

the **sensor** people



COMPACTplus

Safety Light Curtains, Multiple
Light Beam Safety Devices and
Muting Transceivers



Welcome to the COMPACT*plus* world.

Your *plus* in flexibility.

The objective in the development of the Safety Light Curtains, Multiple Light Beam Safety Devices and Muting Transceivers of the COMPACT*plus* series was to satisfy the growing number of requests for greater functionality, more flexible integration and easier use. COMPACT*plus* features different transmission channels, multiple scanning for high light-interference suppression and the option to cascade devices. You also save through the integrated options in external control devices, e.g. for start-up/restart interlock, contactor monitoring or Muting. Safe semiconductor or relay outputs as well as integrated AS-i Safety or PROFIsafe interfaces enable flexible integration of COMPACT*plus* sensors in your existing automation environment.

Safety Light Curtains, Multiple Light Beam Safety Devices and Muting Transceivers

- **Type 4** in accordance with IEC/EN 61496
- **SIL 3** in accordance with IEC 61508 and IEC/EN 62061
- **PL e** (Performance Level) in accordance with EN ISO 13849-1
- **Category 4** in accordance with EN ISO 13849

COMPACT*plus* Multiple Light Beam Safety Devices with integrated AS-i Safety bus interface.



Profit from the **unbeatable** equipment.

Diverse machine interfaces

Various safety-related switching outputs and connection variants, from the screwed cable gland to Hirschmann and MIN-style plugs to M12 plugs, enable the fast and flexible integration of COMPACT*plus* safety sensors in conventional safety modules or safety bus systems.

Safe relay outputs

2 potential-free, normally open contacts for direct integration in power circuits.

Safe semiconductor outputs

Fast control of power contactors up to 0.5 A.

Integrated AS-i Safety interface

Direct connection to the AS-i Safety at Work bus via M12 plug and AS-i bus terminal, including diagnostic option.

Integrated PROFIsafe interface

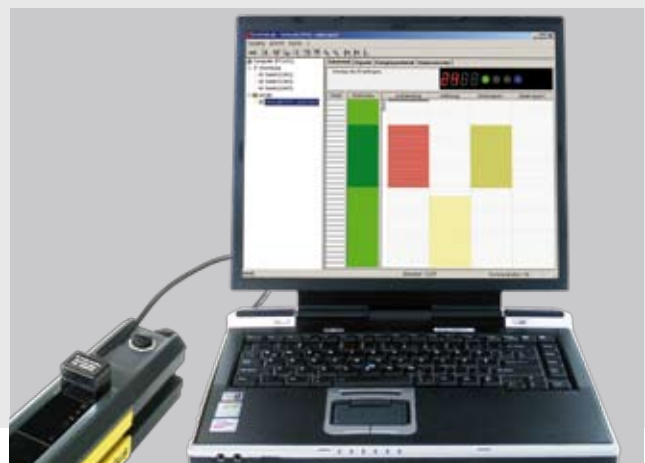
Direct PROFIBUS-DP connection via M12 socket and plug (current supply via separate M12 plug), including diagnostic option.

Versatile and configurable

The SafetyLab PC software is used for diagnostics and configuration. Similar to a safety PLC, functions and control and status signals can, for the most part, be freely selected and assigned to the up to 15 inputs and outputs of the receiver. In this way, the COMPACT*plus* safety sensors can be optimally adapted to machine-specific tasks.

Special COMPACT*plus* features

- M12 local socket for connecting local sensors and signaling devices or sensor connection module (optional)
- Connection option for additional two-channel safety circuit
- SafetyKey for fast and simple configuration of protective field Blanking
- Plug-in module with saved device parameters for fast device exchange
- Diagnostics with 7-segment display and LED displays for fast fault localization on-site
- Infrared interface in front screen for PC-controlled configuration and diagnostics on-site with the SafetyLab software



COMPACT*plus* Safety Light Curtains – a successful duet of **safety** and **efficiency**.

Simple configuration

The basic functions for Muting or Blanking can easily be activated via six DIP switches. With SafetyKey, the requested Blanking ranges can be adapted with teach-in for Blanking in just seconds. Alternatively, you can also set all functions via the SafetyLab PC software.

Blanking with **COMPACT*plus*-b**

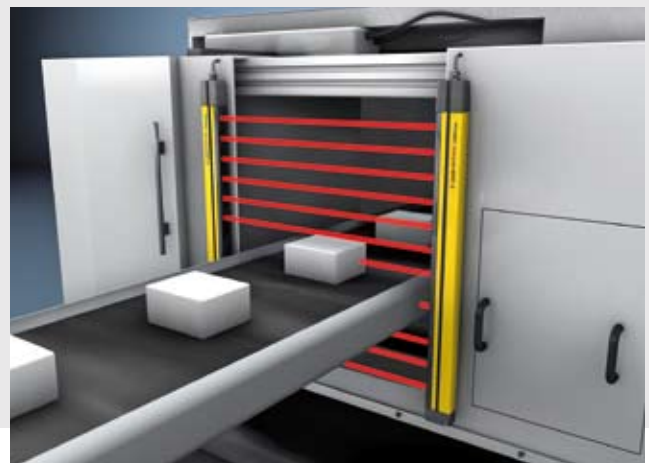
For certain applications in material feeding, it may be necessary to blank individual beams in order to implement continuous material handling while simultaneously ensuring safety. The COMPACT*plus*-b type Safety Light Curtains have been designed with these requirements in mind. They provide Blanking functions for Blanking any amount of beams and beam areas of varying sizes.

Function range

- Fixed and floating Blanking through teaching with SafetyKey or key switch
- Any number of and any size Blanking areas
- Reduced resolution, even in subareas of the protected field
- Position status signals

Typical areas of application

- Point of operation guarding with hand and finger protection, e.g. on hydraulic and mechanical presses or punching machines in the metals, leather and plastics industries
- Horizontal danger zone guarding, e.g. in robot working range





Muting with **COMPACTplus-m**

The intended, time-restricted suspension of the safety function of a protective device (Muting) is necessary in many cases for a continuous and, thus, efficient production process. COMPACTplus sensors are predestined for these requirements. They feature continuous Muting functions and, controlled by Muting sensors, they can therefore be switched inactive. After the relevant objects have passed by, the safety function is automatically activated again.

Function range

- Muting models also as Transceiver with direct connection of up to 4 Muting sensors and Muting indicators in M12 connection technology
- 2-, 3- or 4-sensor Muting
- Transmitter/receiver or Transceiver/Deflecting Mirror principle
- Additional control signals for Muting and Muting timer can be connected

Typical areas of application

- Access guarding with Muting function on robots, automatic processing centers, palletizer systems



Shape scanning with **COMPACTplus-XSS/R**

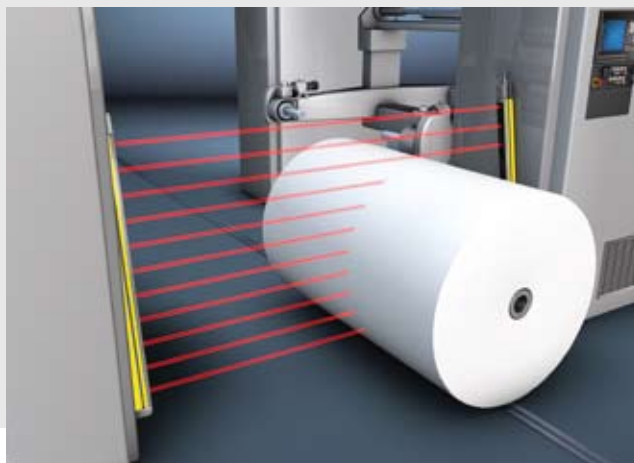
The COMPACTplus-XSS/R Safety Light Curtains, which are arranged at an incline, detect objects with rectangular, enclosed contours, such as paper rolls or loaded pallets. These sensors reduce the amount of work required compared to previous Muting solutions, since no separate Muting sensors and Muting indicators are necessary.

Function range

- Highest detection reliability compared to standard Muting solutions
- Save on Muting accessories, very low cabling requirements
- 2-sensor Muting and connection of tested, type 2 protective sensors for monitoring the lateral access optionally available

Typical areas of application

- Passage of paper rolls in the printing industry and of rectangular objects with closed contours, for example for the transport of pallets in intralogistics applications

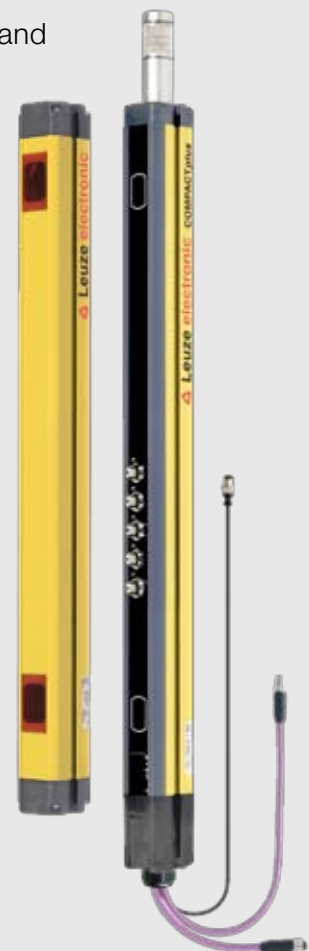


COMPACT*plus* Multiple Light Beam Safety Devices and Muting Transceivers.

When functionality becomes economical.

Multiple Light Beam Safety Devices with Muting function ensure constant personnel protection (access guarding) with unobstructed material feed in conveyor technology. Both productivity - as well as safety requirements for automated production systems can, as a result, be very well satisfied. The COMPACT*plus*-m series, with integrated Muting and override function, provides an extremely flexible and economical solution. All sensors, controls and indicators required for differentiating between people and materials can be connected to the device directly on-site.

COMPACT*plus* Muting Transceiver with direct connection option for Muting sensors and with integrated PROFIsafe interface.



Simply and efficiently safeguard **conveyor belts** and **transfer stations**.

The COMPACT*plus* Multiple Light Beam Safety Devices can be deployed as a 2-, 3- or 4-beam transmitter/receiver system as well as a 2-beam Transceiver system ("CPRT-m"). For the latter, all active components, such as transmitter, receiver and the integrated evaluation unit, are contained in a single housing. This reduces wiring considerably.

Function range of the Multiple Light Beam Safety Devices and Muting Transceivers

- Integrated evaluation unit; no external control devices required
- Various Muting operating modes selectable via DIP switches, no PC required: 2-sensor Parallel Muting, 4-sensor Parallel Muting, 4-sensor Sequential Muting
- Muting sensors, start/restart button and indicator can be connected directly to the device via integrated or external sensor connection module
- Integrated monitored Muting override function in accordance with the latest safety requirements for safe override after switch-offs
- MultiScan function through multiple scanning of the beams and 2 transmission channels for maximum availability
- Function extensions through SafetyLab PC-software: additional Muting operating modes, Muting time limiting and indicator function can be configured, additional control signals for Muting and Muting timer, additional 2-channel safety circuit, e.g for door switches
- Connection option of E-STOP command device or Safety Switch on additional switch-off circuit



Optoelectronic Sensors

Cubic Series
Cylindrical Sensors, Mini Sensors, Fiber Optic Amplifiers
Measuring Sensors
Special Sensors
Light Curtains
Forked Sensors
Double Sheet Monitoring, Splice Detection
Inductive Switches
Accessories

Identification Systems

Data Transmission Systems

Distance Measurement

Barcode Readers
RF-IDent-System
Modular Interfacing Units
Industrial Image Processing Systems
Optical Data Transmission Systems
Optical Distance Measurement/Positioning
Mobile Code Readers

Safety Sensors

Safety Systems

Safety Services

Safety Laser Scanners
Safety Light Curtains
Transceivers and Multiple Light Beam Safety Devices
Single Light Beam Safety Devices
AS-i-Safety Product Range
Safety Sensor Technology for PROFIBUS DP
Safety Switches, Safety Locking Devices and Safety Command Devices
Safety Relays
Sensor Accessories and Signal Devices
Safety Engineering Software
Machine Safety Services

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