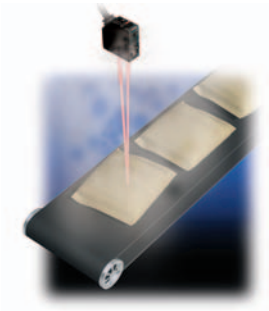
ENVIRONMENTAL RESISTANCE

Little affected by contamination on lens

Even if the lens surface gets somewhat dirty from dust particles, there is very little change in the operation field, by usage adjustable range system.

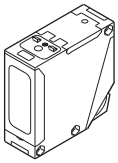


Waterproof

IP67 protection permits use in environments where water may splash.

Note: Sensor may detect a water drop itself, if it is exposed to water splashes during operation.

ORDER GUIDE

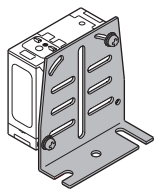
Type		Appearance	Sensing range	Model No.	Supply voltage	Output	Timer function
Multi-voltage			0.1 to 2.5 m 0.328 to 8.202 ft	**EQ-501**	24 to 240 V AC ±10 % or 12 to 240 V DC ±10 %	Relay contact 1a	———
	With timer			**EQ-501T**			ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.)
			0.1 to 1.0 m 0.328 to 3.281 ft	**EQ-502**			———
	With timer			**EQ-502T**			ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.)
DC-voltage			0.1 to 2.5 m 0.328 to 8.202 ft	**EQ-511**	12 to 24 V DC ±10 %	NPN open-collector transistor PNP open-collector transistor (Equipped with 2 outputs)	———
	With timer			**EQ-511T**			ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.)
			0.1 to 1.0 m 0.328 to 3.281 ft	**EQ-512**			———
	With timer			**EQ-512T**			ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.)

OPTION

Designation	Model No.	Description
Sensor mounting bracket	**MS-EQ5-01**	Foot / back angled mounting bracket

Sensor mounting bracket

- **MS-EQ5-01**



Two M5 (length 30 mm 1.181 in) screws with washers and two nuts are attached.

SPECIFICATIONS

Item \ Type	Multi-voltage				DC-voltage			
		With timer		With timer		With timer		With timer
Model No.	**EQ-501**	**EQ-501T**	**EQ-502**	**EQ-502T**	**EQ-511**	**EQ-511T**	**EQ-512**	**EQ-512T**
Adjustable range (Note 2,3)	0.2 to 2.5 m 0.656 to 8.202 ft		0.2 to 1.0 m 0.656 to 3.281 ft		0.2 to 2.5 m 0.656 to 8.202 ft		0.2 to 1.0 m 0.656 to 3.281 ft	
Sensing range (at max. setting distance) (Note 3)	0.1 to 2.5 m 0.328 to 8.202 ft		0.1 to 1.0 m 0.328 to 3.281 ft		0.1 to 2.5 m 0.328 to 8.202 ft		0.1 to 1.0 m 0.328 to 3.281 ft	
Hysteresis (Note 3)	10 % or less of operation distance							
Supply voltage	24 to 240 V AC ±10 % or 12 to 240 V DC ±10 % Ripple P-P 10 % or less				12 to 24 V DC ±10 % Ripple P-P 10 % or less			
Power / Current consumption	AC: 4 VA or less DC: 3 W or less	AC: 5 VA or less DC: 4 W or less	AC: 4 VA or less DC: 3 W or less	AC: 5 VA or less DC: 4 W or less	45 mA or less			
Output	Relay contact 1a • Switching capacity: 250 V AC 3 A (resistive load) 30 V DC 3 A (resistive load) • Electrical life: 100,000 or more switching operations (switching frequency 1,200 operations/hour) • Mechanical life: 50 million or more switching operations (switching frequency 18,000 operations/hour)				NPN open-collector transistor • Maximum sink current: 100 mA • Applied voltage: 30 V DC or less (between output and 0 V) • Residual voltage: 1 V or less (at 100 mA sink current) 0.4 V or less (at 16 mA sink current) PNP open-collector transistor • Maximum source current: 100 mA • Applied voltage: 30 V DC or less (between output and +V) • Residual voltage: 1 V or less (at 100 mA source current) 0.4 V or less (at 16 mA source current)			
Output operation	Switchable either Detection-ON or Detection-OFF							
Short-circuit protection	—				Incorporated			
Response time	20 ms or less (For **EQ-50□T** depends on the setting timer period)				2 ms or less (For **EQ-51□T** depends on the setting timer period)			
Operation indicator	Orange LED (lights up when the output is ON)							
Stability indicator	Green LED (lights up under stable operating condition)							
Distance adjuster	2-turn mechanical adjuster with indicator							
Sensing mode	—				Switchable either BGS or FGS function			
Timer function	—	Incorporated with variable (0.1 to 5 sec.) ON-delay / OFF-delay timer	—	Incorporated with variable (0.1 to 5 sec.) ON-delay / OFF-delay timer	—	Incorporated with variable (0.1 to 5 sec.) ON-delay / OFF-delay timer	—	Incorporated with variable (0.1 to 5 sec.) ON-delay / OFF-delay timer
Automatic interference prevention function	Incorporated (Note 4)							
Environmental resistance: Protection	IP67 (IEC)							
Environmental resistance: Ambient temperature	–20 to +55 °C –4 to +131 °F (No dew condensation or icing allowed), Storage: –30 to +70 °C –22 to +158 °F							
Environmental resistance: Ambient humidity	35 to 85 % RH, Storage: 35 to 85 % RH							
Environmental resistance: Ambient illuminance	Incandescent light: 3,000 ℓx at the light-receiving face							
Environmental resistance: Voltage withstandability	2,000 V AC for one min. among supply terminals, non-supply metal parts and relay contact output terminals, 1,000 V AC for one min. between relay contacts				1,000 V AC for one min. between all supply terminals connected together and enclosure			
Environmental resistance: Insulation resistance	100 MΩ, or more, with 500 V DC megger among supply terminals, non-supply metal parts and relay contact output terminals as well as between relay contacts				20 MΩ, or more, with 250 V DC megger between all supply terminals connected together and enclosure			
Environmental resistance: Vibration resistance	10 to 55 Hz frequency, 1.5 mm 0.059 in amplitude in X, Y and Z directions for two hours each							
Environmental resistance: Shock resistance	500 m/s² acceleration (50 G approx.) in X, Y and Z directions for three times each							
Emitting element	Infrared LED (Peak emission wavelength: 855 nm 0.034 mil, modulated)							
Receiving element	2-segment photodiode							
Material	Enclosure: ABS, Front cover: Polycarbonate, Display cover: Polycarbonate							
Connection method	Screw-on terminal connection							
Cable	Suitable for round cable ø9 to ø11 mm ø0.354 to ø0.433 in							
Cable length	Total length up to 100 m 328.084 ft is possible with 0.3 mm², or more, cabtyre cable.							
Weight	Net weight: 100 g approx.				Net weight: 85 g approx.			
Accessory	Adjusting screwdriver: 1 pc.							

Notes: 1) Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +23 °C +73.4 °F.
2) The adjustable range stands for the maximum sensing range which can be set with the distance adjuster. The sensor can also detect an object 0.1 m 0.328 ft, or more, away.
3) The adjustable range, sensing range and hysteresis are specified for white non-glossy paper (200 × 200 mm 7.874 × 7.874 in) as the object.
4) Note that the detection may be unstable depending on the mounting conditions or the sensing object. In the state that this product is mounted, be sure to check the operation with the actual sensing object. Refer to "**Automatic interference function** (p.368)" of "**PRECAUTIONS FOR PROPER USE**" for details.