

Implementing safety light curtains as a risk reduction measure.

A common safety measure used within the industry for risk reduction against machine hazards is presence sensing as seen with a safety light curtain. However, since safety light curtains do not provide a physical barrier for protection, there are certain machine, process, and environmental factors to consider. The following are just a few aspects to assess in determining if safety light curtains can be applied to your application.

1. Once someone interrupts the light curtain, will the hazardous condition stop before they reach it? This is confirmed by conducting a stop time analysis and a minimum safe distance calculation.
2. There are no reasonably foreseeable concerns for parts to be ejected through the light curtains during operation. For example, tool breakage or stressed material rupturing. Expected operational interruption such as pallets exiting a palletizing area can be accommodated by light curtain functions such as muting.
3. Are there extreme temperatures, dust, moisture, vibrations, or required cleaning methods that may adversely affect light curtain performance? If so, special housing accessories or even special programming within the light curtain may be required.
4. Personnel cannot reach around, under, over the light curtains or be positioned beyond the monitored area once the lights are interrupted and restart a cycle. If such possibilities exist, additional hard guarding and secondary safety functional are needed.

With these basic considerations evaluated, you can better determine if a light curtain is suitable as a risk reduction measure for your identified hazards.

PRODUCT SPOTLIGHT

Schmersal Safety Light Curtains

Schmersal offers several series of Safety Light curtains. They feature a compact rectangular profile 28 mm x 33 mm, 4-sided extruded housing for added durability, and LED illuminated endcaps for signaling.

We have a unique Bluetooth interface which provides secure data transmission up to 5 meters to smartphones and tablets. The operational data displayed in the SLC Assist app can help with alignment during installation, troubleshooting faults, and planning service and maintenance.



SLC440COM

Standard emitter/receiver Type 4 safety light curtain with Bluetooth interface.



SLC440

Type 4 emitter/receiver set with Bluetooth interface and integrated programming for blanking and double reset applications.



SLC445

Type 4 emitter/receiver set with integrated programming for muting, multi-scan and Presence Sensing Device Initiation (PSDI) applications.

Find out more in our [product showcase: Safety Light Curtains](#)

RESOURCES

Here is a collection of reference documents relating to Safety Light Curtains

BROCHURE
Optoelectronic
Safety Devices

This brochure provides background information on optoelectronic safety devices and highlights our lines of Safety light Curtains, Safety light grids, safety light barriers, and various related accessories.

32 pages.

ARTICLE
Selection Guidelines for
Safety Light Curtains

Safety light curtains are a viable safeguarding option for point of operation or perimeter guarding. This article highlights the four main options to consider in selecting the right Safety Light Curtain for your application.

ARTICLE
Calculating
Safety Distances

Applying safeguards to equipment and machines may lead to a false sense of safety if not applied correctly. This paper explores the requirements for the proper placement of safety guards and presence sensing devices.

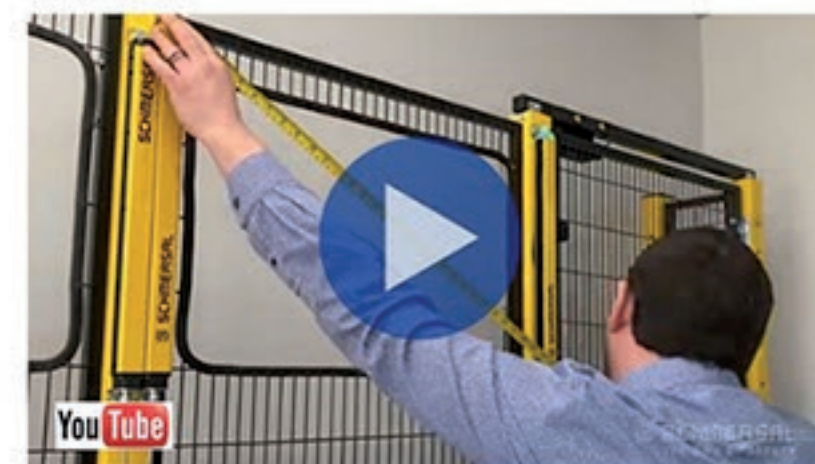
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VIDEO



SLC Bluetooth App demo

A demonstration of the SLC Assist App for the Safety Light Curtains with Bluetooth.



SLC Alignment 101 demo

Steve Lange explains several methods of aligning safety light curtains.



SLC445 Product Animations

Set-up, muting and multi-scan functions are shown of the SLC445 Safety Light Curtain.

[Watch \(YouTube\)](#)
[Watch \(YouTube\)](#)
[Watch \(YouTube\)](#)

WEBINAR

Safety Light Curtains

On April 3rd we presented a webinar which explains how Safety Light Curtains operate, and special functions such as blanking, muting, multi-scan, and double reset. We also reviewed typical applications and what questions to ask to qualify applications.

[> View the recording](#)



SCHEDULE - UPCOMING EVENTS



CSIA Conference - April 15 - 19

We'll be in Dallas, TX for the annual CSIA Conference. Stop by to chat with **Craig Minard** at the **Industry Expo and Reception** on Wednesday, April 17.

[> CSIA Conference](#)

Webinar: Minimum Distances for Safety

Control Measures - April 24

Fixed guards and presence sensing safety devices are often used as control measures for risk reductions. Discover the crucial factors behind implementing these measures - particularly the considerations for their strategic placement to ensure compliance and effectiveness in risk reduction. Join us in this webinar to master the art of calculating and implementing minimum safe distances.

Join us on April 24, at 2 PM (Eastern)

[> Register today](#)



Hosted by: Machine Design magazine

Presenter: Devin Murray



AUTOMATE - May 6 - 9

We are exhibiting at North America's largest automation showcase in Chicago. Plan to visit us in booth 4850 in South Hall.

[> Register to attend Automate](#)

Training: TÜV Rheinland Functional

Safety Training Program - May 13 - 23

Interested in becoming a TÜV Certified Functional Safety Engineer for Machinery? Join us for the TÜV Certification course on May 13-23, 2024, presented online.

[> Learn more here](#)



ASK THE EXPERT



Devin Murray

TUV Functional Safety
Engineer

ID-No. 4274/11

Question: What is muting, in regard to safety light curtains?

Muting is the automatic overriding of the light curtain safety output in applications in which the light curtain must be interrupted by some part of the machine or processed materials without stopping the operation or process. The safeguarding function is realized through 2 or 4 muting sensors, which can distinguish between persons and objects. This allows the expected interruption of the light curtain to continue a process while stopping the hazards if someone were to cross the protection field into the hazardous area.

Do you have a question? Ask Devin: dmurray@schmersal.com

