OMRON

F3SG-SR/PG Series

Safety Light Curtain/Safety Multi-Light Beam

IO-Link

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.
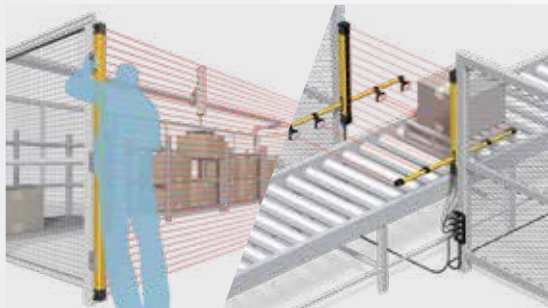
Build flexible safety systems

Design

Set-up

Operation

IP69K model

Maintenance
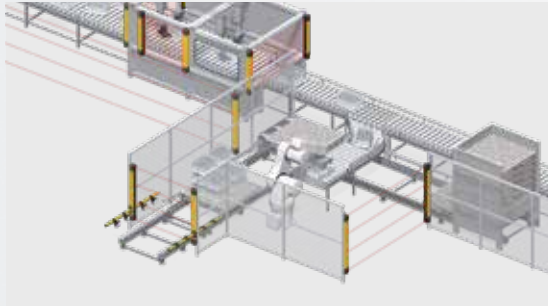
Easy design of line safety

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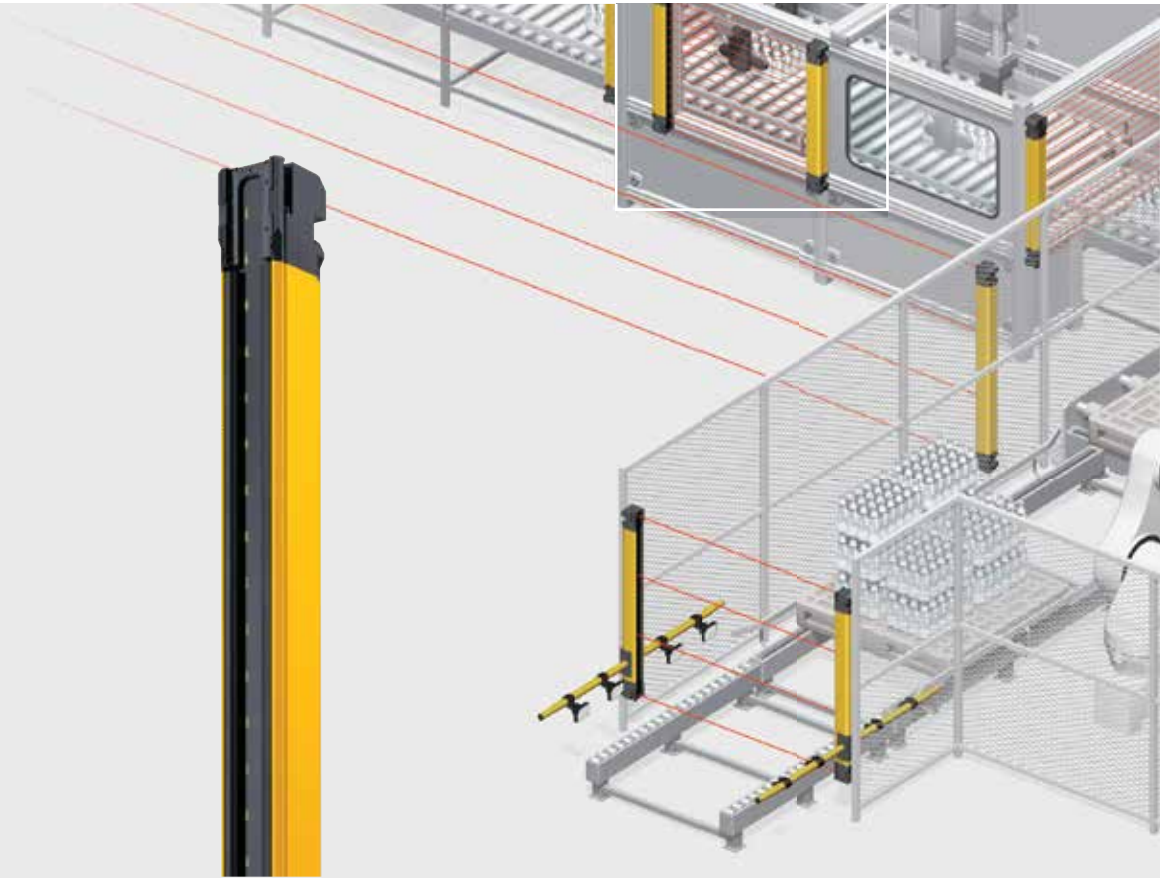
Protection at machine openings

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

IO-Link
Bluetooth®
USB Type-C™

Lamp
F39-SGLP
NEW

Muting Sensor Arm Mounter
F39-FMA
NEW

Muting Sensor Connection Box
F39-GCN5
NEW

Floor Mount Column
F39-ST
NEW

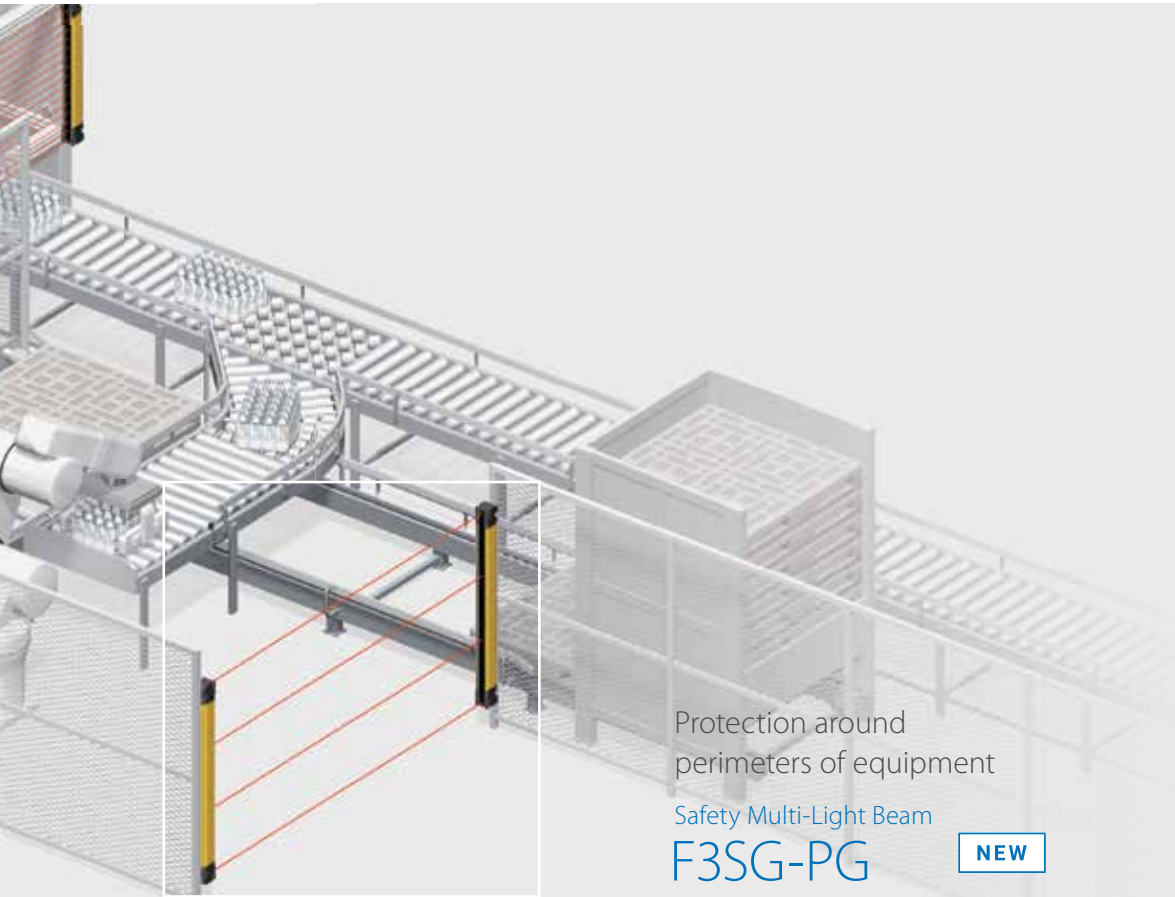Mount-Column Adjustable Base
F39-STB
NEW

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

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

5

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.
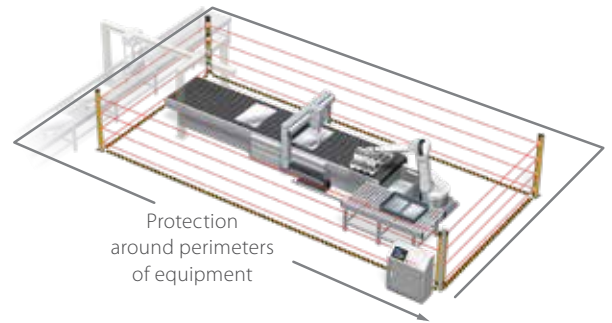
Protection at
machine openings

Protection
around perimeters
of equipment
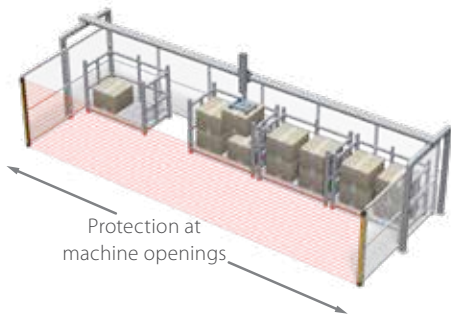
Safety Light Curtain

F3SG-SR
Series

20 m Min.
30 m 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

70 m Min.
110 m 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.

Slim
50%*

46mm

32mm

55mm

38mm
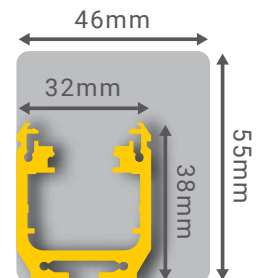
* Compared with OMRON Robotics and Safety Technologies, Inc's PA46 Perimeter Access Guarding Device. (Based on Omron investigation in June 2018)

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

Before replacement
Perimeter guarding model

After replacement
Hand protection model

Even if the safety distance changes, just relocate the light curtain to ensure machine protection.

Same brackets and cables*
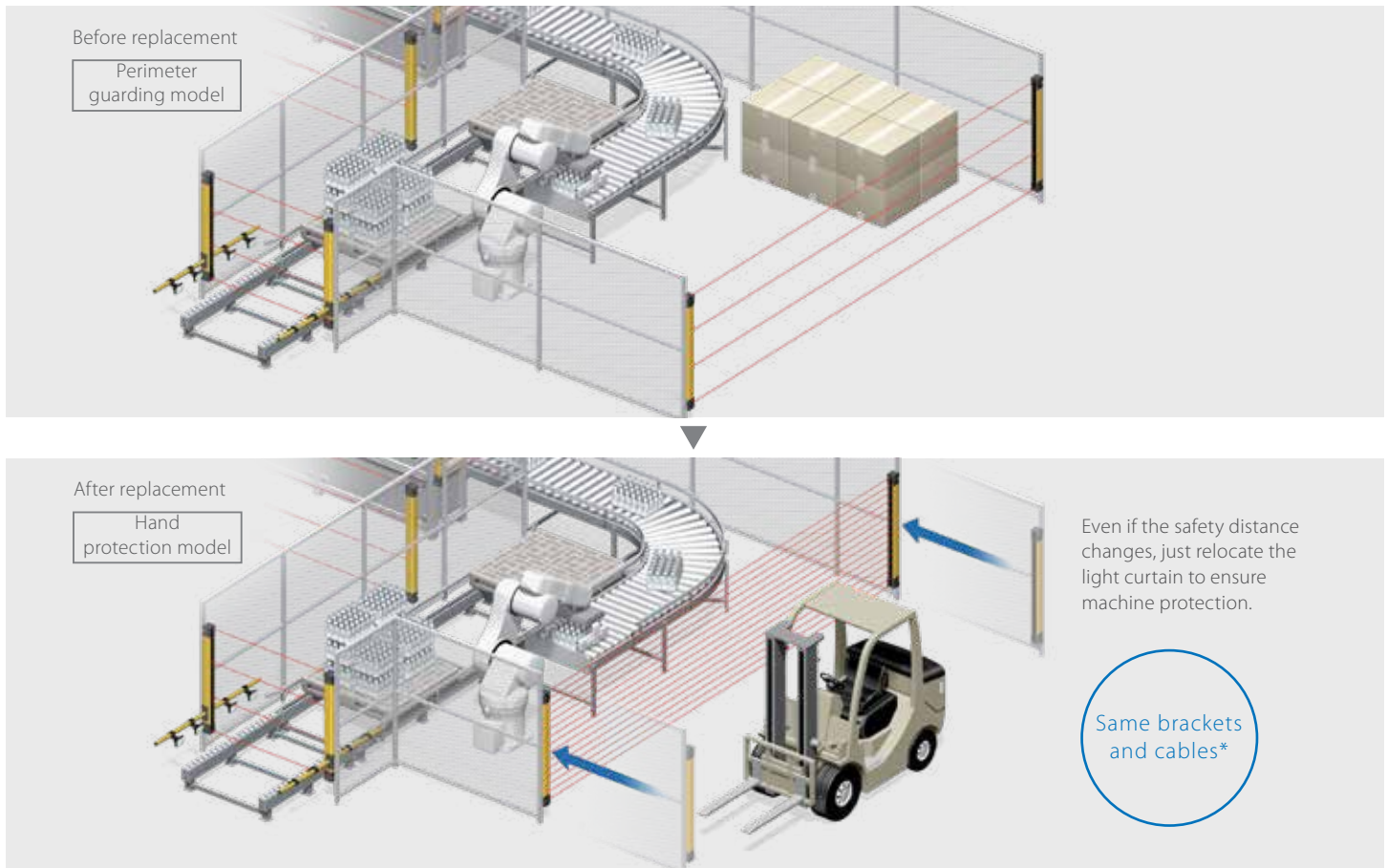
Just replace the light curtain with the same protective height*

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.
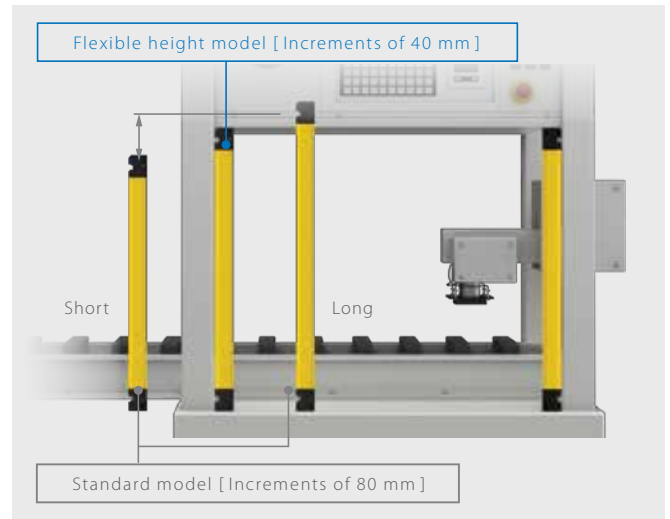
| Problem |

The light curtain does not completely fit the protected area and requires additional measures (e.g., adding extra guarding).
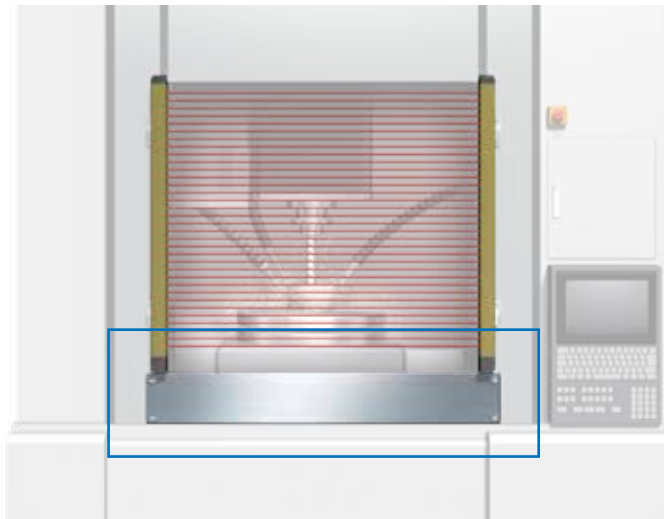
| F3SG-SR* |

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

Flexible height model [Increments of 40 mm]

Short   Long

Standard model [Increments of 80 mm]

* 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.
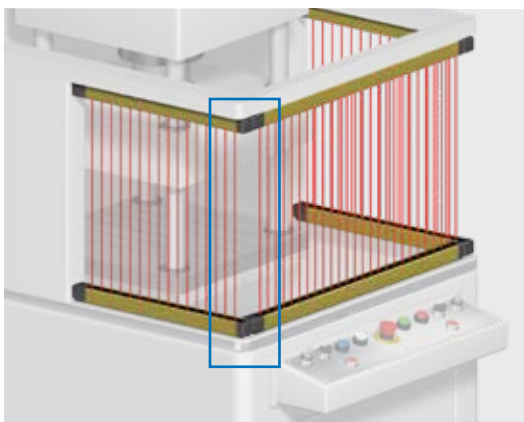
| F3SG-SR* |

Eliminates dead space and ensures safety.

F3SG-SR
Hand Protection
model (25-mm dia.)

Detects
a hand
anywhere
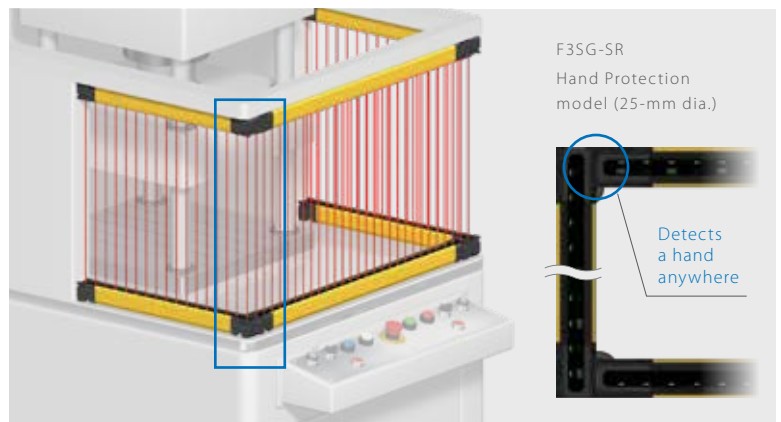
* Except for F3SG-SR Finger Protection models.

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

Emitter/receiver

Passive mirror

No wiring required

Mirror structure of passive mirror

Patent pending

Passive mirror
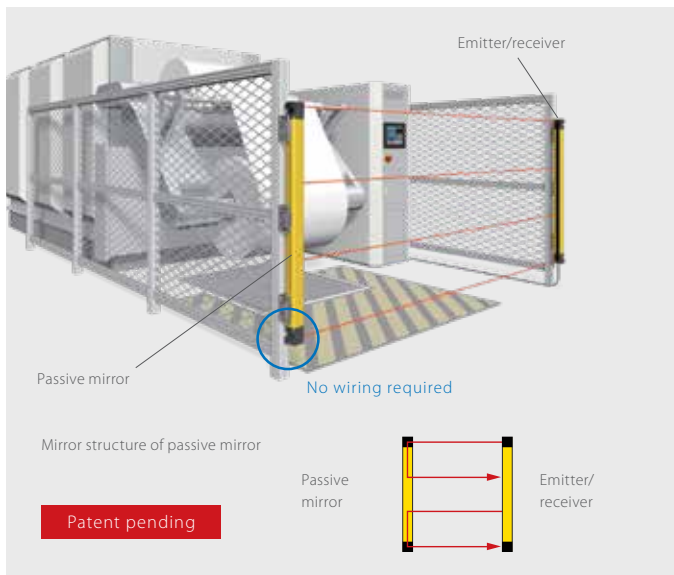
Emitter/ receiver

Wiring at one location for full equipment perimeter protection

Mirror column

Mirror column

Mirror column

Emitter

Receiver

Wiring at one location

Mirror column
F39-SML   F39-PML
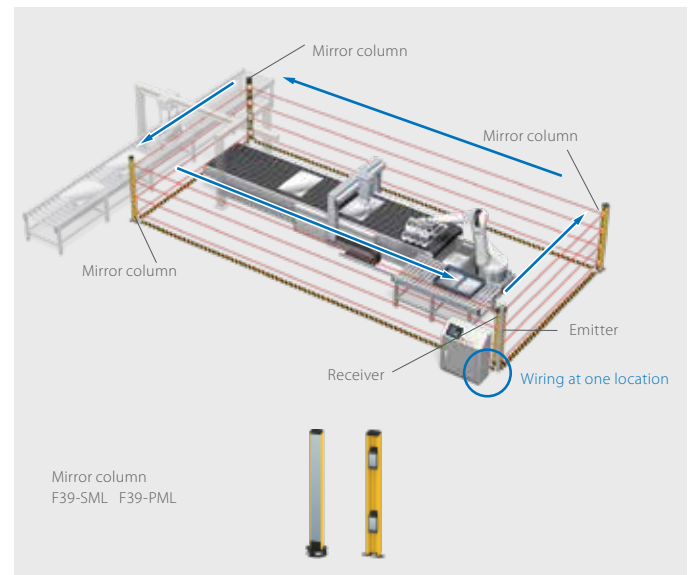
Two different synchronization systems

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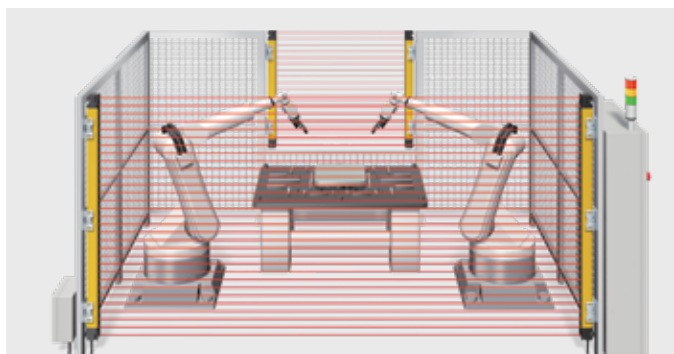
Optical synchronization

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

No wiring to control panel required

Power supply
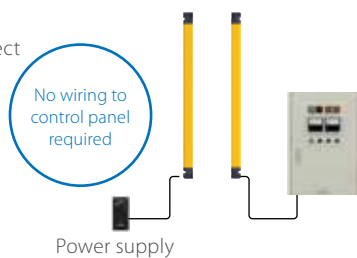
Wired synchronization

Mutual interference prevention:
Up to 3 sets

Mutual interference prevention up to 3 sets
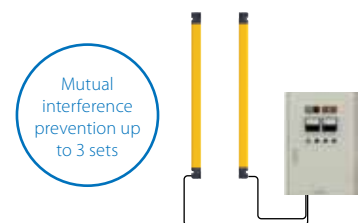
Quick and easy beam adjustment

Color indication of beam status simplifies adjustment and saves time

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

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
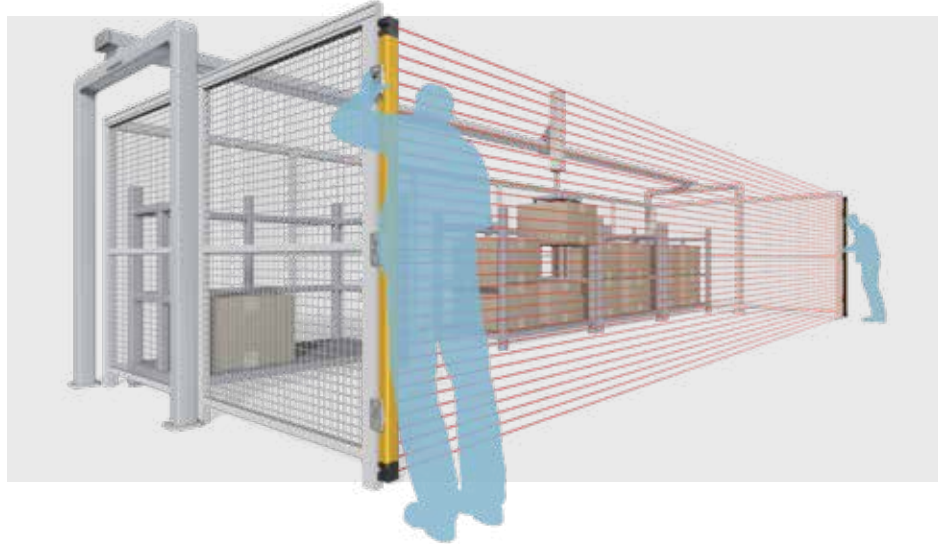
Stable state
Green :
Safety outputs ON

The beams
are unblocked.

Low light intensity
Orange :
Safety outputs ON

Adjust beams or check
if the light curtain is dirty.
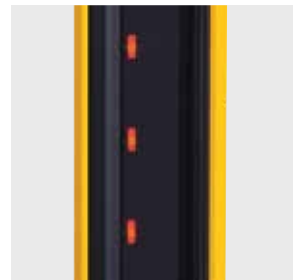
Beams blocked
Red :
Safety outputs OFF*

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.
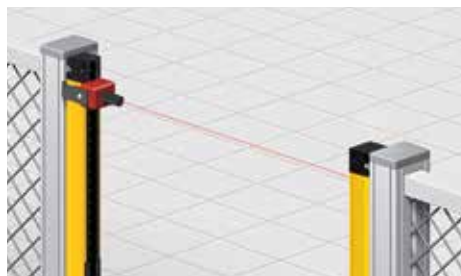
Laser Alignment Pointer
F39-PTG

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. eams can be adjusted using optional brackets.

±22.5°

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 ±22.5º.

±15°
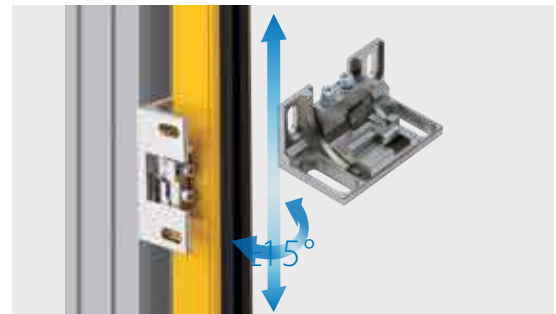
Adjustable Side-Mount Bracket
(Intermediate Bracket)
F39-LSGA

This bracket provides horizontal adjustment of ±15º as well as vertical position adjustment.

Floor Mount Column
F39-ST

This column can be installed independently of equipment or fences.
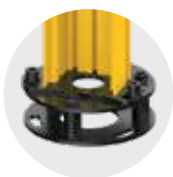
Flexible protection

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 setting are automatically restored when powered on.

Programming without PC

Copy

Paste

....

Reduction in wiring minimizes installation costs

Simple wiring around large equipment

Problem

Long wire runs can be problematic and costly.

▼
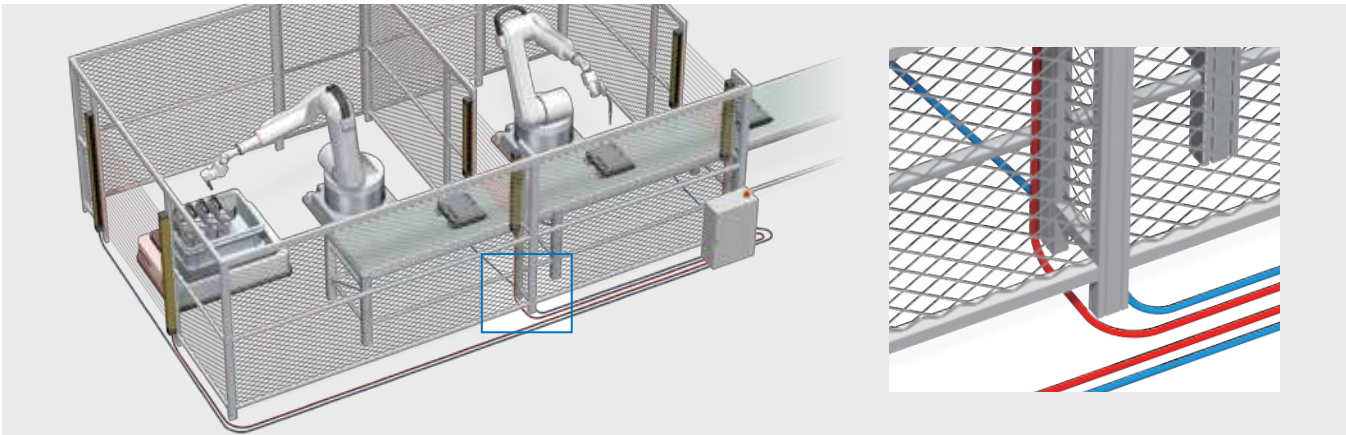
F3SG-SR/PG

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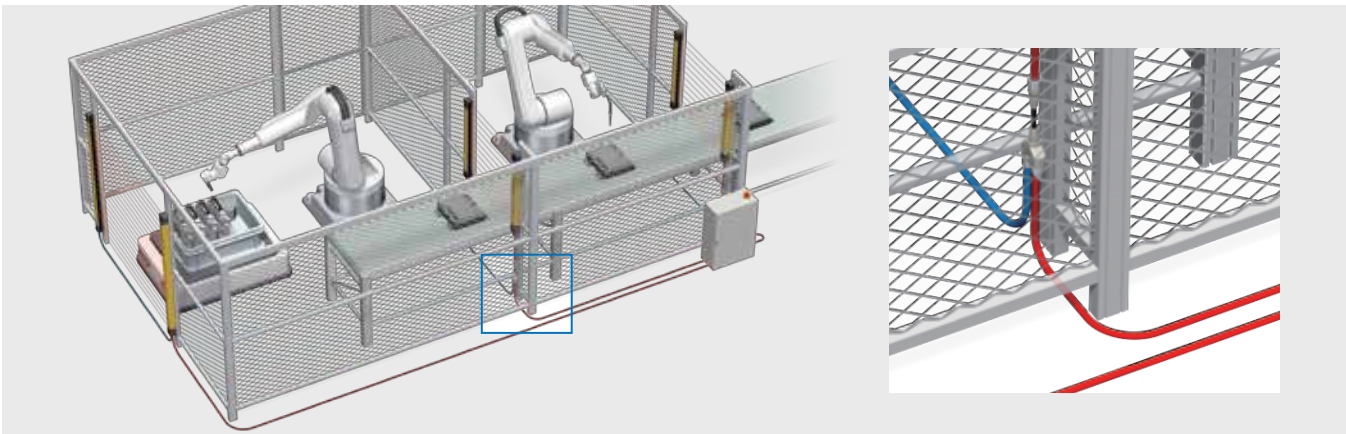
Reduced wiring connector

Y-Joint Plug /
Socket Connector
F39-GCNY2

Emitter   Receiver

Reduced wiring

Emitter   Receiver
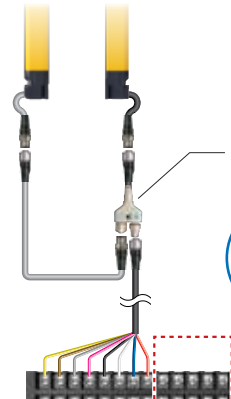
Saving wiring and space

Up to
100 m

13-pair terminals

8-pair terminals

One cable connection to control panel

Options provide simple wiring for muting.

Light curtains are often used with muting sensors,complicating the wiring in control panel.
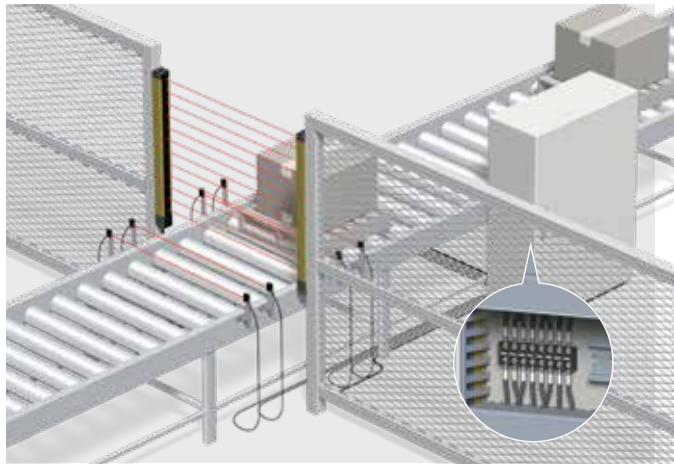
F3SG-SR/PG

Options to reduce wiring simplify the installation of muting sensors.
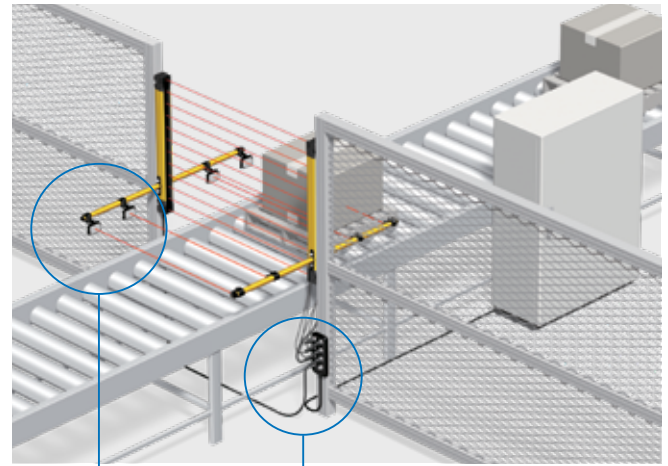
Muting Sensor Mounting Arm Brackets
F39-FMA

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

Reduced installation work

Cable can be stored

Muting sensor cable

Cable cover
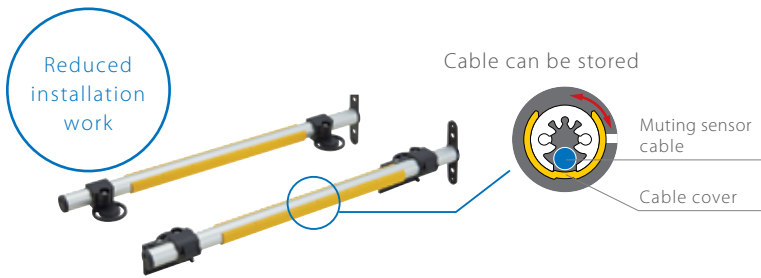
Muting Sensor Connection Box
F39-GCN5

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

Reduced wiring time and costs

Note : The E3Z Muting Sensor is sold separately.

Smartclick connectors to quickly connect cables

Insert fully

Click!

Easy and secure connection

Just a 1/8th turn to connect

Smartclick is a registered trademark of OMRON Corporation.
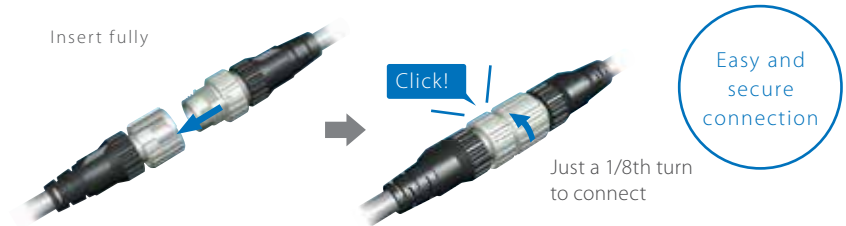
Robust design ensures stable operation in any environment

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.
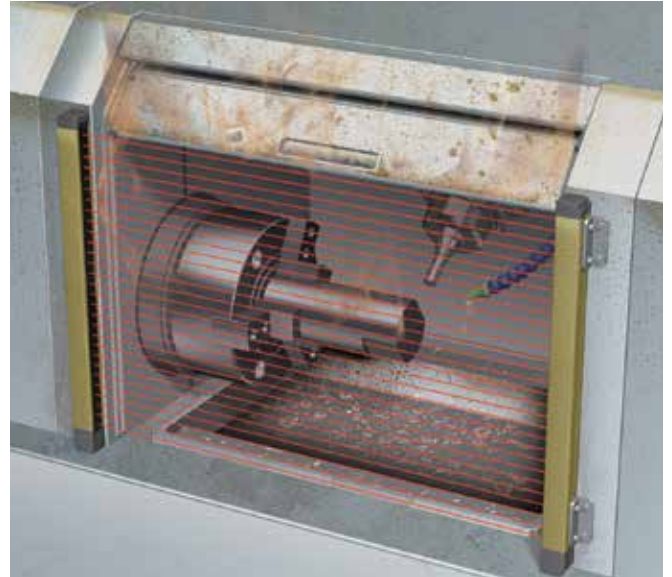
Metal working process
Oil mist penetrates the light curtain causing a failure.
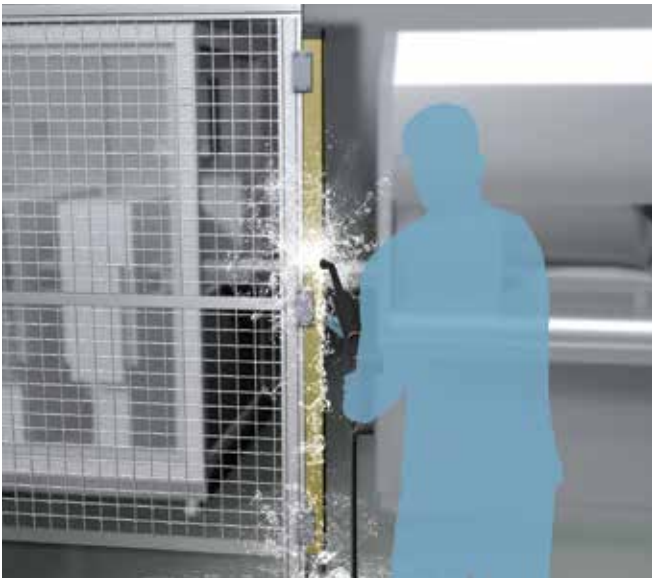
Food processing line
Cleaning solution that gets inside the light curtain during machine wash-down causes failure.

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

Use in temperatures down to
-30°C

Waterproof, oil resistance
IP65/IP67 IP67G

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

Metal cover   Elastic material
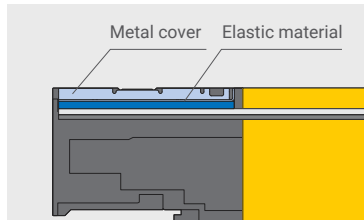
Technology 1 to tightly seal the cap

Pressing parts
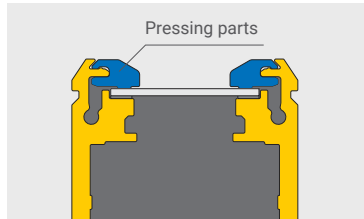
Technology 2 to tightly seal the housing

IP69K model for high-pressure washdown applications

F3SG-SR-K

Waterproof
IP69K

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
MAINT	Red/ Illuminated	LOCKOUT state due to a recoverable error
	Red/ Blinking	LOCKOUT state due to a replacement-recommended error
MAINT	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 [M] status indicator is used for the 14-mm detection capablity model.

Lamp

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

Output information can be assigned to the lamp and ABI.

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

Quick replacement

Replace light curtain

Restores

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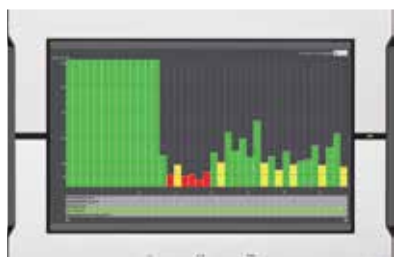
Note 1. Screen images for illustration purposes only.
    2. You need to create screens.

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

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
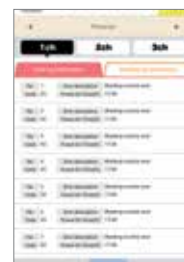
Startup screen   Error log screen   Light level monitoring

System configuration example

SD Manager 3
Mobile APP

Bluetooth®

Safety output

F39-SGIT-IL3 Intelligent Tap
F39-SGBT Bluetooth Communication Unit

USB Type-C™

IO-Link

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

SD Manager 3

*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.
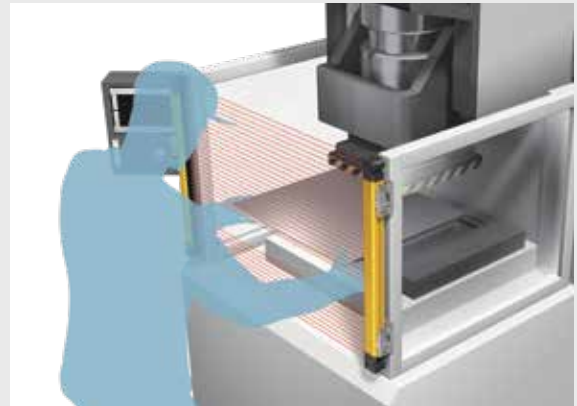
Dangerous restart prevention : Pre-Reset

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.
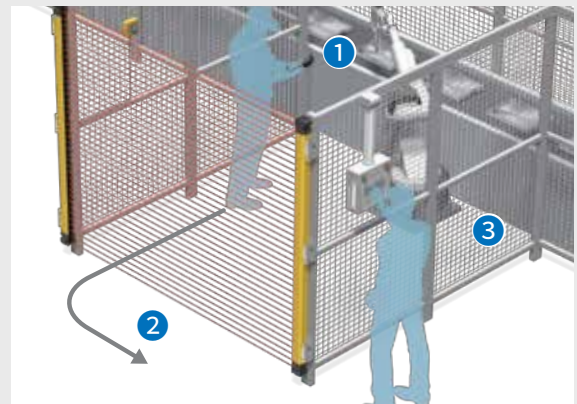
Ignoring interrupted beams : Reduced Resolution

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.
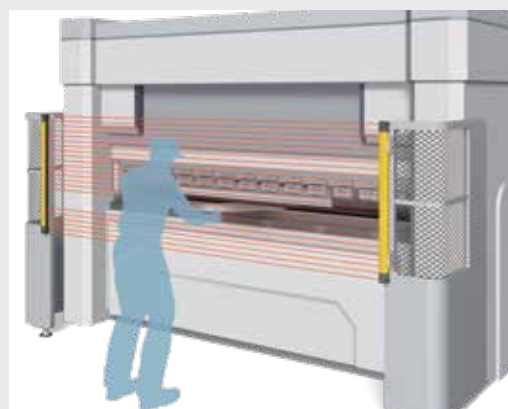
Built-in standard safety functions

Monitoring
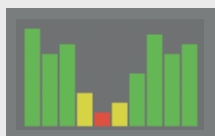
Incident/Ambient
Light Level Information

Safety function setting
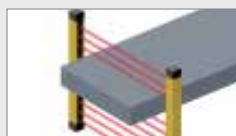
Fixed Blanking
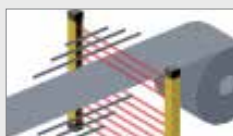
Floating Blanking
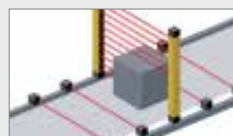
Muting/Override

Warning Zone

I/O setting
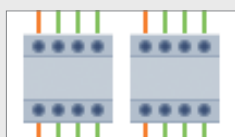
Interlock/External Device
Monitoring

Teach-in Input

External Test Input

Operation state change
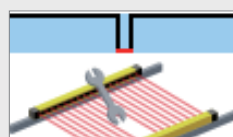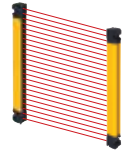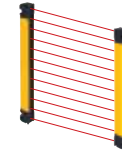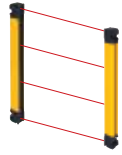
Response Time
Adjustment
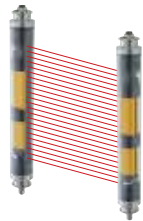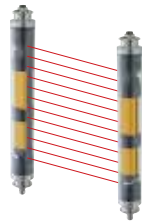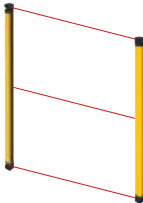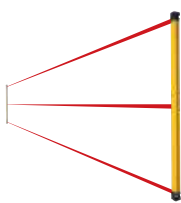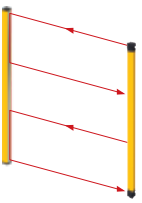
Operating Range
Selection

F3SG-SR/PG Series Features and specifications

		Protection at machine openings :				S
Series		Advanced/Standard				
		(image)	(image)	(image)	(image)	
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** Muting Sensor Arm Mounter/Connection Box	Available	Available	Available	Available	

▣ 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 **NEW**		
	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)		
	[icon]		[icon]		
	[icon]		[icon]		Not supported
	[icon] / ⌧ *2		[icon] / ⌧		
	[icon]		[icon]		
	[icon] / ⌧ *2		[icon] / ⌧		
	⌧ *2		Not supported		
	[icon] / ⌧ *2		[icon] / ⌧		
	⌧ *2		⌧		
	⌧ *2		⌧		
	[icon] / ⌧ *2		Not supported		
	⌧ *2		Not supported		
	⌧ *2		Not supported		
	[icon] / [icon] / ⌧ *2		Not supported	[icon] / [icon] / ⌧	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
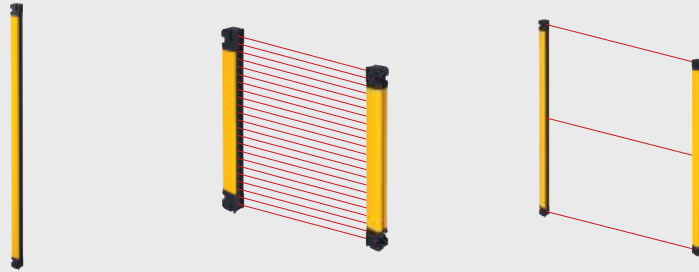
STEP 2

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
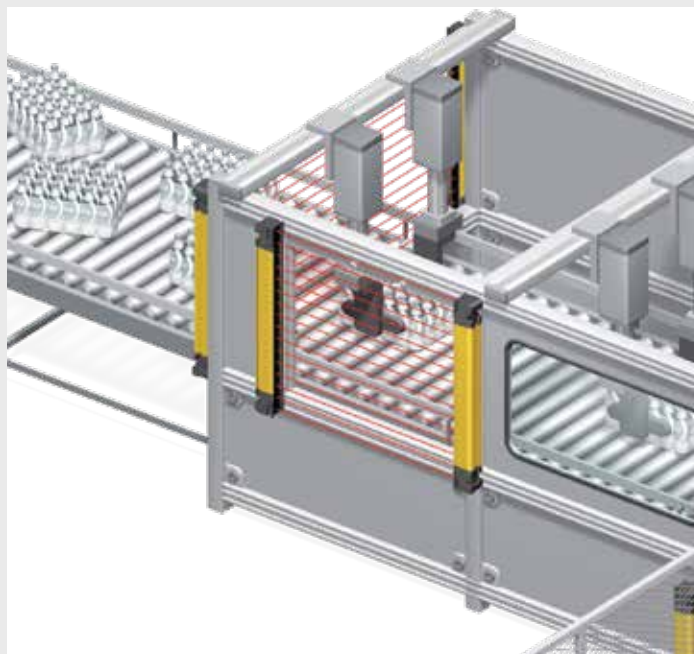
Protection around
perimeters of equipment

PG

Safety Multi-Light Beam

F3SG-PG Page 26
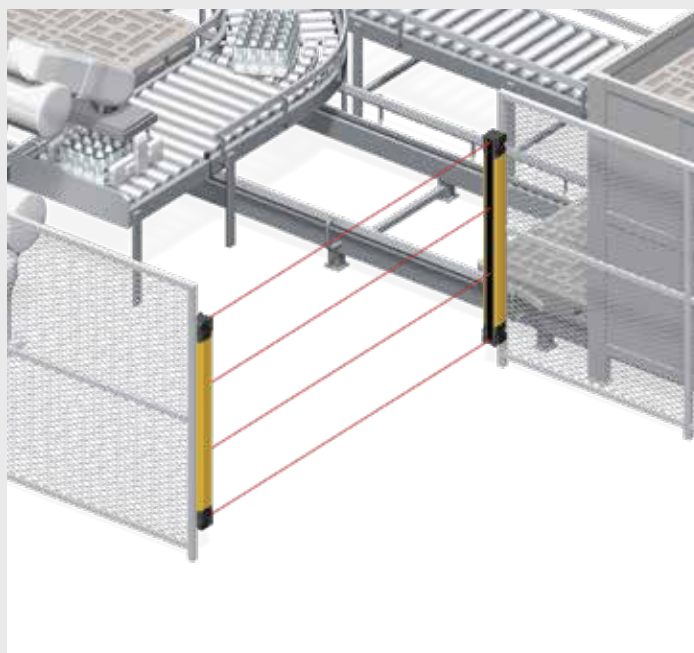
Protection at machine openings

SR	Safety Light Curtain
	F3SG-SR

Complete the model number.

F3SG-4SR □ □□□□-□□-□-□
① ③ ② ④ ⑤

① Select an application.

Indicators showing beam status
YES — NO

□=A	□=B
ABI indicating status	Standard model
Advanced	Standard
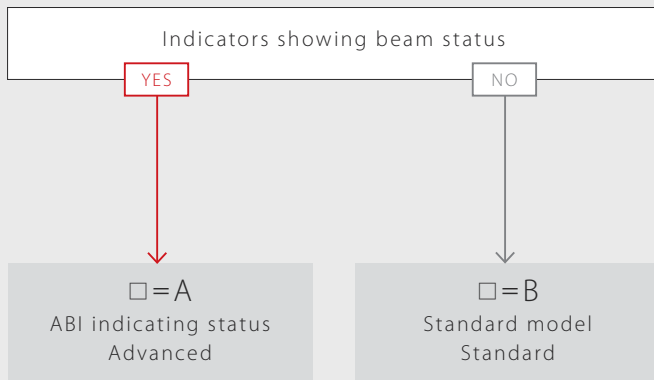
② Select detection capability.

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

④ ⑤ Select an option.*[1]

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

Option 1	④
Set of emitter and receiver	Blank
Emitter *[2]	□=L
Receiver *[2]	□=D

Finger Protection and Hand Protection only

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

*1. Representative models are listed.
*2. Emitters and receivers will be available separately.

Protection at machine openings

PG

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	Simple wiring Perimeter Guarding Passive Mirror	Protection up to 70 m long Perimeter Guarding Long Range

F3SG-PGA-□A

F3SG-PGA-□C

F3SG-PGA-□L
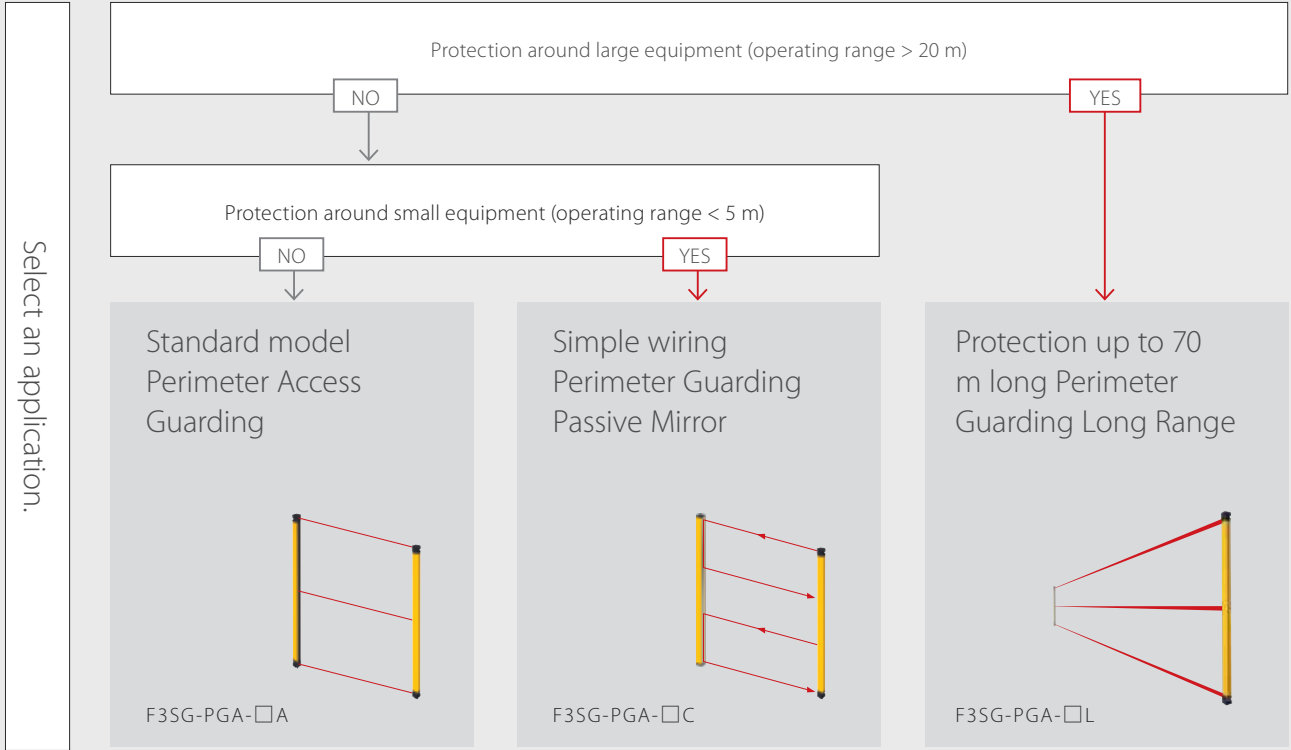
Select a beam gap and number of beams.

Beam gap/ number of beams	**1**	Beam gap/ number of beams	**1**	Beam gap/ number of beams	**1**
500 mm/2 beams	□□=2A	500 mm/2 beams	□□=2C	500 mm/2 beams	□□=2L
400 mm/3 beams	□□=3A	-	-	400 mm/3 beams	□□=3L
300 or 400 mm/ 4 beams	□□=4A	300 or 400 mm/ 4 beams	□□=4C	300 or 400 mm/ 4 beams	□□=4L

Step 1: Choose a safety light curtain

2 Select Product length.

3 Select an option.

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

Option	3
Set of emitter and receiver, or set of emitter/receiver and passive mirror	Blank
Emitter [1]	□=L
Receiver [1]	□=D
Emitter/receiver [1] (Perimeter Guarding Passive Mirror only)	□=LD
Passive mirror [1] (Perimeter Guarding Passive Mirror only)	□=M
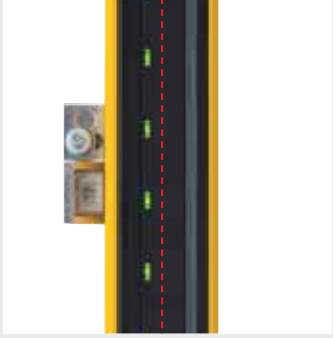
[1]. Emitters, receivers, emitter/receivers, and passive mirrors will be available separately.

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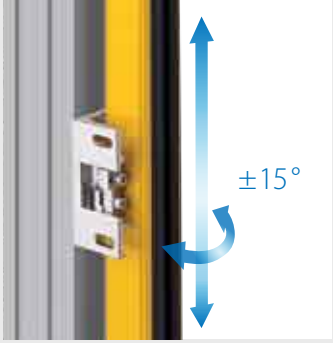
• Side mounting and backside mounting
• Beams not adjustable after installation
• Two brackets per set

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

±15°

• Vertical adjustment
  Angle adjustment range : ±15°
• Side mounting and backside mounting
• Two brackets per set

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

±22.5°

• Used at the top and bottom
  of the light curtain
• Angle adjustment range : ±22.5°
• 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

• Cable extension (up to 100 m)

Series-connected

• Side-by-side cascading (12 cm)

• Cascading cable extension (up to 10 m)

Use of reduced wiring connector

Y-Joint Plug/
Socket Connector
F39-GCNY2

6 or 8

Replacement of Omron light curtain

Connecting
cables of
existing
light curtain

Use of Intelligent Tap

• Always connected (Wired synchronization)

IO-Link master

11 or 12

CN4   CN3

CN1   CN2

8 Safety
output

Intelligent Tap
F39-SGIT-IL3

• Connected for setting (optical synchronization)

CN4   CN3
CN1   CN2

Intelligent Tap
F39-SGIT-IL3
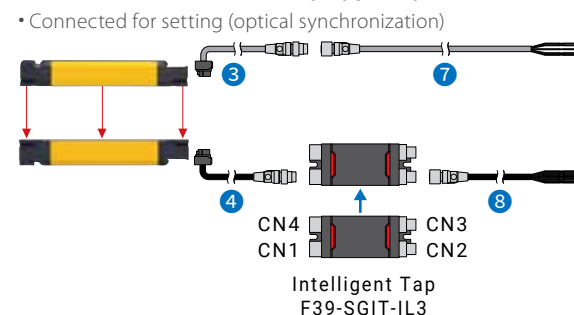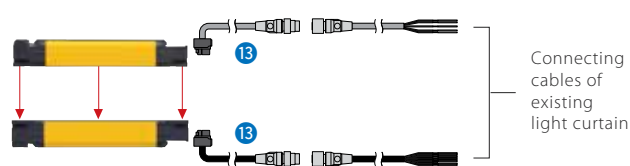
Optional cables (sold separately)

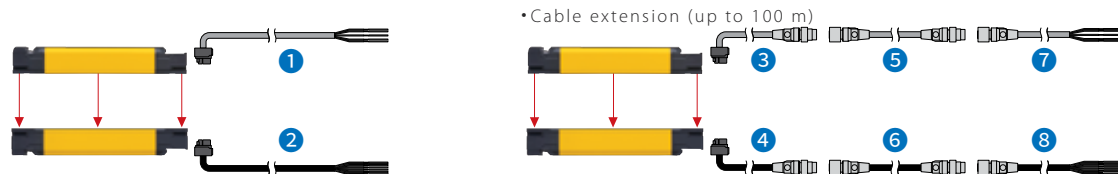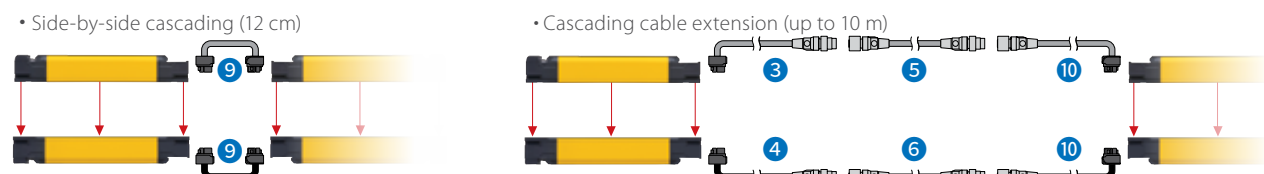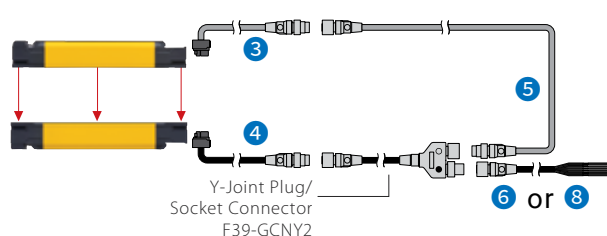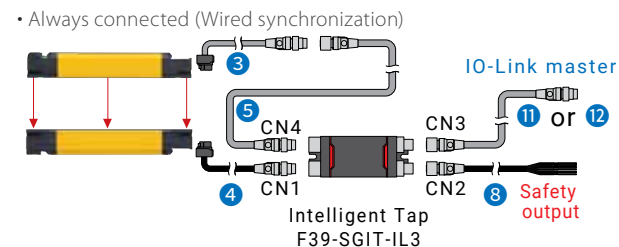| No.	Product name	Appearance	Model	Cable length	Remarks
1	Root-Straight Cable		F39-JG☐C-L	3, 7, 10 m	For emitter, gray
2			F39-JG☐C-D	3, 7, 10 m	For receiver, black
3	Root-Plug Cable for Extended		F39-JGR3K-L	30 cm	For emitter, gray
4			F39-JGR3K-D	30 cm	For receiver, black
5	Extended Plug-Socket Cable		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
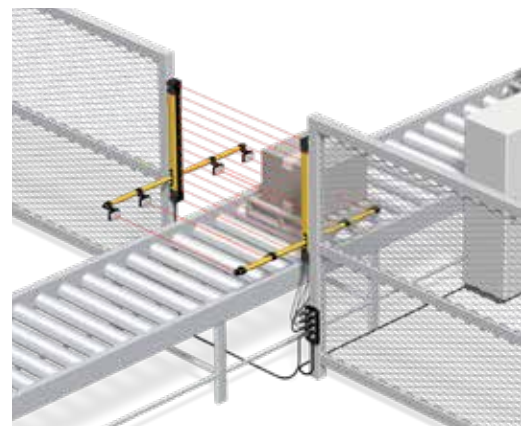
Easy installation and wiring of muting sensors

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

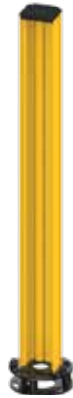(The E3Z Muting Sensor is sold separately.)

Floor mounting system

Easy installation of light curtains and mirrors on floors
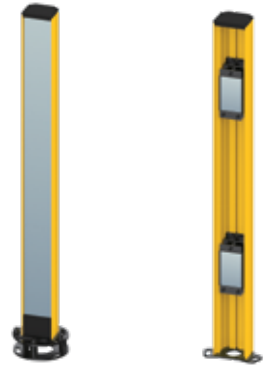
Floor Mount Column
F39-ST

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

SR

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
Finger Protection Detection capability **14-mm dia.**	□□=14
Hand Protection Detection capability **25-mm dia.**	□□=25

② Select protective height.

Finger Protection

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

Hand Protection

Protective height (mm)	Number of beams	③
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
1000	50	□□□□=1000
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

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.

OMRON

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