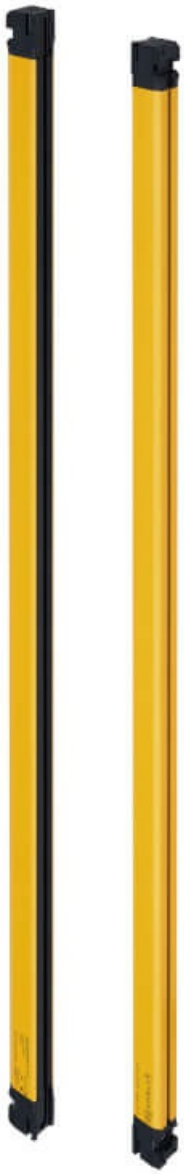
OMRON Industrial Automation



F3SG-4SRB1000-25-F

Safety Light Curtain, F3SG-SRB Standard, Type 4, 25 mm resolution, range 0.3 to 20.0 m, height 1000 mm, PNP/NPN

Specifications

Sensing method	Safety light curtain
Type of protection	Hand protection
Number of beams	50
Detection capability	25 mm
Safety field height	1000 mm
Type of safety according to IEC 61496-1	4
Beam spacing	20 mm
Maximum safety range	20 m
Minimum operating distance	0.3 m
Key features	Auxiliary output, Blanking, Designated beam output, External Device Monitoring (EDM), External test, Interlock, Muting, Mutual interference prevention, Operating range selection, PNP/NPN selection, Pre-reset, Response time adjustment, Warning zone
Degree of protection (IP)	IP65/IP67/IP67G
Cascadable	✔
Number of protected semiconductor outputs	2
Number of semiconductor outputs with signalling function	1
Type of switching output of the OSSD	PNP/NPN
Response time	13 ms
With muting function	✔
With beam coding	✔
Communication option(s)	Bluetooth, IO-Link, USB
Suitable for safety functions	✔
Scope of delivery	Transmitter and receiver

Wavelength of the sensor	870 nm
Connection method	Root connector (order separately)
Supply voltage DC	19.2-28.8 V
Max. output current at protected output	300 mA
Ambient temperature	-30-55 °C
Overall length of sensor	1000 mm
Height of sensor	1000 mm
Width of sensor	32 mm
Number of fixed side-mount brackets	2
Number of adjustable side-mount brackets	2
Number of intermediate brackets	1

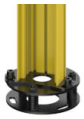
Accessories

	**E39-R1S**	Accessory photoelectric sensor, reflector, 40 x 60 x 7.5 mm, ABS & Acrylic
	**E3AS-F1000IPT-M1TJ 0.3M OMS**	Photoelectric sensor, rectangular housing, plastic body, infrared laser class 1, time-of-flight, 1000 mm, PNP, Light-ON/Dark-ON, IO-Link COM3, M12 pigtail Smartclick connector, 0.3 m
	**E3AS-F1500IPT-M1TJ 0.3M OMS**	Photoelectric sensor, rectangular housing, plastic body, infrared laser class 1, time-of-flight, 1500 mm, PNP, Light-ON/Dark-ON, IO-Link COM3, M12 pigtail Smartclick connector, 0.3 m
	**E3Z-R81 2M OMI**	Photoelectric sensor, rectangular housing, red LED, retro-reflective, 4 m, PNP, Light-ON/Dark-ON, 2 m cable
	**E3Z-R81 5M OMS**	Photoelectric sensor, rectangular housing, red LED, retro-reflective, 4 m, PNP, Light-ON/Dark-ON, 5 m cable
	**E3Z-T81 2M OMI**	Photoelectric sensor, rectangular housing, infrared LED, through-beam, 15 m, PNP, Light-ON/Dark-ON, 2 m cable

	**E3Z-T81 5M OMS**	Photoelectric sensor, rectangular housing, infrared LED, through-beam, 15 m, PNP, Light-ON/Dark-ON, 5 m cable
	**F39-FMA150R**	Muting sensor arm mounter for retroreflective sensor; length 150 mm (2 mounters per set)
	**F39-FMA150T**	Muting sensor arm mounter for through-beam sensor; length 150 mm (2 mounters per set)
	**F39-FMA400R**	Muting sensor arm mounter for retroreflective sensor; length 400 mm (2 mounters per set)
	**F39-FMA400T**	Muting sensor arm mounter for through-beam sensor; length 400 mm (2 mounters per set)
	**F39-GCN5**	Muting Sensor Connection Box for F3SG-SR/PG series
	**F39-GCNY2**	Safety sensor accessory, F3SG-R_SR, M12 Y-joint connector, 0.5 m
	**F39-GCNY3**	Safety sensor accessory, F3SG-R_SR, Reset Switch M12 Y-joint connector, 0.5 m
	**F39-JG10A-D**	Single-ended cable,for F3SG-SR/PG extension cable and F3SG-R Advanced, receiver cable M12, 8-pin, female, 10 m
	**F39-JG10A-L**	Safety sensor accessory, Single-ended cable,for F3SG-SR/PG extension cableand F3SG-R Advanced, emitter cable M12, 5-pin, female, 10 m
	**F39-JG10B**	Double-ended cable set, 10 m, for F3SG-SR/PG and F3SG-4RA (2 covers per set, one for emitter M12 connector (5-pin) on both ends Gray, and one for receiver M12 connector (8-pin) on both ends Black) For cable extension or simple wiring
	**F39-JG10B-D**	Double-ended cable,for F3SG-SR/PG and F3SG-R Advanced, receiver extension cable M12, 8-pin, male/female, 10 m
	**F39-JG10B-L**	Safety sensor accessory, double-ended cable,for F3SG-SR/PG and F3SG-R Advanced, emitter extension cable M12, 5-pin, male/female, 10 m
	**F39-JG10C-D**	Root-straight cable 10 m for F3SG-SR (cable for Receiver with dedicated connector - Black),external open-ended type 8 wires

	**F39-JG10C-L**	Root-straight cable 10 m for F3SG-SR (cable for Emitter with dedicated connector - Gray),external open-ended type 5 wires
	**F39-JG20B**	Double-ended cable 20 m, for F3SG-SR/PG and F3SG-4RA,(2 covers per set, one for emitter M12 connector (5-pin) on both ends Gray, and one for receiver M12 connector (8-pin) on both ends Black) For cable extension or simple wiring
	**F39-JG20B-D**	Double-ended cable,for F3SG-SR/PG and F3SG-R Advanced, receiver extension cable M12, 8-pin, male/female, 20 m
	**F39-JG20B-L**	Double-ended cable,for F3SG-SR/PG and F3SG-R Advanced, emitter extension cable M12, 5-pin, male/female, 20 m
	**F39-JG3A-D**	Single-ended cable, for F3SG-SR/PG and F3SG-R Advanced, extension cable,receiver cable M12, 8-pin, female, 3 m
	**F39-JG3A-L**	Single-ended cable,F3SG-SR/PG and F3SG-R Advanced, extension cable,emitter cable M12, 5-pin, female, 3 m
	**F39-JG3B**	Double-ended cable set 3 m, for F3SG-SR/PG and F3SG-4RA (2 covers per set, one for emitter M12 connector (5-pin) on both ends Gray, and one for receiver M12 connector (8-pin) on both ends Black) For cable extension or simple wiring
	**F39-JG3B-D**	Double-ended cable,for F3SG-SR/PG and F3SG-R Advanced, receiver extension cable M12, 8-pin, male/female, 3 m
	**F39-JG3B-L**	Double-ended cable,for F3SG-SR/PG and F3SG-R Advanced, emitter extension cable M12, 5-pin, male/female, 3 m
	**F39-JG3C**	Root-straight cable set 3 m, for F3SG-SR/PG (2 cables per set with dedicated connector, one for Emitter external open-ended type 5 wires, Gray and one for Receiver external open-ended type 8 wires,Black)
	**F39-JG3C-D**	Root-straight cable 3 m for F3SG-SR/PG (cable for Receiver with dedicated connector - Black),external open-ended type 8 wires
	**F39-JG3C-L**	Root-straight cable 3 m for F3SG-SR/PG (cable for Emitter with dedicated connector - Gray),external open-ended type 5 wires
	**F39-JG7C-D**	Root-straight cable 7 m, for F3SG-SR (cable for Receiver with dedicated connector - Black),external open-ended type 8 wires
	**F39-JG7C-L**	Root-straight cable 7 m for F3SG-SR (cable for Emitter with dedicated connector - Gray),external open-ended type 5 wires

	**F39-JGR12L**	Side-by-side Cascading Cable set, 0.12 m, for F3SG-4SR (2 cables per set, for emitter and receiver)
	**F39-JGR3K**	Double-ended cable for extended set, 0.3 m, for F3SG-SR/PG (2 cables per set, for emitter and receiver)
	**F39-JGR3K-D**	Double-ended cable for extended, 0.3 m, for F3SG-SR/PG (cable for receiver - black) M12, 8-pin
	**F39-JGR3K-L**	Root-Plug cable for extended, 0.3 m, for F3SG-SR/PG (cable for emitter - gray),M12,5-pin
	F39-JGR3K-MS	Root-Plug cable for extended set, 0.3 m, for F3SG-SR/PG,for Conversion with MS4800 (2 cables per set, for emitter and receiver)
	**F39-JGR3K-MS-D**	Double-ended cable for extended, 0.3 m,for F3SG-SR/PG, for Conversion with MS4800 (cable for receiver - black)
	**F39-JGR3K-MS-L**	Root-Plug cable for extended, 0.3 m,for F3SG-SR/PG, for Conversion with MS4800 (cable for emitter - gray)
	**F39-JGR3K-RE**	Root-Plug cable for extended set, 0.3 m,for F3SG-SR/PG, for conversion with F3SG-RE (2 cables per set, for emitter and receiver)
	**F39-JGR3K-RE-D**	Double-ended cable for extended, 0.3 m,for F3SG-SR/PG, for Conversion with F3SG-RA/ RE, (cable for receiver - black)
	**F39-JGR3K-RE-L**	Double-ended cable for extended set 0.3 m,for F3SG-SR/PG, for Conversion with F3SG-RA/ RE, (cable for emitter - gray),
	F39-JGR3K-SJ	Double-ended cable for extended set, 0.3 m,for F3SG-SR/PG, for conversion F3SJ/ SN/ SR (2 cables per set, for emitter and receiver)
	**F39-JGR3K-SJ-D**	Double-ended cable for extended, 0.3 m,for F3SG-SR/PG, for Conversion with F3SJ/ SN (cable for receiver - black)
	**F39-JGR3K-SJ-L**	Double-ended cable for extended, 0.3 m,for F3SG-SR/PG,for Conversion with F3SJ/ SN (cable for emitter - gray)
	**F39-JGR3W**	Cascading cable for extended set, 0.3 m for F3SG-SR/PG and F3SG-4SR, (2 cables per set, one for emitter M12 connector (5-pin) on both ends Gray, and one for receiver M12 connector (8-pin) on both ends Black)

	**F39-LITF1**	Intelligent Tap Bracket For DIN in Panel
	**F39-LMAF1**	Bracket for muting sensor arm mounter (2 units per set)
	**F39-LSGA**	Adjustable Side-Mount Bracket (2 brackets per set),Material: Zinc alloy
	**F39-LSGF**	Fixed Side-Mount Bracket (2 brackets per set)
	**F39-LSGTB-MS**	Adjustable top/bottom bracket set (2 pcs.) for MS4800/F3SR series
	**F39-LSGTB-RE**	Adjustable top/bottom bracket set (2 pcs.) for F3SG-RA/ RE series
	**F39-LSGTB-SJ**	Adjustable top/bottom bracket set (2 pcs.) for F3SJ/ SN series
	**F39-PTS**	Laser-alignment kit for F3SG-SR/PG Series, Mountable from the front. This can be easily mounted and removed to/from the main unit, even as a set with the F39-ST.
	**F39-SGBT**	Bluetooth Communication Unit for F39-SGIT-IL3
	**F39-SGIT-IL3**	Intelligent Tap unit for F3SG-SR/PG
	**F39-SGLP**	The lamp can be connected to emitter, receiver, or emitter/receiver and turned ON based onthe operation of F3SG-SR/PG.The lamp can indicate red, orange, and green colors, to which three different states can beassigned. IP67 * rated when mated.
	**F39-SML1310**	Mirror column 1310 mm for Safety Light Curtain F3SG-SR/PG up to 1200 mm
	**F39-ST1310**	Floor mount column of 1310 mm for F3SG-SR/PG, protective height up to 1280 mm
	**F39-STB**	Mount-column adjustable base for F3SG-SR/PG Mounted to the floor mount column or mirror column.The angle and height of the column can be adjusted.

	**F39-TRD25**	Safety light curtain accessory, test rod, 25 mm for initial and daily checks and regular inspections. (Not included in the Safety Light Curtain delivery)
	**XS2G-D5S1**	Field assembly connector, M12 straight plug (male), 5-poles, A coded, screw connection, for cable diameters 5-6 mm
	**XS3W-M421-401-R**	Cable with connectors on both cable ends, M8 straight socket (female), M8 straight plug (male), 4-poles, PVC robot cable, IP67, 1 m
	**XS3W-M421-402-R**	Cable with connectors on both cable ends, M8 straight socket (female), M8 straight plug (male), 4-poles, PVC robot cable, IP67, 2 m
	**XS3W-M421-405-R**	Cable with connectors on both cable ends, M8 straight socket (female), M8 straight plug (male), 4-poles, PVC robot cable, IP67, 5 m
	**XS3W-M421-410-R**	Cable with connectors on both cable ends, M8 straight socket (female), M8 straight plug (male), 4-poles, PVC robot cable, IP67, 10 m
	**XS3W-M424-402-R**	Cable with connectors on both cable ends, M8 right-angle socket (female), M8 straight plug (male), 4-poles, PVC robot cable, IP67, 2 m
	**XS3W-M424-405-R**	Cable with connectors on both cable ends, M8 right-angle socket (female), M8 straight plug (male), 4-poles, PVC robot cable, IP67, 5 m
	**XS3W-M42C-4C2-A**	Cable with connectors on both cable ends, M8 straight socket (female), Smartclick M12 straight plug (male), 4-poles, PVC standard cable, IP67, 0.2 m
	**XS5F-D421-C80-F**	Sensor cable, Smartclick M12 straight socket (female), 4-poles, A coded, PVC fire-retardant robot cable, IP67, 1 m
	**XS5F-D421-D80-F**	Sensor cable, Smartclick M12 straight socket (female), 4-poles, A coded, PVC fire-retardant robot cable, IP67, 2 m
	**XS5F-D421-E80-F**	Sensor cable, Smartclick M12 straight socket (female), 4-poles, A coded, PVC fire-retardant robot cable, IP67, 3 m
	**XS5F-D421-G80-F**	Sensor cable, Smartclick M12 straight socket (female), 4-poles, A coded, PVC fire-retardant robot cable, IP67, 5 m
	**XS5F-D421-J80-F**	Sensor cable, Smartclick M12 straight socket (female), 4-poles, A coded, PVC fire-retardant robot cable, IP67, 10 m

	**XS5F-D421-L80-F**	Sensor cable, Smartclick M12 straight socket (female), 4-poles, A coded, PVC fire-retardant robot cable, IP67, 20 m
	**XS5F-D521-DJ0-IL**	IO-Link cable, Smartclick M12 straight socket (female), 5-poles, A coded, PVC, IP67, 2 m

Downloads

CAD file



F3SG-SR/PG Safety Light Curtain/Safety Multi-Light Beam

Datasheet

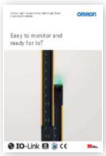
EN PDF 5.81 MB



F3SG-SR/PG Series

Users Manual

EN PDF 68.5 MB



F3SG-SR/PG Series Safety Light Curtain/Safety Multi-Light Beam

Brochure

EN PDF 35.9 MB



F3SG-_SR_ Quick Installation Manual

Instruction Sheet

EN PDF 6.87 MB



IO-Link Series

Brochure

EN PDF 7.95 MB

SD Manager 3 MobileApp V1.10

Software

EN RAR 619 KB

SDManager3_Setup_Version

Software

EN EXE 80.3 MB



Safety Component Selection Guide EU

Brochure

EN PDF 5.26 MB



Safety Solution Advanced Guide

Guide

EN PDF 2.57 MB



Safety Solution Basic Guide

Guide

EN PDF 14.4 MB

TERMS OF WEBSITE USE

This PDF document was created from the European OMRON Industrial Automation website on 4 November, 2026. Click here for terms of use.