

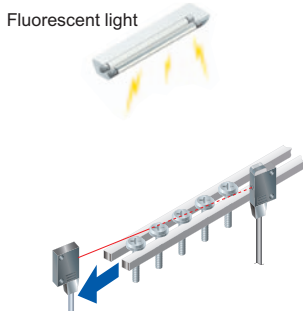
- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS / SAFETY COMPONENTS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC ELECTRICITY PREVENTION DEVICES
- LASER MARKERS
- PLC
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS

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

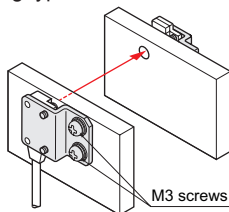
Flexible cable type **EX-□-R** is available. It is most suitable for moving parts, such as robot arm, etc.

MOUNTING / SIZE

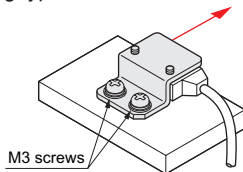
Mountable with M3 screws

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

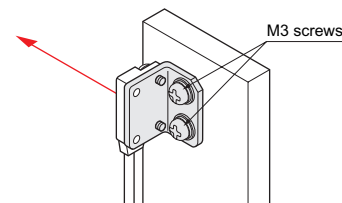
- **MS-EX10-1**
[Cold rolled carbon steel (SPCC)]
- **MS-EX10-11**
[Stainless steel (SUS304)]
(mounting bracket for the front sensing type)



- **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□**).

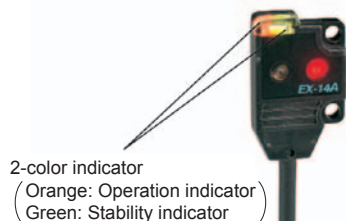
Red beam makes beam alignment easy

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.

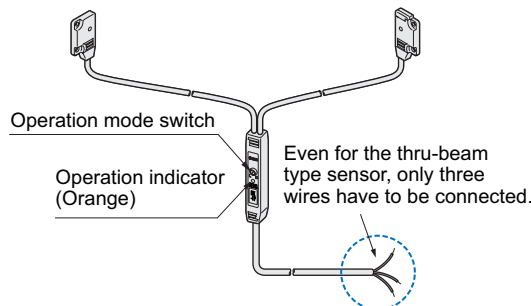


VARIETIES

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.



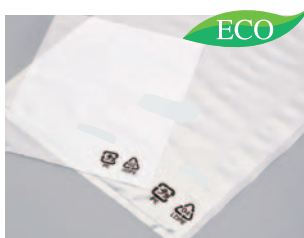
OTHERS

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.



- 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

ORDER GUIDE

Type	Appearance	Sensing range	Model No.(Note 2)		Output operation	Output	
			NPN output	PNP output			
Standard Type	Thru-beam Front sensing <small>With operation mode switch on the bifurcation</small>	150 mm 5.906 in	EX-11A	EX-11A-PN	Light-ON	NPN open-collector transistor or PNP open-collector transistor	
			EX-11B	EX-11B-PN	Dark-ON		
		500 mm 19.685 in	EX-13A	EX-13A-PN	Light-ON		
			EX-13B	EX-13B-PN	Dark-ON		
		1 m 3.281 ft	EX-19A	EX-19A-PN	Light-ON		
			EX-19B	EX-19B-PN	Dark-ON		
	Thru-beam Side sensing <small>With operation mode switch on the bifurcation</small>	150 mm 5.906 in	EX-15	EX-15 -PN	Switchable either Light-ON or Dark-ON		
		500 mm 19.685 in	EX-17	EX-17-PN			
		150 mm 5.906 in	EX-11EA	EX-11EA-PN	Light-ON		
			EX-11EB	EX-11EB-PN	Dark-ON		
		500 mm 19.685 in	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
EX-15E				—	Switchable either Light-ON or Dark-ON		
EX-17E				—	Switchable either Light-ON or Dark-ON		
Narrow beam type	Thru-beam Front sensing	150 mm 5.906 in	EX-11SA	EX-11SA-PN	Light-ON	NPN open-collector transistor or PNP open-collector transistor	
			EX-11SB	EX-11SB-PN	Dark-ON		
		500 mm 19.685 in	EX-13SA	EX-13SA-PN	Light-ON		
			EX-13SB	EX-13SB-PN	Dark-ON		
		1 m 3.281 ft	EX-19SA	EX-19SA-PN	Light-ON		
			EX-19SB	EX-19SB-PN	Dark-ON		
	Thru-beam Side sensing	150 mm 5.906 in	EX-11SEA	EX-11SEA-PN	Light-ON		
			EX-11SEB	EX-11SEB-PN	Dark-ON		
		500 mm 19.685 in	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
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