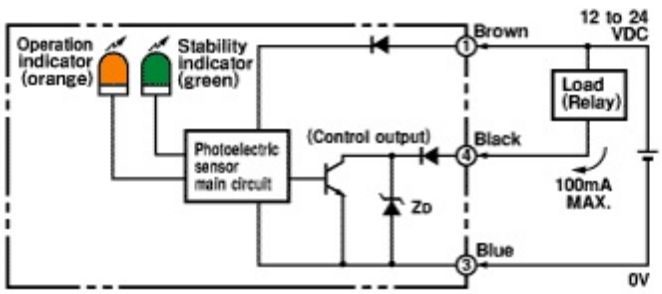

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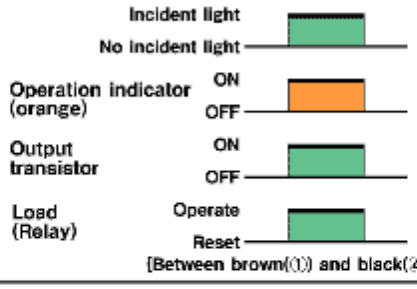
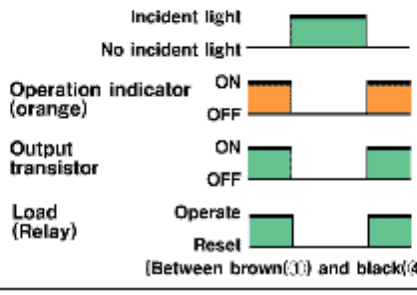
Timing chart

As of April 20, 2022

Operation mode	Timing chart	Mode switch
Light ON		L side (LIGHT ON)
Dark ON		D side (DARK ON)

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Operating range

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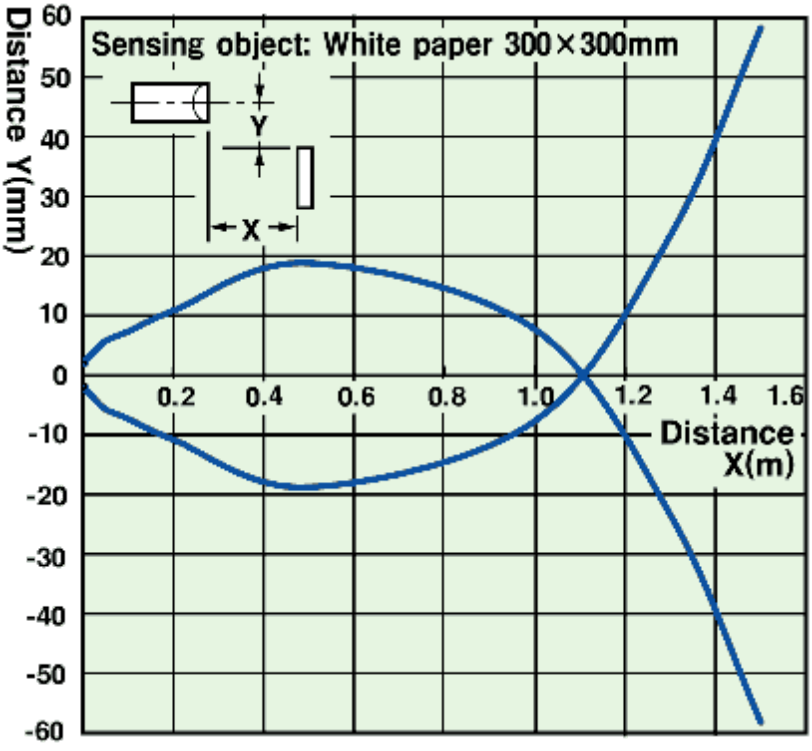

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Setting distance

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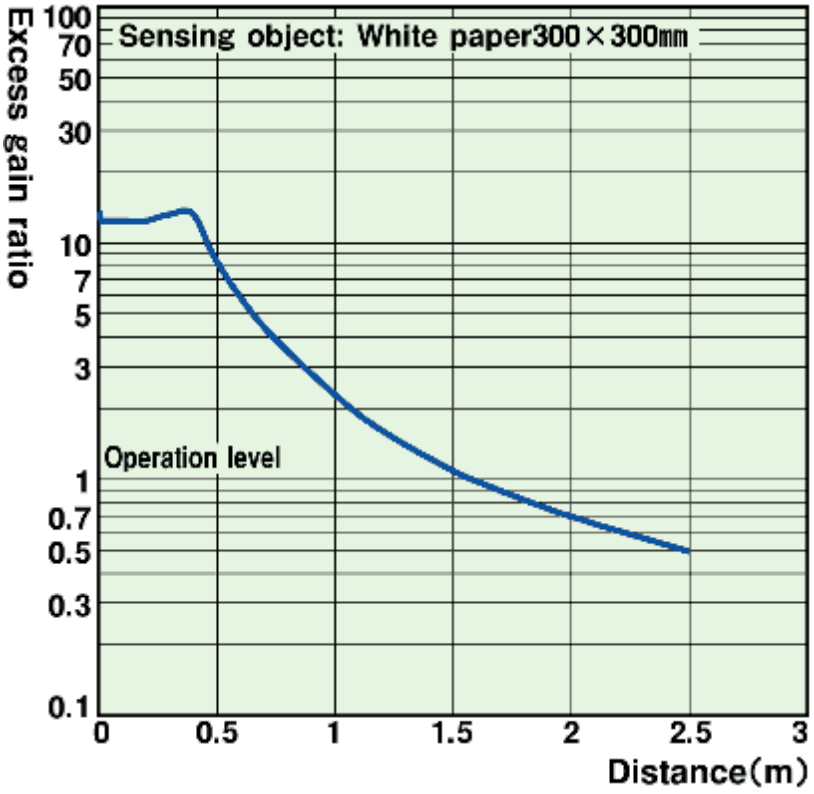
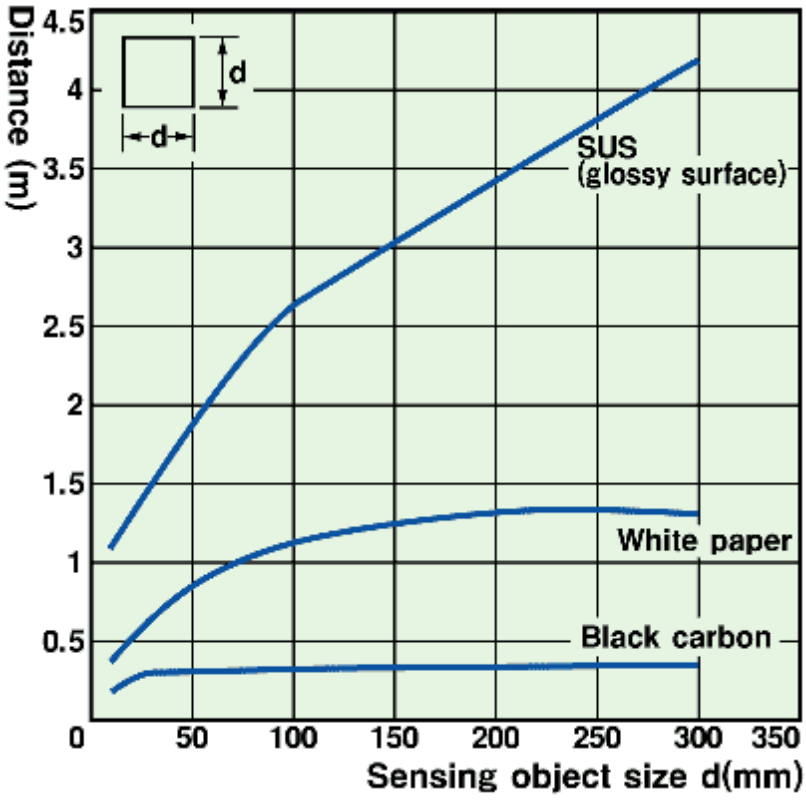
Excess gain ratio vs. setting distance



Sensing object size vs. setting distance



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