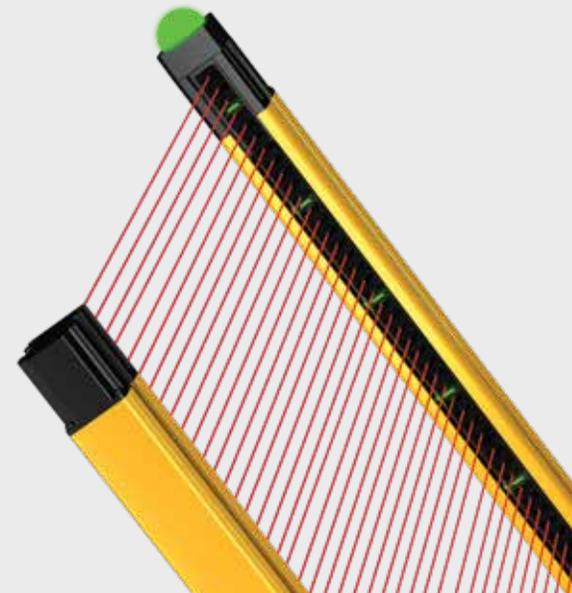


LS Series

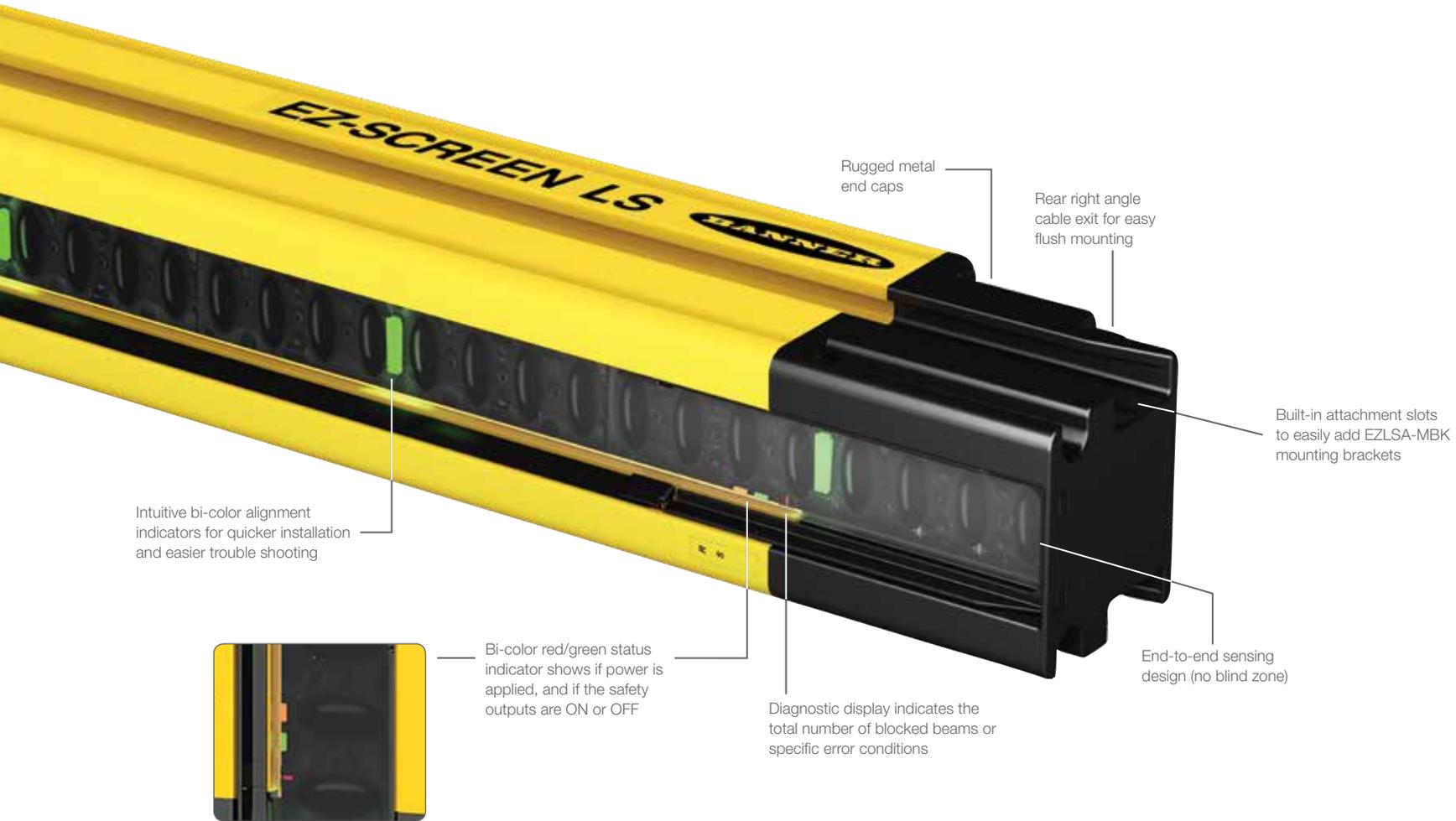


Safety Light Screen

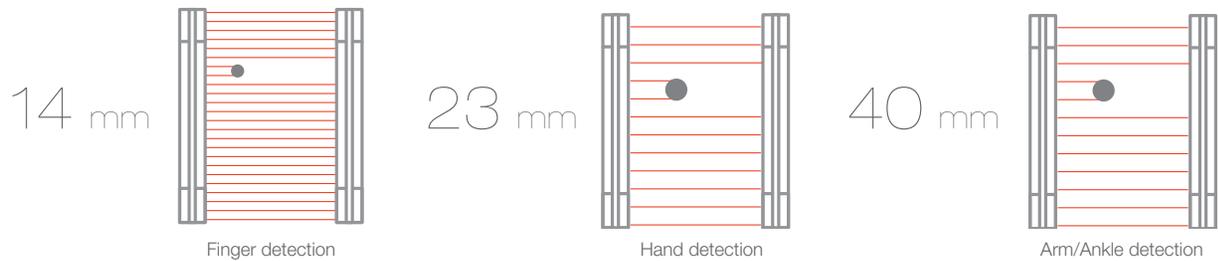
- Quick, easy configuration—no DIP switches or software to configure
- End-to-end sensing
- Heavy-duty aluminum housing and recessed window to avoid damage in harsh environments
- Highly visible alignment and diagnostic indicators
- Available in 14, 23 and 40 mm resolution stand alone and cascade models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

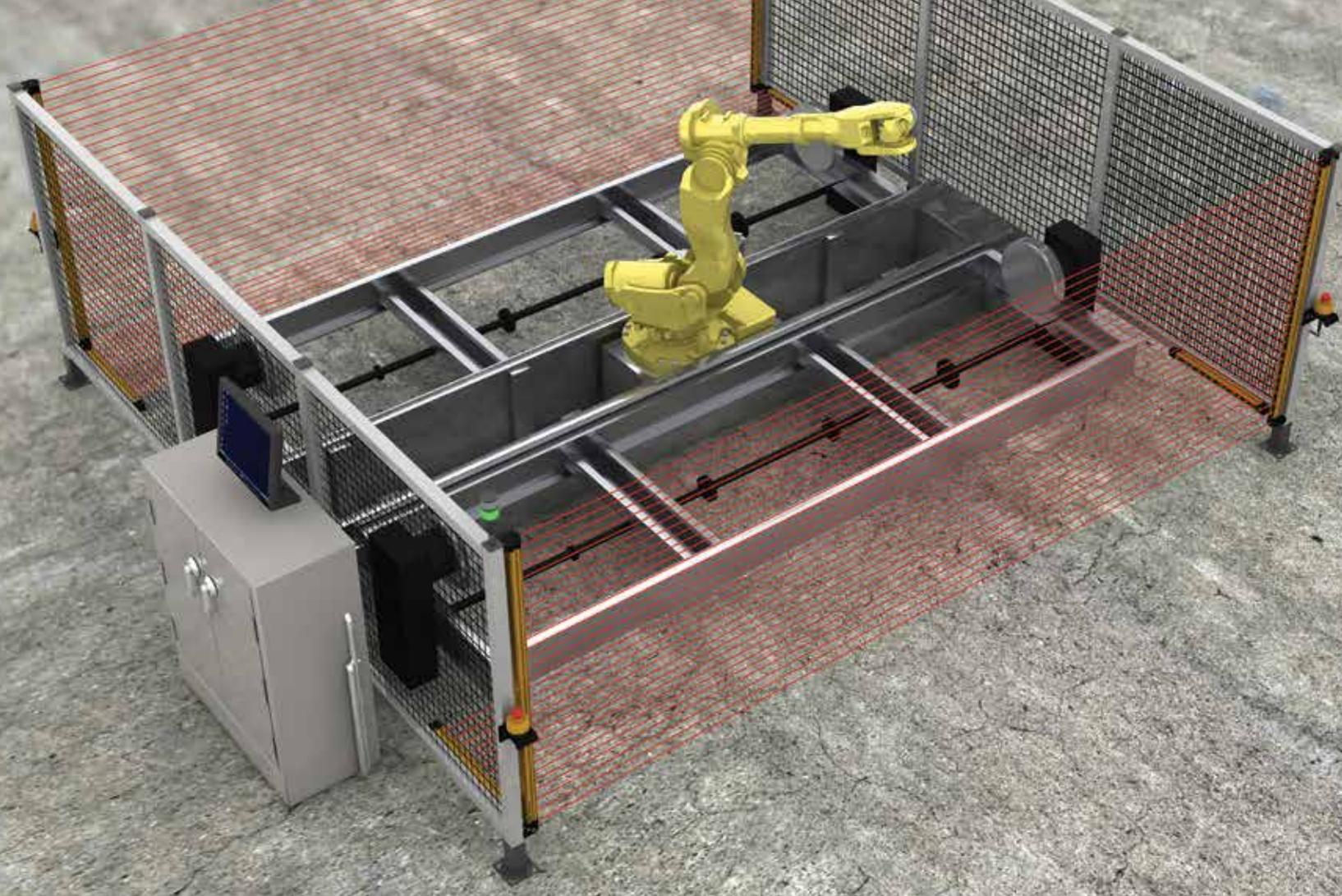


Heavy-Duty LS Series Safety Light Screen



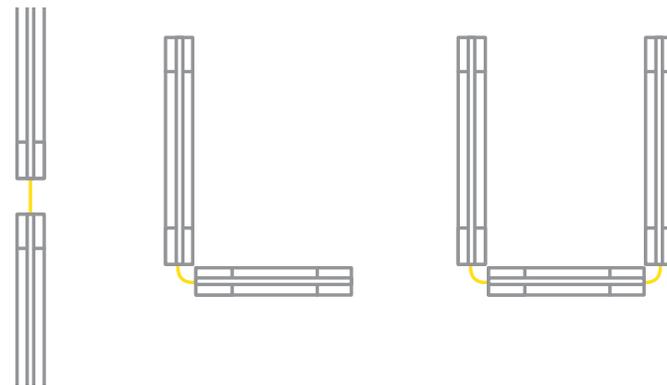
Available in Three Resolutions





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



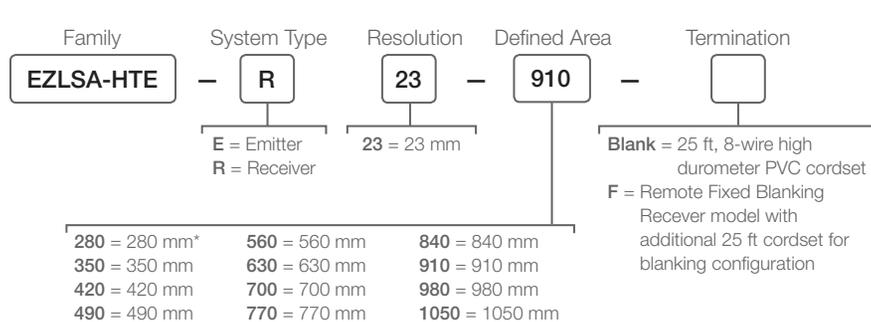
IP69K Hygienic Option

- 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)

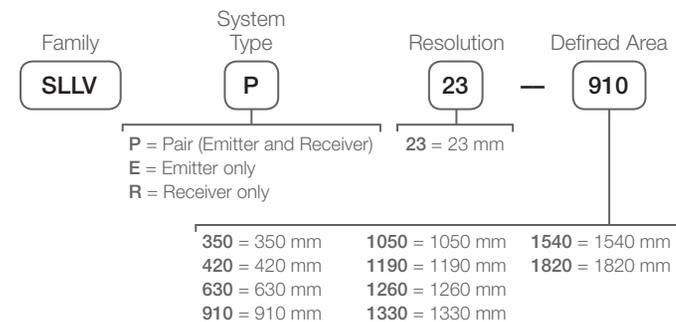


LS Basic

- 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



* Not available with remote fixed blanking option



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 RDLS-8..D



RD Cordsets



RDLS-815D
4.6 m (15.1')
RDLS-825D
8 m (26.2')
RDLS-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')

QDE-875D
22.8 m (75')
QDE-8100D
30.4 m (100')

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

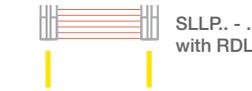
8-Pin M12/Euro-Style Double-Ended

DEE2R-81D
0.3 m (1')
DEE2R-83D
0.9 m (3')
DEE2R-88D
2.5 m (8')
DEE2R-812D
3.6 m (12')
DEE2R-815D
4.6 m (15')

DEE2R-825D
7.6 m (25')
DEE2R-830D
9.1 m (30')
DEE2R-850D
15.2 m (50')
DEE2R-875D
22.9 m (75')
DEE2R-8100D
30.5 m (100')

5-Pin

SLLP. - ... with RDLS-5..D

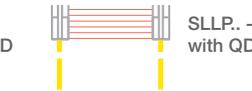


RD Cordsets



RDLS-515D
4.6 m (15.1')

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



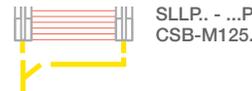
5-Pin M12/ Euro-Style



QDE-515D
4.5 m (15')
QDE-525D
7.6 m (25')
QDE-550D
15.2 m (50')

QDE-575D
22.8 m (75')
QDE-5100D
30.4 m (100')

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

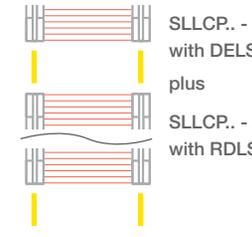
5-Pin M12/Euro-Style Double-Ended

DEE2R-51D
0.3 m (1')
DEE2R-53D
0.9 m (3')
DEE2R-58D
2.5 m (8')
DEE2R-512D
3.6 m (12')
DEE2R-515D
4.6 m (15')

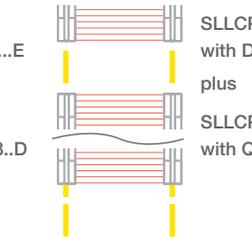
DEE2R-525D
7.6 m (25')
DEE2R-530D
9.1 m (30')
DEE2R-550D
15.2 m (50')
DEE2R-575D
22.9 m (75')
DEE2R-5100D
30.5 m (100')

Cascade

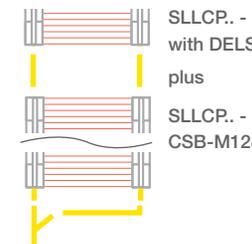
SLLCP. - with DELS-....E plus SLLCP. - ... with RDLS-8..D



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



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

Fixed Blanking Remote Key Switch



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)



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



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)

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

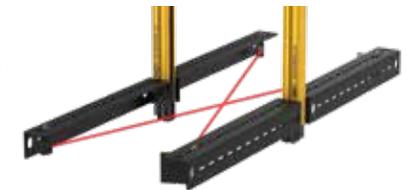
T-Configuration



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)

Resolution

LS: 14 mm, 23 mm, or 40 mm, depending on model
 LS Basic, IP69K Hygienic: 23 mm

Output

Two redundant solid-state outputs (OSSD)
 24 V dc, 0.5 A max. per OSSD

Environmental Rating

LS, LS Basic: IEC IP65/IEC IP67
 IP69K Hygienic: IP69K

Operating Conditions

-20 °C to +55 °C (-4 °F to +131 °F)
 95% maximum relative humidity (non-condensing)

Supply Voltage at the Device

24 V dc ±15% (use a SELV-rated power supply according to EN IEC 60950)

Short Circuit Protection

All inputs and outputs are protected from short circuits to +24 V dc or dc common

Electrical Safety Class

III (per IEC 61140: 1997)

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

Dimensions (mm)

LS and LS Basic: 36 W x 45 D
 IP69K Hygienic: ø 63.5 mm
 Height varies by model

Certifications

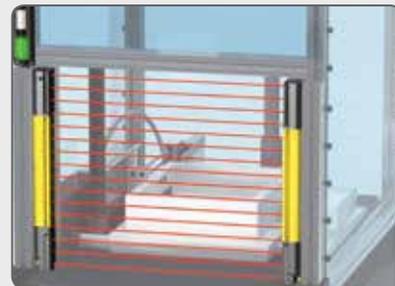


Banner offers intuitive, easy-to-use safety light curtains for a wide variety of safety applications



HEAVY-DUTY TYPE 4

Robust safety light curtains for harsh industrial environments.



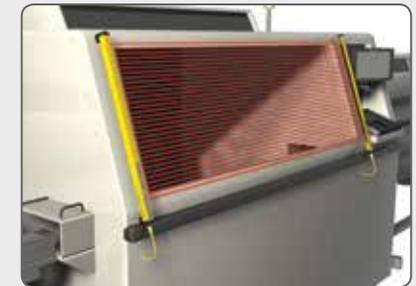
COMPACT TYPE 4

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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