

## Safety Light Curtain

# F3SJ Series

Three versions available to meet your exact safety needs.

All versions conform to the latest PLe/Safety Category 4 and SIL3 requirements.



» ADVANCED type supports finger protection, and complex blanking and muting functions

» **EASY type simple and affordable hand protection**

» BASIC type simple hand protection and simple muting functions

# Offering the best selection of safety light curtains for your guarding needs.

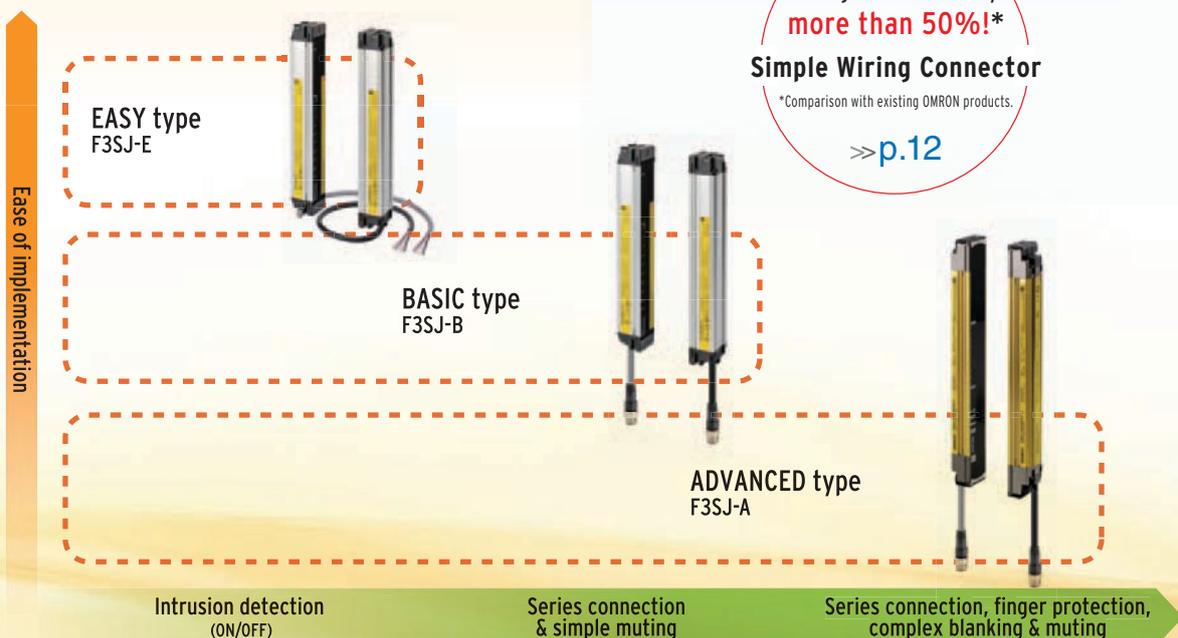
Three F3SJ types allow easy selection for your application.

Omron's new F3SJ series of safety light curtains offers a tailored approach for a variety of production environments. Conventional safety light curtains offer full-featured models, even when only simple intrusion detection is needed. The F3SJ series offers a product range that allows you to choose the best product according to your application needs.

The EASY type has been added for simple hand detection, while the BASIC type adds the potential for series connection and simple muting functions.

The F3SJ series now allows you to select the best safety light curtain for your application environment without paying for unused functions.

- For simple and affordable hand protection:  
The **EASY type (F3SJ-E)**
- For simple hand protection, series connection and muting functions:  
The **BASIC type (F3SJ-B)**
- For finger protection, series connection, complex blanking and muting functions:  
The **ADVANCED type (F3SJ-A)**





**[Applicable Standards]**

- EN ISO 13849-1: PL<sub>e</sub>/Safety Category 4
- IEC 61496-1,-2: Type 4
- IEC 61508-1 to 3: SIL3

Authenticated under major safety standards including European standards.



- 1/2 Mounting Time
- Global Support
- Fast Installation
- Easy-to-View Diagnostics



- Series Connection
- Global Support
- Simple muting
- Easy-to-View Diagnostics



- Series Connection
- Warning Zone
- Global Support
- Simple muting
- Blanking
- PC Setting Tool
- Finger Protection



**Easy to install**  
**EASY type (F3SJ-E)**

Can be used for simple hand intrusion detection. Mounting now takes less than half the man-hours that conventional models take. Despite its simplicity, the EASY type is a highly reliable safety light curtain.

**Easy to maintain**  
**BASIC type (F3SJ-B)**

The muting function allows use of the safety light curtain in a variety of manufacturing environments. The flexible mounting supports up to three sets of series-connected sensors.

**High functionality**  
**ADVANCED type (F3SJ-A)**

The detection capability supports finger protection through use of 14mm resolution. The ADVANCED type has a wide variety of muting and blanking functions to increase productivity.

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\* As the beams are infrared, they are invisible to the naked eye.

## Implementation cost reduction with 1/2\* the mounting time: Start with the "EASY type"

The EASY type safety light curtain well is suited for straight forward on/off detection applications.

\* Comparison with existing OMRON products.

By carefully selecting the available functions, we have reduced man hours necessary for installation by approximately 1/2 when compared with existing OMRON models.

Reduced installation time means added savings to your project's budget, start with the EASY type.

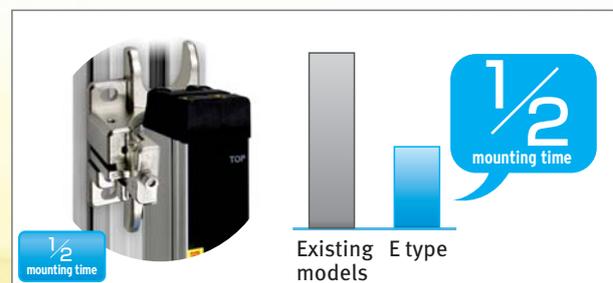


Easy-to-view blue LEDs make beam adjustment easier!



Machine safety first, narrowed down to the simplest functions:

Upon detection of personnel, the machine stops.  
Simple yet very optimal.

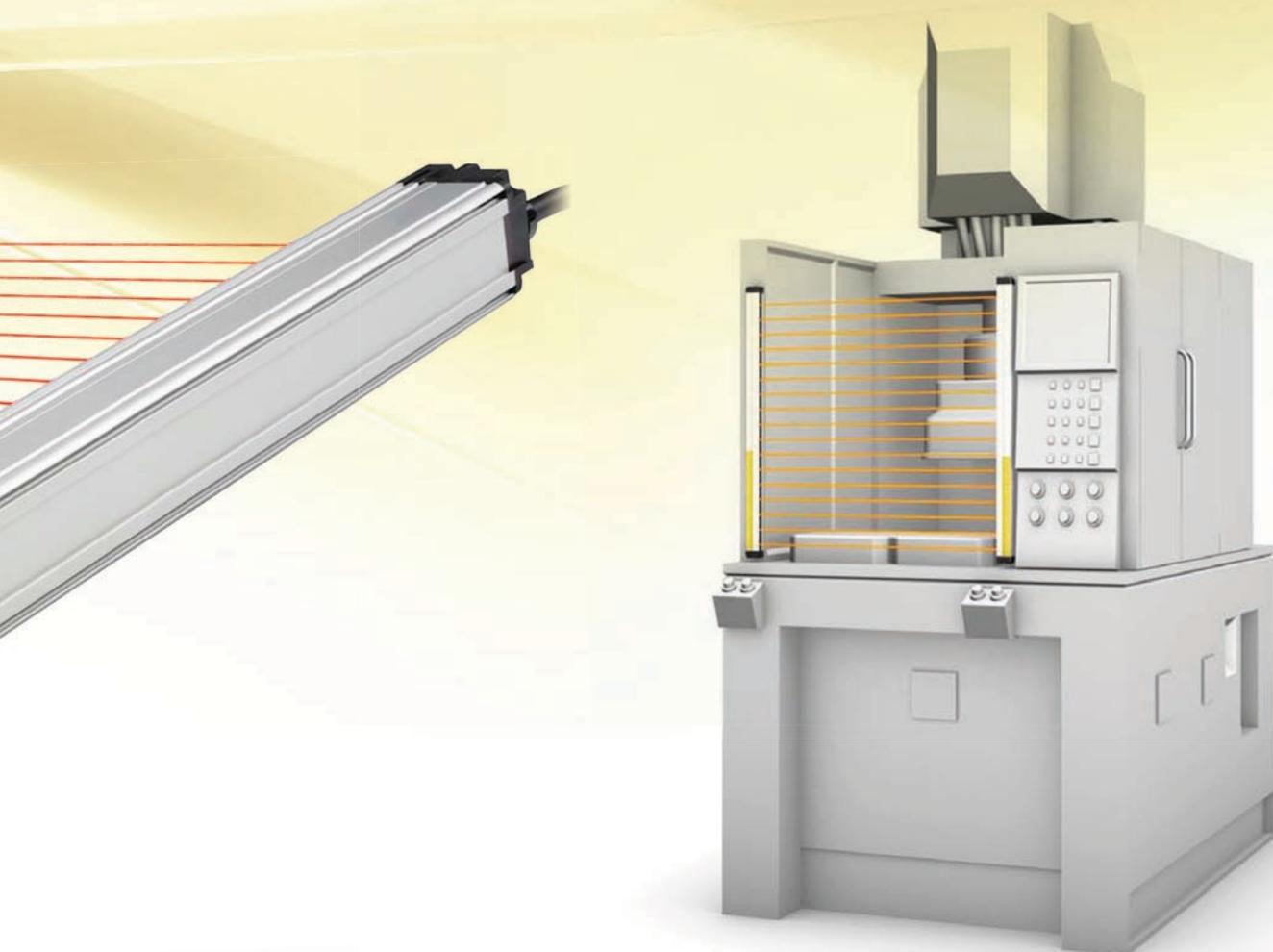


1/2 the mounting time

Fixed response time makes calculation of the safety distance is easier.

Reduced wiring, one-touch brackets and easy-to-view alignment beams all add up to cost savings.

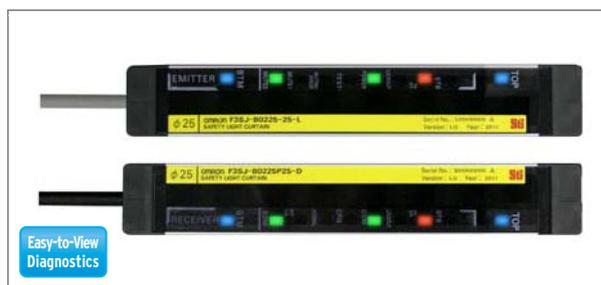
Additionally, with one fixed response time, it is know easier to calculate the safety distance.



Global Support

### Global Support

OMRON will support you through our global network



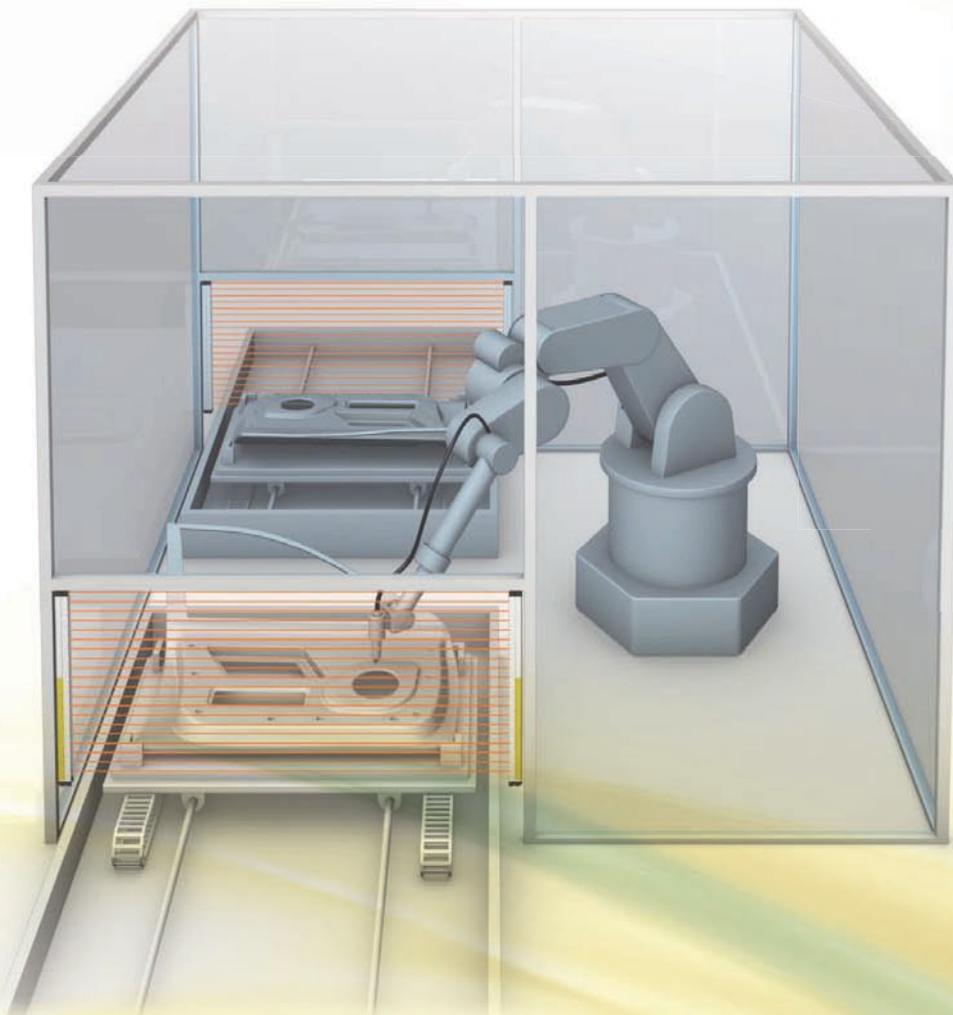
Easy-to-View Diagnostics

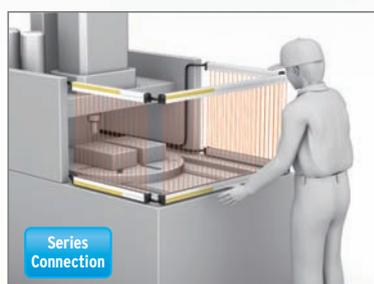
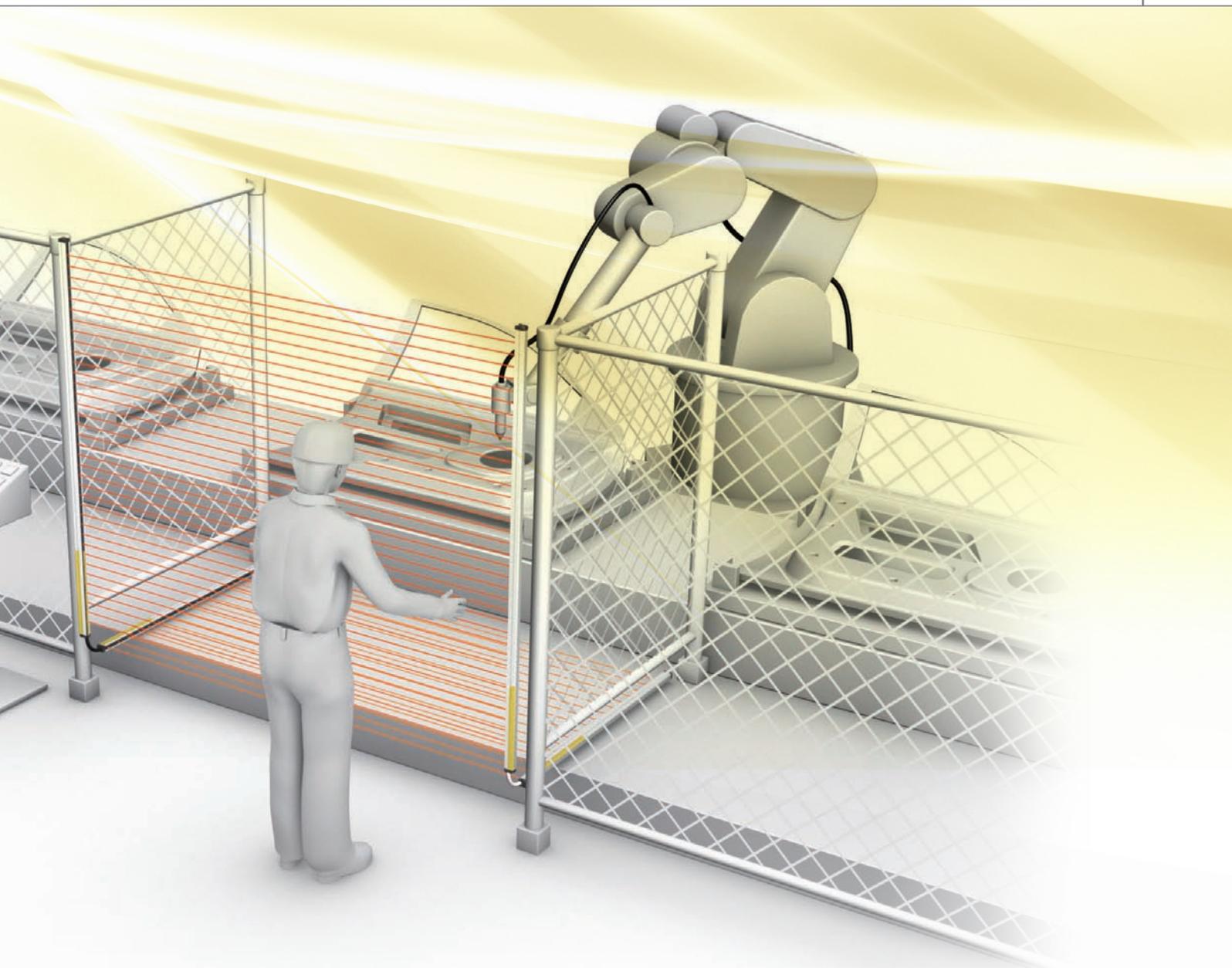
### Easy-to-view Diagnostics

These indicators enable you to intuitively know the status and cause of any error. Allowing you faster installation while reducing machine down time.

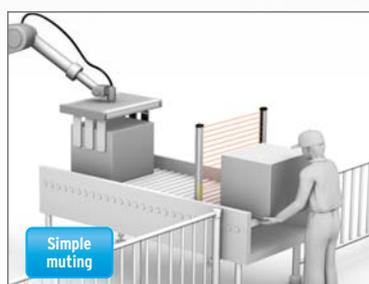
## Fits any site, equipped with muting functions and series connection: Use the **"BASIC type"**

In addition to the simple functions inherited from the EASY type, such as global support, easy-to-view indicators, the BASIC type includes series connection and simple muting functions. This enables the BASIC type to satisfy installations that require multiple safety light curtains.





**Up to three sets-connected in series**  
It is possible to connect up to three sets of safety light curtains in series. These sensors can be placed in a U-shaped or L-shaped pattern with a single power line, thus requiring less wiring.



**Instant visibility of process trouble during muting**  
The BASIC type includes a muting function which temporarily disables the safety light curtain when a workpiece passes through. In the event of any trouble occurring, the error can be instantly recognized from the pattern of the LED indicators, allowing for a fast solution.



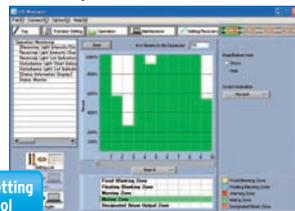
**Functions inherited from the EASY type**  
Simple functions such as universal power voltage specification, easy-to-view diagnostics, a fixed response time have been inherited from the EASY type. As a result, expect reduced work-hours at each stage of use, from design and installation to operation.

## Multi-functional for special applications such as finger protection: the "ADVANCED" type

The detection capability supports finger protection through use of 9 mm resolution. The ADVANCED type is equipped with various functions such as blanking, muting and the programming of warning zones. All settings can be done via an easy to use software tool. This Tool simplifies installations that were previously complicated, again our way of reducing cost and increasing productivity.



- Beam alignment is easier.



PC Setting Tool

Tool for setting parameters and checking the system status

With the ADVANCED type (F3SJ-A) "SD Manager", all parameters can be set and the system status can be checked with a personal computer. Complex settings are now simple to configure

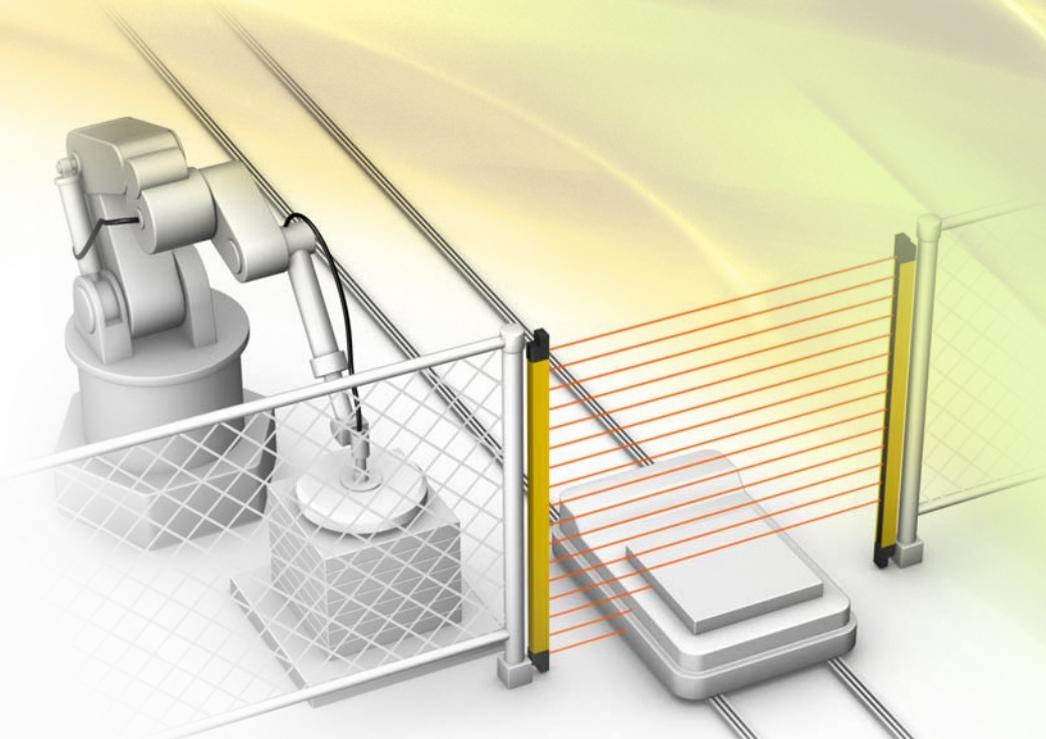
- Detection capability: 9 mm



Finger Protection

Detection capability supports finger-protection

Even if the distance from the hazard is short, we have prepared a lineup that includes safety light curtains with a detection capability of 14 mm.



**Versatile muting function possible**

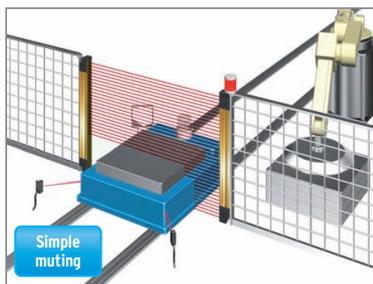
Equipped with partial muting that disables only the beams where a workpiece passes through, and position detection muting that disables the beams while detecting the position of a machine or robot.

**The blanking function disables specific beams of the Safety Light Curtain**

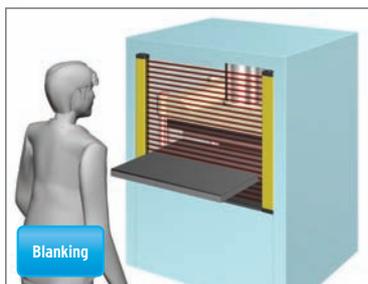
If a part of the mechanical equipment is within the detection zone of the Safety Light Curtain, the relevant beams can be disabled. This is possible not only with non-moving parts but also with moving parts.

**Setting up a warning zone to prevent unnecessary stoppage**

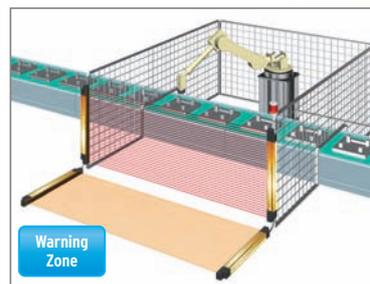
Under normal use, if an intrusion occurs in the safety zone, the machine will stop immediately. However, use of a warning zone will only notify the operator that an intrusion has occurred. This can be used to prevent carelessness resulting in machine stoppage on the part of the operator.



**Partial muting**



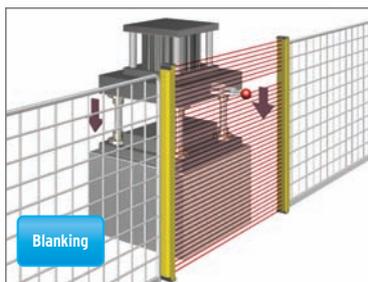
**Fixed blanking**



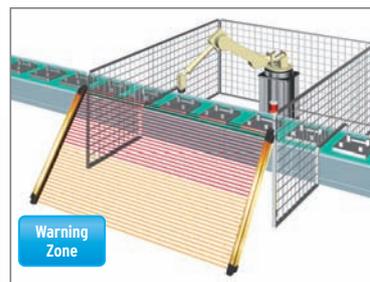
**Dividing the zone between series-connected sensors**



**Position detection muting**



**Floating blanking**



**A single sensor zone can also be divided**

## Easy and fast mounting with one-touch brackets\*

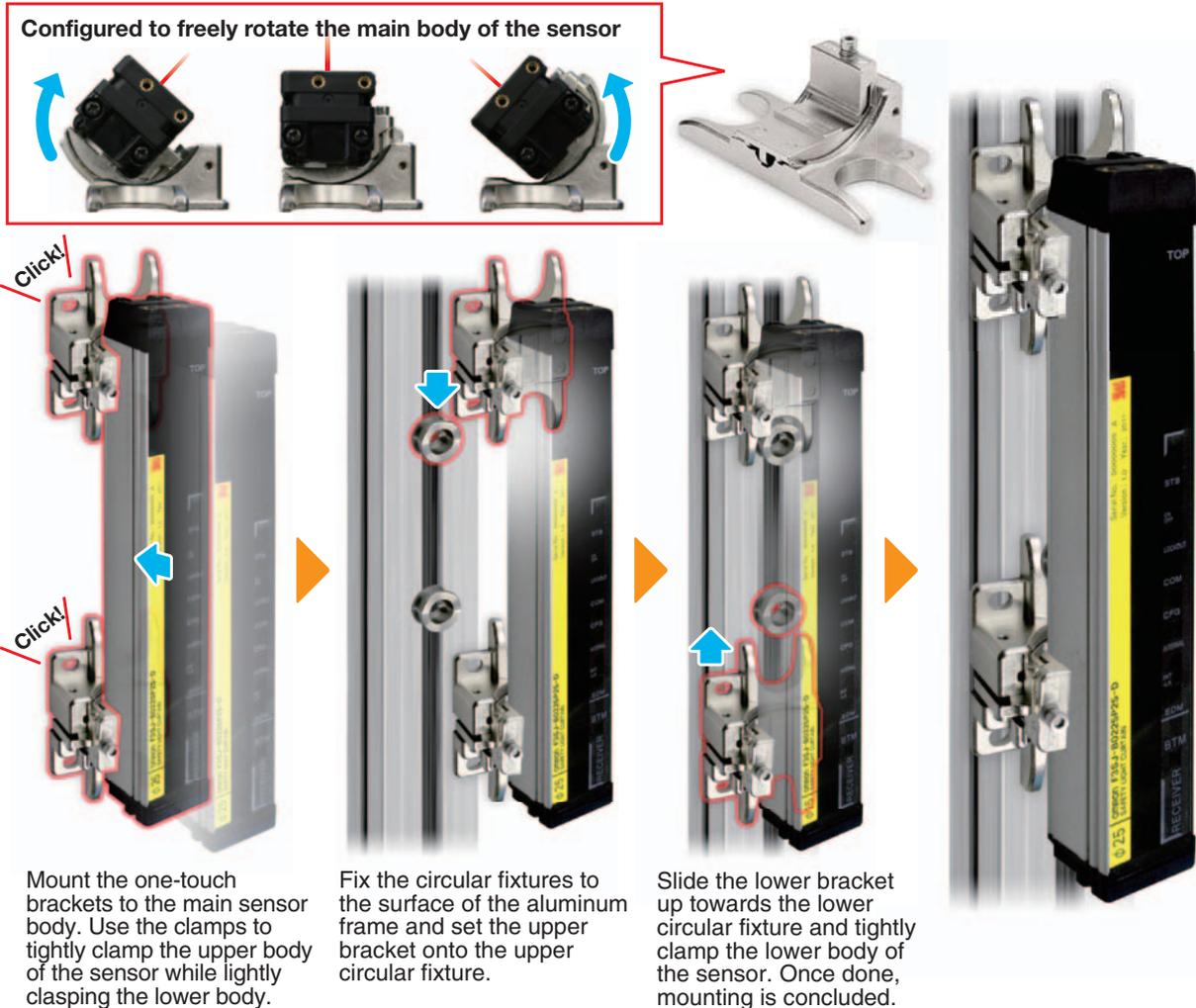
EASY

BASIC

\* Sold separately

Patented

OMRON has developed "one-touch" brackets which speed mounting to aluminum framing and reduce mounting time in half, when compared with existing models. This unique design allows for smooth horizontal movement, beam alignment is easy.



## Top and bottom blue LEDs enabling beam alignment

EASY

BASIC

Simple positional alignment can be done using the blue LEDs at the top (TOP) and bottom (BTM) of the emitter and receiver. With the blue LEDs ON, you can see at a glance that the beams' positions are correctly aligned.

