

F3SG-SR/PG Series

Safety Light Curtain/Safety Multi-Light Beam

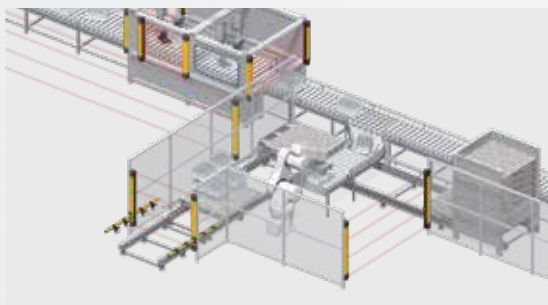


Redefining safety at manufacturing sites

We developed our F3SG-SR/PG Series light curtain to help manufacturers overcome the challenges of globalization and flexible production. This series offers a complete lineup of products that comply with global safety standards and provide a wide range of functionality across all design and maintenance needs, enabling manufacturers to construct state-of-the-art safety systems.



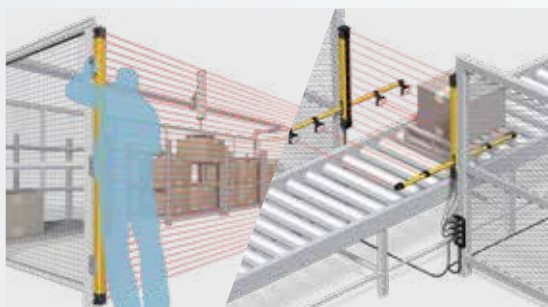
Build flexible safety systems



Design

Easy design of line safety Page 4

Flexible design for equipment Page 8



Set-up

Simple beam adjustment Page 10

Easy installation and angle adjustment Page 11

Various options to reduce wiring Page 12



Operation

Reduction in unplanned machine downtime Page 14



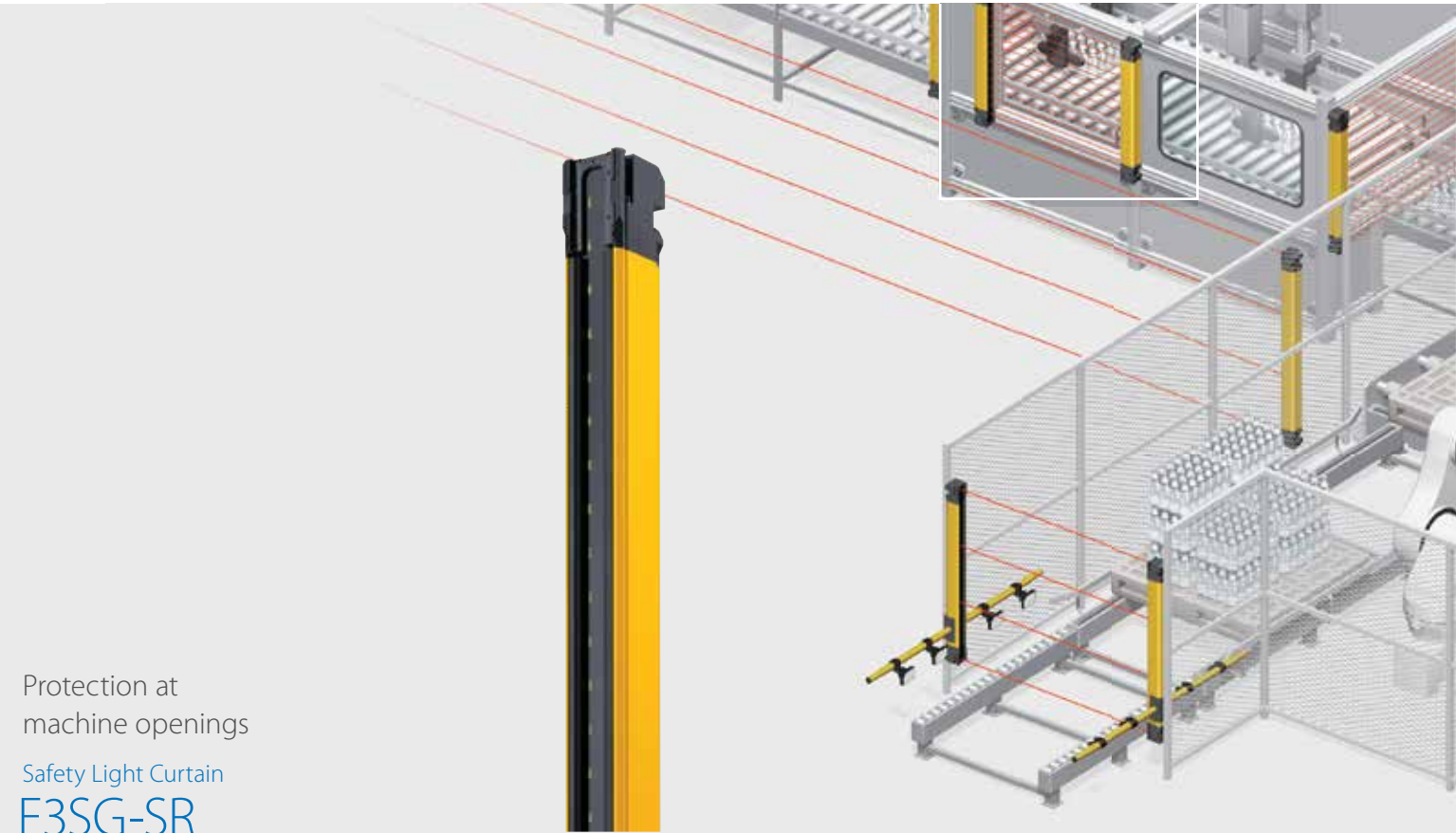
Maintenance

Simple and intuitive maintenance Page 16

Quick maintenance through ICT Page 17

Easy design of line safety

One series covers all protection applications—from machine openings to perimeter protection



Protection at machine openings

Safety Light Curtain F3SG-SR

Finger Protection

Beam gap	10 mm	Detection capability 14-mm dia.
Protective height	160 to 2,000 mm	
Max. operating range Min./Typ.	10 m / 15 m	

IP69K model available

Hand Protection

Beam gap	20 mm	Detection capability 25-mm dia.
Protective height	160 to 2,480 mm	
Max. operating range Min./Typ.	20 m / 30 m	

IP69K model available

Arm/Leg Protection

Beam gap	40 mm	Detection capability 45-mm dia.
Protective height	240 to 1,520 mm	
Max. operating range Min./Typ.	20 m / 30 m	

Body Protection

Beam gap	80 mm	Detection capability 85-mm dia.
Protective height	280 to 920 mm	
Max. operating range Min./Typ.	20 m / 30 m	

Common accessories including cables and brackets

The light curtains share optional accessories for easy design and retrofitting production lines.

Intelligent Tap
F39-SGIT-IL3

Bluetooth® Communication Unit
F39-SGBT



Lamp
F39-SGLP

NEW



Muting Sensor Arm Mounter
F39-FMA

NEW



Muting Sensor
Connection Box
F39-GCN5

NEW



Floor Mount Column
F39-ST

NEW

Mount-Column
Adjustable Base
F39-STB

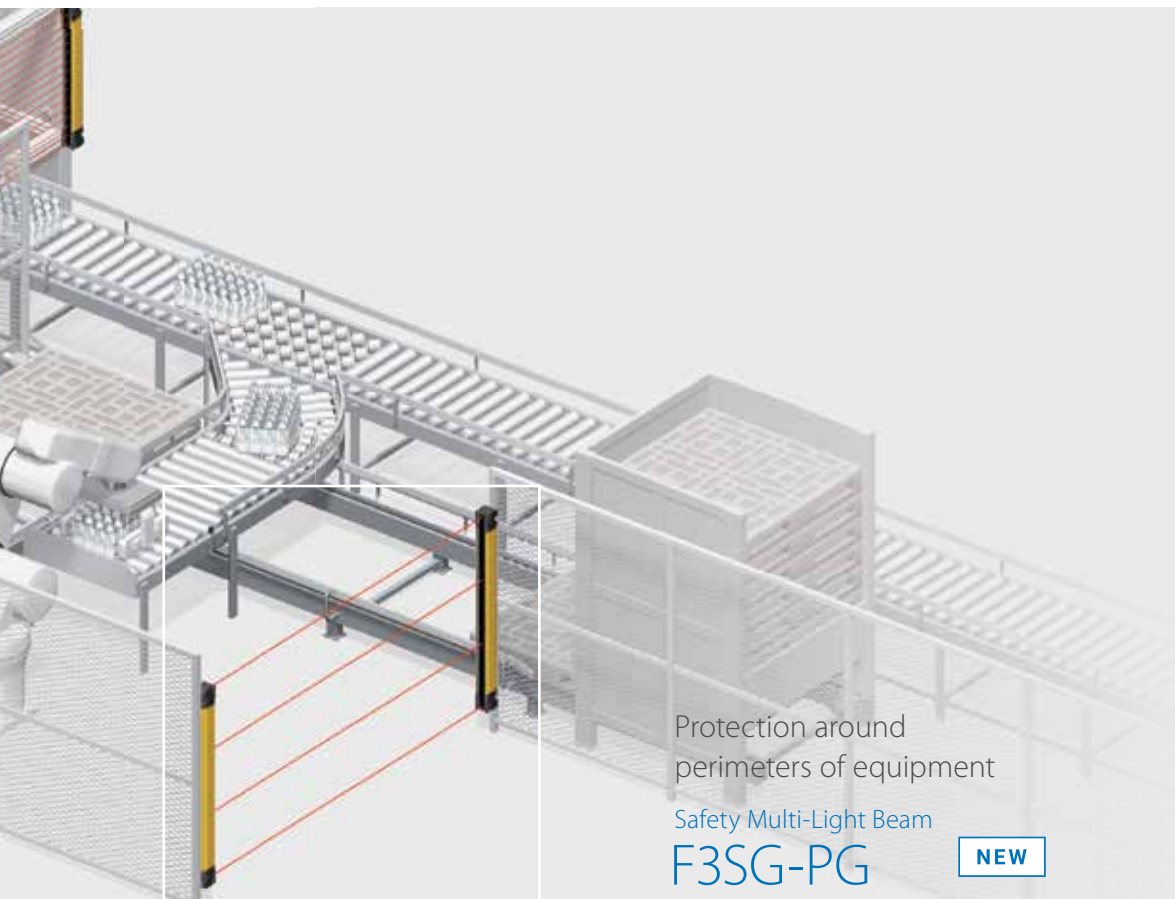
NEW



Mirror Column
(for F3SG-SR
Safety
Light Curtain)
F39-SML

NEW

(The mount-column adjustable base is sold separately.)



Protection around
perimeters of equipment

Safety Multi-Light Beam F3SG-PG

NEW



Perimeter Access Guarding

Beam gap	300/400/500 mm
Product length	670 to 1,370 mm
Max. operating range Min./Typ.	20 m/30 m



Perimeter Guarding Long Range

Beam gap	300/400/500 mm
Product length	630 to 1,370 mm
Max. operating range Min./Typ.	70 m/110 m



Perimeter Guarding Passive Mirror

Beam gap	300/400/500 mm
Product length	670 to 1,370 mm
Max. operating range Min./Typ.	5 m/8 m

Helps build safety systems for machines all over the world

Mirror Column
(for F3SG-PG
Safety
Multi-Light Beam)
F39-PML

NEW



Certification to worldwide safety standards*.

* We will apply for TS Mark, S Mark, and KCs Mark.



PNP/NPN selection for global compatibility.



IP67G rated seal for water and oil resistance. IP69K option available*.

* (Safety Light Curtain
IP69K model F3SG-SR-K)

NEW

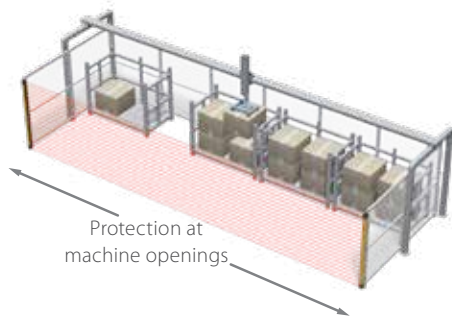


Flexible design to fit your equipment

Broad industry lineup to meet your needs for flexible production line design

Long operating range thanks to unique optical design

The long-distance sensing capability enables reliable detection even in harsh environments.



Safety Light Curtain

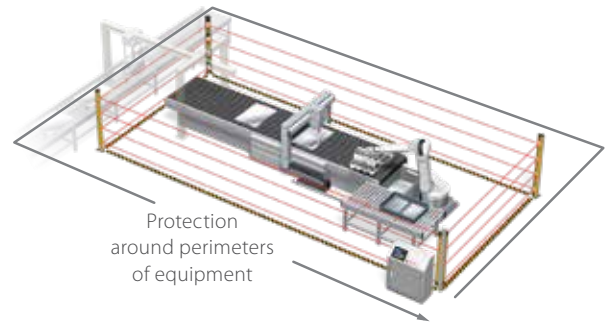
F3SG-SR
Series

20m Min.
30m Typ.

World's longest class*

The high-power optical system provides stable detection up to 20 m even in harsh environments.

* Except for detection capability of 14-mm dia.



Safety Multi-Light Beam

F3SG-PG
Series

70m Min.
110m Typ.

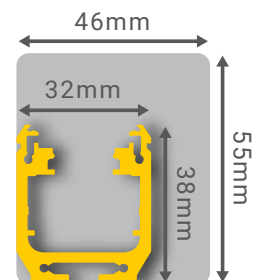
Patent pending

When mirror columns are installed in three corners: 50m Min./80m Typ.



Omron's unique compact design

The F3SG-SR Safety Light Curtain and F3SG-PG Safety Multi-Light Beam share the same compact housing, making the mechanical design more flexible.

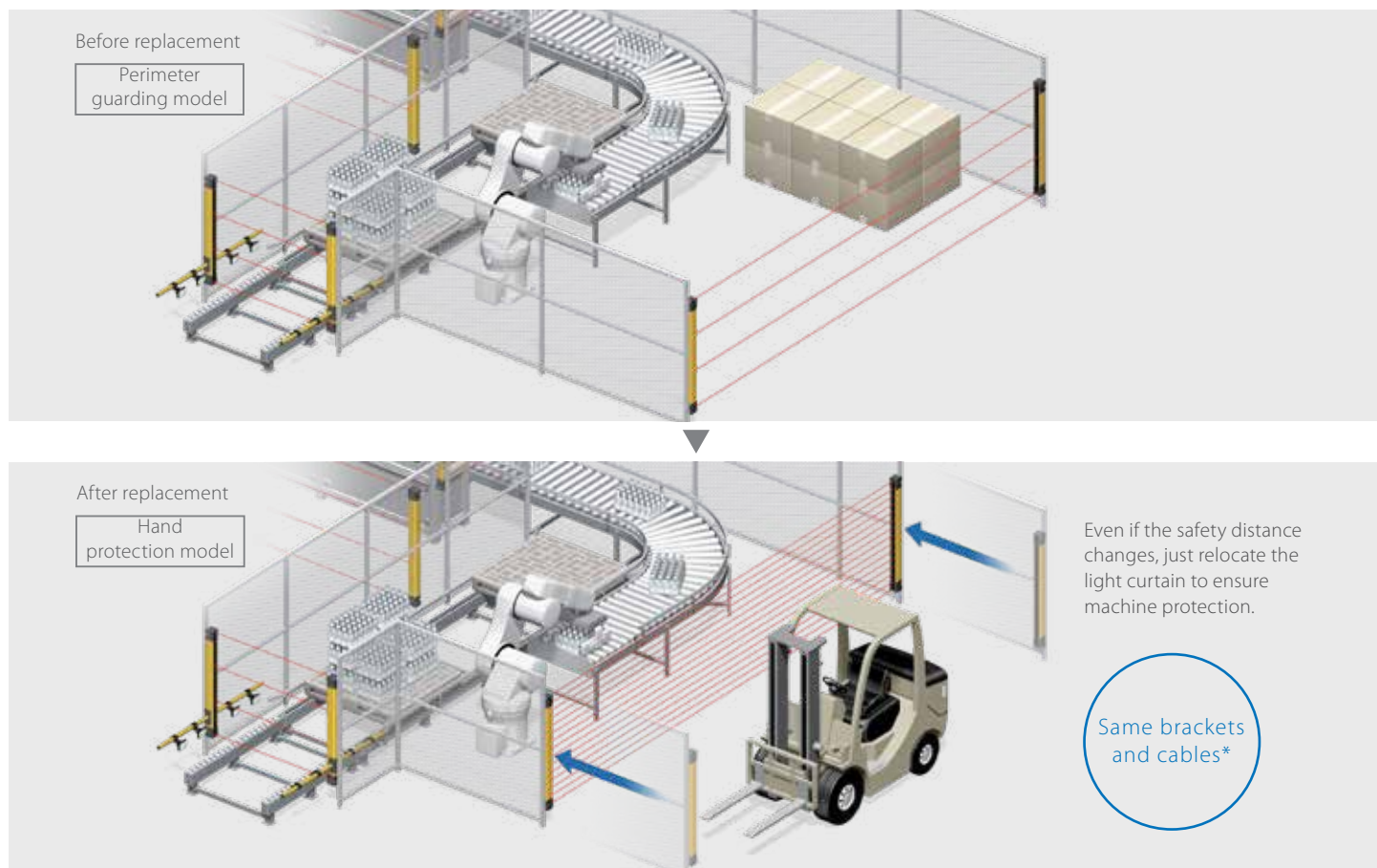


* Compared with OMRON Robotics and Safety Technologies, Inc's PA46 Perimeter Access Guarding Device. (Based on Omron investigation in June 2018)

Easy line layout changes

Simply replace a light curtain using the same accessories because the F3SG-SR Series and F3SG-PG Series share the same housing. There is no need to install different accessories for the new light curtain.

Example : In order to secure a larger working space by installing the light curtain closer to the machine, the perimeter guarding model is replaced with the finger protection model



Just replace the light curtain with the same protective height*

F3SG-SR Series lineup

● Standard model ○ Flexible height model (Increments of 40 mm)

Protective height (mm)	160	200	240	280	320	360	400	440	480	520	560	600	640	670	680	720	760	800	840	880	920	960	970	1000	1040	1070	1120	1200	1280	1360	1370
Finger Protection	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hand Protection	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Arm/Leg Protection																															
Body Protection																															

Protective height (mm)	1400	1440	1520	1600	1680	1760	1800	1840	1920	2000	2080	2280	2480
Finger Protection	○	○	○	○	○	○	○	○	○	○	○	○	○
Hand Protection	○	○	○	○	○	○	○	○	○	○	○	○	○
Arm/Leg Protection													
Body Protection													

F3SG-PG Series lineup

Product length (mm)	160	200	240	280	320	360	400	440	480	520	560	600	640	670	680	720	760	800	840	880	920	960	970	1000	1040	1070	1120	1200	1280	1360	1370
Perimeter Access Guarding																															
Perimeter Guarding Long Range																															
Perimeter Guarding Passive Mirror																															

* Except for some models and optional accessories. See page 28 and 29 for details.

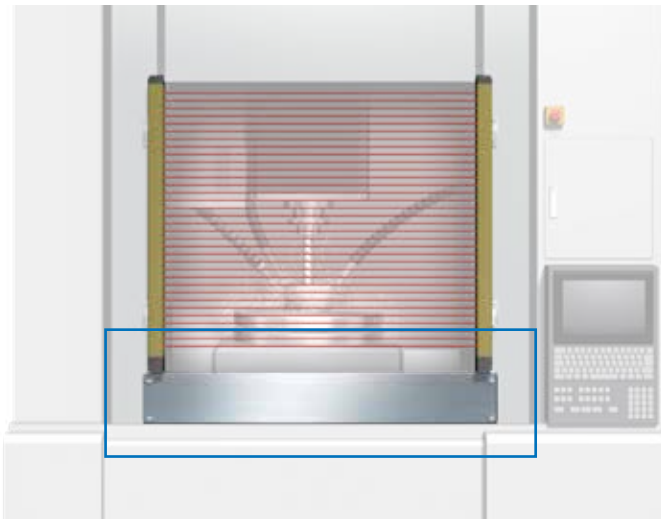
Flexible design to fit your equipment

Perfect fit

Protective heights are available in increments of 40 mm up to 1,000 mm*. The perfect protective height for any area ensures safety and eliminates the need for additional protective measures.

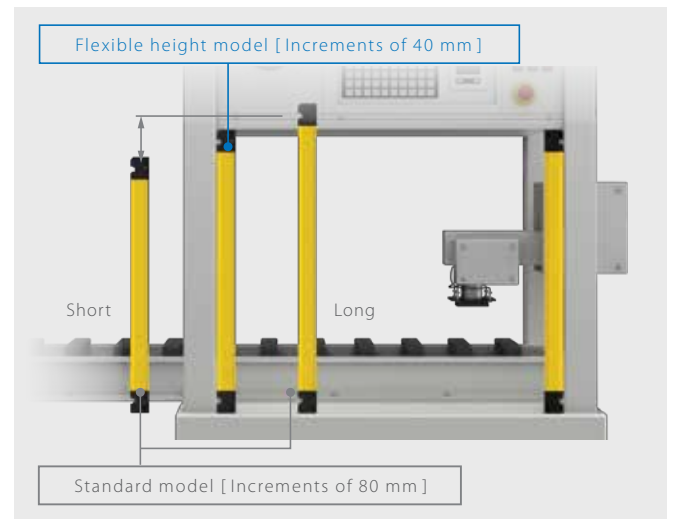
Problem

The light curtain does not completely fit the protected area and requires additional measures (e.g., adding extra guarding).



F3SG-SR*

The flexible height model requires no additional guarding saving installation time and money.



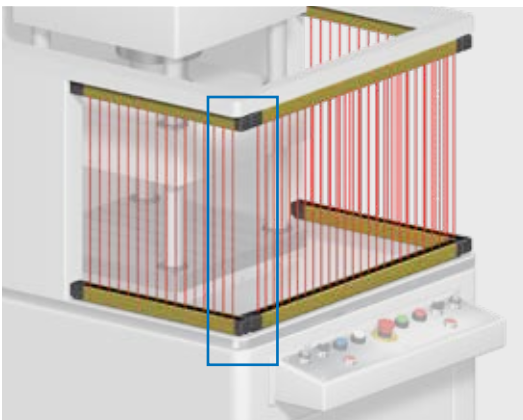
* F3SG-SR Finger and Hand Protection models only.

No dead space*

The F3SG-SR Series eliminates dead space even when light curtains are series-connected or U-shape connected.

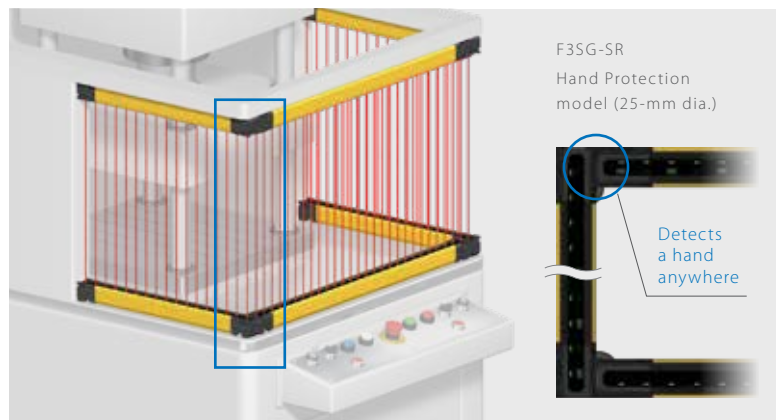
Problem

Dead space exists at the joint.



F3SG-SR*

Eliminates dead space and ensures safety.

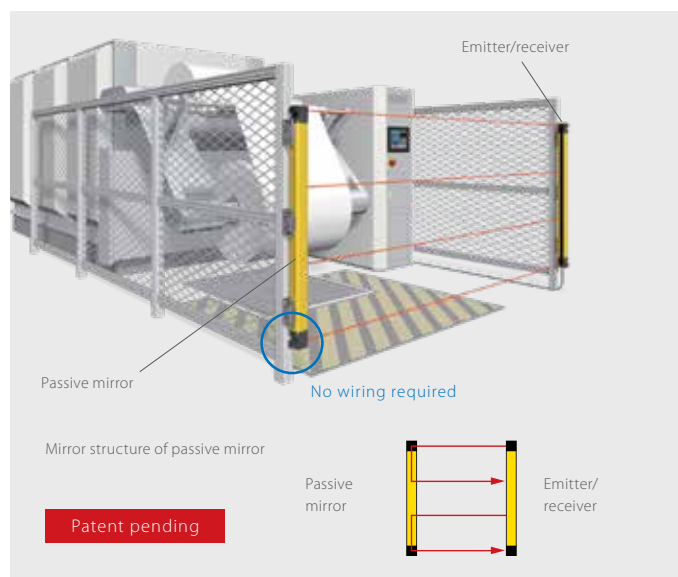


* Except for F3SG-SR Finger Protection models.

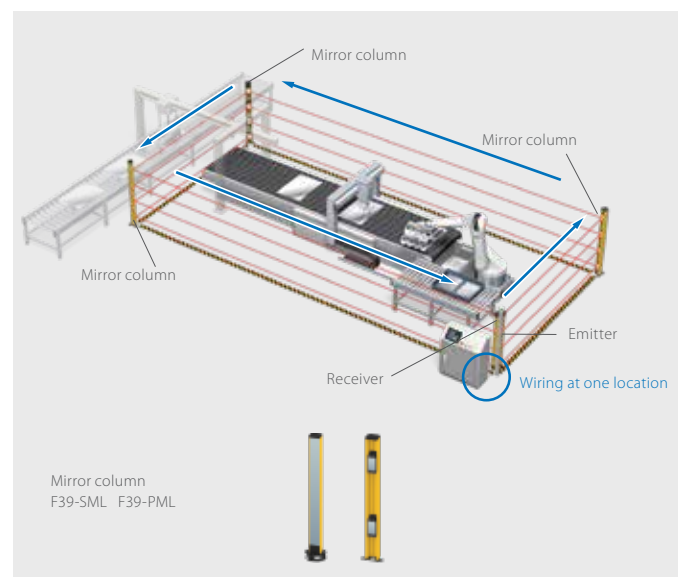
Reduce wiring for a flexible design

The F3SG-PG-C Perimeter Guarding Passive Mirror requires wiring only the emitter/receiver. The use of mirror columns allows for protection around perimeter of equipment, without wiring multiple locations. This saves design and wiring time.

Wiring only the emitter/receiver

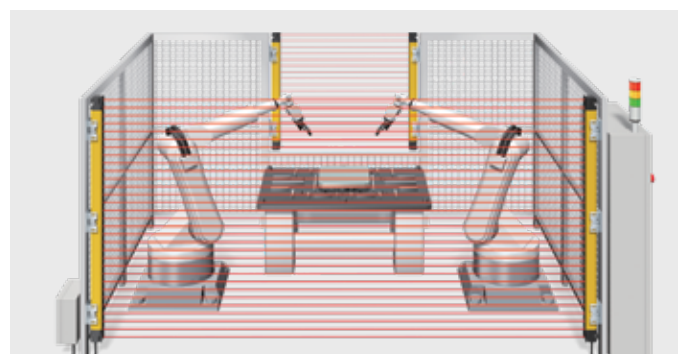


Wiring at one location for full equipment perimeter protection



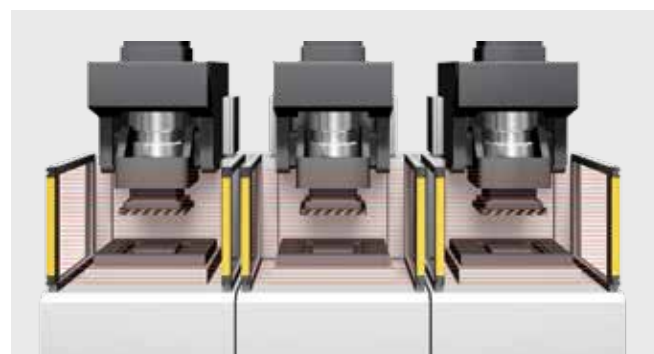
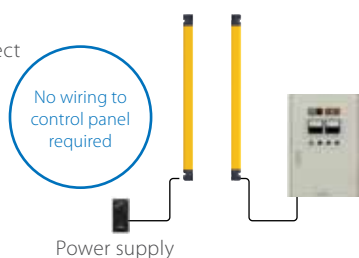
Two different synchronization systems

Choose from two different methods of synchronization between the emitter and receiver to suit your equipment.



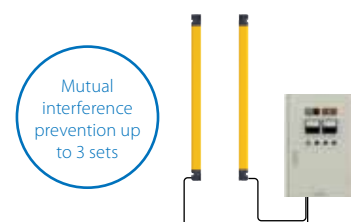
Optical synchronization

No sync lines are required. Connect only emitter to power supply.
Mutual interference prevention:
Up to 2 sets



Wired synchronization

Mutual interference prevention:
Up to 3 sets



Quick and easy beam adjustment

Color indication of beam status simplifies adjustment and saves time

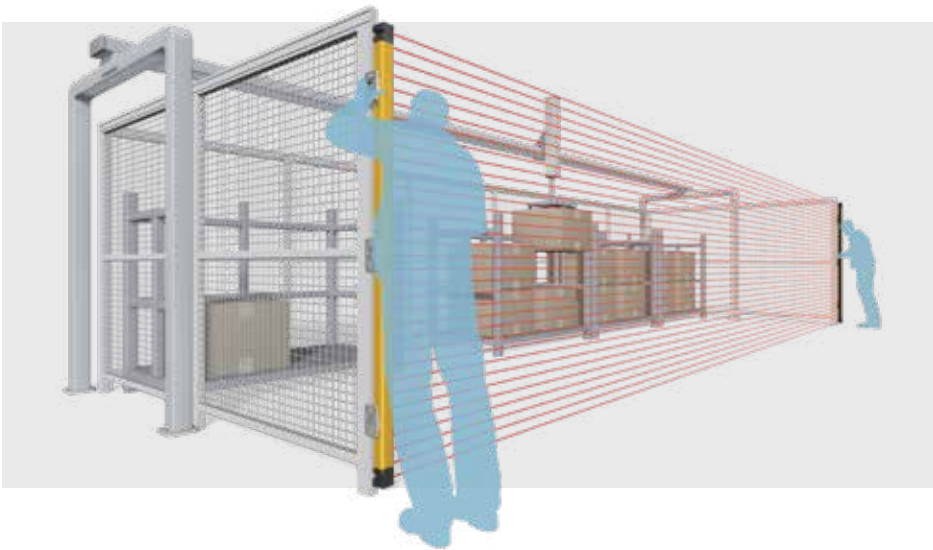
Area Beam Indicator (ABI) for an at-a-glance check of beam status

Patent pending

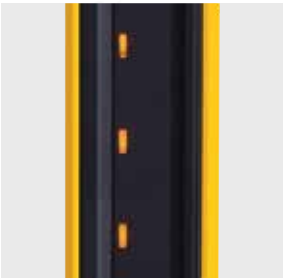
ON/OFF status of the light curtain plus low light intensity indicators provide immediate beam status and aid in long distance alignment.



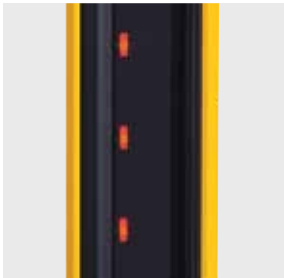
Easy to see



Stable state
Green :
Safety outputs ON
The beams are unblocked.



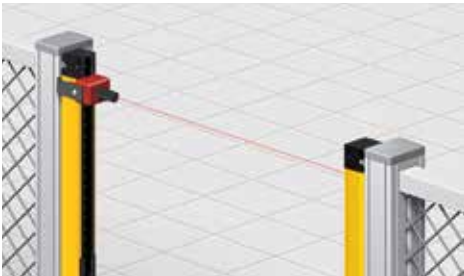
Low light intensity
Orange :
Safety outputs ON
Adjust beams or check if the light curtain is dirty.



Beams blocked
Red :
Safety outputs OFF*
The beams in the area are blocked.

* The indicator of an unblocked area is OFF.

The images of indicator illumination may vary somewhat from the actual products.



Laser Alignment Pointer
F39-PTG



Assists with beam adjustment. Easy-to-see laser beam shows the sensor orientation.

Easy installation and angle adjustment

Multiple accessory options to reduce installation time. Simplify angle adjustment without relying on advanced engineering expertise.

Reduce installation time and easily adjust beams after installation without relying on the expertise of experienced engineers.

Easy beam adjustment

Problem

When using a protective cover, it is difficult to adjust the beams after installation, and the protection cover is attached.



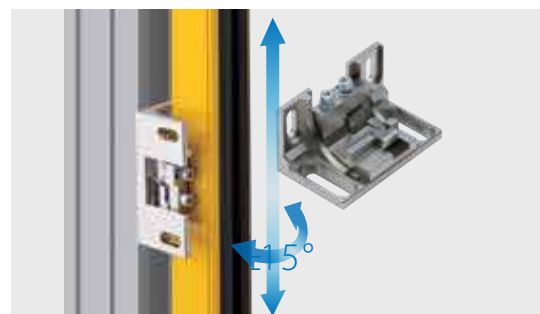
F3SG-SR/PG

The rugged metal housing of the light curtain does not need a protection cover. Beams can be adjusted using optional brackets.



Adjustable Top / Bottom Bracket
F3SJ, F3SN Adapter
F39-LSGTB-SJ

This bracket used at the top and bottom of the light curtain provides horizontal adjustment of $\pm 22.5^\circ$.



Adjustable Side-Mount Bracket
(Intermediate Bracket)
F39-LSGA

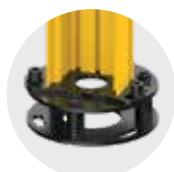
This bracket provides horizontal adjustment of $\pm 15^\circ$ as well as vertical position adjustment.



Floor Mount Column
F39-ST

This column can be installed independently of equipment or fences.

Flexible
protection



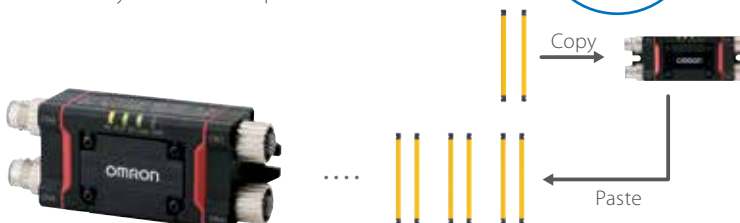
Mount-Column
Adjustable Base
F39-STB

(The mount-column adjustable base is sold separately.)

Intelligent Tap
F39-SGIT-IL3

Settings can be duplicated between the same light curtain models without needing a PC, reducing installation time and effort. Backed up settings are automatically restored when powered on.

Programming
without PC

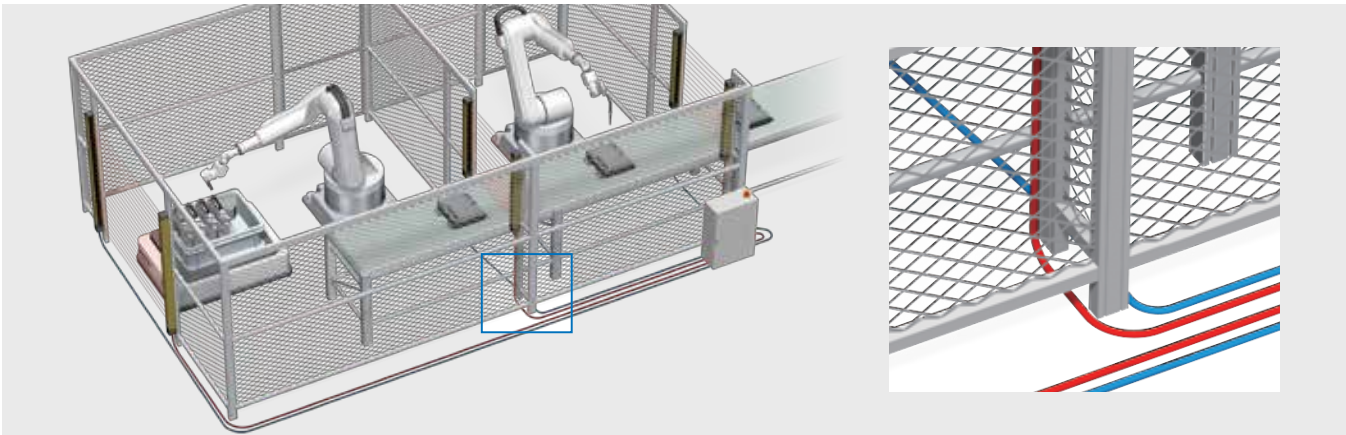


Reduction in wiring minimizes installation costs

Simple wiring around large equipment

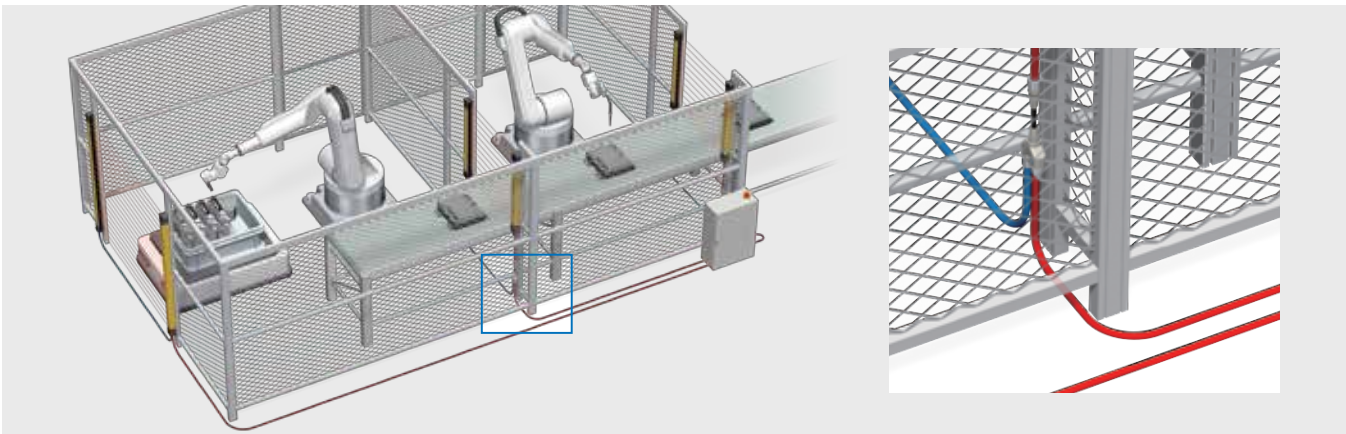
Problem

Long wire runs can be problematic and costly.



F3SG-SR/PG

The reduced wiring system lessens the number of cables and terminal blocks as well as wiring time.



Reduced wiring connector



Y-Joint Plug /
Socket Connector
F39-GCNY2

Emitter Receiver

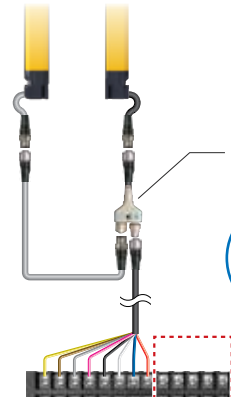


13-pair terminals

Reduced wiring



Emitter Receiver



8-pair terminals

Saving wiring and
space

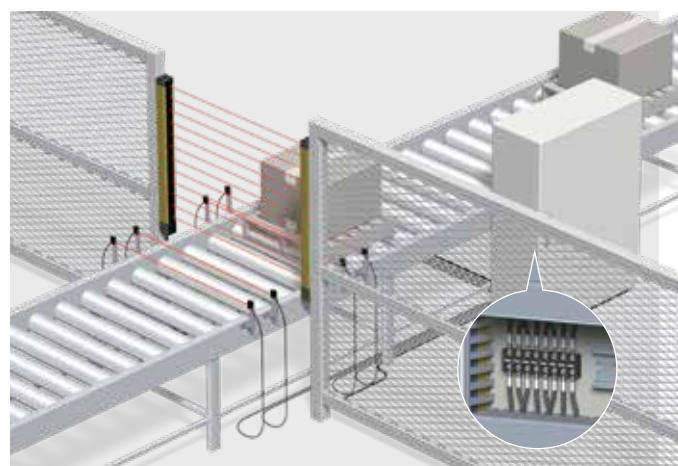
Up to
100m

One cable connection to control panel

Options provide simple wiring for muting.

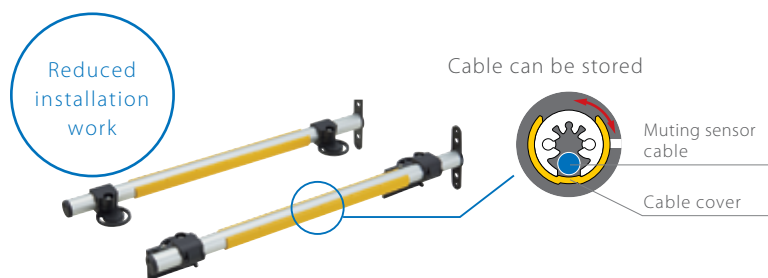
Problem

Light curtains are often used with muting sensors, complicating the wiring in control panel.



Muting Sensor Mounting Arm Brackets F39-FMA

The muting sensor arm mounter facilitates installation of a muting sensor.



Note : The E3Z Muting Sensor is sold separately.

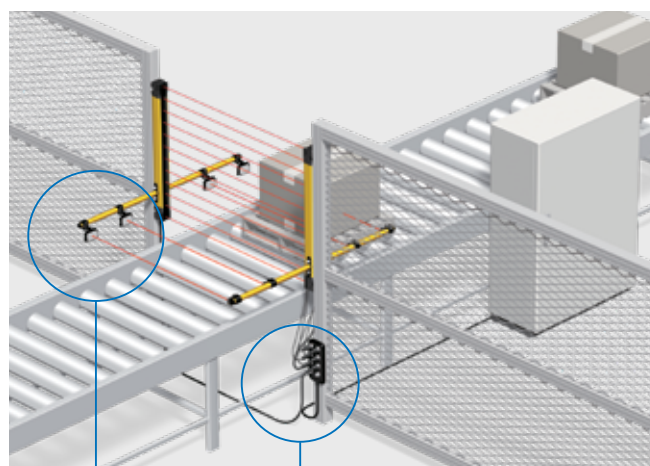
Smartclick connectors to quickly connect cables



Smartclick is a registered trademark of OMRON Corporation.

F3SG-SR/PG

Options to reduce wiring simplify the installation of muting sensors.



Muting Sensor Connection Box F39-GCN5

The connection box simplifies wiring for muting, and only one cable is run to the control panel.



Insert fully



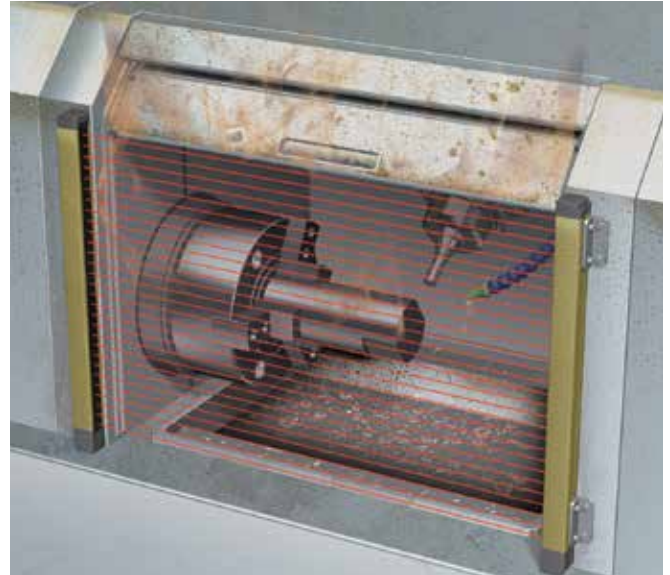
Robust design ensures stable operation in any environment

Light curtains tend to malfunction in harsh environments



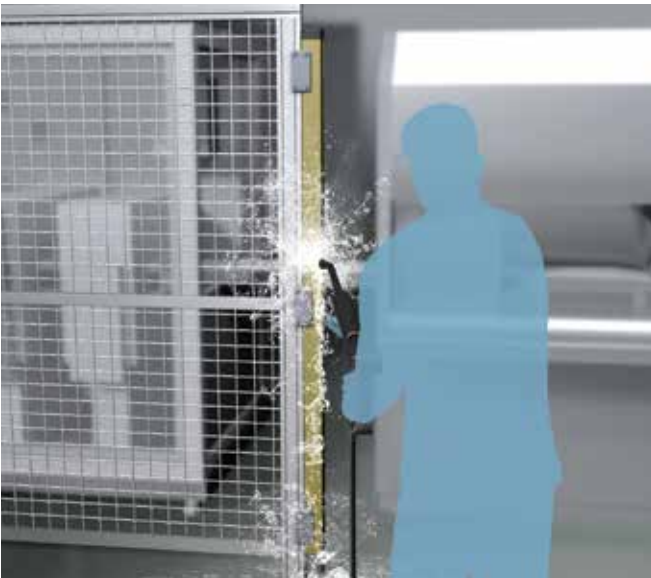
Cold storage warehouse

Safety measures cannot be implemented because light curtains cannot operate at such low temperatures.



Metal working process

Oil mist penetrates the light curtain causing a failure.



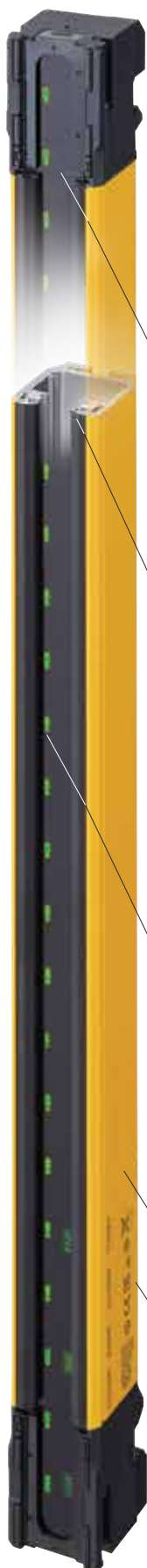
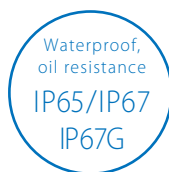
Food processing line

Cleaning solution that gets inside the light curtain during machine wash-down causes failure.



Harsh environment use

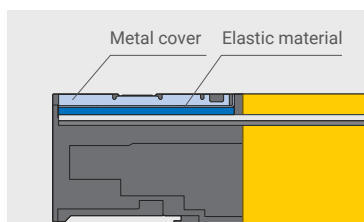
The spattered or dusty optical surface of the light curtain causes a malfunction or an unplanned machine stop.



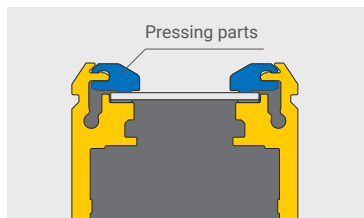
Tightly sealed structure improves environmental resistance

The unique housing structure firmly compresses the optical surface, ensuring a leak proof seal, which improves the environmental resistance of the housing.

Patent pending



Technology 1 to tightly seal the cap



Technology 2 to tightly seal the housing

IP69K model for high-pressure washdown applications

F3SG-SR-K



High-power optical system provides stable detection



The maximum operating range of the F3SG-SR Safety Light Curtain is 20 m and of the F3SG-PG Safety Multi-Light Beam 70 m.

Metal housing increases ruggedness

Laser-marked information withstands harsh environments

Straightforward Maintenance

Color indicators provide clear error diagnosis

The light curtain status can be checked at a glance.



Status indicator

Clear LED indicators with labels help perform predictive maintenance by dirt detection and determine the optimal replacement timing.

Colors and patterns indicate the status

Status indicator *	Color	Status
	Red/ Illuminated	LOCKOUT state due to a recoverable error
	Red/ Blinking	LOCKOUT state due to a replacement-recommended error
	Orange/ Illuminated	Safety outputs are instantaneously turned OFF due to ambient light, vibration, or noise
	Orange/ Blinking	The Intelligent Tap is in LOCKOUT state

* The status indicator is used for the 14-mm detection capability model.

Lamp

Output status can be checked at a glance.
F39-SGLP



Output information can be assigned to the lamp and ABL.



Status, such as light intensity drop, can be checked from a distance.

Back up and restore settings with Intelligent Tap

Replacement and setting time during maintenance can be reduced by 90%*.

Plug & Play for quick replacement

Install the Intelligent Tap to automatically copy the settings of the replaced light curtain to a new one. Anyone can easily replace light curtains and immediately restart the machine.

Replacement and setting time reduced by 90%*



Intelligent Tap
F39-SGIT-IL3



* Based on an Omron investigation in June 2018.

IO-Link facilitates detailed data monitoring

Status visualization

Various devices can be connected via IO-Link.*¹

For example, low light intensity due to dirt on the light curtain can be displayed on the monitor, enhancing preventative maintenance prior to an erroneous detection.

IO-Link



No PC
required
on site

Easy on-site monitoring

The Bluetooth communication unit allows you to monitor information about device stoppages on mobile devices.

Bluetooth®

SD Manager 3
Mobile APP



Note 1. Screen images for illustration purposes only.
2. You need to create screens.

Process data

- Auxiliary output status *²
- Muting input status
- Sequence error information
- Unstable state information (each ch)
- Power voltage information
- OSSD output status
- Reset/EDM/override input status
- Instantaneous block information (each ch)
- Light curtain/Intelligent Tap lockout information

Service data

- Light curtain information
- Light intensity information (1 byte: 0-255)
- Light curtain settings
- Light curtain internal status information
- Intelligent Tap power-on time information
- Intelligent Tap information
- Error log (4 errors)

Requirements

Android™ 7.0 or higher



Startup screen



Error log screen



Light level monitoring

System configuration example



IO-Link

Note 1. Screen images for illustration purposes only.
2. You need to create screens.

*1. Refer to the IO-Link Series Catalog (Cat. No. Y229) for details. *2. Auxiliary output can be set using the SD Manager 3.

Easy setting via PC software

SD Manager 3

The configuration tool allows you to easily monitor status and modify settings without using a safety controller.



Manually loaded machining : PSDI



PSDI*, provided as standard, reduces operator effort and increases productivity

There is no need for the operator to press a two-hand control switch, saving operating time and increasing operating efficiency.

Single break

The machine restarts when the light curtain is interrupted and reset once.

Example : Manual loading and automatic unloading press

Double break

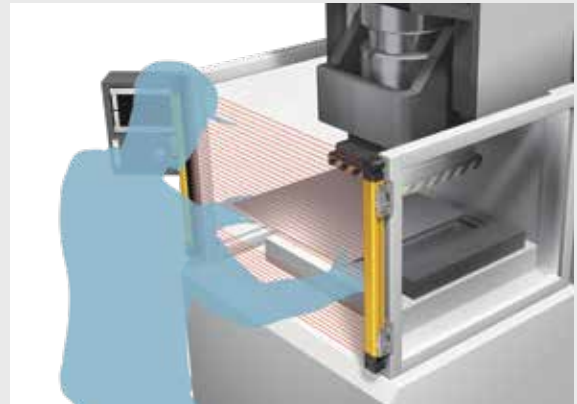
The machine restarts when the interruption and reset are repeated twice.

Example : Manual loading and manual unloading press

* PSDI : Presence Sensing Device Initiation

Read the User's Manual (Cat. No. Z405) before using.

Note: Comply with laws and regulations in the countries where the machine operates.



Dangerous restart prevention : Pre-Reset

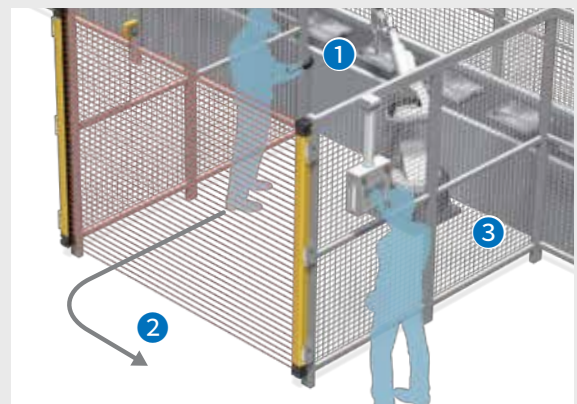


The Pre-Reset function prevents possible accidents

This function prevents the restart of equipment while an unseen worker is still near the robot, ensuring operators' safety.

- 1 Press the pre-reset switch inside the hazardous zone.
- 2 Get out of the hazardous zone.
- 3 Press the reset switch in the control panel to restart the light curtain.
The machine is ready for restart.

The equipment cannot be restarted until the pre-reset switch of the light curtain is pressed and the light curtain is reset.



Ignoring interrupted beams : Reduced Resolution



Reduced Resolution changes the detection capability of the light curtain

Even when objects (with a size of 1 to 3 interrupted beams) are present this function ignores them and keeps the safety outputs ON. This helps maintain productivity.

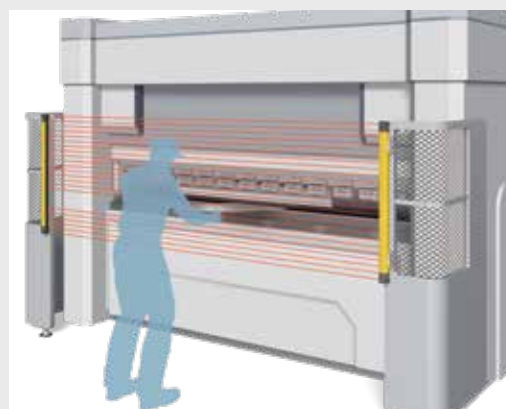
Example : Arm and body protection

Safety output is kept ON even if worker's finger and an object interrupt 2 beams because they are allowed to enter.



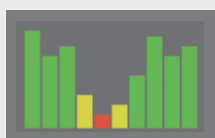
When worker's arm or body, which interrupts 3 beams is detected, safety output is turned OFF.

Note : Ensure that the desired safety distance is maintained.



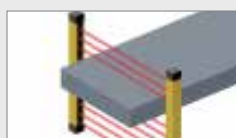
Built-in standard safety functions

Monitoring

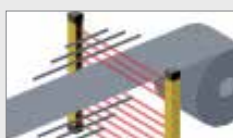


Incident/Ambient Light Level Information

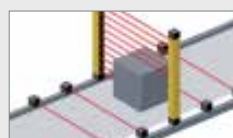
Safety function setting



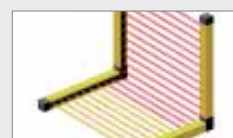
Fixed Blanking



Floating Blanking

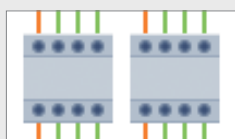


Muting/Override



Warning Zone

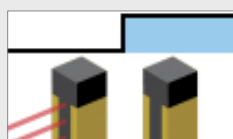
I/O setting



Interlock/External Device Monitoring

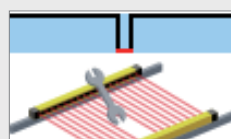


Teach-in Input



External Test Input

Operation state change

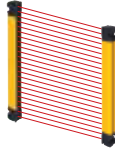
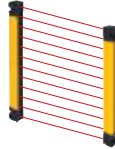
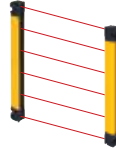
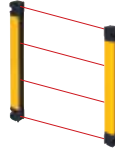

































Response Time Adjustment



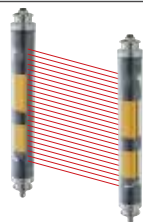
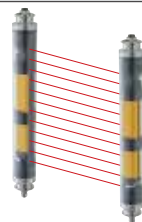
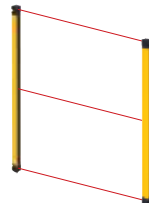
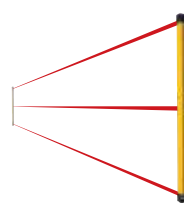
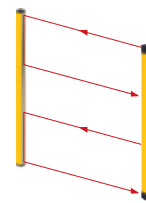












































Operating Range Selection

F3SG-SR/PG Series Features and specifications

Series		Protection at machine openings :				
		Advanced/Standard				
						
Application	 Finger Protection					
	 Hand Protection					
	 Arm/Leg Protection					
	 Body Protection					
Specification	Detection capability	14-mm dia.	25-mm dia.	45-mm dia.	85-mm dia.	
	Beam gap	10 mm	20 mm	40 mm	80 mm	
	Max. operating range Min./Typ.	10 m / 15 m	20 m / 30 m	20 m / 30 m	20 m / 30 m	
	Protective height (Product length)	160 to 2,000 mm	160 to 2,480 mm	240 to 1,520 mm	280 to 920 mm	
	Number of beams	15 to 199	8 to 124	6 to 38	4 to 12	
	Degree of protection	IP65, IP67, and IP67G				
Feature	Mutual interference prevention	 (No settings required for wired synchronization)				
	PNP/NPN Selection					
	External Test					
	Interlock	 / 				
	Lockout Reset					
	Pre-Reset	 / 				
	PSDI					
	External Device Monitoring (EDM)	 / 				
	Auxiliary Output					
	Muting					
	Blanking	 / 				
	Reduced Resolution					
	Warning Zone					
	Operating Range Selection	 /  / 				
	Response Time Adjustment					
	Area Beam Indicator (ABI)	 * Advanced models only				
	Designated Beam Output					
Connection/ wiring	Cascade connection	Available	Available	Available	Available	
	Reduced wiring system ^{*1}	Available	Available	Available	Available	
Optional accessory	Laser Alignment Pointer	Available	Available	Available	Available	
	Lamp NEW	Available	Available	Available	Available	
	Mirror Column NEW	Available	Available	Available	Available	
	Muting Sensor Arm Mounter/Connection Box					

 Setting by DIP switch on Intelligent Tap
 Setting by configuration tool SD Manager 3
 Setting by wiring

 Setting by end cap

Safety Light Curtain F3SG-SR		Protection around perimeters of equipment : Safety Multi-Light Beam F3SG-PG		
IP69K model, Standard		Perimeter Access Guarding	Perimeter Guarding Long Range	Perimeter Guarding Passive Mirror
				
				
				
14-mm dia.	25-mm dia.	30-mm dia.		
10 mm	20 mm	300 mm/400 mm/500 mm		
8 m / 12 m	16 m / 24 m	20 m / 30 m	70 m / 110 m	5 m / 8 m
320 to 1,800 mm	320 to 1,840 mm	670 to 1,370 mm		
31 to 179	16 to 92	2, 3 and 4		2 and 4
IP65, IP67, and IP69K		IP65 and IP67		
No settings required for wired synchronization		 (No settings required for wired synchronization)		
				
			Not supported	
 /  *2		 / 		
				
 /  *2		 / 		
 *2		Not supported		
 /  *2		 / 		
 *2				
 *2				
 /  *2		Not supported		
 *2		Not supported		
 *2		Not supported		
 /  /  *2		Not supported	 /  / 	Not supported
 *2				
Not supported				
 *2				
Not available		Not available	Not available	Not available
Not available		Available	Available	Available
Not available		Available	Available	Available
Not available		Available	Available	Available *3
Not available		Available	Available	Available *4

*1. The reduced wiring system includes the Y-joint plug/socket connector, reset switch connector, muting sensor connection box, and muting sensor arm mounter.

*2. When connecting F3SG-SR-K with open-ended cable to the intelligent tap, use a relay terminal block.

*3. The lamp can be attached to the emitter/receiver.

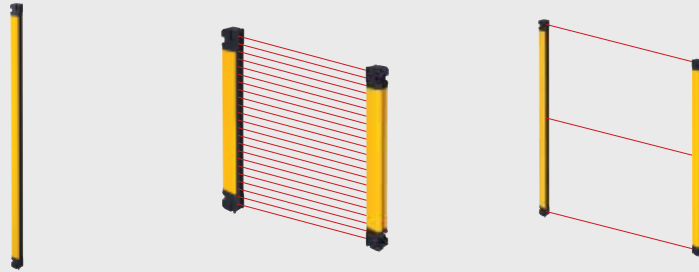
*4. The perimeter guarding passive mirror cannot be used with the mirror column.

F3SG-SR/PG Series Product Selection

Choose your safety light curtain and accessories from our F3SG Series through a 4-step process

STEP 1

Choose a safety light curtain



STEP 2

Choose a mounting bracket



STEP 3*

Choose a wiring method



STEP 4*

Choose the accessories you need



* There is no need to follow STEP 3 and STEP 4 when the IP69K model is selected.

Step 1: Choose a safety light curtain

Select a light curtain to suit your application.

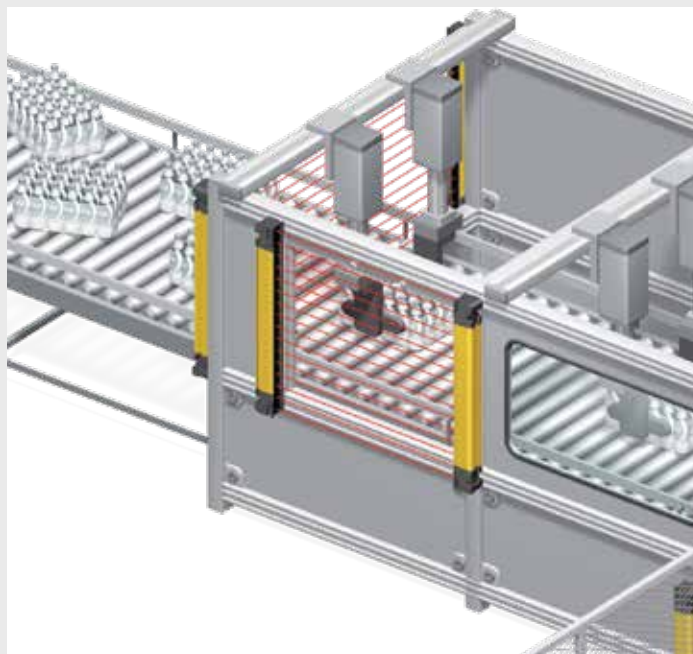
Protection
at machine openings

SR

Safety Light Curtain

F3SG-SR Page 24

IP69K model Page 32

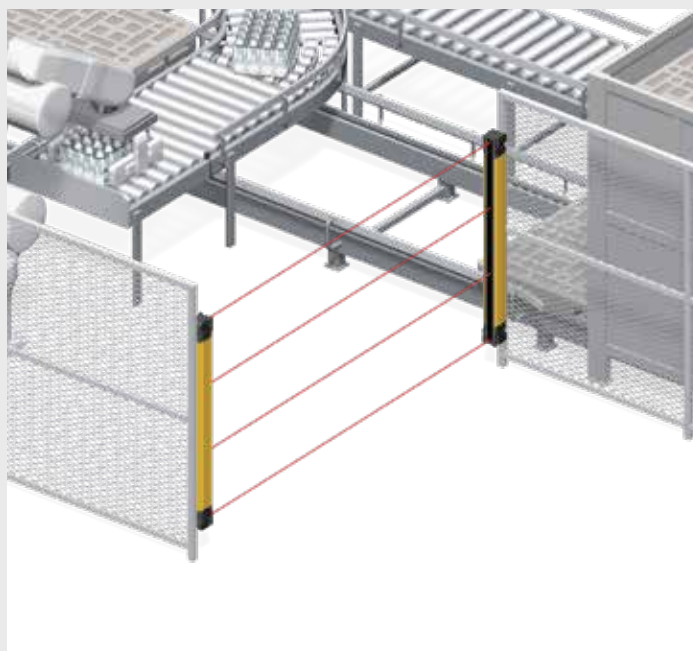


Protection around
perimeters of equipment

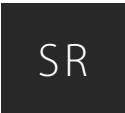
PG

Safety Multi-Light Beam

F3SG-PG Page 26



Protection at machine openings



Safety Light Curtain

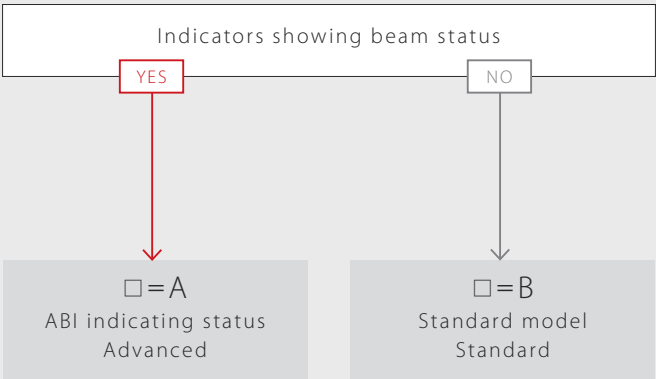
F3SG-SR

Complete the model number.

F3SG-4SR - - -

1 **3** **2** **4** **5**

1 Select an application.



2 Select detection capability.

Type	2
Finger Protection Detection capability 14-mm dia.	 □□=14
Hand Protection Detection capability 25-mm dia.	 □□=25
Arm/Leg Protection Detection capability 45-mm dia.	 □□=45
Body Protection Detection capability 85-mm dia.	 □□=85

3 Select protective height.*1

Finger Protection

Protective height (mm)	Number of beams	3
160	15	□□□□=0160
240	23	□□□□=0240
320	31	□□□□=0320
400	39	□□□□=0400
480	47	□□□□=0480
560	55	□□□□=0560
640	63	□□□□=0640
800	79	□□□□=0800
1000	99	□□□□=1000
1200	119	□□□□=1200
1400	139	□□□□=1400
1600	159	□□□□=1600
1800	179	□□□□=1800
2000	199	□□□□=2000

Arm/Leg Protection

Protective height (mm)	Number of beams	3
240	6	□□□□=0240
400	10	□□□□=0400
560	14	□□□□=0560
720	18	□□□□=0720
880	22	□□□□=0880
1200	30	□□□□=1200
1520	38	□□□□=1520

Body Protection

Protective height (mm)	Number of beams	3
280	4	□□□□=0280
440	6	□□□□=0440
600	8	□□□□=0600
760	10	□□□□=0760
920	12	□□□□=0920

Step 1: Choose a safety light curtain

Hand Protection

Protective height (mm)	Number of beams	③
160	8	□□□□=0160
240	12	□□□□=0240
320	16	□□□□=0320
400	20	□□□□=0400
480	24	□□□□=0480
560	28	□□□□=0560
640	32	□□□□=0640
720	36	□□□□=0720
800	40	□□□□=0800
880	44	□□□□=0880
960	48	□□□□=0960
1040	52	□□□□=1040
1120	56	□□□□=1120
1200	60	□□□□=1200
1280	64	□□□□=1280
1360	68	□□□□=1360
1440	72	□□□□=1440
1520	76	□□□□=1520
1600	80	□□□□=1600
1680	84	□□□□=1680
1760	88	□□□□=1760
1840	92	□□□□=1840
1920	96	□□□□=1920
2080	104	□□□□=2080
2280	114	□□□□=2280
2480	124	□□□□=2480

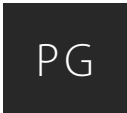
④ ⑤ Select an option.

Option 1	④
Set of emitter and receiver	Blank

Finger Protection and Hand Protection only

Option 2	⑤
-	Blank
Flexible Height Model <Protective heights available in increments of 40 mm>	□=F

Protection at machine openings



Safety Light Curtain

F3SG-PG

Complete the model number.

F3SG-4PGA - -

2

1

3

1 Select an application and then select a beam gap and number of beams.

Select an application.

Protection around large equipment (operating range > 20 m)

NO

↓

YES

↓

Protection around small equipment (operating range < 5 m)

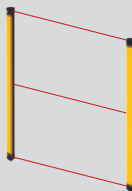
NO

↓

YES

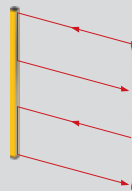
↓

Standard model
Perimeter Access
Guarding



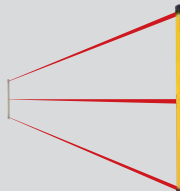
F3SG-PGA- A

Simple wiring
Perimeter Guarding
Passive Mirror



F3SG-PGA- C

Protection up to 70
m long Perimeter
Guarding Long Range



F3SG-PGA- L

Select a beam gap and number of beams.

Beam gap/ number of beams	1
500 mm/2 beams	 =2A
400 mm/3 beams	 =3A
300 or 400 mm/ 4 beams	 =4A

Beam gap/ number of beams	1
500 mm/2 beams	 =2C
-	-
300 or 400 mm/ 4 beams	 =4C

Beam gap/ number of beams	1
500 mm/2 beams	 =2L
400 mm/3 beams	 =3L
300 or 400 mm/ 4 beams	 =4L

26

Step 1: Choose a safety light curtain

2 Select Product length.

Product length (mm)	Number of beams	2
670	2	□□□□=0670
970	3	□□□□=0970
1070	4	□□□□=1070
1370	4	□□□□=1370

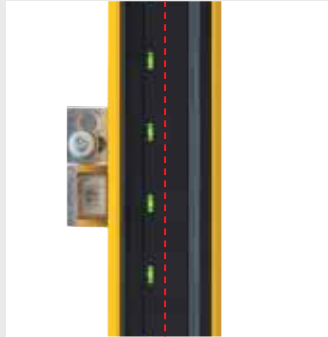
3 Select an option.

Option	3
Set of emitter and receiver, or set of emitter/receiver and passive mirror	Blank

Step 2: Choose an optional mounting bracket (sold separately)

Brackets used when beam adjustment is not required after installation

Standard Bracket
(Intermediate Bracket)
F39-LSGF

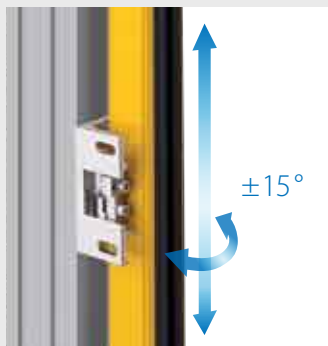


- Side mounting and backside mounting
- Beams not adjustable after installation
- Two brackets per set

Suitable for mounting on an aluminum profile so that its center is aligned with the center of beams.

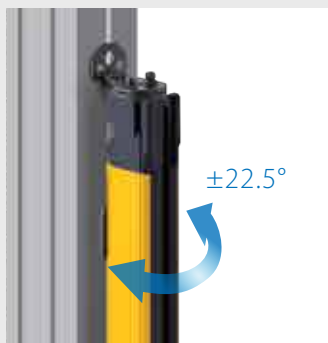
Brackets that allow beam adjustment after the light curtain is installed

Adjustable Side-Mount Bracket
(Intermediate Bracket)
F39-LSGA



- Vertical adjustment
- Angle adjustment range : $\pm 15^\circ$
- Side mounting and backside mounting
- Two brackets per set

Adjustable Top/
Bottom Bracket
F3SJ, F3SN Adapter
F39-LSGTB-SJ



- Used at the top and bottom of the light curtain
- Angle adjustment range : $\pm 22.5^\circ$
- For replacement of F3SJ or F3SN Series
- Side mounting and backside mounting
- Two brackets per set

Mounting brackets to easily replace your existing Omron light curtains are also available.

For replacement of
F3SG-RA/RE Series
Adjustable Top/Bottom Bracket
F3SG-RA/RE Adapter
F39-LSGTB-RE

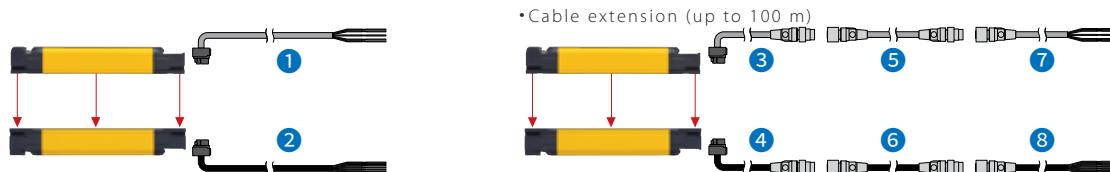


For replacement of MS4800 Series and
F3SR-B Series
Adjustable Top/Bottom Bracket MS4800/
F3SR Adapter
F39-LSGTB-MS

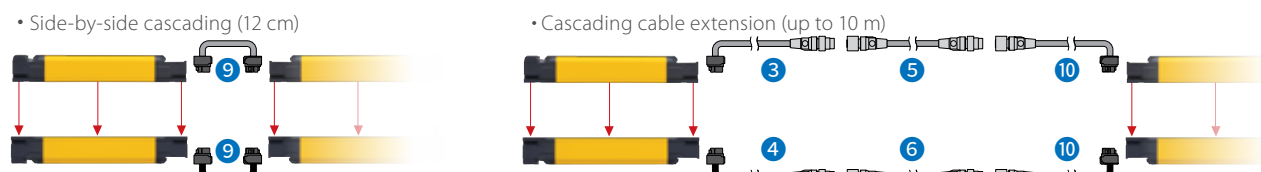


Step 3: Choose a wiring method

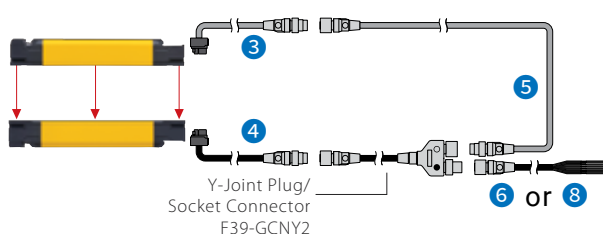
One light curtain



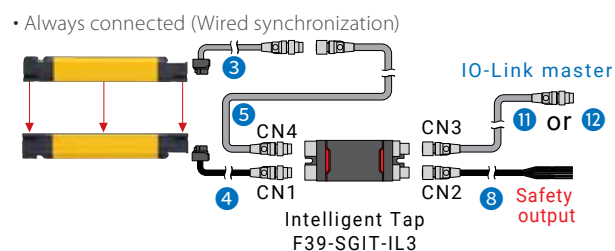
Series-connected



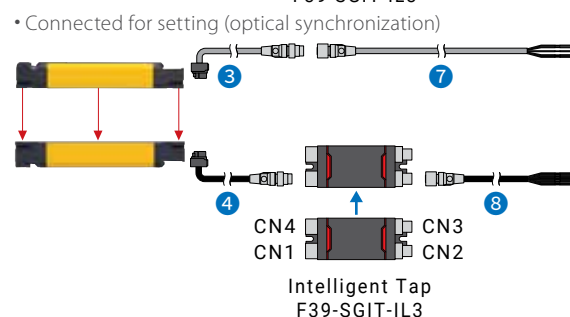
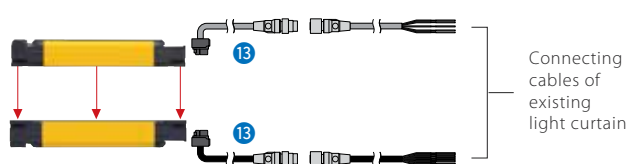
Use of reduced wiring connector



Use of Intelligent Tap



Replacement of Omron light curtain



Optional cables (sold separately)

No.	Product name	Appearance	Model	Cable length	Remarks
1	Root-Straight Cable		F39-JG□C-L	3, 7, 10 m	For emitter, gray
2			F39-JG□C-D	3, 7, 10 m	For receiver, black
3	Root-Plug Cable for Extended		F39-JGR3K-L	30 cm	For emitter, gray
4			F39-JGR3K-D	30 cm	For receiver, black
5	Extended Plug-Socket Cable		F39-JG□B-L	3, 10, 20 m	For emitter, gray
6			F39-JG□B-D	3, 10, 20 m	For receiver, black
7	Extended Socket-Straight Cable		F39-JG□A-L	3, 10 m	For emitter, gray
8			F39-JG□A-D	3, 10 m	For receiver, black
9	Side-by-side Cascading Cable		F39-JGR12L	12 cm	For emitter and receiver, two cables per set
10	Cascading Cable for Extended		F39-JGR3W	30 cm	For emitter and receiver, two cables per set
11	Socket-Straight Cable for IO-Link		F39-JG□B-L	3, 10, 20 m	For connection to GX-ILM08C
12	Root-Straight Cable for IO-Link		XS5F-D521-DJ0-IL	2 m	For connection to NX-ILM400
13	Conversion Cable		F39-JGR3K-SJ	30 cm	For use of wiring for F3SN, F3SJ-A/-B, or F3SR
			F39-JGR3K-RE	30 cm	For use of wiring for F3SG-RE
			F39-JGR3K-MS	30 cm	For use of wiring for MS4800

Step 4: Select your desired accessories (sold separately)

Intelligent Tap and configuration tool SD Manager 3

Easy monitoring, setting, and IO-Link connection with external devices

Intelligent Tap
F39-SGIT-IL3



Configuration tool for PC
SD Manager 3

Note : Use the SD Manager 3 with the F39-SGIT-IL3 Intelligent Tap.



Bluetooth Communication Unit
F39-SGBT



Monitoring tool for smartphones and tablets
SD Manager 3 Mobile APP

Requirements
Android 7.0 or higher
For details, refer to your local Omron website.



Reduced wiring system

Simple wiring of light curtains and reset switches

Y-Joint Plug/Socket Connector
F39-GCNY2



Reset Switch Connector
F39-GCNY3

Note : Please prepare a reset switch (NC contact).



Muting system

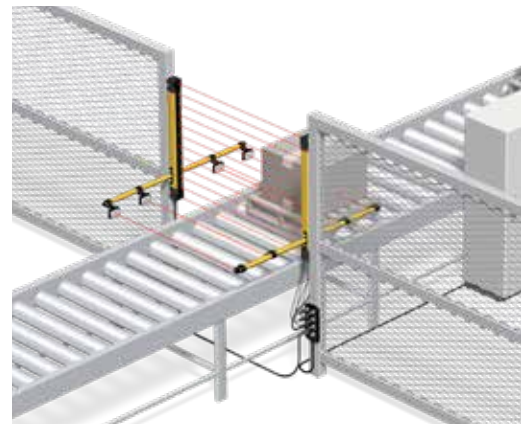
Easy installation and wiring of muting sensors

Muting Sensor Arm Mounter
F39-FMA□□□T
(Through-beam)

F39-FMA□□□R
(Retro-reflective)

Muting Sensor Connection Box
F39-GCN5

Muting Sensor Arm Mounter Bracket for SLC
F39-LMAF1
(The E3Z Muting Sensor is sold separately.)

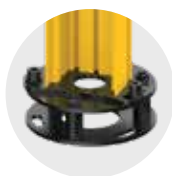


Floor mounting system

Easy installation of light curtains and mirrors on floors

Floor Mount Column
F39-ST

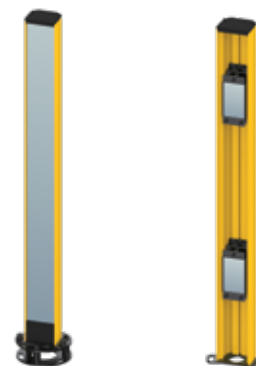
Mount-Column Adjustable
Base
F39-STB



(The mount-column adjustable base is sold separately.)

Mirror Column
(For F3SG-SR/PG
Safety Light Curtain/
Safety Multi-Light Beam)
F39-SML

Mirror Column
(for F3SG-PG
Safety Multi-Light Beam)
F39-PML



(The mount-column adjustable base is sold separately.)

Laser Alignment Pointer

Easy beam adjustment with laser beam

F39-PTG



Lamp

At-a-glance check of light curtain status

F39-SGLP

Note: The Lamp does not support Bluetooth communication.



Spatter Protection Cover

Protection of optical surfaces
against spatter

F39-HSG



Protection at machine openings



Safety Light Curtain

F3SG-SR-K IP69K model

Complete the model number.

F3SG-4SRB - -K


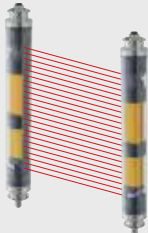

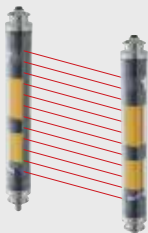
2

1

Step 1: Choose a safety light curtain

Select detection capability and protective height.

1 Select detection capability.

Type	1
<div> Finger Protection</div> <div>Detection capability 14-mm dia.</div> <div></div>	<div>$\square\square = 14$</div>
<div> Hand Protection</div> <div>Detection capability 25-mm dia.</div> <div></div>	<div>$\square\square = 25$</div>

2 Select protective height.

Finger Protection		
Protective height (mm)	Number of beams	2
320	31	$\square\square\square\square = 0320$
400	39	$\square\square\square\square = 0400$
480	47	$\square\square\square\square = 0480$
560	55	$\square\square\square\square = 0560$
640	63	$\square\square\square\square = 0640$
720	71	$\square\square\square\square = 0720$
800	79	$\square\square\square\square = 0800$
880	87	$\square\square\square\square = 0880$
960	95	$\square\square\square\square = 0960$
1000	99	$\square\square\square\square = 1000$
1200	119	$\square\square\square\square = 1200$
1400	139	$\square\square\square\square = 1400$
1600	159	$\square\square\square\square = 1600$
1800	179	$\square\square\square\square = 1800$

Hand Protection		
Protective height (mm)	Number of beams	3
320	16	$\square\square\square\square = 0320$
400	20	$\square\square\square\square = 0400$
480	24	$\square\square\square\square = 0480$
560	28	$\square\square\square\square = 0560$
640	32	$\square\square\square\square = 0640$
720	36	$\square\square\square\square = 0720$
800	40	$\square\square\square\square = 0800$
880	44	$\square\square\square\square = 0880$
960	48	$\square\square\square\square = 0960$
1000	50	$\square\square\square\square = 1000$
1040	52	$\square\square\square\square = 1040$
1120	56	$\square\square\square\square = 1120$
1200	60	$\square\square\square\square = 1200$
1280	64	$\square\square\square\square = 1280$
1360	68	$\square\square\square\square = 1360$
1440	72	$\square\square\square\square = 1440$
1520	76	$\square\square\square\square = 1520$
1600	80	$\square\square\square\square = 1600$
1680	84	$\square\square\square\square = 1680$
1760	88	$\square\square\square\square = 1760$
1840	92	$\square\square\square\square = 1840$

Step 2: Choose an optional mounting bracket (sold separately)

IP69K Model Mounting Bracket

F39-LSGTB-K
Two brackets per set



Note: When connecting F3SG-SR-K with open-ended cable to the intelligent tap, use a relay terminal block. Read the User's Manual (Cat.No. Z405) before using the intelligent tap for setting and monitoring.



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