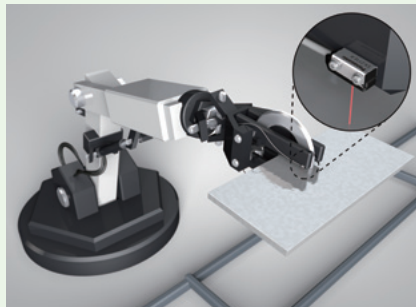


## A wide range of applications

### Inflection resistant cable type available for all models

Inflection resistant cable type with improved flex resistance is available for all models. Select the model suitable for your specific application. The standard type comes with lead wires with the same diameter as previous models, but the outside diameter of the cable is 2.0 mm **0.079 in** and thinner than the cables of the **EX-10** series. This facilitates cable routing.



### IP67 protective structure

The sensors features an IP67 protective structure to allow their use in process lines where water is used or splashed.

Rust-resistant stainless steel sensor mounting brackets and screws are available.

Note: If water splashes on the sensor during sensing operation, it may sense water as an object.



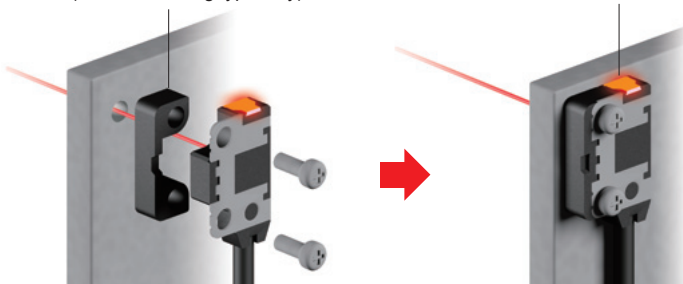
## Options

### A variety of mounting brackets are available!

A spacer for mounting at the back (1 type) for through-wall sensing and sensor mounting brackets (3 types) are available to meet a diversity of sensor installation needs.

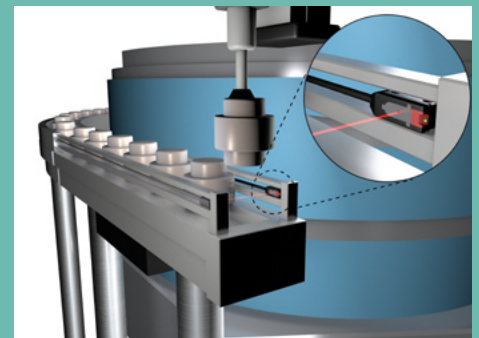
Spacer for mounting at the back (for front sensing type only)

Operation indicator (orange) can be checked from the rear side.

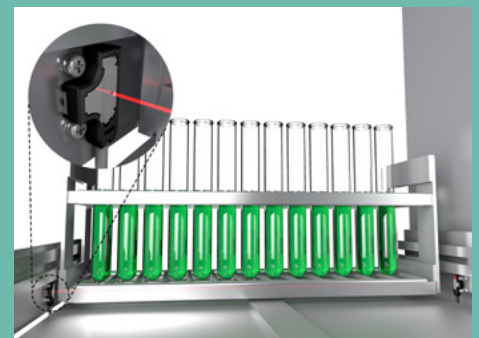


Through-wall detection

## Examples of applications



Detection of parts in parts feeder



Detection of presence / absence of test tube tray



Detection of LED lead

## ORDER GUIDE

Type	Appearance	Sensing range	Model No. (Note)		Output operation
			NPN output	PNP output	
Thru-beam	Front sensing Infection resistant cable	50 mm 1.969 in	EX-Z11FA	EX-Z11FA-P	Light-ON
			EX-Z11FB	EX-Z11FB-P	Dark-ON
		200 mm 7.874 in	EX-Z12FA	EX-Z12FA-P	Light-ON
			EX-Z12FB	EX-Z12FB-P	Dark-ON
		500 mm 19.685 in	EX-Z13FA	EX-Z13FA-P	Light-ON
			EX-Z13FB	EX-Z13FB-P	Dark-ON
		50 mm 1.969 in	EX-Z11FA-R	EX-Z11FA-P-R	Light-ON
			EX-Z11FB-R	EX-Z11FB-P-R	Dark-ON
		200 mm 7.874 in	EX-Z12FA-R	EX-Z12FA-P-R	Light-ON
			EX-Z12FB-R	EX-Z12FB-P-R	Dark-ON
		500 mm 19.685 in	EX-Z13FA-R	EX-Z13FA-P-R	Light-ON
			EX-Z13FB-R	EX-Z13FB-P-R	Dark-ON
	Side sensing Infection resistant cable	50 mm 1.969 in	EX-Z11A	EX-Z11A-P	Light-ON
			EX-Z11B	EX-Z11B-P	Dark-ON
		200 mm 7.874 in	EX-Z12A	EX-Z12A-P	Light-ON
			EX-Z12B	EX-Z12B-P	Dark-ON
		500 mm 19.685 in	EX-Z13A	EX-Z13A-P	Light-ON
			EX-Z13B	EX-Z13B-P	Dark-ON
		50 mm 1.969 in	EX-Z11A-R	EX-Z11A-P-R	Light-ON
			EX-Z11B-R	EX-Z11B-P-R	Dark-ON
		200 mm 7.874 in	EX-Z12A-R	EX-Z12A-P-R	Light-ON
			EX-Z12B-R	EX-Z12B-P-R	Dark-ON
		500 mm 19.685 in	EX-Z13A-R	EX-Z13A-P-R	Light-ON
			EX-Z13B-R	EX-Z13B-P-R	Dark-ON

Note: Mounting bracket is not supplied with the sensor. Please select from the range of optional sensor mounting brackets (MS-EXZ-□).

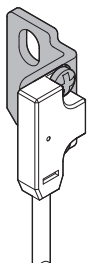
Note: The model No. with "E" shown on the label affixed to the thru-beam type sensor is the emitter, "D" shown on the label is the receiver.

## OPTIONS

Designation	Model No.	Description
Sensor mounting bracket	MS-EXZ-1	L-shaped mounting bracket (SUS304) for front sensing and side sensing types (2 sets are required)
	MS-EXZ-2	Mounting bracket (SUS304) for front sensing type (2 sets are required)
	MS-EXZ-3	Mounting bracket (SUS304) for side sensing type (2 sets are required)
Spacer for mounting at the back	MS-EXZ-4	Spacer for mounting at the back (polyacetal) for front sensing type

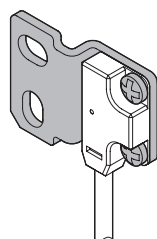
### Sensor mounting bracket

• MS-EXZ-1



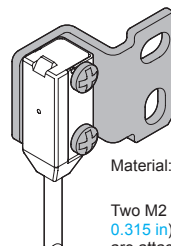
Material: Stainless steel (SUS304)  
Two M2 (length 4 mm 0.157 in) pan head screws and two M2 (length 8 mm 0.315 in) pan head screws are attached.

• MS-EXZ-2



Material: Stainless steel (SUS304)  
Two M2 (length 4 mm 0.157 in) pan head screws are attached.

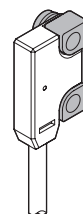
• MS-EXZ-3



Material: Stainless steel (SUS304)  
Two M2 (length 8 mm 0.315 in) pan head screws are attached.

### Spacer for mounting at the back

• MS-EXZ-4



Material: Polyacetal  
M2 (length: 10 mm 0.394 in) screws, nuts, spring washers and flat washers are attached. (20 pieces each)