

COMPACT*plus*

Safety Light Curtains and Light Grids



versatile

configurable

future-directed



The Advantages

COMPACTplus –developed for the world market

When developing the new COMPACTplus series of safety light curtains, our engineering team aimed to fulfill future demands for greater functionality, flexible integration, and at the same time, ease of operation. Compared with the tried and tested COMPACT series, the COMPACTplus has been equipped with added integrated functions, such as blanking, muting and initiation control. In addition, various plug-in interface subassemblies allow the new COMPACTplus to be flexibly connected either to safety bus systems or to conventional safety components.

COMPACTplus is an active optoelectronic protective device (AOPD), Type 4, in compliance with the product standards EN 61496-1,-2 and IEC 61496-1,-2.

Added Functionality!

The COMPACTplus has retained the well-known benefits of the COMPACT series, including different transmission channels, the multiple evaluation process "d-scan" for suppressing light interference, and the ability to cascade multiple units. And now, additional integrated functions eliminate the need for external control devices.

- Integrated functions such as restart interlock, relay monitoring, blanking, muting and initiation control
- Capability for connecting a two-channel safety switch (e.g. Emergency Stop)
- Muting version for direct connection of up to 4 muting sensors and multiple muting lamps using M12 connectors
- Device-specific identification code for preventing mutual interference between adjacent units

Added Flexibility!

- Plug-in interface subassemblies:
semiconductor output, relay output, Profibus DP, SafetyBUS p, AS-i Safety (Other bus systems upon request.)
- Optional sensor extension module

Added Ease of Operation!

- Integrated laser alignment aid for fast and easy alignment optional
- Safety Key for quick and easy configuration of protection zone blanking areas
- Infra-red interface for PC-supported configuration and on-site diagnosis
- Insertable chip card stores the device configuration so that devices can be quickly replaced
- SafetyLab configuration and diagnosis software for the PC





The Output Subassemblies

COMPACTplus – Choose Your Safety Interface!

Due to its plug-in output subassemblies, the COMPACTplus can be integrated into conventional circuitry as well as open safety bus systems, and changeovers can be made quickly and easily.

Safe Semiconductor Outputs

- For the fast control of power relays up to 0.65 A
- Screw terminals with a choice of MG screws, Hirschmann connectors or Brad Harrison connectors

Safe Relay Outputs

- 2 potential-free normally open contacts (250 V, 6 A max.) for direct integration into power circuits
- Connection via Hirschmann connectors, power supply via M12-plug

Integrated PROFIsafe Interface

- For directly connecting the Profibus DP up to 12 MBd
- Complete configuration and diagnosis using the Profibus
- Bus connection using M12 jack and M12-plug, power supply via M12-plug

Integrated SafetyBUS p Interface

- For integration into SafetyBUS p up to 500 KBd
- Bus connection and power supply by an M12-plug

Integrated AS-i Safety Interface

- For making a direct connection to AS-Interface Safety at Work
- Connection via M12-plug and AS-i bus terminal





Configuration and Diagnosis

COMPACTplus - Configuration with or without a PC!

The basic functions of the selected function package can be set using five DIP switches. Alternatively, the functions can also be selected using the configuration and diagnosis software SafetyLab. For this purpose, SafetyLab has been provided with various password-protected access levels.

The entire device configuration is saved on an insertable chip card. This allows devices to be quickly and easily exchanged. And with the Safety Key, the fixed blanking areas can be adapted in a matter of seconds.

COMPACTplus – Diagnosis included!

A self-diagnosis system with a 7-segment display and LED indicators makes it possible to quickly locate faults on-site. The COMPACTplus is also equipped with an infra-red interface in the front screen for presenting detailed PC-supported system diagnosis.



Technical Data

Safety Light Curtain/ Safety Light Grid	COMPACTplus	
Safety category	Type 4 (self-monitoring) in accordance with EN 61496-1, -2 and IEC 61496-1,-2	
Height of protection zone	150 ... 1800 mm 450 ... 3000 mm 750 ... 3000 mm	for Series CP 14 and CP 30 (1950, 2100, 2250 mm upon request) for Series CP 50 for Series CP 90
Operating range	0,3 ... 6 m 0,8 ... 18 m 6 ... 60 m	for Series CP 14 for Series CP 30, CP 50, CP 90, CP xx0 for Series CP xx1
Resolution	14/30/50/90 mm or 2/3/4 beams	
Response time/semiconductor outputs	Series CP 14: Series CP 30, CP 50, CP 90:	7 ... 39 ms (d-scan 10 ... 78 ms) < 20 ms (d-scan < 39 ms)
Response time/relay outputs	Series CP 14: Series CP 30, CP 50, CP 90:	19 ... 51 ms (d-scan 22...90 ms) < 32 ms (d-scan < 51 ms)
Response time bus output	on request	
Enclosure rating	IP 65	
Ambient operating temperature	0 ... +55 °C	
Supply voltage	24 V DC +/- 20 %	
Dimensions	Cross-section: Length depending on protected height:	55 x 52 mm 284 ... 3134 mm

The Functions

COMPACTplus – As Many Functions As You Need!

Depending on your application, you can select among a range of function packages. External modules are no longer necessary.

COMPACT-s, The Standard Profile

- Start / Restart interlock
- Static and dynamic relay monitoring
- Connection of Emergency Stop button / Safety Interlocking Device
- Definition of a warning field

COMPACT-b, The Blanking Profile

- Includes all functions of the standard profile as well as
- Fixed and Floating Blanking
 - Reduced Resolution
 - Safety Key for simple Teach-In

COMPACT-i, The Initiation Control Profile

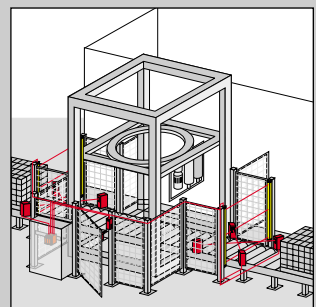
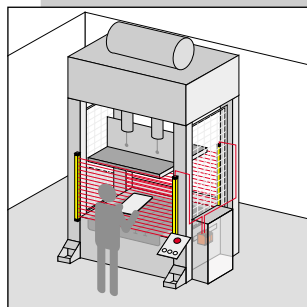
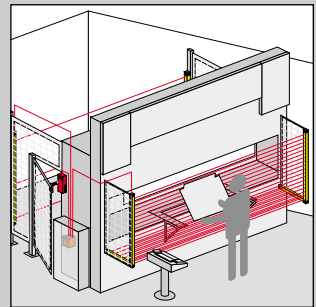
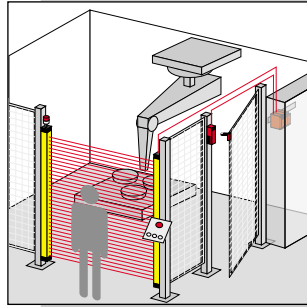
- Single and double break control
- Static and dynamic relay monitoring
- Connection of Emergency Stop button / Safety Interlocking Device

COMPACT-m, The Muting Profile

- 2-, 3-, and 4-sensor muting
- Various muting modes
- Partial muting of the protection zone
- Connection of Emergency Stop button / Safety Interlocking Device

COMPACT-u, The Universal Profile

- Includes all of the function profiles listed above; configuration is performed using the SafetyLab PC software





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Leuze lumiflex

Lumiflex has been active in the field of opto-electronics for over 20 years and in 1993 became a subsidiary of Leuze electronic GmbH + Co.

Protecting people dependably from danger is a task which requires impeccable product quality as well as a deep sense of responsibility. Our products are developed and manufactured in accordance with the carefully applied, universally acknowledged rules of technology. A rigorous quality assurance system, certified according to ISO 9001, ensures that we meet stringent standards.

And – we offer full service, from consulting to customized product adaptation, through installation and initial acceptance, to annual maintenance and performance checks. Upon request we will train your employees to become experts on our equipment. Should questions arise, many of them can be answered by our technical telephone support hotline. At Leuze lumiflex customer satisfaction is our primary aim, and partnership is where it all begins.

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 (Barcode readers, optional data transfer systems, optional distance sensors)