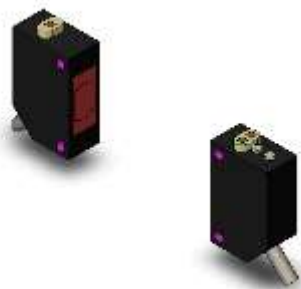




Compact Photoelectric Sensor with Built-in Amplifier

E3Z-T81 2M

Through-beam, Sensing distance: 15 m, Light-ON/Dark-ON selectable, PNP output, Pre-wired models (2 m)



Image

Sensing method	Through-beam
Sensing distance	15 m
Light source	Infrared LED (Emission wave length: 870 nm)
Connection method	Pre-wired models (Cable length: 2 m)

Ratings/Performance

As of March 3, 2017

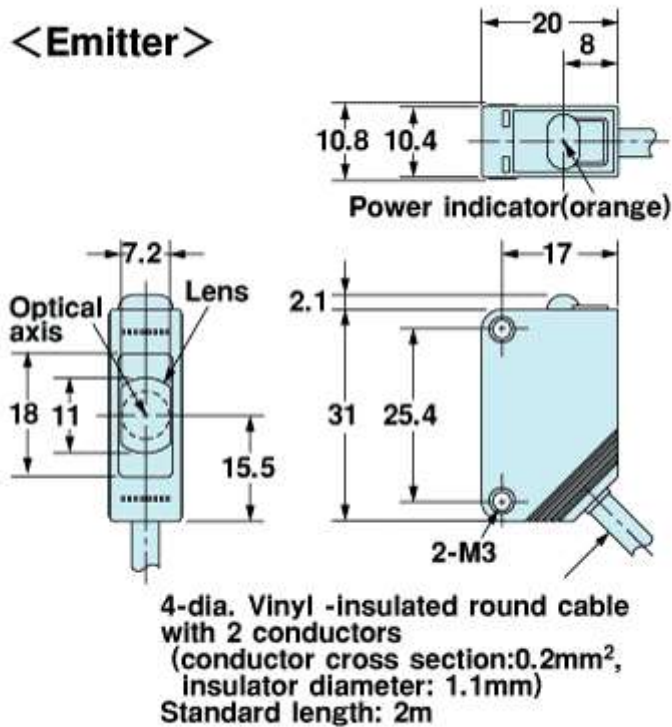
Shape	Square type
Sensing method	Through-beam
Sensing distance	15 m
Standard sensing object	Opaque 12 mm dia. min.
Directional angle	Emitter: 3 to 15 DEG Receiver: 3 to 15 DEG
Light source	Infrared LED (Emission wave length: 870 nm)
Power supply voltage	12 to 24 VDC $\pm 10\%$ (ripple (p-p) 10% max.)
Current consumption	Emitter: 15 mA max. Receiver: 20 mA max.
Control output	PNP open collector output 26.4 VDC max. Load current: 100 mA max. Residual voltage: 1 V max. (Load current Less than 10mA)/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	1 ms max. (Operate or reset)
Sensitivity setting	Single-turn adjustment
Ambient illuminance	Incandescent lamp: 3000 lux max., Sunlight: 10000 lux max.
Ambient temperature (Operating)	-25 to 55 °C (with no icing or condensation)
Ambient temperature (Storage)	-40 to 70 °C (with no icing or condensation)

Ambient humidity	Operating: 35 to 85% Storage: 35 to 95% (with no icing or condensation)
Insulation resistance	20 MΩ min. at 500 VDC
Dielectric strength	1000 VAC at 50/60 Hz for 1 min
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions
Shock resistance	500 m/s**2 for 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), Power indicator (orange)
Weight (packed state)	Approx. 120 g
Material	Case: PBT Lens: Denatured Polyarylate
Accessories	Instruction manual

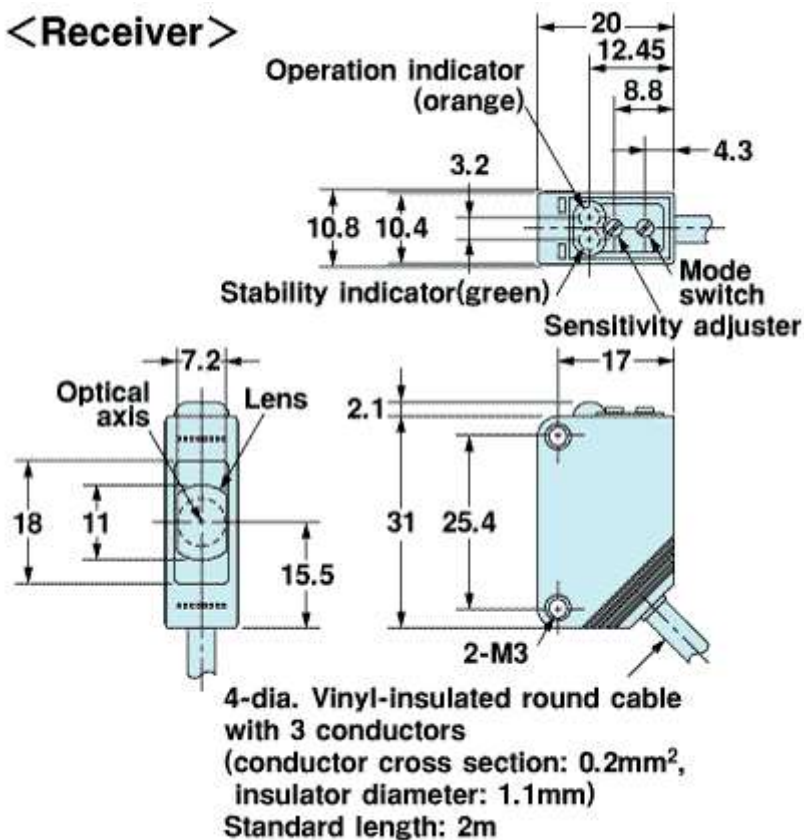
As of March 3, 2017

Dimensions

As of March 3, 2017



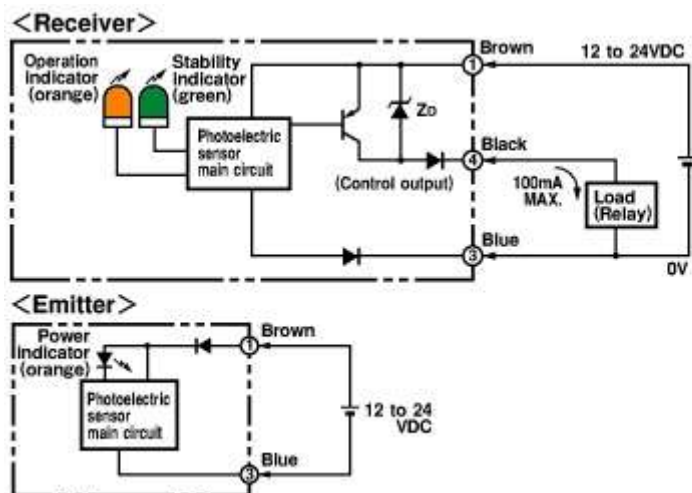
<Receiver>



As of March 3, 2017

Output circuit

As of March 3, 2017



Operation mode	Timing chart	Mode switch
Light ON	<div><div>Incident light</div><div>No Incident light</div><div>Operation Indicator (orange)<div>ON</div><div>OFF</div></div><div>Output transistor<div>ON</div><div>OFF</div></div><div>Load (Relay)<div>Operate</div><div>Reset</div><div>(Between blue(3) and black(4))</div></div></div>	L side (LIGHT ON)
Dark ON	<div><div>Incident light</div><div>No Incident light</div><div>Operation Indicator (orange)<div>ON</div><div>OFF</div></div><div>Output transistor<div>ON</div><div>OFF</div></div><div>Load (Relay)<div>Operate</div><div>Reset</div><div>(Between blue(3) and black(4))</div></div></div>	D side (DARK ON)

As of March 3, 2017