

Compact Laser Photoelectric Sensor with Built-in Amplifier

## E3Z-LT81 2M



Image

Through-beam type, Sensing distance 60 m, Light-ON/Dark-ON selectable, PNP, Pre-wired models (2 m), Red LD (655 nm)

Sensing method	Through-beam type
Sensing distance	60 m
Light source	Red LD (655 nm)
Connection method	Pre-wired models

### Ratings/Performance

As of April 20, 2022

Shape	Square type
Sensing method	Through-beam type
Sensing distance	60 m
Spot size	5 mm dia. max. (sensing distance: 3 m)
Standard sensing object	Opaque: 12 mm dia. min.
Minimum sensing object	6 mm min. dia. (at 3 m)
Directional angle	Receiver: 3 to 15°
Light source	Red LD (655 nm)
Classification of laser	IEC: Class 1 FDA: Class 1 JIS: Class 1
Power supply voltage	12 to 24 VDC±10% ripple (p-p) 10% max.
Current consumption	Emitter: 15 mA max. Receiver: 20 mA max.
Control output	PNP 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

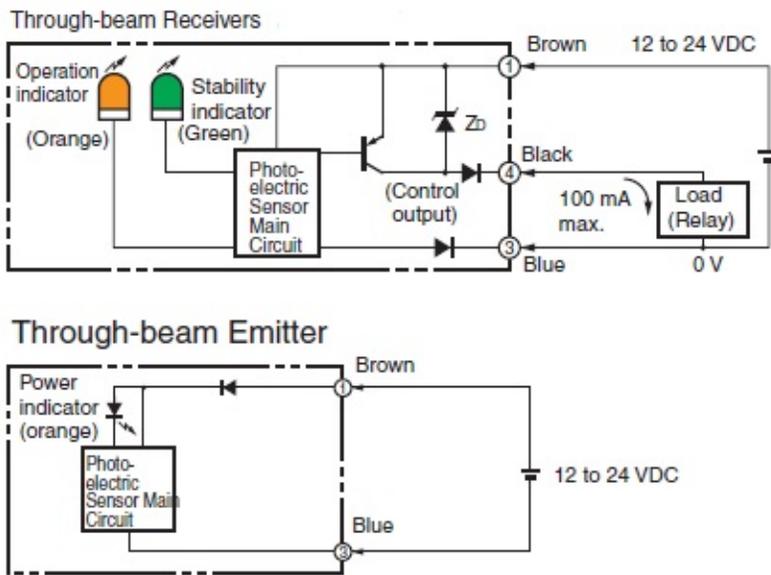
<b>Protective circuit</b>	Output short-cut protection, Output reverse polarity protection, Power supply reverse polarity protection
<b>Response time</b>	Operate or reset: 1 ms max.
<b>Sensitivity setting</b>	Single-turn adjustment
<b>Ambient illuminance</b>	Incandescent lamp: 3,000 lx max. Sunlight: 10,000 lx max.
<b>Ambient temperature range (Operating)</b>	-10 to 55 °C (with no freezing or condensation)
<b>Ambient temperature range (Storage)</b>	-25 to 70 °C (with no freezing or condensation)
<b>Ambient humidity range (Operating)</b>	35 to 85% (with no freezing or condensation)
<b>Ambient humidity range (Storage)</b>	35 to 95% (with no freezing or condensation)
<b>Insulation resistance</b>	20 MΩ min. (500 VDC megger)
<b>Dielectric strength</b>	1000 VAC 50/60 Hz 1 min
<b>Vibration resistance</b>	Destruction: 10 to 55 Hz, 1.5 mm double amplitude each in X, Y, and Z directions for 2 h
<b>Shock resistance</b>	Destruction: 500 m/s <sup>2</sup> 3 times each in X, Y and Z directions
<b>Degree of protection</b>	IEC: IP67
<b>Connection method</b>	Pre-wired models (Cable length 2 m)
<b>Indicator</b>	Operation indicator (orange), Stability indicator (green), Power indicator (orange)
<b>Weight</b>	Package: Approx. 120 g
<b>Accessories</b>	Instruction manual
<b>Material</b>	Case: Polybutylene terephthalate (PBT) Lens: Denatured Polyarylate

As of April 20, 2022

### Dimensions

As of April 20, 2022





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Timing chart

As of April 20, 2022

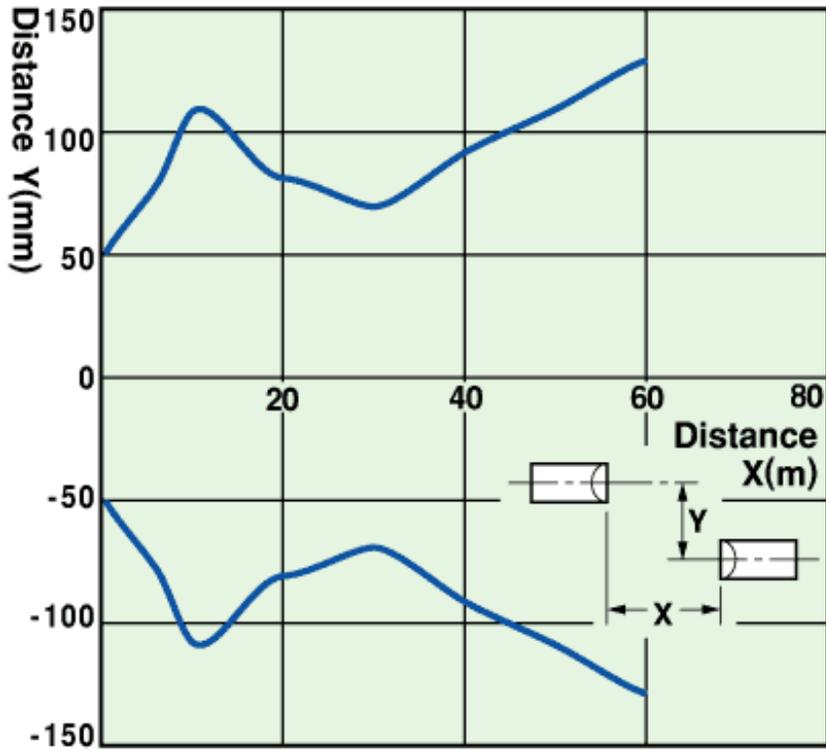
Operation mode	Timing chart	Mode switch
Light ON	Incident light	L side (LIGHT ON)
	No Incident light	
	Operation Indicator (orange) ON	
	OFF	
	Output transistor ON	
Dark ON	Incident light	D side (DARK ON)
	No Incident light	
	Operation Indicator (orange) ON	
	OFF	
	Output transistor ON	

Load (Relay) Operate and Reset (Between blue(3) and black(4))

As of April 20, 2022

Parallel operating range

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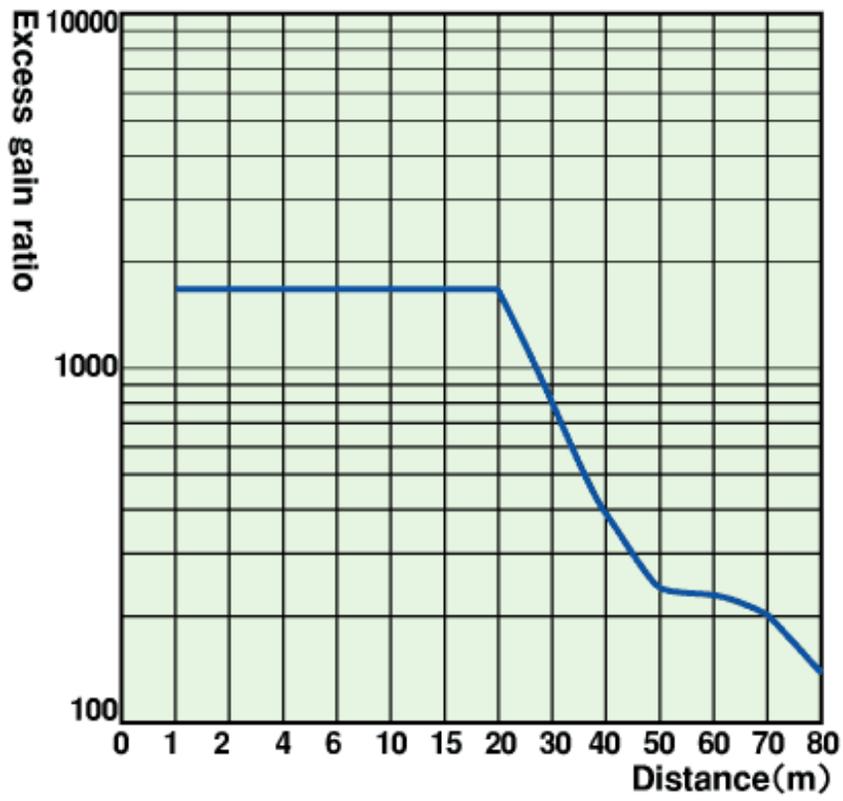


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Setting distance

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Excess gain ratio vs. setting distance



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