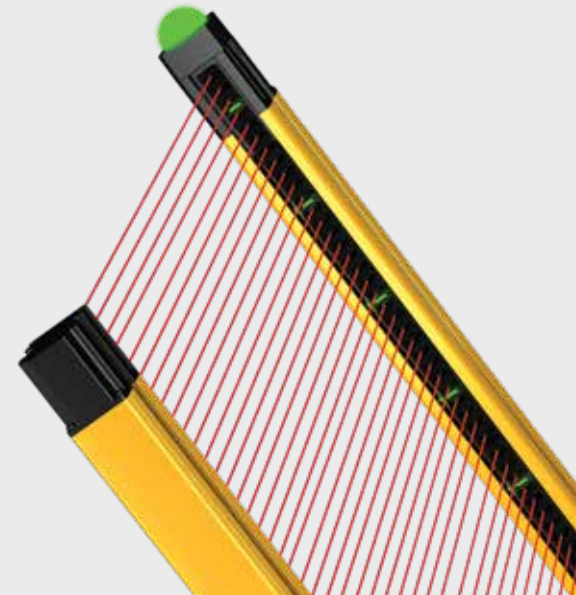


LS Series

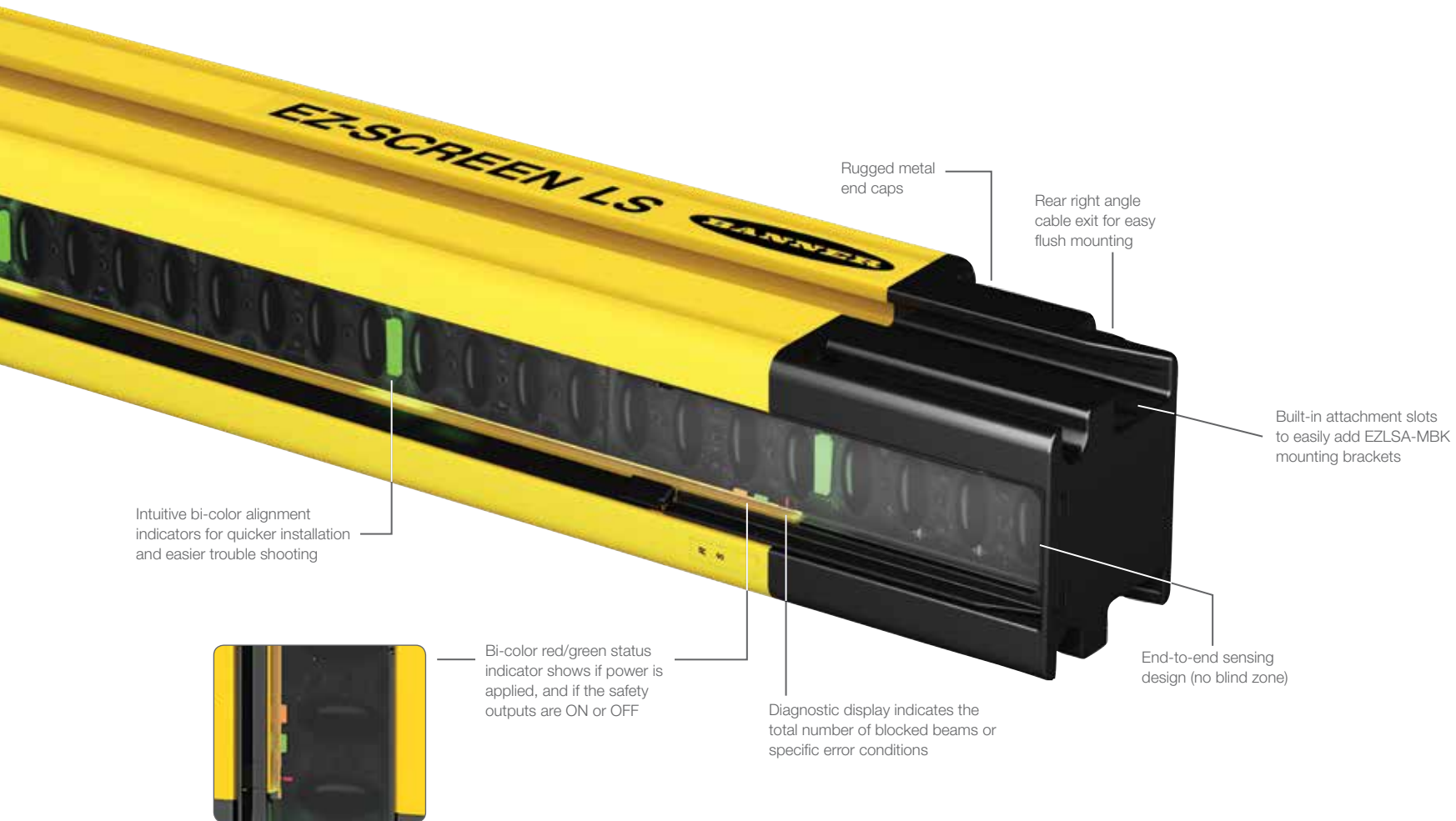


Safety Light Screen

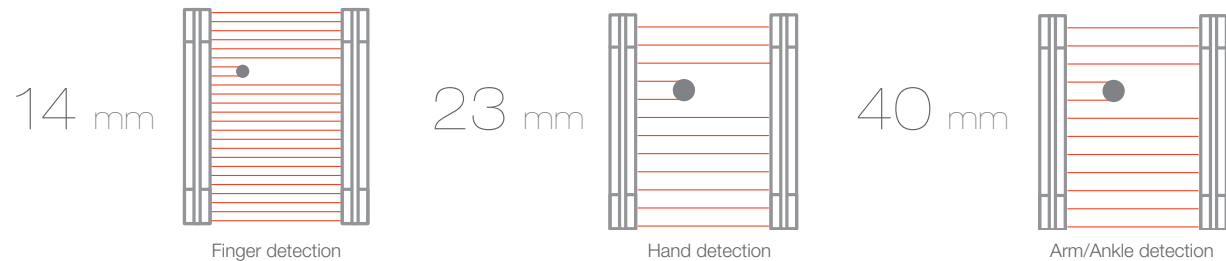
- Quick, easy configuration—no DIP switches or software to configure
- End-to-end sensing
- Heavy-duty aluminum housing and recessed window to avoid damage in harsh environments
- Highly visible alignment and diagnostic indicators
- Available in 14, 23 and 40 mm resolution stand alone and cascade models
- Basic models with limited options offer additional value for simple applications
- IP69K Hygienic models available for washdown environments

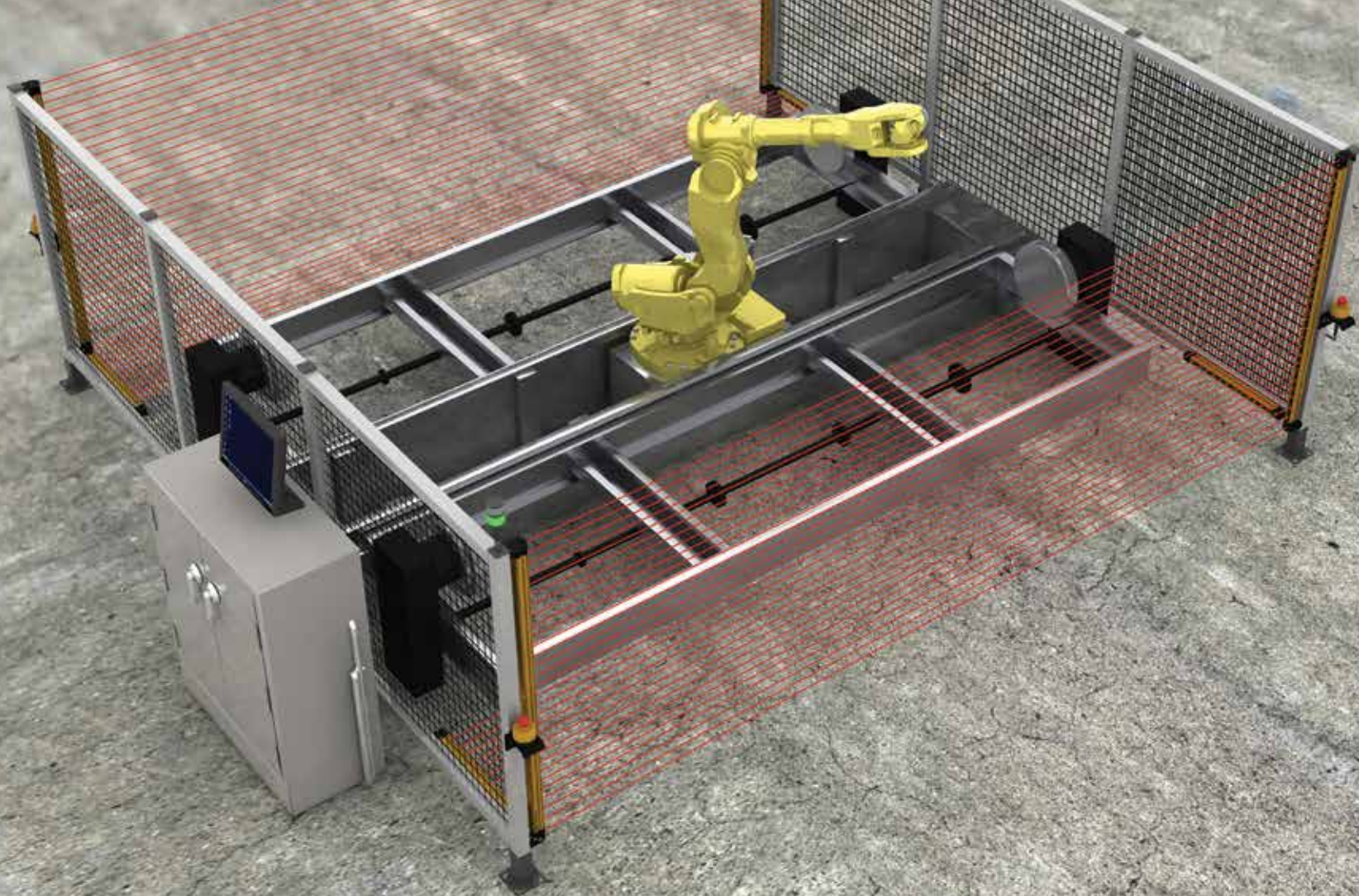


Heavy-Duty LS Series Safety Light Screen



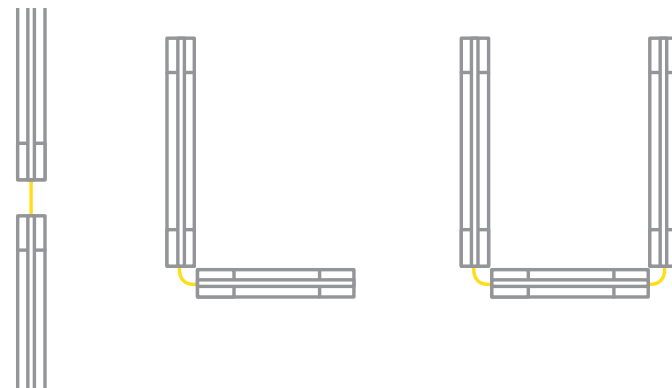
Available in Three Resolutions



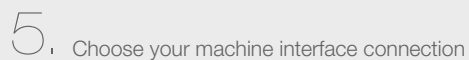
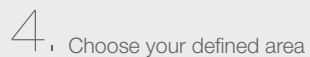
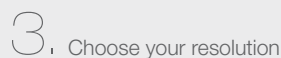
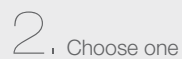


Cascade Capable

- Cascade light screens provide multi-sided protection in areas where increased access is required.
- Connect up to four pairs of EZ-SCREEN® LS Safety Light Screens
- Connect pairs of different resolutions or lengths
- Built-in automatic cascade configuration
- Each additional pair adds only 2 ms to system response time
- Scan code automatically alternates from one pair to the next



1. Choose one

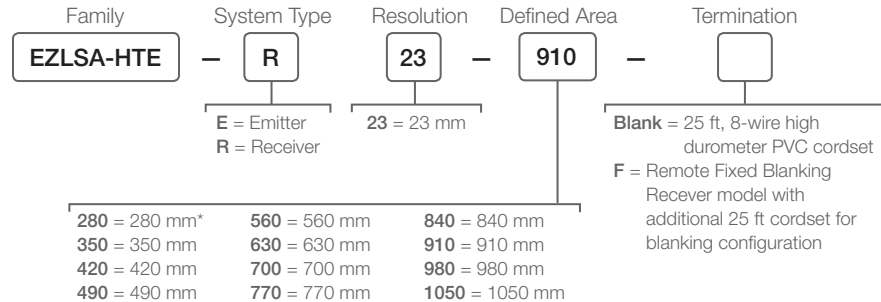


- 
- EZ-SCREEN LS**



IP69K Hygienic Option

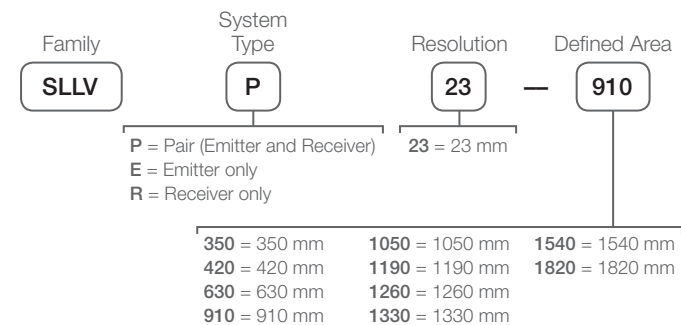
- 8.4 meter range
- 23 mm resolution
- Twelve defined areas available from 280 to 1050 mm
- IP69K Washdown-rated with easy-to-clean hygienic design
- Chemical Resistant—316 Stainless Steel and Food Grade Polycarbonate
- Hydrophobic Vent allows air to pass but not fluid – prevents condensation by allowing pressure to adjust
- Remote Fixed Blanking optional models to ignore stationary objects
- 25', 8-wire high durometer PVC cordset
- Stainless steel brackets ordered separately (see page 7)



* Not available with remote fixed blanking option

LS Basic

- 8 meter range
- 23 mm resolution
- Ten defined areas available from 350 to 1820 mm
- External Device Monitoring, Auxiliary Fault Output and Scan Code Select included (8-Pin Connectors)
- M12 Pigtail (see below) and brackets (see page 7) ordered separately



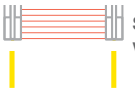
M12 Pigtail
Euro-Style Quick Disconnect to LS Custom Male Straight Connector

DELSE-51D (5-pin)
0.3 m (1 ft)

DELSE-81D (8-pin)
0.3 m (1 ft)

Connection Options

8-Pin

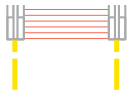
 SLLP.. - ... with RDL5-8..D

RD Cordsets

RDL5-815D
4.6 m (15.1')

RDL5-825D
8 m (26.2')

RDL5-850D
15.3 m (50.2')

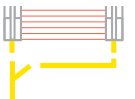
 SLLP.. - ...P88 with QDE-8..D

8-Pin M12/ Euro-Style

QDE-815D
4.5 m (15')

QDE-825D
7.6 m (25')

QDE-850D
15.2 m (50')

 SLLP.. - ...P88 with CSB-M128..M128.. & DEE2R-8..D

8-Pin Male M12 to Dual 8-Pin Female M12 Euro-Style Splitter

CSB-M1280M1280
No trunk/ no branches

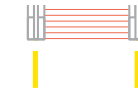
CSB-M1281M1281
0.3 m (1') trunk/2 x 0.3 m (1') branches

CSB-M1288M1281
2.44 m (8') trunk/2 x 0.3 m (1') branches

8-Pin M12/Euro-Style Double-Ended

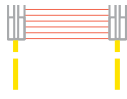
DEE2R-81D 0.3 m (1')	DEE2R-825D 7.6 m (25')
DEE2R-83D 0.9 m (3')	DEE2R-830D 9.1 m (30')
DEE2R-88D 2.5 m (8')	DEE2R-850D 15.2 m (50')
DEE2R-812D 3.6 m (12')	DEE2R-875D 22.9 m (75')
DEE2R-815D 4.6 m (15')	DEE2R-8100D 30.5 m (100')

5-Pin

 SLLP.. - ... with RDL5-5..D

RD Cordsets

RDL5-515D
4.6 m (15.1')

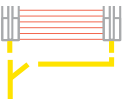
 SLLP.. - ...P55 with QDE-5..D

5-Pin M12/ Euro-Style

QDE-515D
4.5 m (15')

QDE-525D
7.6 m (25')

QDE-550D
15.2 m (50')

 SLLP.. - ...P55 with CSB-M125..M125.. & DEE2R-5..D

5-Pin Male M12 to Dual 5-Pin Female M12 Euro-Style Splitter

CSB-M1250M1250
No trunk/ no branches

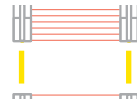
CSB-M1251M1251
0.3 m (1') trunk/2 x 0.3 m (1') branches

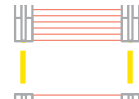
CSB-M1258M1251
2.44 m (8') trunk/2 x 0.3 m (1') branches

5-Pin M12/Euro-Style Double-Ended

DEE2R-51D 0.3 m (1')	DEE2R-525D 7.6 m (25')
DEE2R-53D 0.9 m (3')	DEE2R-530D 9.1 m (30')
DEE2R-58D 2.5 m (8')	DEE2R-550D 15.2 m (50')
DEE2R-512D 3.6 m (12')	DEE2R-575D 22.9 m (75')
DEE2R-515D 4.6 m (15')	DEE2R-5100D 30.5 m (100')

Cascade

 SLLCP.. - with DELS-....E plus SLLCP.. - ... with RDL5-8..D

 SLLCP.. - with DELS-....E plus SLLCP.. - ...P88 with CSB-M128..M128.. & DEE2R-8..D

Double-Ended RD to RD Cordsets

DELS-110E 0.05 m (0.2')	DELS-118E 2.5 m (8.2')	DELS-1125E 8 m (26.2')
DELS-111E 0.3 m (1')	DELS-1115E 4.6 m (15.1')	DELS-1150E 15.3 m (50.2')
DELS-113E 1 m (3.3')		

Interface Options

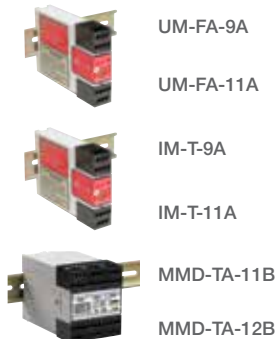
Safety Controllers



Expandable safety controller supports up to eight I/O modules and programs easily using icon-based software

Flexible, efficient safety controller has small footprint and programs easily using icon-based software" to match XS description

Safety Modules



Monitors solid-state PNP OSSD safety outputs and provides latching (manualreset) function for applications requiring a reset

Interface Modules provide isolated safety output contacts for a solid-state output (OSSD) device. It requires monitoring with the External Device Monitoring (EDM) function

Muting modules suspend safeguarding during non-hazardous portion of the machine cycle

Contactors



11-BG00-31-D-024
BF1801L024

Two contactors are required for higher levels of safety performance and requires monitoring by External Device Monitoring (EDM) function.

Fixed Blanking Remote Key Switch



EZA-RBK-1

Used to configure fixed blanking remotely when connected to a cascade receiver using DELSEF-81D cable. Also use with DEE2R-8..D cordset to provide extension as needed.

Accessories



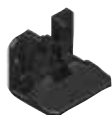
EZLSA-MBK-11*
End mount steel bracket with 360° rotation in 23° increments (two supplied with each sensor)



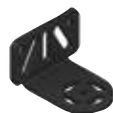
EZLSA-MBK-12*
Center mount steel bracket with +/- 15 degree rotation (one supplied with each sensor ≥ 980 mm)



EZLSA-MBK-HTE-2
Hygienic stainless steel bracket with 360 degree rotation for IP69K enclosure models (two brackets per optional kit)



EZLSA-MBK-16
Side mount die-cast bracket with +15° and -20° rotation (one bracket per optional kit)



EZLSA-MBK-20
8-ga. black cold-rolled steel (optional end-mount bracket for slotted aluminum framing)



EZLSA-MBK-HTE-1
Stamped stainless steel bracket with 360 degree rotation for IP69K enclosure models (two brackets per optional kit)



K30LGRXPQ
requires 4-pin QD



K50LGRXPQ
requires 4-pin QD



TL50GRQ
requires 4-pin QD



EZLSA-K30LGR (Green/Red)
EZLSA-K30LXR (Red)
Connects directly to SLLCR... cascade receiver

RD to M12/ Euro-Style Cordsets

Connects indicators/remote fixed blanking key switch to a cascade receiver



4-Pin (use with Indicators)

DELSEF-40D
0.07 m (0.2')
DELSEF-41D
0.3 m (1')

DELSEF-43D
1 m (3.3')
DELSEF-48D
2.5 m (8.2')

DELSEF-415D
4.6 m (15.1')

8-Pin (use with EZA-RBK-1)

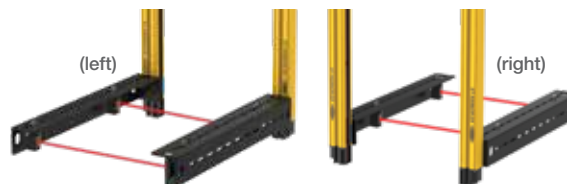
DELSEF-81D
0.3 m (1')

* Not included with the LS Basic or IP69K Hygienic models. Must be purchased separately.

Mute Arm Kits

- Pre-assembled for plug-and-play connection
- Adjusts easily for line changes
- Cables, mute lights and hardware accessories available

L-Configuration

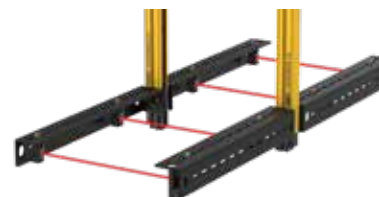


SGSA-ML-L-LPQ20

SGSA-ML-R-LPQ20

includes 2 mute arms, 2 SGSA-Q20PLPQ5 mute sensors, and 2 retroreflectors

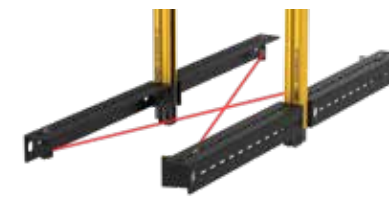
T-Configuration



SGSA-MT-LPQ20

includes 4 mute arms, 4 SGSA-Q20PLPQ5 mute sensors, and 4 retroreflectors

X-Configuration



SGSA-MX-LPQ20



includes 4 mute arms, 2 SGSA-Q20PLPQ5 mute sensors, and 2 retroreflectors

Box or Pallet Muting

Mute Arm Kit	Enter/Exit Direction	Width & Shape	Position on Conveyor
L-Configuration	One-way (exit)	Varying	Varying
X- Configuration	Bi-Directional	Consistent	Consistent
T-Configuration	Bi-Directional	Varying	Varying

For a list of required products and the steps necessary to create a muting solution for your Safety Light Screen, see datasheet 206632.

Specifications

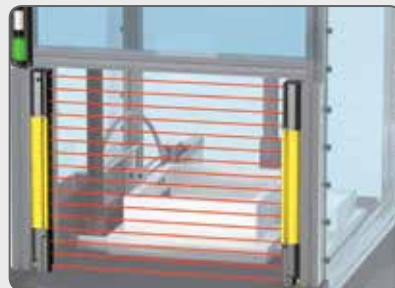
Operating Range	LS: 0.1 to 12 m (4 in to 39 ft) LS Basic: 0.1 to 8 m (4 in to 26 ft) IP69K Hygienic: 8.4m (4 in to 27.6 ft)	Supply Voltage at the Device	24 V dc $\pm 15\%$ (use a SELV-rated power supply according to EN IEC 60950)
Resolution	LS: 14 mm, 23 mm, or 40 mm, depending on model LS Basic, IP69K Hygienic: 23 mm	Short Circuit Protection	All inputs and outputs are protected from short circuits to +24 V dc or dc common
Output	Two redundant solid-state outputs (OSSD) 24 V dc, 0.5 A max. per OSSD	Electrical Safety Class	III (per IEC 61140: 1997)
Environmental Rating	LS, LS Basic: IEC IP65/IEC IP67 IP69K Hygienic: IP69K	Safety Rating	Type 4 per IEC 61496-1, -2 Category 4 PL e per EN ISO13849-1 SIL3 per IEC 61508; SIL CL3 per IEC 62061
Operating Conditions	-20 °C to +55 °C (-4 °F to +131 °F) 95% maximum relative humidity (non-condensing)	Dimensions (mm)	LS and LS Basic: 36 W x 45 D IP69K Hygienic: \varnothing 63.5 mm Height varies by model
		Certifications	 

Banner offers intuitive, easy-to-use safety light curtains for a wide variety of safety applications



HEAVY-DUTY TYPE 4

Robust safety light curtains for harsh industrial environments.



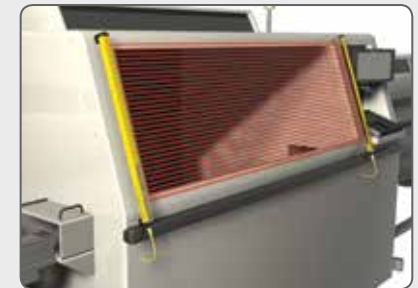
COMPACT TYPE 4

Compact safety light curtains for safety in tight spaces.



PERIMETER GUARDING TYPE 4

One to four beam safety light devices.



TYPE 2

Cost-effective safety light curtain for lower risk applications.



185184 Rev. B

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