

FIBER
SENSORSLASER
SENSORSPHOTOELECTRIC
SENSORSMICRO
PHOTOELECTRIC
SENSORSAREA
SENSORSLIGHT CURTAINS /
SAFETY
COMPONENTSPRESSURE /
FLOW
SENSORSINDUCTIVE
PROXIMITY
SENSORSPARTICULAR
USE SENSORSSENSOR
OPTIONSSIMPLE
WIRE-SAVING
UNITSWIRE-SAVING
SYSTEMSMEASUREMENT
SENSORSSTATIC ELECTRICITY
PREVENTION
DEVICESLASER
MARKERS

PLC

HUMAN MACHINE
INTERFACESENERGY CONSUMPTION
VISUALIZATION
COMPONENTS

FA COMPONENTS

MACHINE 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

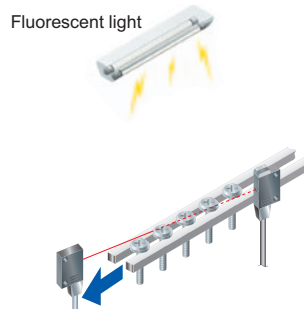
RX

RT-610

ENVIRONMENTAL RESISTANCE**Incorporated an inverter countermeasure circuit ***

The **EX-10** series become significantly stronger against inverter light and other extraneous light.

* Effective from production in October 2010.

**Waterproof IP67**

The sensor can be hosed down because of its IP67 construction and the non-corrosive stainless steel mounting bracket.

Note: However, take care that if it is exposed to water splashes during operation, it may detect a water drop itself.

Bending durability**EX-□-R**

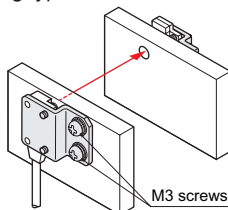
Flexible cable type **EX-□-R** is available. It is most suitable for moving parts, such as robot arm, etc.

MOUNTING / SIZE**Mountable with M3 screws**

Non-corrosive stainless steel type sensor mounting bracket is also available.

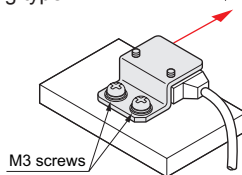
- **MS-EX10-1**
[Cold rolled carbon steel (SPCC)]

MS-EX10-11
[Stainless steel (SUS304)]
(mounting bracket for the front sensing type)



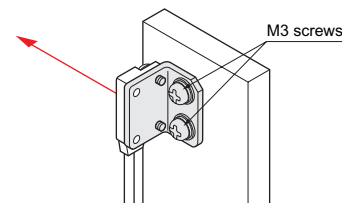
- **MS-EX10-2**
[Cold rolled carbon steel (SPCC)]

MS-EX10-12
[Stainless steel (SUS304)]
(mounting bracket for the side sensing type)



- **MS-EX10-3**
[Cold rolled carbon steel (SPCC)]

MS-EX10-13
[Stainless steel (SUS304)]
(L-shaped mounting bracket)



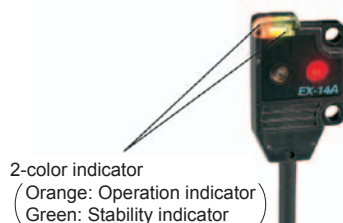
Note: Sensor mounting brackets can not be used for the narrow beam type (**EX-□S□**).

Red beam makes beam alignment easy

The red LED beam projected from the emitter helps you to align the sensor heads.

FUNCTIONS**Bright 2-color indicator**

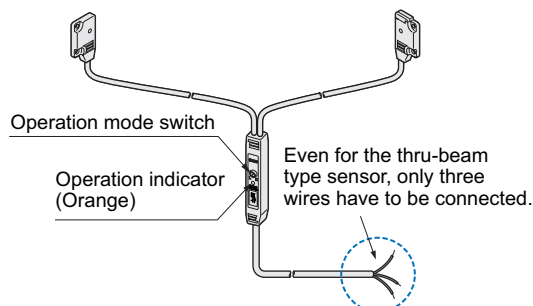
A convenient 2-color indicator has been incorporated in the miniature body.



2-color indicator
(Orange: Operation indicator
Green: Stability indicator)

VARIETIES**Operation mode switch****EX-15□/17□**

Thru-beam type sensor incorporated with an operation mode switch on the bifurcation is also available. It helps you to test the operability before start-up.

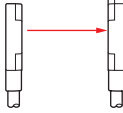
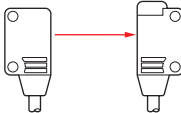
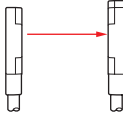
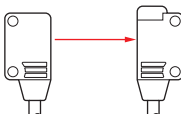
**OTHERS****Less resources used ***

Based on environmental considerations, simplified packaging is used in order to reduce waste. In addition, the bag is made from polyethylene which produces no toxic gases even when burned.

* Effective from production in October 2010.



ORDER GUIDE

Type		Appearance	Sensing range	Model No.(Note 2)		Output operation	Output
				NPN output	PNP output		
Standard Type	Thru-beam	Front sensing With operation mode switch on the bifurcation	 150 mm 5.906 in 500 mm 19.685 in 1 m 3.281 ft	EX-11A	EX-11A-PN	Light-ON	NPN open-collector transistor or PNP open-collector transistor
				EX-11B	EX-11B-PN	Dark-ON	
				EX-13A	EX-13A-PN	Light-ON	
				EX-13B	EX-13B-PN	Dark-ON	
				EX-19A	EX-19A-PN	Light-ON	
				EX-19B	EX-19B-PN	Dark-ON	
		Side sensing With operation mode switch on the bifurcation	 150 mm 5.906 in 500 mm 19.685 in 1 m 3.281 ft	EX-15	EX-15 -PN	Switchable either Light-ON or Dark-ON	
				EX-17	EX-17-PN		
				EX-11EA	EX-11EA-PN	Light-ON	
				EX-11EB	EX-11EB-PN	Dark-ON	
				EX-13EA	EX-13EA-PN	Light-ON	
				EX-13EB	EX-13EB-PN	Dark-ON	
	Convergent reflective (Diffused beam type)	Front sensing	 2 to 25 mm 0.079 to 0.984 in (Note 1) (Convergent point: 10 mm 0.394 in)	EX-14A	EX-14A-PN	Light-ON	
				EX-14B	EX-14B-PN	Dark-ON	
	Narrow beam type	Thru-beam	 150 mm 5.906 in 500 mm 19.685 in 1 m 3.281 ft	EX-11SA	EX-11SA-PN	Light-ON	NPN open-collector transistor or PNP open-collector transistor
				EX-11SB	EX-11SB-PN	Dark-ON	
				EX-13SA	EX-13SA-PN	Light-ON	
				EX-13SB	EX-13SB-PN	Dark-ON	
				EX-19SA	EX-19SA-PN	Light-ON	
				EX-19SB	EX-19SB-PN	Dark-ON	
		Side sensing	 150 mm 5.906 in 500 mm 19.685 in	EX-11SEA	EX-11SEA-PN	Light-ON	
				EX-11SEB	EX-11SEB-PN	Dark-ON	
				EX-13SEA	EX-13SEA-PN	Light-ON	
				EX-13SEB	EX-13SEB-PN	Dark-ON	

NOTE: Mounting bracket is not supplied with the sensor. Please select from the range of optional sensor mounting brackets (MS-EX10-□). Sensor mounting brackets (MS-EX10-□) can not be used for the narrow beam type (EX-□S□).

Notes: 1) The sensor does not detect even a specular background if it is separated by 100 mm 3.937 in or more. (However, the background should be directly opposite. A spherical or curved background may be detected.)

2) The model No. with "P" shown on the label affixed to the thru-beam type sensor is the emitter, "D" shown on the label is the receiver.

Flexible cable type

Flexible cable type is also available for NPN output type. (excluding narrow beam type EX-□S□ and sensor with operation mode switch on the bifurcation EX-15□/17□)

When ordering this type, suffix "-R" to the model No.

(e.g.) Flexible cable type of EX-11A is "EX-11A-R".

5 m 16.404 ft cable length type

5 m 16.404 ft cable length type (standard: 2 m 6.562 ft) is also available for NPN output type. (excluding narrow beam type EX-□S□ and flexible cable type)

When ordering this type, suffix "-C5" to the model No.

(e.g.) 5 m 16.404 ft cable length type of EX-11A is "EX-11A-C5".

FIBER SENSORS

LASER SENSORS

PHOTO-ELECTRIC SENSORS

MICRO PHOTO-ELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS

PRESSURE / FLOW SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASURE-MENT SENSORS

STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

PLC

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

Selection Guide

Amplifier Built-in

Power Supply Built-in

Amplifier-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