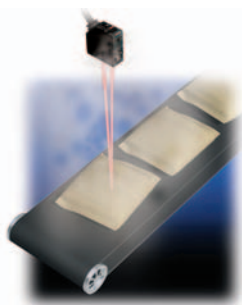


ENVIRONMENTAL RESISTANCE**Little affected by contamination on lens**

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

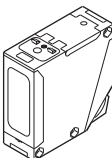
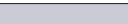
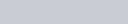
**Waterproof**

IP67 protection permits use in environments where water may splash.



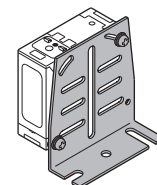
Note: Sensor may detect a water drop itself, if it is exposed to water splashes during operation.

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	—
			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			—
			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)	—
			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			—
			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.

FIBER
SENSORSLASER
SENSORSPHOTO-
ELECTRIC
SENSORSMICRO
PHOTO-
ELECTRIC
SENSORSAREA
SENSORSLIGHT
CURTAINS /
SAFETY
COMPONENTSPRESSURE /
FLOW
SENSORSINDUCTIVE
PROXIMITY
SENSORSPARTICULAR
USE
SENSORSSENSOR
OPTIONSSIMPLE
WIRE-SAVING
UNITSWIRE-SAVING
SYSTEMSMEASURE-
MENT
SENSORSSTATIC
ELECTRICITY
PREVENTION
DEVICESLASER
MARKERS

PLC

HUMAN
MACHINE
INTERFACESENERGY
CONSUMPTION
VISUALIZATION
COMPONENTSFA
COMPONENTSMACHINE
VISION
SYSTEMSUV
CURING
SYSTEMSSelection
GuideAmplifier
Built-inPower Supply
Built-inAmplifier-
separated

CX-400

CY-100

EX-10

EX-20

EX-30

EX-40

CX-440

EQ-30

EQ-500

MQ-W

RX-LS200

RX

RT-610

SPECIFICATIONS

Type		Multi-voltage				DC-voltage			
		With timer		With timer		With timer		With timer	
Item	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)							
	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.

FIBER
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SAFETY
COMPONENTSPRESSURE /
FLOW
SENSORSINDUCTIVE
PROXIMITY
SENSORSPARTICULAR
USE
SENSORSSENSOR
OPTIONSSIMPLE
WIRE-
SAVING
UNITSWIRE-
SAVING
SYSTEMSMEASURE-
MENT
SENSORSSTATIC
ELECTRICITY
PREVENTION
DEVICESLASER
MARKERS

PLC

HUMAN
MACHINE
INTERFACESENERGY
CONSUMPTION
VISUALIZATION
COMPONENTSFA
COMPONENTSMACHINE
VISION
SYSTEMSUV
CURING
SYSTEMSSelection
GuideAmplifier
Built-inPower Supply
Built-inAmplifier-
separated**CX-400****CY-100****EX-10****EX-20****EX-30****EX-40****CX-440****EQ-30****EQ-500****MQ-W****RX-LS200****RX****RT-610**