

# Light curtain on the switch



## Summary of Content

A safety light curtain is a non-contact protective device that stops a machine when its infrared beams are interrupted, often interfacing with switches, relays, or PLCs to ensure safe operation.

### How a Light Curtain Works

A safety light curtain consists of a transmitter and a receiver aligned across a hazardous area. The transmitter emits multiple parallel infrared beams, and the receiver monitors them. If any beam is blocked by a hand, finger, or object, the receiver signals the machine to stop immediately through its Output Signal Switching Devices (OSSDs), which are dual-channel transistor outputs designed for safety redundancy. Unlike mechanical guards, light curtains allow frequent access while maintaining protection.

### Integration with Switches and Safety Systems

Light curtains are typically connected to safety relays, safety PLCs, or emergency stop circuits. The OSSD outputs act like a switch: when beams are clear, both channels are ON, allowing the machine to run; if a beam is interrupted, one or both channels switch OFF, stopping the machine. This ensures fail-safe operation and prevents bypassing the safety function. Some systems also include External Device Monitoring (EDM) to verify that the relay or switch controlling the machine is functioning correctly.

### Wiring Considerations

When wiring a light curtain to a switch or relay:

## Article Content

### OPERATING INSTRUCTIONS deTec4

OPERATING INSTRUCTIONS deTec4 Safety light curtain Described product deTec4  
Manufacturer SICK AG Erwin-Sick-Str. 1

#### How Safety Light Curtains Work

Safety light curtains are an advanced method of safeguarding personnel around many hazardous machines. Safety

#### Safety Light Curtains

With safety light curtains offering non-contact monitoring, they commonly have a much longer service life than mechanical door

#### Simple Machine Safety (E-stop, Door Switch, Light Curtain)

This building block is designed to work in safety applications with at least one E-stop button, one door switch and one light curtain.

#### The Best Smart Window Shades, Blinds, and Curtains

Smart shades, blinds, and curtains can open or close on a schedule, or at your command. They save energy and

#### How to Wire a Safety Light Curtain? (NPN/PNP Wiring)

In a safety curtain sensor connection, the transmitter requires only a power supply, while the

#### Light Curtains | Safety Light Barriers | RS

Safety light curtains are also known as safety light barriers or safety light screens. These optoelectronic devices are used to detect

#### Light curtain

A light curtain is a safety device that detects when a beam of infrared light has been broken by a person passing through an area.

#### SwitchBot Curtain 3

Meet the SwitchBot Smart Curtain 3, a better smart curtain solution! Now even quieter, supports Matter,

Tapeswitch Corp.

Light Curtains EOS is a compact light curtain range with competitive performance and innovative features. Includes models with

#### How to Wire a Safety Light Curtain? (NPN/PNP Wiring)

Incorrect wiring of a safety light curtain can not only cause it to malfunction but also create

## Safety Light Curtain

The GL-V Series features full length, highly visible indicators to easily understand the light curtain's status

## Light Curtain (LC)

Most light curtains provide controllers or relays that essentially filter out the pulse test and provide two dry contacts for OSSD1 and

## Safety light curtains

Safety light curtains provide reliable and cost-effective access protection for hazardous points and hazardous areas. Depending on

## Safety Light Curtains for Industrial Automation | ReeR

Light Curtains For Industrial Safety Applications Safety Light curtains are electro sensitive devices using one or more light beams,

## OPERATING INSTRUCTIONS deTec4

When one or more light beams are completely interrupted, the safety light curtain reports the interruption in the light path to the

## GuardShield Type 2 Safety Light Curtain Installation Instructions

The GuardShield Type 2 safety light curtain receiver has two safety outputs, Output Signal Switching Devices (OSSDs) and one non

## Introduction to Safety Light Curtains: Operation and

Light curtains serve as an invisible barrier, keeping workers out of harm's way and

## Smartscan Safety Light Curtain Pallet Safe Series:

As soon as the loaded pallet clears the light curtain the safety system will automatically reactivate to a "fully guarded" condition. Now,

## Lutron | Intelligent light. Automated Shades. Powerful

myRoom XC. Design world-class guest room experiences. Ketra Natural Light Show. Shift the color of

## Light curtain controllers

The light barrier switching devices are used to protect persons that regularly during the handling process must reach into machines

## How to Wire a Light Switch (Step-by-Step Guide

This guide explains how to wire a standard single-pole light switch safely, including common

Nintendo Switch Lite

Learn about Nintendo Switch Lite. It is compact, lightweight, and dedicated to handheld play. Making it

Light curtain controllers

Light curtain controllers Monitor light barriers and light grids If persons or objects approach a dangerous area, the DOLD light barrier

Type 4 safety light curtain | KEYENCE Canada

KEYENCE Canada provides Type 4 safety light curtain; Heavy-duty and slim models with full-length detection, easy alignment, and

S4B Safety Light Curtain Instruction Manual

Supplemental safeguarding (such as a horizontal-mounted safety light curtain as an area guard) is required in areas that cannot be

Safety Light Curtain Working Principle: Complete Industrial Guide

Learn how a safety light curtain works, including its working principle, components, PLC integration, types, and

## Contact Us

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