

Safety Light Curtain Replacement Operation Guide

Follow the instructions on the screen to select information about the product, functions and accessories you currently use.

A new product model that is an ideal replacement will be identified based on the selected information, and the differences in the specifications from the product you are using will be listed.

Usage flow of the website

Select the product model you currently use



Existing series >

Output Type >

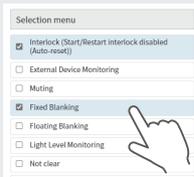
Existing model >

Select a new product model



Replacement model >

Select the functions you currently use



Select function >

Interlock, blanking, etc.

Select the accessories you currently use



Cable >

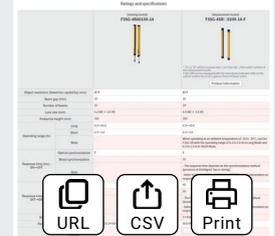
Reduced wiring >

Bracket > Basic >

Tool · Monitor >

Muting >

Check the differences in specifications between the new and old models in the list



The specification list can be shared by URL, exported as a CSV file, and printed.

Basic screen display and common operations

The selected information is displayed.

When the information is selected for an item, the item name is displayed in a blue frame.

The language can be selected.

Safety Light Curtain Replacement English

Read prior to using this web page.
This web page provides information to help you replace our old series safety light curtain with our latest series.
Simply select your existing light curtain and accessories to see the models and specifications of the latest series ideal for replacement.
Read our latest catalog and user's manual before using. Consult your sales representative or distributor for details.

Existing series > Output Type > Existing model > Replacement model > Function > Cable > Reduced wiring > **Bracket** > Basic > Tool · Monitor > Muting > Search results

<	Existing series	F3SG-RA	<	Output Type	PNP	<	Existing model	F3SG-4RA0160-14	<	Replacement model	F3SG-4SR0200-14-F
<	Select function	selected	<	Cable	selected	<	Reduced wiring	selected	<	Bracket	selected
	Basic			Tool · Monitor			Muting				

Click a selected item name to return to the selection screen for that item.

Please note that the selection information of all items after it will be reset when the selection screen is redisplayed.

Select Bracket

Select the optional accessory [Bracket] used with your safety light curtain from the selection menu and click "OK".
If you cannot find your Bracket, select nothing and click "OK".

Selection menu

- Mounting with the included brackets
- Mounting with Side-Mount Bracket
- Fixed Bracket (not adjustable)**
- Mounting with brackets other than the included ones

Selection results

[Existing model]	[Replacement model]
F3SG-4RA0160-14	F3SG-4SR0200-14-F
Standard Fixed Bracket F39-LGF : 4 brackets (2 brackets per set)	Side-Mount Bracket F39-LSGF : 4 brackets (2 brackets per set)

* Refer to the user's manual (Cat. No. Z405) for details on mounting dimensions including mounting brackets.

< Back OK >

Expand the menu by clicking , and collapse the menu by clicking .

Reset the selection in the menu.

Click this button to check the details of the corresponding item in an illustration.

Return to the previous item.

Confirm the selection and proceed to the next item.

* The screen shows an example. There are items and menus that are not displayed depending on the selections.

Select the product model you currently use

Existing series

- 1 Click the series name of the light curtain you are using.



Output Type

- 1 Click the output type (PNP or NPN) of the light curtain you are using.



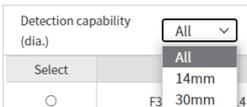
i If you unclear of the output type, select [PNP].

Existing model

- 1 Select the model of light curtain you are using.
- 2 Click [OK].

Click this button to check the specifications of each model.

The models to display in the list can be refined base on the detection capability (dia.).



Select	Model	Number of beams	Sensor overall length	Protective height	Distance between optical axes (D)	Detail
<input checked="" type="radio"/>	F3SG-4RA0160-14	15	208	160	140	Detail
<input type="radio"/>	F3SG-4RA0240-14	23	288	240	220	Detail
<input type="radio"/>	F3SG-4RA0320-14	31	368	320	300	Detail
<input type="radio"/>	F3SG-4RA0400-14	39	448	400	380	Detail
<input type="radio"/>	F3SG-4RA0480-14	47	528	480	460	Detail
<input type="radio"/>	F3SG-4RA0560-14	55	608	560	540	Detail
<input type="radio"/>	F3SG-4RA0640-14	63	688	640	620	Detail
<input type="radio"/>	F3SG-4RA0720-14	71	768	720	700	Detail
<input type="radio"/>	F3SG-4RA0800-14	79	848	800	780	Detail
<input type="radio"/>	F3SG-4RA0880-14	87	928	880	860	Detail
<input type="radio"/>	F3SG-4RA0960-14	95	1,008	960	940	Detail

< Back OK >

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Next:

Select a new product model

Select the functions you currently use

Select function

1 Select the functions you are using on the light curtain from the menu.

Select [The above functions are not used] if there are no functions that you are using, and [Not clear] if unclear which functions you are using.

2 Click [OK].

You can check the differences in the functions selected from the menu between the new and old models.

Selection menu	Selection results	
	[Existing model] F3SG-4RA0160-14	[Replacement model] F3SG-4SR□0200-14-F
<input checked="" type="checkbox"/> Interlock (Start/Restart interlock disabled (Auto-reset))	Factory default setting:Auto Reset mode Can be changed by F3SG-RA's DIP-SW or Configuration Tool (SD Manager2)	Factory default setting:Auto Reset mode Can be changed by DIP-SW of the Intelligent Tap or the Configuration Tool (SD Manager3) * To change the settings of the F3SG-SR, the optional Intelligent Tap (F39-SGIT-IL3) is required
<input type="checkbox"/> External Device Monitoring	Factory default setting:Disabled Can be changed by F3SG-RA's DIP-SW or Configuration Tool (SD Manager2)	
<input type="checkbox"/> Muting	Factory default setting:Enabled (Standard Muting) Can be changed by the Configuration Tool (SD Manager2)	
<input checked="" type="checkbox"/> Fixed Blanking	Factory default setting:Disabled Can be changed by F3SG-RA's DIP-SW or Configuration Tool (SD Manager2)	Factory default setting:Disabled Can be changed by DIP-SW of the Intelligent Tap or the Configuration Tool (SD Manager3) * To change the settings of the F3SG-SR, the optional Intelligent Tap (F39-SGIT-IL3) is required
<input type="checkbox"/> Floating Blanking	Factory default setting:Disabled Can be changed by F3SG-RA's DIP-SW or Configuration Tool (SD Manager2)	
<input type="checkbox"/> Light Level Monitoring	Can be monitored by the Configuration Tool (SD Manager2)	
<input type="checkbox"/> Not clear	I don't know what functions I use.	
<input type="checkbox"/> The above functions are not used		

Next:

Select the accessories you currently use



Select the accessories you currently use - 1

Cable

- 1 Select the cable wiring state from the menu.

If unclear of the cable wiring state, proceed to step 2 without selecting anything.

- 2 Click [OK].

Selection menu Clear

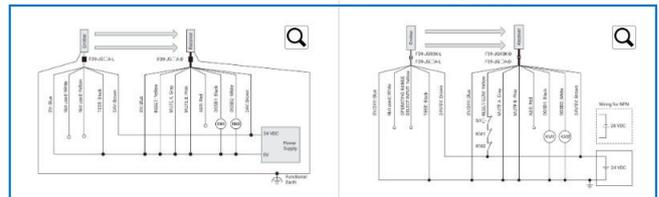
- Newly lay cables
- Using Extended Plug-Socket Cable ?
 - Use in one segment system
 - Cable
 - Use in cascade connection

1

Information about the cables you currently use

Information about the cables required after replacement

[Existing model] F3SG-4RA0160-14	[Replacement model] F3SG-4SR0200-14-F																				
Root cable Power cable is included. Single-Ended Cable (for switchboard connection) <table border="1"> <tr><td>For Emitter</td><td>F39-JG□A-L</td></tr> <tr><td>For Receiver</td><td>F39-JG□A-D</td></tr> </table> Double-Ended Cable (cable for extension) <table border="1"> <tr><td>For Emitter</td><td>F39-JG□B-L</td></tr> <tr><td>For Receiver</td><td>F39-JG□B-D</td></tr> </table>	For Emitter	F39-JG□A-L	For Receiver	F39-JG□A-D	For Emitter	F39-JG□B-L	For Receiver	F39-JG□B-D	Root Cable <table border="1"> <tr><td>For Emitter</td><td>F39-JGR3K-L</td></tr> <tr><td>For Receiver</td><td>F39-JGR3K-D</td></tr> </table> * Power cable for light curtain product is not included for F3SG-SR. Make sure to purchase Root Cable separately sold. Extended Socket-Straight Cable (for switchboard connection) <table border="1"> <tr><td>For Emitter</td><td>F39-JG□A-L</td></tr> <tr><td>For Receiver</td><td>F39-JG□A-D</td></tr> </table> * Current Single-Ended Cable (F39-JG□A-/F39-JG□A-D) in use can be used as is by connecting to F3SG-SR. Extended Plug-Socket Cable (cable for extension) <table border="1"> <tr><td>For Emitter</td><td>F39-JG□B-L</td></tr> <tr><td>For Receiver</td><td>F39-JG□B-D</td></tr> </table> * Current Double-Ended Cable (F39-JG□B-/F39-JG□B-D) in use can be used as is by connecting to F3SG-SR.	For Emitter	F39-JGR3K-L	For Receiver	F39-JGR3K-D	For Emitter	F39-JG□A-L	For Receiver	F39-JG□A-D	For Emitter	F39-JG□B-L	For Receiver	F39-JG□B-D
For Emitter	F39-JG□A-L																				
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For Receiver	F39-JG□A-D																				
For Emitter	F39-JG□B-L																				
For Receiver	F39-JG□B-D																				



A wiring example for each model is displayed. Click to enlarge the illustration.

< Back OK >

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Reduced wiring

- 1 If using a reduced wiring connector, select [Reduced wiring connector] in the menu.

If unclear whether using a reduced wiring connector, proceed to step 2 without selecting anything.

- 2 Click [OK].

Selection menu Clear

- Reduced wiring connector ?

1

Information about the reduced wiring connector you currently use

Information about the reduced wiring connector required after replacement

[Existing model] F3SG-4RA0160-14	[Replacement model] F3SG-4SR0200-14-F
Y-Joint Plug/Socket Connector F39-GCNY2	Y-Joint Plug/Socket Connector F39-GCNY2 *Current Y-Joint Plug/Socket Connector (F39-GCNY2) in use can be used as is by connecting to F3SG-SR.

< Back OK >

2

Select the accessories you currently use - 2

Bracket

- 1 Select the bracket you are using from the menu.

If unclear of the bracket you are using, proceed to step 2 without selecting anything.

- 2 Click [OK].

Basic

- 1 Select the other accessories you are using from the menu.

If unclear of the accessories you are using, proceed to step 2 without selecting anything.

- 2 Click [OK].



Select the accessories you currently use - 3

Tool · Monitor

- 1 Select the tool you are using for configuring various settings from the menu.

If unclear of the tool you are using, proceed to step 2 without selecting anything.

- 2 Click [OK].

Information about the tool you currently use

Information about the tool required after replacement

[Existing model]	[Replacement model]
F3SG-4RA0160-14	F3SG-4SR0200-14-F

PC Tool

Configuration software	Interface Unit(F-U)	Configuration software	Intelligent Tap
SD Manager2	F39-GIF	SD Manager3 (Please download from the web)	F39-SGIT-IL3

* Can use a USB Type-C cable (for data transfer) as the communication cable with the Intelligent Tap
* The Intelligent Tap can also be used to make IO-Link connections to external devices

Back OK

Muting

- 1 If you are using a muting function, select either a muting sensor or actuator in the menu.

If unclear of the muting sensor or actuator you are using, proceed to step 2 without selecting anything.

- 2 Click [OK].

Information about the accessory for muting you currently use

Information about the accessory for muting required after replacement

[Existing model]	[Replacement model]
F3SG-4RA0160-14	F3SG-4SR0200-14-F

Muting sensor currently in use

The muting sensor currently in use can be used as it is by reconnecting it to the F3SG-SR.

Back OK

Selection of the product, functions and accessories you currently use is now finished.

Next:

Check the differences in specifications between the new and old models in the list

Check the differences in specifications between the new and old models in the list

The differences in specifications between the light curtain you currently use and the new model are listed based on the selected information.

The list can be output and shared in various ways to help you consider replacement.

Ratings and specifications

	[Existing model] F3SG-4RA0160-14	[Replacement model] F3SG-4SR□0200-14-F
Object resolution (Detection capability) (mm)	φ14	φ14
Beam gap (mm)	10	10
Number of beams	15	19
Lens size (mm)	5.2 (W) × 3.4 (H)	4.4 (W) × 3.4 (H)
Protective height (mm)	160	200
ON voltage: 0 to 3 V (short circuit current: approx. 2.0 mA)	0.3	0.3
OFF voltage: 9 V to Vs, or open (short circuit current: approx. 2.5 mA)	0.3	0.3
Protective circuit	Output short protection, Power supply reverse polarity protection	Output short protection
Ambient temperature (Operating)	-10~55°C (non-icing)	-30~55°C (non-icing)
Ambient temperature (Storage)	-25~70°C	-30~70°C
Ambient humidity (Operating)	35~85%RH (non-condensing)	35~85%RH (non-condensing)
Ambient humidity (Storage)	35~95%RH	35~95%RH
Ambient illuminance : Incandescent lamp	3,000 lx max. on receiver surface	3,000 lx max. on receiver surface
Ambient illuminance : Sunlight	10,000 lx max. on receiver surface	10,000 lx max. on receiver surface
Insulation resistance	20 MΩ or higher (500 VDC megger)	20 MΩ or higher (500 VDC megger)
Dielectric strength	1,000 VAC, 50/60 Hz (1 min)	1,000 VAC, 50/60 Hz (1 min)
Degree of protection (IEC 60529)	IP65 and IP67	IP65 and IP67
Vibration resistance (IEC 61496-1)	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes
Shock resistance (IEC 61496-1)	100m/s ² , 1000 shocks for all 3 axes	100m/s ² , 1000 shocks for all 3 axes

Function

	[Existing model] F3SG-4RA0160-14	[Replacement model] F3SG-4SR□0200-14-F
Intelligent tap	—	F39-SGIT-IL3
ツール	SD Manager2 (Please download from the web)	SD Manager3 (Please download from the web)
Interlock (Start/Restart interlock disabled (Auto-reset))	Factory default setting:Auto Reset mode Can be changed by F3SG-RA's DIP-SW or Configuration Tool (SD Manager2)	Factory default setting:Auto Reset mode Can be changed by DIP-SW of the Intelligent Tap or the Configuration Tool (SD Manager3) * To change the settings of the F3SG-SR, the optional Intelligent Tap (F39-SGIT-IL3) is required
Fixed Blanking	Factory default setting:Disabled Can be changed by F3SG-RA's DIP-SW or Configuration Tool (SD Manager2)	Factory default setting:Disabled Can be changed by DIP-SW of the Intelligent Tap or the Configuration Tool (SD Manager3) * To change the settings of the F3SG-SR, the optional Intelligent Tap (F39-SGIT-IL3) is required

Optional accessory

	[Existing model] F3SG-4RA0160-14	[Replacement model] F3SG-4SR□0200-14-F
Basic	External indicator/Lamp Lamp F39-LP * Connected to the receiver	Lamp F39-SGLP * Can be connected to an emitter or receiver.
	Laser Alignment Kit Laser Alignment Kit F39-PTG	Laser Alignment Kit F39-PTG * Can be mounted on F3SG-SR with spatter protection cover. * The Laser Alignment Kit (F39-PTG) currently in use can be used as it is. Laser Alignment Kit F39-PTS * Can be attached to the front side of the F3SG-SR.
	Mirror Column Mirror Column F39-MLG0406 * Operating range becomes 12% shorter than the rating	Mirror Column F39-SML0990 * Protective height up to 880 mm * Operating range becomes 15% shorter than the rating
Tool・Monitor	Configuration software SD Manager2	Configuration software SD Manager3 (Please download from the web)
	Interface Unit(IF-U) F39-GIF	Intelligent Tap F39-SGIT-IL3 * Can use a USB Type-C cable (for data transfer) as the communication cable with the Intelligent Tap * The Intelligent Tap can also be used to make IO-Link connections to external devices
Muting	Muting sensor currently in use	The muting sensor currently in use can be used as it is by reconnecting it to the F3SG-SR.

Click this button to display the product information page.

Items with different specifications are displayed in red.

Copy to URL

You can copy the URL of the webpage you are viewing. Sending the URL to a person with which you wish to share the results allows sharing the same information as you see immediately.

Export to CSV

You can save the list of differences as a CSV file. This helps prevent ordering mistakes because there is no need to manually input the model and other information for ordering.

Print

You can print the list of differences.

Copy URL

Export to CSV

Print