OMRON Industrial Automation



# F3SG-4SRB0840-25-F

Safety Light Curtain, F3SG-SRB Standard, Type 4, 25 mm resolution, range 0.3 to 20.0 m, height 840 mm, PNP/NPN

# Specifications

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| **Sensing method** | Safety light curtain |
| **Type of protection** | Hand protection |
| **Number of beams** | 42 |
| **Detection capability** | 25 mm |
| **Safety field height** | 840 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 |

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| **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** | 840 mm |
| **Height of sensor** | 840 mm |
| **Width of sensor** | 32 mm |
| **Number of fixed side-mount brackets** | 2 |
| **Number of adjustable side-mount brackets** | 2 |
| **Number of intermediate brackets** | 0 |

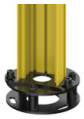
# Accessories

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|  | **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 |

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|  | **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 |

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|  | **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 |

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|  | **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) |

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|  | **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-ST0990** | Floor mount column of 990 mm for F3SG-SR/PG; Protective Height up to 880 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. |

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|  | **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 |

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|  | **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**

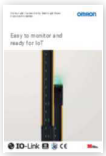
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**F3SG-SR/PG Series**

**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**

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