40th Anniversary MODEL

New

SF4C

Type 4 · PLe · SIL3

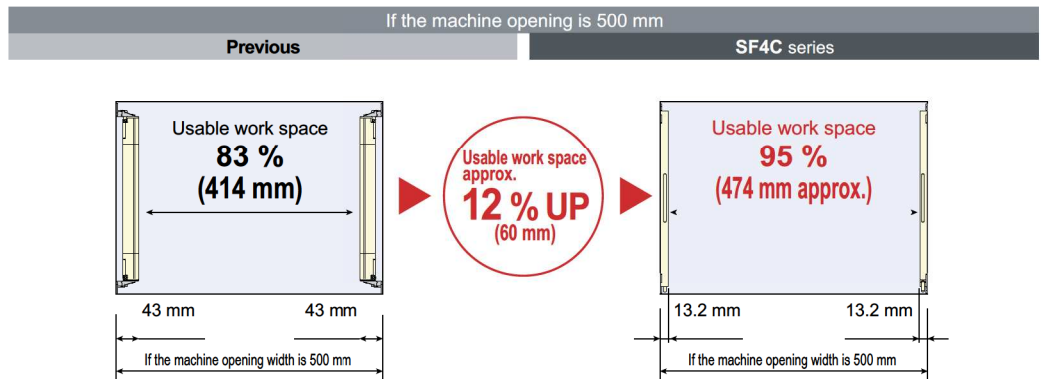**Ultra-slim light curtain machines safeguards without sacrificing productivity**

Features

■ Large built-in multi-purpose indicators

Large LED bars on each side of the light curtain provide a wide visibility indicator that can be customized for various applications by means of independent external inputs. The indicator can be used as an operation indicator, job indicator, etc.
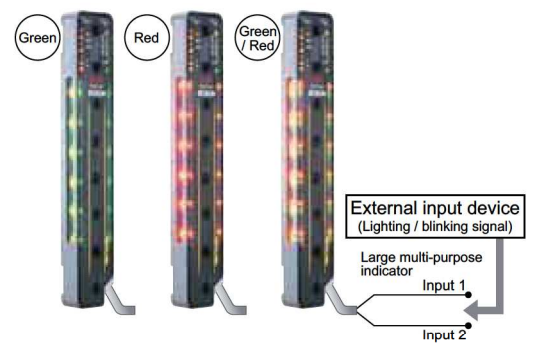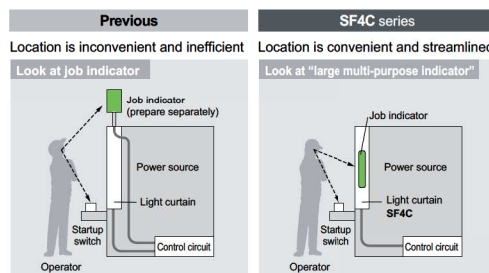
■ Slim size for efficient applications

Available work space is expanded from the previous model, and productivity is improved.

If the machine opening is 500 mm	
Previous	**SF4C** series

Usable work space
83 %
(414 mm)

Usable work space approx.
12 % UP
(60 mm)

Usable work space
95 %
(474 mm approx.)

43 mm 43 mm
If the machine opening width is 500 mm

13.2 mm 13.2 mm
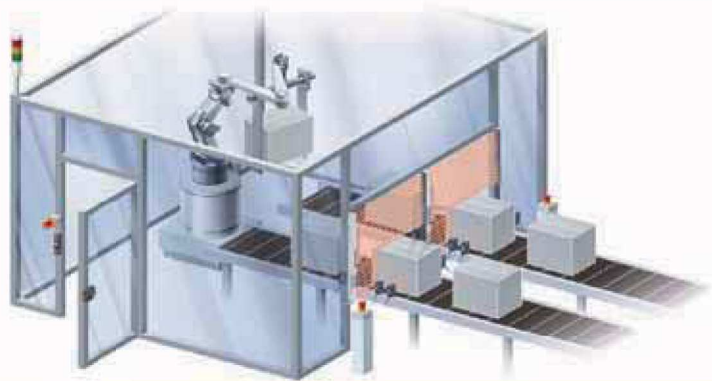If the machine opening width is 500 mm

■ Can be used in a variety of applications for simplified equipment (Large multi-purpose indicator)

The bright LED indicators located in the center of both sides of each light curtain can be illuminated green or red by using external inputs. There is no need to set up a separate indicator..
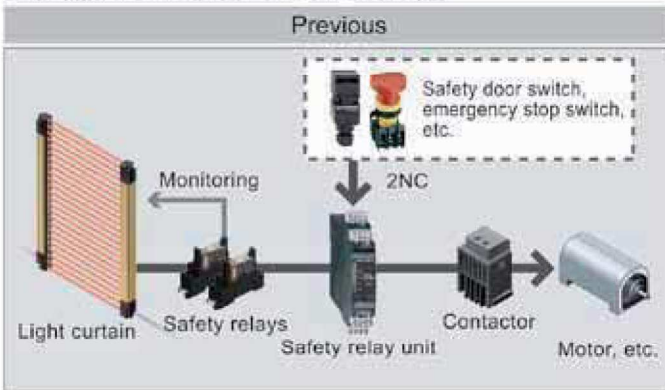
Previous	SF4C series
Location is inconvenient and inefficient	Location is convenient and streamlined
Look at job indicator	Look at "large multi-purpose indicator"

Job indicator (prepare separately)
Power source
Light curtain
Startup switch
Control circuit
Operator

Job indicator
Power source
Light curtain SF4C
Startup switch
Control circuit
Operator

Green   Red   Green / Red

External input device
(Lighting / blinking signal)
Large multi-purpose indicator
Input 1
Input 2

SF4C

## ■ Wire-saving when connecting to safety devices [safety input functions]

Contact outputs such as emergency stop switches or safety door switches can be connected to the light curtain. Also, by using the handy-controller **SFC-HC,** up to three sets of light curtains can be cascade connected for a consolidated safety output.
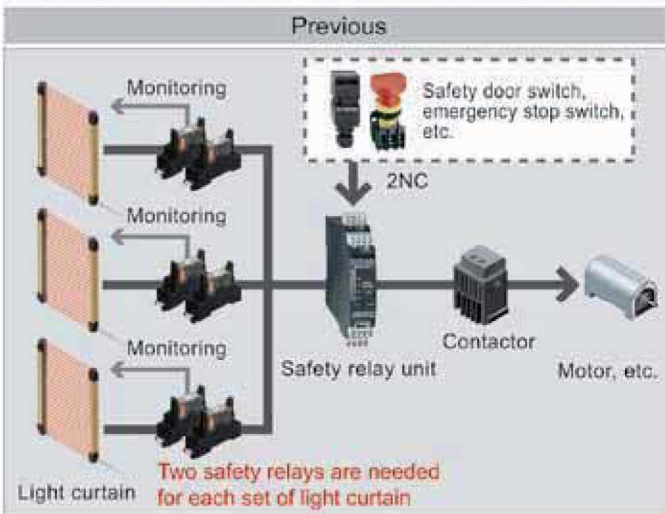
■ Direct connection of safety devices

Previous

Safety door switch, emergency stop switch, etc.

2NC

Monitoring

Light curtain   Safety relays
Safety relay unit

Contactor
Motor, etc.

A safety relay unit is needed for connecting safety devices other than light curtain.

SF4C series

Safety door switch, emergency stop switch, etc.

2NC

Monitoring

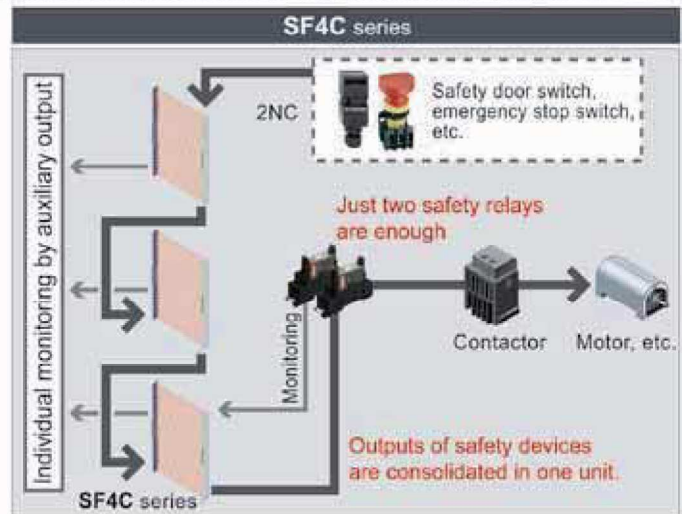SF4C series   Safety relays

Contactor
Motor, etc.
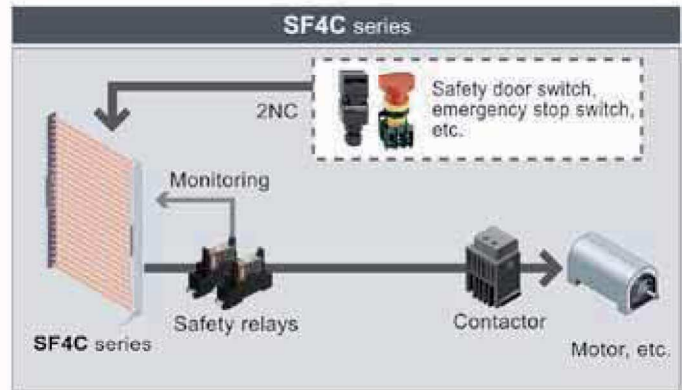
Direct connection of various safety devices is possible for a simplified safety circuit.

■ By using the handy-controller SFC-HC (available soon) up to three sets of light curtains can be cascade connected for a consolidated safety output. ▬HC

Previous

Monitoring

Safety door switch, emergency stop switch, etc.

2NC

Monitoring

Monitoring

Contactor
Safety relay unit
Motor, etc.

Light curtain   Two safety relays are needed for each set of light curtain

Three sets of light curtains require three sets of safety relays.

SF4C series

Individual monitoring by auxiliary output

Safety door switch, emergency stop switch, etc.

2NC

Just two safety relays are enough

Monitoring

Contactor   Motor, etc.

SF4C series

Outputs of safety devices are consolidated in one unit.

Individual monitoring on light curtains is possible while the outputs of three sets of light curtains and other safety devices are consolidated in one unit.

■ IP67 protection structure

An IP67 (IEC / JIS) rating is achieved with an ultra-slim size for protection from environmental factors.

■ Mutual interference is reduced without needing interference prevention lines

The light curtain is equipped with the ELCA (Extraneous Light Check & Avoid) function, which has been proven to be strong against mutual interference. Because it automatically shifts the scan timing of the light curtain in order to avoid interference, it is not necessary to wire interference prevention lines between machinery.

■ Safety, productivity, and cost reduction [muting control function]

The light curtain has a built-in muting control function that causes the line to stop only when a person passes through the light curtain, and does not stop the line when an object passes through. The muting sensors and muting lamps can be connected directly to the light curtain. Furthermore, the large multi-purpose indicators can be used as muting lamps, which contribute to less wiring troubles, improvement of safety and productivity, and cost reduction.

■ A fast response time of 7ms* for all models

A fast response time of 7ms* is unified for all models regardless of the number of beam channels. This reduces the safety distance as well as the calculation work required for the safety distance among models with different beam channels.

* When connecting safety sensors (light curtains, etc) to the safety input, the response time will be the total time of connected units.
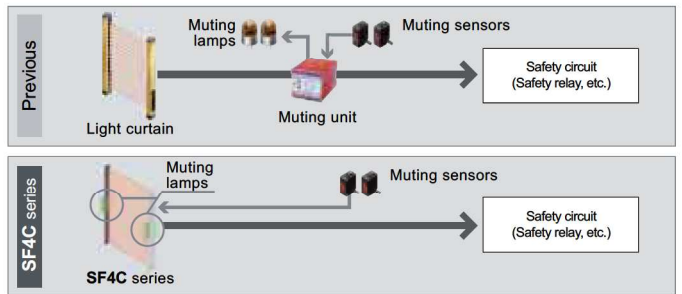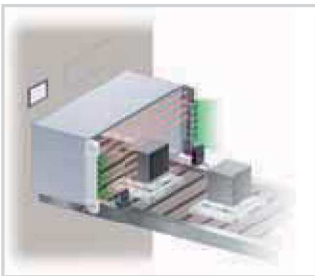

* If a failure diagnosis of muting lamp is needed as by the result of risk assessment, use the handy-controller **SFC-HC** to change the setting, and connect the muting lamp output wire (red) of this light curtain to an incandescent lamp separately.
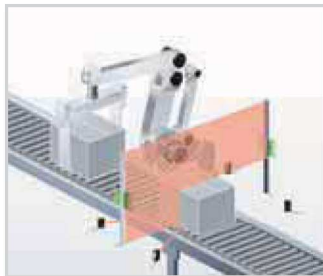
Typical Applications

Use a muting lamp

There is no need to buy and install a separate muting lamp.
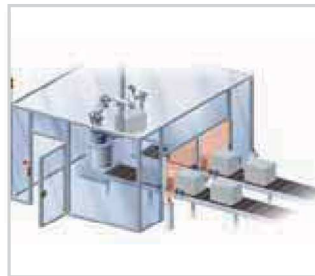
Selective muting area

Separate muting control function for each beam channel.

Industry first!

Wire-saving when connecting to safety devices (safety input function)

Technical Specifications

	SF4C pigtailed type	SF4C cable type
Type Beam pitch	Hand protection type 20mm	
Safety category	Type 4, PLe, SIL3	
Operating range	0.1 to 3m	
Protective height	160mm to 640mm	
Min. sensing object	∅25mm or more in opaque object	
Supply voltage	24V DC (+10/-15%)	
Control output	OSSD1 and OSSD2 (2xPNP or 2xNPN, switchable), max. 200mA	
Response time	OFF response: 7ms or less / ON response: 90ms or less	
Dimensions	W13,2 x protective height x 30mm	