

SF2-EH SERIES

Related Information

- General terms and conditions..... P.1
- SF-AC P.588
- Glossary of terms..... P.983~
- General precautions P.986~



Conforming to OSHA / ANSI

SUNX website <http://www.sunx.com>

Passes global safety standards!

ORDER GUIDE

Light curtains Mating cable is not supplied with the light curtain. Please order it separately.

Appearance	Operating range (Note 1)	Model No. (Note 2)		Number of beam channels	Protective height (mm in) (Note 3)
		PNP output equivalent type	NPN output equivalent type		
	0.3 to 10m 0.984 to 32.808 ft	SF2-EH12	SF2-EH12-N	12	220 8.661
		SF2-EH16	SF2-EH16-N	16	300 11.811
		SF2-EH20	SF2-EH20-N	20	380 14.961
		SF2-EH24	SF2-EH24-N	24	460 18.110
		SF2-EH28	SF2-EH28-N	28	540 21.260
		SF2-EH32	SF2-EH32-N	32	620 24.409
		SF2-EH36	SF2-EH36-N	36	700 27.559
		SF2-EH40	SF2-EH40-N	40	780 30.709
		SF2-EH48	SF2-EH48-N	48	940 37.008
		SF2-EH56	SF2-EH56-N	56	1,100 43.307
		SF2-EH64	SF2-EH64-N	64	1,260 49.606
		SF2-EH72	SF2-EH72-N	72	1,420 55.905
		SF2-EH80	SF2-EH80-N	80	1,580 62.205

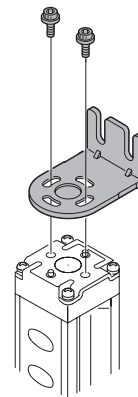
- Notes: 1) The operating range is the possible setting distance between the emitter and the receiver.
 The light curtain can detect an object less than 0.3 m 0.984 ft away.
 2) The model No. with suffix "P" shown on the label affixed to the product is the emitter, "D" shown on the label is the receiver.
 (e.g.) Emitter of SF2-EH12-N: SF2-EH12P-N, Receiver of SF2-EH12-N: SF2-EH12D-N.
 3) Refer to the "Definition of light curtain and area sensor sensing heights" (p.589) for the definition of the protective height.

Spare parts (Accessories for light curtain)

Designation	Model No.	Description
Sensor mounting bracket	MS-SF2-1	One set of two brackets for both the emitter and the receiver
Intermediate supporting bracket	MS-SF2-2	One set of two brackets for both the emitter and the receiver
Test rod	SF2-EH-TR	Sensing object (ø30 mm ø1.181 in) for daily check

Sensor mounting bracket

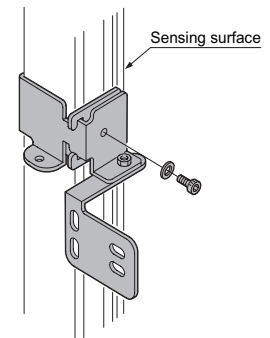
- MS-SF2-1



Four bracket set
 Eight M4 (length 10 mm 0.394 in) hexagon-socket-head bolts with washers are attached.

Intermediate supporting bracket

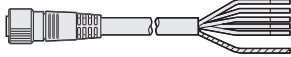
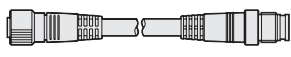
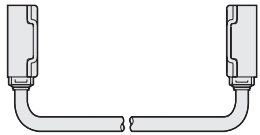
- MS-SF2-2



Set of 2 pcs. each of U-shaped intermediate supporting bracket and L-shaped intermediate supporting bracket
 Two M4 (length 6 mm 0.236 in) hexagon-socket-head bolts, two M4 (length 10 mm 0.394 in) hexagon-socket-head bolts with washers, two nuts and two plain washers are attached.

ORDER GUIDE

Mating cables Mating cable is not supplied with the light curtain. Please order it separately.

Type	Appearance	Model No.	Description
Cable with connector on one end		SF2-CC3	Length: 3 m 9.843 ft Net weight: 410 g approx. (two cables)
		SF2-CC7	Length: 7 m 22.966 ft Net weight: 890 g approx. (two cables)
		SF2-CC10	Length: 10 m 32.808 ft Net weight: 1.2 kg approx. (two cables)
Cable with connector on both ends		SF2-CCJ10	Length: 10 m 32.808 ft Net weight: 1.2 kg approx. (two cables)
Cable for series connection		SF2-CSL02	Length: 200 mm 7.874 in Net weight: 150 g approx. (two cables)
		SF2-CSL05	Length: 500 mm 19.685 in Net weight: 170 g approx. (two cables)

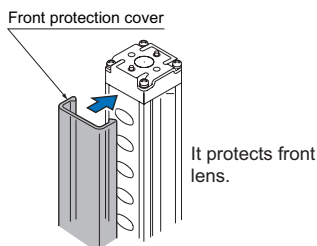
OPTIONS

Applicable beam channels		12 beam channels	16 beam channels	20 beam channels	24 beam channels	28 beam channels	32 beam channels	36 beam channels	40 beam channels	48 beam channels	56 beam channels	64 beam channels	72 beam channels	80 beam channels
Front protection cover	Model No.	FC-SF2-H12	FC-SF2-H16	FC-SF2-H20	FC-SF2-H24	FC-SF2-H28	FC-SF2-H32	FC-SF2-H36	FC-SF2-H40	FC-SF2-H48	FC-SF2-H56	FC-SF2-H64	FC-SF2-H72	FC-SF2-H80
Slit mask	Model No.	OS-SF2-H12	OS-SF2-H16	OS-SF2-H20	OS-SF2-H24	OS-SF2-H28	OS-SF2-H32	OS-SF2-H36	OS-SF2-H40	OS-SF2-H48	OS-SF2-H56	OS-SF2-H64	OS-SF2-H72	OS-SF2-H80
Front protection bracket	Model No.	MC-SF2EH-12	MC-SF2EH-16	MC-SF2EH-20	MC-SF2EH-24	MC-SF2EH-28	MC-SF2EH-32	MC-SF2EH-36	MC-SF2EH-40	MC-SF2EH-48	MC-SF2EH-56	MC-SF2EH-64	MC-SF2EH-72	MC-SF2EH-80

Note: The model Nos. given above denote a single unit, not a pair of units. 2 pcs. (2 sets) are required to mount the emitter / receiver.

Front protection cover

• FC-SF2-H□

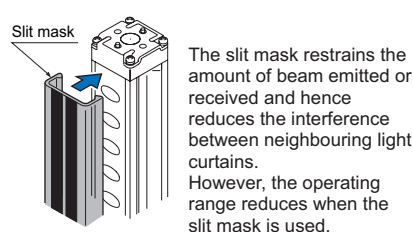


Operating range

- Front protection cover on the emitter side: 0.3 to 8.5 m **0.984 to 27.887 ft**
- Front protection cover on the receiver side: 0.3 to 8.5 m **0.984 to 27.887 ft**
- Front protection cover on the both sides: 0.3 to 8 m **0.984 to 26.247 ft**

Slit mask

• OS-SF2-H□

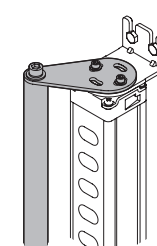


Operating range

- Slit on the emitter side: 0.3 to 4 m **0.984 to 13.124 ft**
- Slit on the receiver side: 0.3 to 5 m **0.984 to 16.404 ft**
- Slit on both sides: 0.3 to 2 m **0.984 to 6.562 ft**

Front protection bracket

• MC-SF2EH-□



Laser alignment tool

• SF-LAT-2E



FIBER SENSORS

LASER SENSORS

PHOTO-ELECTRIC SENSORS

MICRO PHOTO-ELECTRIC SENSORS

AREA SENSORS

SAFETY COMPONENTS

PRESSURE SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC CONTROL DEVICES

LASER MARKERS

Selection Guide

Light Curtains

SF4B

SF2B

BSF4-AH80

Control Units

SF-C10

Optical Touch Switch

SW-101

Other Products

Definition of Sensing Heights

SPECIFICATIONSThe CAD data in the dimensions can be downloaded from the SUNX website: <http://www.sunx.com>

Item	Model No.	Number of beam channels													
		12	16	20	24	28	32	36	40	48	56	64	72	80	
	PNP output equivalent type	SF2-EH12	SF2-EH16	SF2-EH20	SF2-EH24	SF2-EH28	SF2-EH32	SF2-EH36	SF2-EH40	SF2-EH48	SF2-EH56	SF2-EH64	SF2-EH72	SF2-EH80	
	NPN output equivalent type	SF2-EH12-N	SF2-EH16-N	SF2-EH20-N	SF2-EH24-N	SF2-EH28-N	SF2-EH32-N	SF2-EH36-N	SF2-EH40-N	SF2-EH48-N	SF2-EH56-N	SF2-EH64-N	SF2-EH72-N	SF2-EH80-N	
Protective height		220 mm 8.661 in	300 mm 11.811 in	380 mm 14.961 in	460 mm 18.110 in	540 mm 21.260 in	620 mm 24.409 in	700 mm 27.559 in	780 mm 30.704 in	940 mm 37.008 in	1,100 mm 43.307 in	1,260 mm 49.606 in	1,420 mm 55.905 in	1,580 mm 62.205 in	
Operating range		0.3 to 10 m 0.984 to 32.808 ft (Note 2)													
Beam pitch		20 mm 0.787 in													
Detection capability		ø30 mm ø1.181 in or more opaque object													
Effective aperture angle		±2.5° or less [for operating range exceeding 3 m 9.843 ft (conforming to IEC 61496-2 / UL 61496-2)]													
Supply voltage		24 V DC ± 15 %													
Current consumption		200 mA or less													
Control outputs (OSSD 1, OSSD 2)		<PNP output equivalent type> Semiconductor output (PNP output equivalent) 2 outputs • Maximum source current: 300 mA • Applied voltage: Same as supply voltage (between control output and +V) • Residual voltage: 2.5 V or less (at 300 mA source current)							<NPN output equivalent type> Semiconductor output (NPN output equivalent) 2 outputs • Maximum sink current: 300 mA • Applied voltage: Same as supply voltage (between control output and 0 V) • Residual voltage: 2 V or less (at 300 mA sink current)						
	Utilization category	DC-12 or DC-13													
Operation mode		ON when all beam channels are received / OFF when one or more beam channels are interrupted (OFF also in case of any malfunction in the light curtain or the synchronization signal.)													
Response time		OFF response: 15 ms or less, ON response: 20 ms or less													
Test input (emission halt) function		Incorporated													
Interference prevention function		Incorporated [Series connection: 4 sets max., however total 192 beam channels max. Parallel connection: 4 sets max., however total 192 beam channels max. Series and parallel mixed connection: 12 sets max., however total 192 beam channels max.]													
Pollution degree		3 (Industrial environment)													
Degree of protection		IP65 (IEC) (Refer to p.984 for details of standards.)													
Ambient temperature		-10 to +55 °C +14 to +131 °F (No dew condensation or icing allowed), Storage: -25 to +70 °C -13 to +158 °F													
Emitting element		Infrared LED (Peak emission wavelength: 870 nm 0.034 mil)													
Material		Enclosure: Aluminum, Cap: ABS													
Net weight (Total of emitter and receiver)		1.1 kg approx.	1.3 kg approx.	1.5 kg approx.	1.7 kg approx.	1.9 kg approx.	2.2 kg approx.	2.4 kg approx.	2.6 kg approx.	3.1 kg approx.	3.5 kg approx.	4.0 kg approx.	4.4 kg approx.	4.9 kg approx.	
Dimensions		W35 × H (protective height + 92) × D35 mm W1.378 × H (protective height + 3.622) × D1.378 in													
Accessories		MS-SF2-1 (Sensor mounting bracket): 1 set for emitter and receiver, MS-SF2-2 (Intermediate supporting bracket): (Note 3), SF2-EH-TR (Test rod): 1 pc.													

Notes: 1) Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +20 °C **+68 °F**.

2) The operating range is the possible setting distance between the emitter and the receiver.

The light curtain can detect an object less than 0.3 m **0.984 ft** away.3) **MS-SF2-2** (intermediate supporting bracket) is attached with light curtains having 24, or more, beam channels.

The number of attached intermediate supporting brackets is different depending on the light curtains as follows.

SF2-EH24(-N), **SF2-EH28(-N)**, **SF2-EH32(-N)**, **SF2-EH36(-N)**, **SF2-EH40(-N)**, **SF2-EH48(-N)**, **SF2-EH56(-N)**: 1 set**SF2-EH64(-N)**, **SF2-EH72(-N)**, **SF2-EH80(-N)**: 2 sets**PRECAUTIONS FOR PROPER USE**

Refer to p.986~ for general precautions.



Refer to the applicable regulations for the region where this device is to be used when setting up the device. In addition, make sure that all necessary measures are taken to prevent possible dangerous operating errors resulting from earth faults.

- This catalog is a guide to select a suitable product. Be sure to read the instruction manual attached to the product prior to its use.



- Do not utilize this light curtain in "PSDI Mode", in which the light curtain is utilized as an activator for machinery.
- To use this product in the U.S.A., refer to OSHA 1910. 212 and OSHA 1910. 217 for installation, and in Europe, refer to EN 999 as well. Observe your national and local requirements before installing this product.