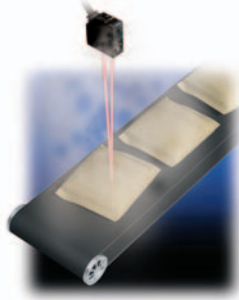


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- Amplifier-separated
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- CY-100
- EX-10
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- EX-40
- CX-440
- EQ-30
- EQ-500**
- MQ-W
- RX-LS200
- RX
- RT-610

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.



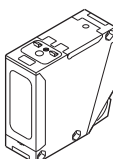
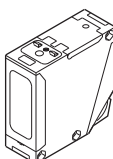

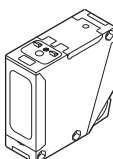


Waterproof

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

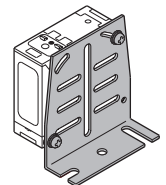
| Type | Appearance | Sensing range | Model No. | Supply voltage | Output | Timer function | |
|-----------------------------|---|---|---|--|--|---|---|
| Multi-voltage With timer |  |  0.1 to 2.5 m 0.328 to 8.202 ft | EQ-501 | 24 to 240 V AC ±10 % or 12 to 240 V DC ±10 % | Relay contact 1a | — | |
| | | | EQ-501T | | | ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.) | |
| | | EQ-502 |  0.1 to 1.0 m 0.328 to 3.281 ft | | | EQ-502 | — |
| | | | | | | EQ-502T | ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.) |
| DC-voltage With timer |  |  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 | — | |
| | | | EQ-511T | | | ON-delay / OFF-delay timer (Timer period: 0.1 to 5 sec.) | |
| | | EQ-512 |  0.1 to 1.0 m 0.328 to 3.281 ft | | | EQ-512 | — |
| | | | | | | 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 Model No. | Multi-voltage | | | | DC-voltage | | | |
|---|--------------------------|--|---|-------------------------------------|---|---|---|--------------|---|
| | | With timer | | With timer | | With timer | | With timer | |
| | | 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 | | | | NPN open-collector transistor | | | |
| | | <ul style="list-style-type: none"> 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) | | | | <ul style="list-style-type: none"> 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) | | | |
| | | <ul style="list-style-type: none"> 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) | | | | | | | |
| | 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 | | | | | | | |
| | Ambient humidity | 35 to 85 % RH, Storage: 35 to 85 % RH | | | | | | | |
| | Ambient illuminance | Incandescent light: 3,000 lx at the light-receiving face | | | | | | | |
| | 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 | | | |
| | 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 | | | |
| | Vibration resistance | 10 to 55 Hz frequency, 1.5 mm 0.059 in amplitude in X, Y and Z directions for two hours each | | | | | | | |
| | Shock resistance | 500 m/s ² 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 mm ² , 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.

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Power Supply Built-in

Amplifier-separated

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CY-100

EX-10

EX-20

EX-30

EX-40

CX-440

EQ-30

EQ-500

MQ-W

RX-LS200

RX

RT-610