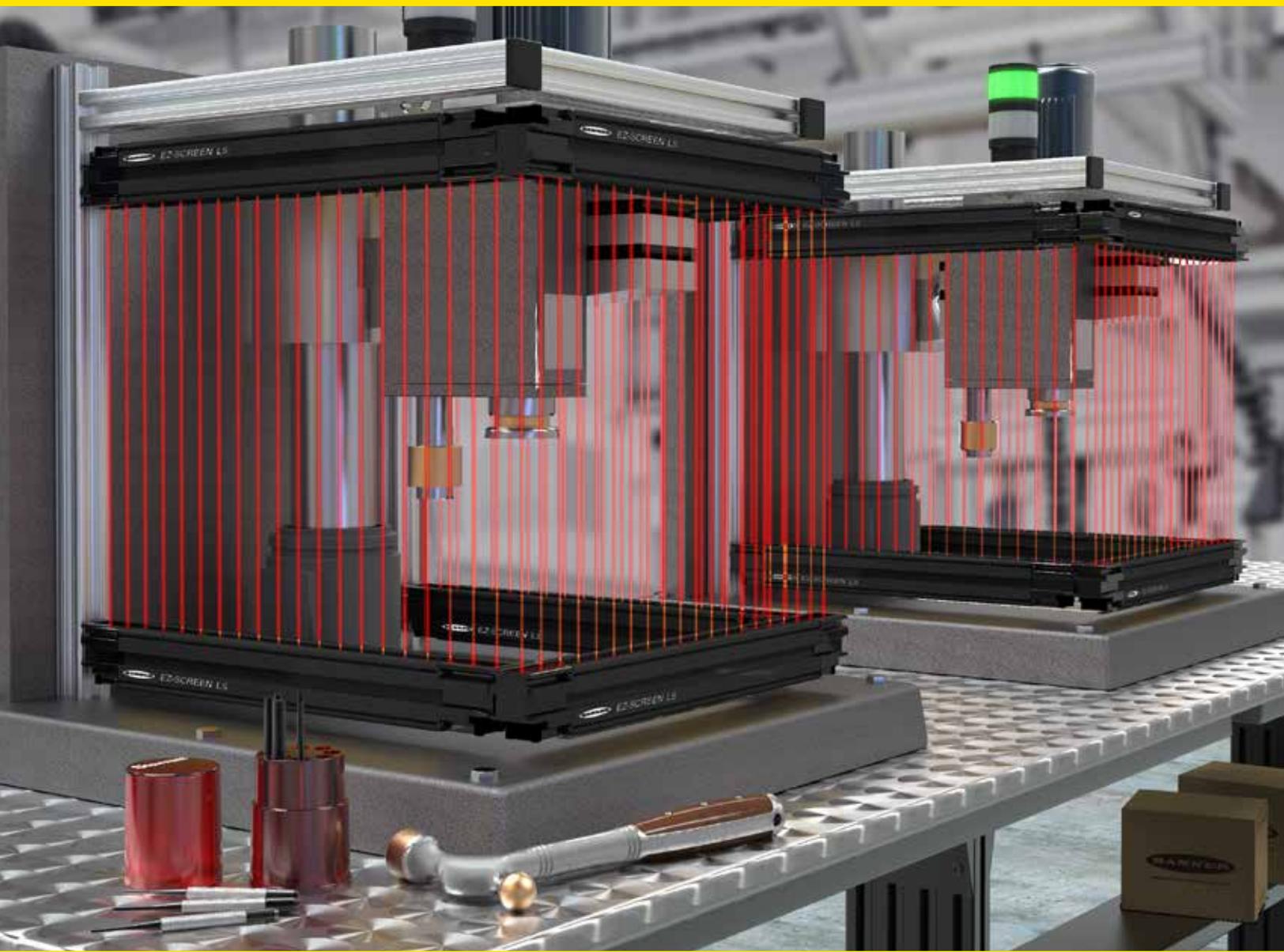


# LS Series Safety Light Screen

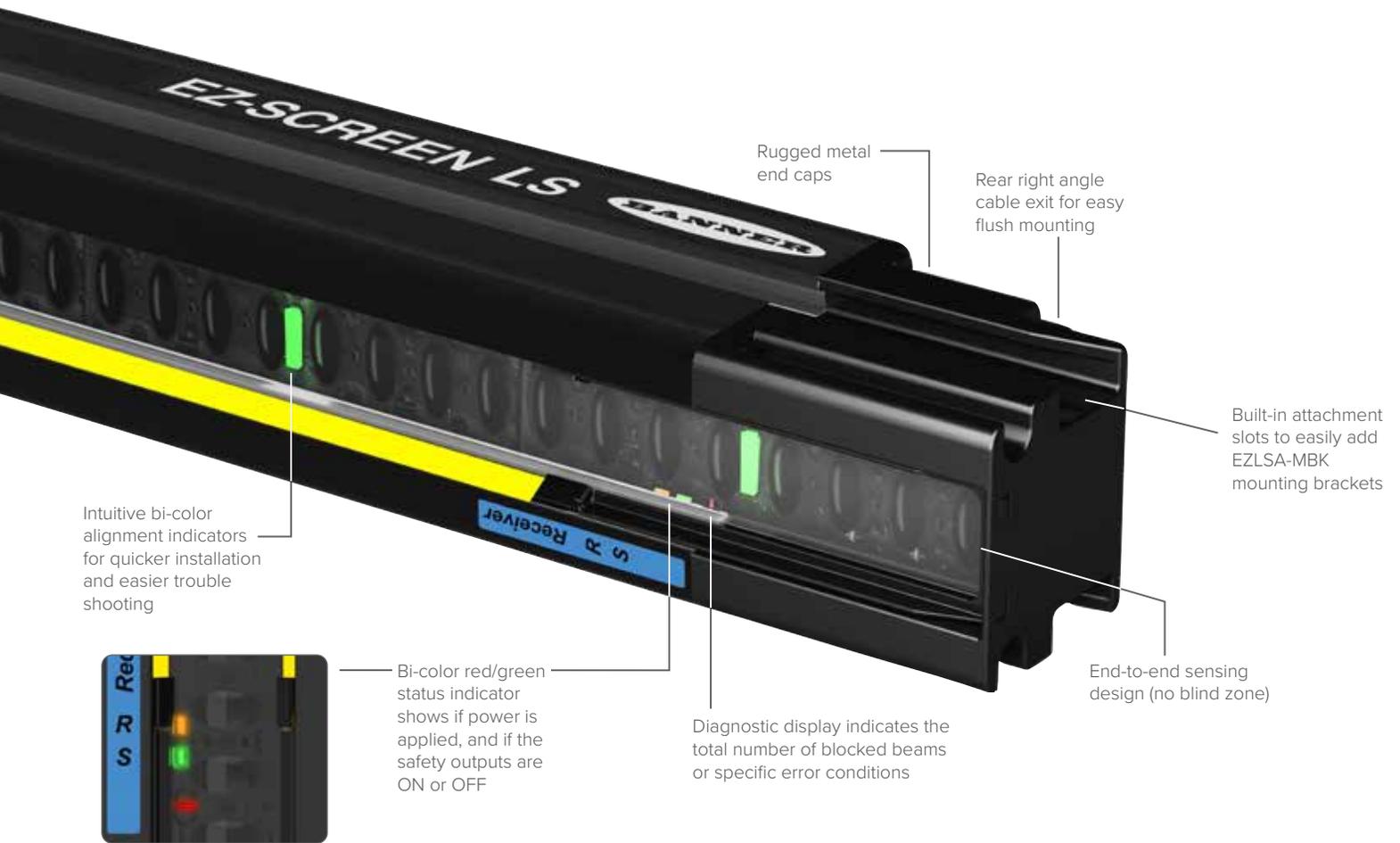


## Safety Light Screen

- Quick, easy set up—no DIP switches or software to configure
- End-to-end sensing for simplified integration
- Heavy-duty aluminum housing and recessed window to avoid damage in harsh environments
- Highly visible alignment and diagnostic indicators for easy set up and status
- Available in 14, 23 and 40 mm resolution for finger, hand and arm/ankle detection requirements
- Stand alone and cascade models for multi-sided protection
- IP69 Hygienic models available for washdown environments

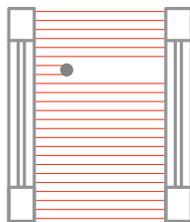
**BANNER**<sup>®</sup>  
more sensors, more solutions

# Heavy-Duty LS Series Safety Light Screen

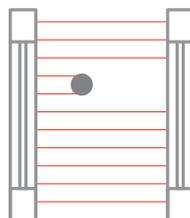


Available in Three Resolutions

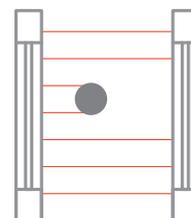
14 mm

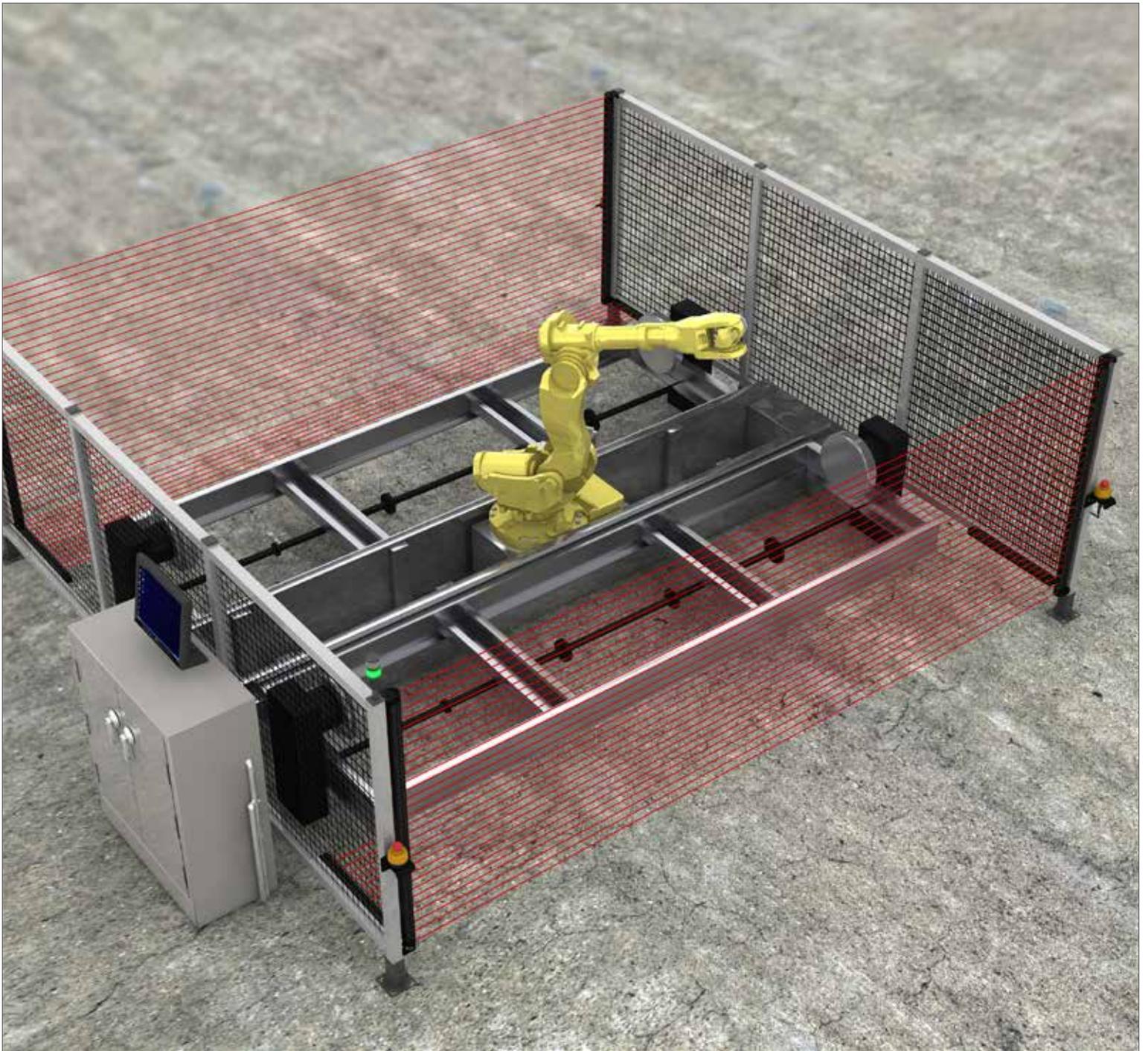


23 mm



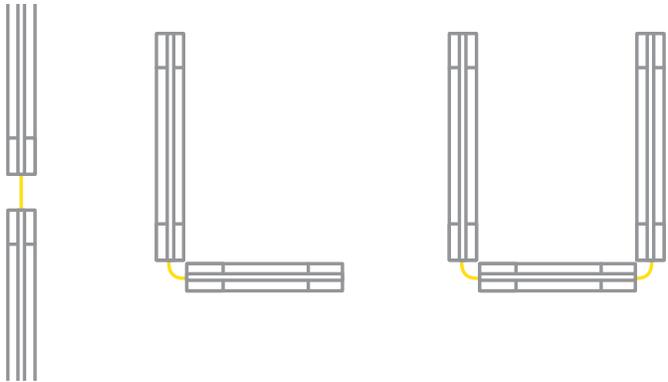
40 mm





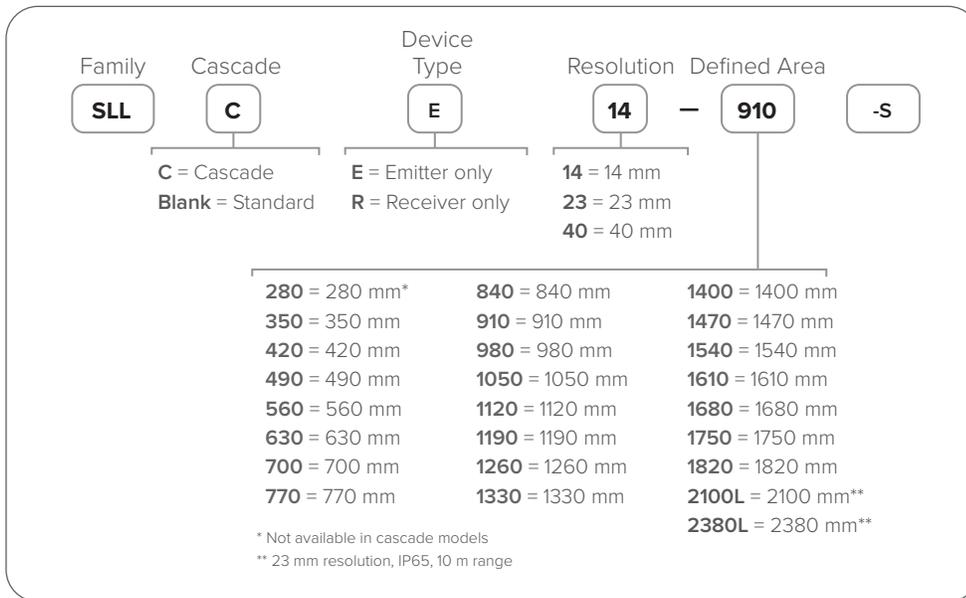
## Cascade Capable

- 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



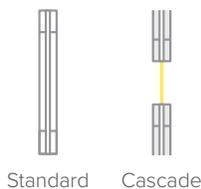
# LS Safety Light Screen

- 12 meter range
- 14, 23 and 40 mm resolution available
- 23 defined areas from 280 to 1820 mm in 70 mm increments
- External Device Monitoring, Auxiliary Fault Output and Scan Code Select included (8-pin connectors)
- Cascadable models available
- Remote Fixed Blanking to ignore stationary objects
- Optional status indicator (EZLSA-K30LGR) or fixed blanking control (EZA-RBK-1) available with cascade models



## Build a Safety Solution

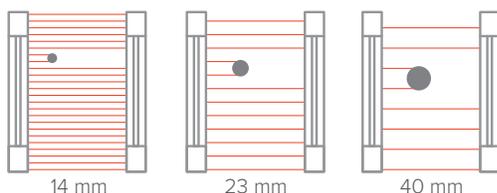
### 1. Choose your Emitter



### 3. Choose your defined area



### 2. Choose your resolution

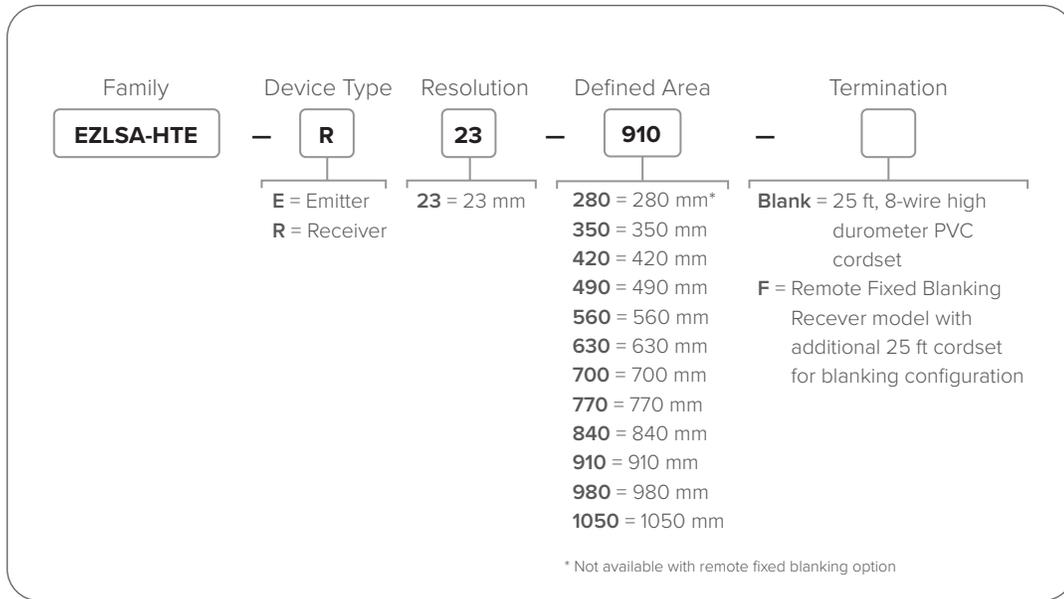


### 4. Choose your matching Receiver

### 5. Choose your connection and mounting options from page 6

# IP69 Hygienic Option

- 8.4 meter range
- 23 mm resolution
- Twelve defined areas available from 280 to 1050 mm
- IP69 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 6)



# Connection Options

8-Pin

5-Pin

Cascade



RD Cordsets

- RDLS-815D**  
4.6 m (15')
- RDLS-825D**  
8 m (26')
- RDLS-850D**  
15.3 m (50')



8-Pin Double-Ended

- DELSE-81D**  
0.3 m (1 ft)



8-Pin Male M12 to Dual 8-Pin Female M12 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 with Flying Leads

- 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')

8-Pin M12 Double-Ended

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



RD Cordsets

- RDLS-515D**  
4.6 m (15')



5-Pin Double-Ended

- DELSE-51D**  
0.3 m (1 ft)



5-Pin Male M12 to Dual 5-Pin Female M12 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 with Flying Leads

- 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')

5-Pin M12 Double-Ended

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



Double-Ended RD to RD Cordsets

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

## Accessories



**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 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')

## Bracket Options



- EZLSA-MBK-11**
- Slimmest mounting design to optimize opening while providing a wide range of adjustment
- End-mount steel bracket; Includes 2 brackets and hardware
- 360° rotation in 23° increments



- EZLSA-MBK-12**
- Use with EZLSA-MBK-11 for light curtains greater than or equal to 980 mm for additional support
- Center-mount steel bracket; Includes 1 bracket and hardware
- Rotation ± 15°



- EZLSA-MBK-16**
- Simplified mounting and alignment with an all-in-one, single set-screw, side mount bracket in a durable design
- Side-mount die-cast bracket; Includes 1 bracket and hardware
- Rotation +15° and -20°



- EZLSA-MBK-HTE-2**
- Hygienic stainless steel bracket with 360° rotation for IP69 enclosure models



- EZLSA-MBK-HTE-1**
- Stamped stainless steel bracket with 360° rotation for IP69 enclosure models

# Interface Options

## Safety Controllers



**XS26-2**  
**XS26-2d**  
**XS26-2e**  
**XS26-2de**

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



**SC26-2**  
**SC26-2d**  
**SC26-2e**  
**SC26-2de**

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



**SC10-2roe**

Replace the functionality of two safety relay modules with one cost-effective device featuring an intuitive user interface and advanced diagnostics

## Safety Modules



**SR-IM-9A**  
**SR-IM-11A**

Provides isolated safety output contacts for a primary safety device for the LS with solid-state (OSSD) outputs and external device monitoring (EDM) capability



**UM-FA-9A**  
**UM-FA-11A**

Monitors solid-state PNP OSSD safety outputs for LS and LS basic models, and provides latching (manual reset) function for applications requiring a reset



**MMD-TA-11B**  
**MMD-TA-12B**

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

## Contactors



**11-BG00-31-D-024**

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

**BF1801L024**

## 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.

# Mute Arm Kits

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

### 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

L-Configuration



**SGSA-ML-L-LPQ20**

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

**SGSA-ML-R-LPQ20**

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

**NOTE:** EZLSA-MCB-HW allows the Mute Arms to mount directly to the LS housing

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

# LS Series Safety Light Screen

## Specifications

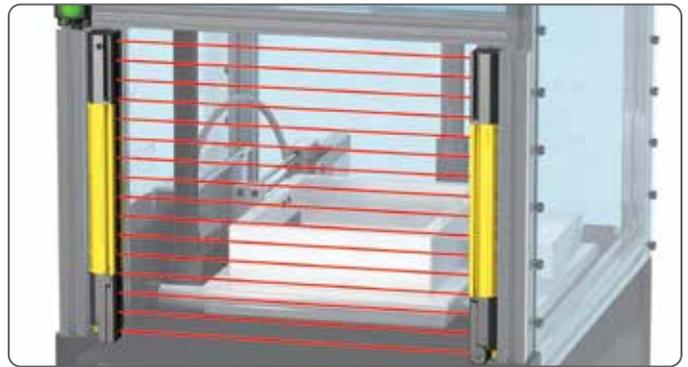
<b>Operating Range</b>	LS: 0.1 to 12 m (4 in to 39 ft) IP69 Hygienic: 8.4m (4 in to 27.6 ft)	<b>Supply Voltage at the Device</b>	24 V dc $\pm$ 15% (use a SELV-rated power supply according to EN IEC 60950)
<b>Resolution</b>	LS: 14 mm, 23 mm, or 40 mm, depending on model IP69 Hygienic: 23 mm	<b>Short Circuit Protection</b>	All inputs and outputs are protected from short circuits to +24 V dc or dc common
<b>Output</b>	Two redundant solid-state outputs (OSSD) 24 V dc, 0.5 A max. per OSSD	<b>Electrical Safety Class</b>	III (per IEC 61140: 1997)
<b>Environmental Rating</b>	LS: IEC IP65/IEC IP67 IP69 Hygienic: IP69	<b>Safety Rating</b>	Type 4 per IEC 61496-1, -2 Category 4 PL e per EN ISO13849-1 SIL3 per IEC 61508; SIL CL3 per IEC 62061
<b>Operating Conditions</b>	-20 °C to +55 °C (-4 °F to +131 °F) 95% maximum relative humidity (non-condensing)	<b>Dimensions (mm)</b>	LS: 36 W x 45 D IP69 Hygienic: $\varnothing$ 63.5 mm Height varies by model
		<b>Certifications</b>	 

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.



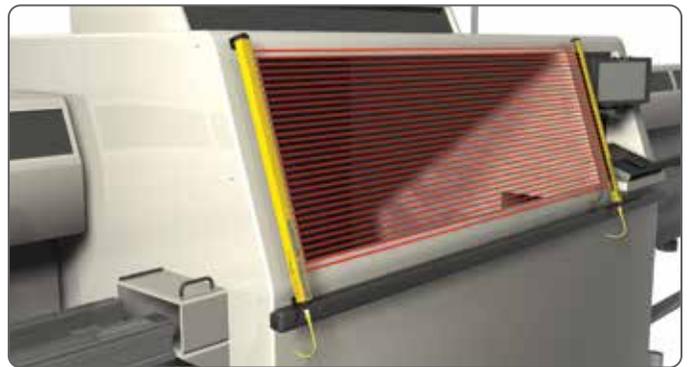
**COMPACT TYPE 4**

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.



Banner Engineering Corp.

9714 10th Avenue North • Minneapolis, MN 55441 • 1-888-373-6767 • [www.bannerengineering.com](http://www.bannerengineering.com)