

Industry is subject to the possible conflicting priorities of ecology, technology, science, economic efficiency and people – holistic thinking and action is what is required! What we do serves to protect people from machines and installations which are dangerous and can cause accidents, to record and control automatic processes and thereby to make them more safe.

CEDES Safety & Automation AG specialises in all applications involving optical sensors. We have highly qualified employees available, a custom-made infrastructure and a global sales network.



Innovative Optical Sensors

Challenging applications as well as use and integration of new technologies are a permanent challenge for us, to extend our knowledge and to master new processes. Through constant innovation at all stages as well as future-oriented thinking and action we seeking to achieve unconventional solutions for our customers which guarantee a high degree of economic success.



CEDES
Safety & Automation AG
A Rockwell Automation Company

The range of Services we offer

Machine Safety

Safety curtains

Making machines and installations safe for work, whilst complying with the regulations is quite often a major challenge for design engineers. Modern design and thought-through ergonomics often leave little room for safety components.

Use of our compact safety curtains allows you the option to combine machine safety and other design specifications according to need.

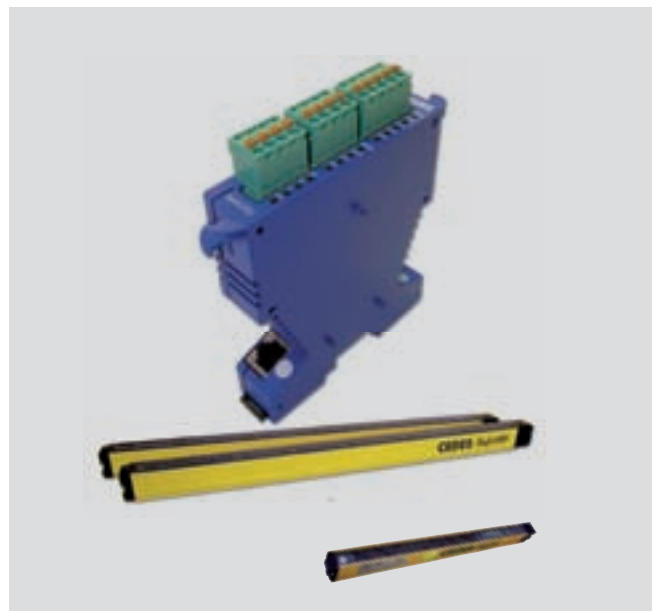
The rapid reaction time of just a few milliseconds allows mounting of the safety curtains close to the danger areas with the smallest possible safety clearance.



Controller

Our compact safety controllers provide complete safety monitoring of your machine. The controllers are impressive due to the configuration options that are available, and their rapid reaction times. Small and large applications can be monitored in a cost efficient and space saving way.

Various relay and bus extension modules allow direct integration into the safety control system.



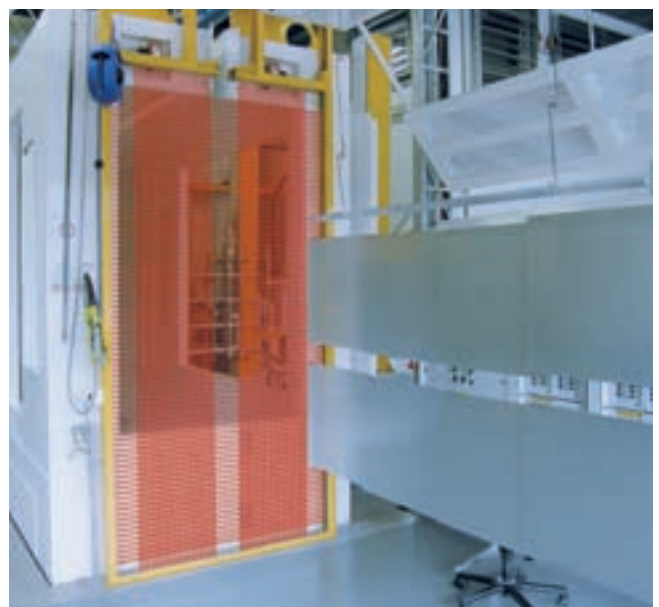
Industrial Automation

Light curtains

Use of our light curtain systems allow industrial automation processes to be controlled and monitored. For example, it is possible to detect accesses, ejections and edges, while objects can be counted or measured and protrusions checked.

Controllers

The controllers can be obtained in various versions. Status information is delivered regarding every individual light beam according to version. Recognition of superelevations and various object sizes makes the system a valuable work instrument – also for modernisation of already existing plant.



Safety

Safety light curtains



Safe400

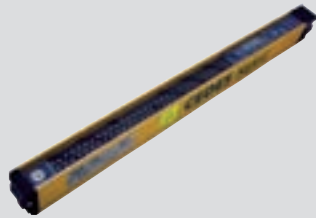
Resolution	14 oder 30 mm (Finger/Hand)
Operating range	
– Resolution 14 mm	0 ... 5 m
– Resolution 30 mm	0 ... 5 m
Protective field height	Standard 50 ... 1200 mm (reinforced) 600 ... 1800 mm
Supply voltage	see Controller
Profile cross-section	15 × 20 mm (standard profil) 30 × 40 mm (reinforced profile)
Safety Category	Category 4 according EN 954-1
Approvals	CE, CSA, TÜV, UL IEC 61496 Part 1+2

Features

- Small profile
- Perimeter, blanking, Cascading etc. is possible
- Very economic

Areas of application

- SMD placement machines
- Robot cells
- Small presses



Safe2+ / Safe4

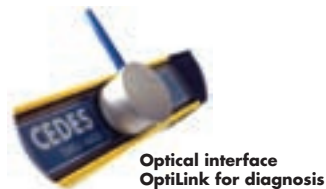
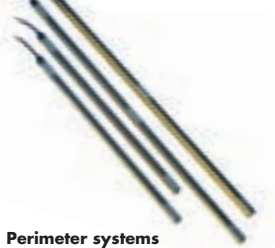
Resolution	14 oder 30 mm (Finger/Hand)
Operating range	
– Resolution 14 mm	0 ... 9 m
– Resolution 30 mm	0 ... 18 m
	optional 6 m or 5 ... 30 m
Protective field height	120 ... 2280 mm
Supply voltage	24 VDC
Profile cross-section	30 × 40 mm
Safety Category	Category 2 or 4 according to EN 954-1
Approvals	CE, CSA, TÜV IEC 61496 Parts 1+2

Features

- Laser Alignment System ILAS
- Diagnostic option on the device
- A large range

Areas of application

- Presses
- Paper cutting machines
- Conveyors



Controllers



SafeCIS3

Supply voltage	+ 24 VDC ± 15%
Dimensions	111 × 125 × 22.5 mm
Safety outputs	2 PNP, 400 mA, short circuit fused
Interfaces	Optilink (optical)
Safety Category	Category 4 according to EN 954-1, SIL 3 according to IEC 61508
Approvals	CE, TÜV, UL

Features

- Short reaction times
- Extendable with up to 3 additional modules
- Simple to configure

Areas of application

- Small machines
- Rotary indexing tables
- Small presses



SafeC400

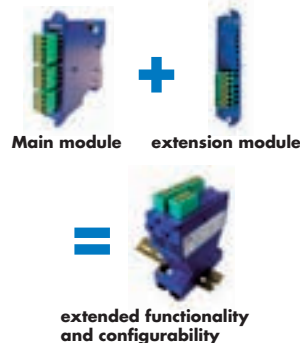
Supply voltage	24 VDC ± 20%
Dimensions	122 × 105 × 135 mm
Safety outputs	Block A: 3 NO contacts Block B: 5 NO contacts or 4 P
Interfaces	RS 485/Optilink (optical)
Safety Category	Category 4 according to EN 954-1
Approvals	CE, TÜV, CSA, UL

Features

- Safety controller for up to 10 safety components
- Short reaction times
- Relay or transistor output

Areas of application

- Presses
- Production lines
- Rotary indexing tables



Designed for CEDES light curtains and light barriers



Connection to the safety light curtains Safe 400



Simple configuration by means of the optical interface OptiLink

Automation



Process/Mini

Resolution	30 mm
Range	1 ... 8 m bzw. – (or selectable) 0.2 ... 1.5 m
Monitoring field height	118 ... 734 mm
Supply voltage	14 ... 30 VDC
Profile cross-section	12 × 16 mm
Protection Class	IP54
Approvals	CE

Features

- Very robust
- Usable in a universal way
- An integrated controller

Areas of application

- Access detection
- Number of objects
- Ejection control



Process/Eco

Resolution	16 ... 36 mm
Range	0 ... 5 m – Standard – on request 3 ... 8 m
Monitoring field height	113 ... 1780 mm
Supply voltage	17 ... 240 VAC/DC
Profile cross-section	12 × 16 mm
Protection Class	IP54
Approvals	CE, CSA

Features

- Relay or PNP output
- Straight or crossed beams
- Self calibration

Areas of application

- Protrusion control
- Packaging machines
- Recognition of persons and goods



Object 100

Resolution	10 or 25 mm
Range	0 ... 4 m
Monitoring field height	50 ... 2200 mm
Supply voltage	24 VDC ± 20% (IEC 60204-1)
Profile cross-section	15 × 20 mm (standard profile) 30 × 40 mm (reinforced profile)
Protection Class	IP54
Approvals	CE, CSA

Features

- Very high detection speed
- Also usable as a cascadable system
- An integral LED indicator

Areas of application

- Object measurement
- Warehouse systems
- Protrusion and presence monitoring



Process/Mini profiles are very compact and robust



Process/Eco profiles are very compact and robust



Object 100 is a multi-faceted system which can be obtained in a compact and a reinforced variant.



At all times the integral LED display delivers status information about the light barrier in an easily legible presentation

Three different control units can be obtained



The controller can be obtained in three different versions: digital I/O, CAN and RS485

Example applications



Contact-free access detection



A 125° Safe4 L configuration to a power loom



Integrated in a laser welding machine



Economic detection of objects



Warehouse lift with height measurement using optical sensors and securing of the removal area



Height measurement in the powder coating industry



Protrusion control



A safe workplace without any disturbing mechanical safety systems

Our product flyers:



Compact Safety Light Curtain

Safe400

Securing machines and equipment so that they meet required safety standards is not always easy. Our modern design and sophisticated ergonomics leave little room for safety components.

The extremely compact Safe400 safety light curtain from CEDES gives designers the ability to perfectly combine the latest safety requirements with whatever design and construction criteria they may have. With a cross-section of just 15 x 20 mm, it is one of the smallest light curtains available. It also provides safety category 4 finger protection (according to EN 954-1).

Thanks to its millisecond-response time, the Safe400 light curtain can be installed within the hazardous zone with the smallest possible safety distance.

Safe400 - small, fast and safe!

Applications:

- SMD assembly machines
- Semiconductor manufacturing
- Robot cells
- Small presses
- Production lines
- Access control
- And many more




Robust Safety Light Curtain

Safe4

The Safe4 safety light curtain enables contact-free and very cost-effective safeguarding of areas on and around hazardous machines. Thanks to the device's multiple configuration and combination options, machine manufacturers are able to simply and reliably safeguard geometrically complex areas, whether they be large or small. The machine operator is thus provided with maximum safety.

Safe4 has been developed in conjunction with leading automobile manufacturers. Ease-of-operation, cost-efficiency and total reliability were the guiding principles during the device's development. Safe4 has proven itself around the globe, often under extreme conditions.

With the standard Integrated Laser Alignment System (IAS), you receive a product which saves you precious time and frustration during installation. So you no longer need expensive specialists with an enormous amount of technical flair to get a category 4 light curtain to work!

Safe4 - serial safety

Application areas:

- Presses
- Paper cutting machines
- Production lines
- Loading tables
- Conveyor systems
- Access control
- And many more




Multifunctional Safety Controller

SafeC 200 / SafeC 400

The compact SafeC 200 and SafeC 400 safety controller monitor all necessary safety functions for your machine. You no longer have to purchase individual safety relays for every safety component and laboriously wire them all up.

Light curtains, emergency stop buttons and door switches on large or small machines are all controlled with just one compact SafeC controller, saving time, money and space. The required flexibility comes from the optical interface, OptiLink, and the CEDES "Configuration Tool" software. Inputs and outputs can be configured, and the desired combination of components defined in the simplest possible way, with just a few mouse clicks. Whether you need automatic, manual or two-hand start, time delay, latching or temporary overriding of an individual safety component, CEDES' SafeC 400 combined with the Safe400 safety light curtain fulfills all your needs.

CEDES also offers the SafeC 200 safety controller for applications which only require safety category 2, in accordance with EN 954-1.

SafeC - a wide variety of connection and application possibilities.

Application areas:

- Presses
- Production lines
- Loading tables
- Conveyor industry
- Automatic storage systems
- Small handling robots
- And many more




Compact Safety Controller

SafeCIS3

The SafeCIS3 safety controller has been designed as a compact control unit for the smallest safety light curtains in the world - the Safe400 series.

The controller's advantages include a slim profile and an extremely fast reaction time combined with multifunctional abilities such as muting and external device monitoring (EDM). In addition to monitoring the protective area, the controller can simultaneously control emergency-stop or interlock switches.

More complex applications can be managed with the help of the CEDES Configuration Tool, which enables an individual configuration per software.

Additionally, a number of relay and Bus extension modules enable direct integration into different types of safety control systems.

SafeCIS3 - versatile and extremely compact!

Applications:

- Small machines
- Subassembly machines
- Small presses
- Safety machines
- Tooling machines
- And many more




Industrial light curtain

Process/Mini

Process/Mini is a light curtain system designed to control and monitor industrial automation processes.

The use of the very latest technology, the dense monitoring area and the extremely robust construction ensures excellent reliability and longevity.

The slim profile (12 x 16 mm) and the integrated controller means Process/Mini requires minimal space and can be easily integrated into machines and systems.

Process/Mini is based on ASIC technology which is already employed in millions of optical sensors used to safeguard elevator doors.

Process/Mini is available in five standard lengths, granting the system integrator with a wide range of setup options.

Process/Mini - compact and cost-effective Automation

Application areas:

- Verifying of assembly process
- Counting of objects
- Confirmation of ejection process
- Recognition of leading edge
- Recognition of irregular shapes
- And more




The Light Curtain That Measures Objects

Object100

Object100 can perform a variety of measuring tasks within the automation industry, recognizing the position and shape of objects. As an intelligent light curtain system, Object100 can measure objects and detect any overhang or overhang.

There are so many applications that the very compact Object100 light curtain in conjunction with the Object100 controller can perform. Its very high sampling rate ensures the machine's control system gets all the necessary data it needs to react. Small and quickly moving objects are immediately detected and measured.

The system can be quickly and easily configured for the most wide-ranging of applications by using the simple teach-in procedure.

Object100 - Measuring and overhang detection in a single system.

Applications:

- Stacking and pallet industry
- Storage systems
- Part-array and powder coating systems
- Object measuring (conveyor systems)
- Woodworking machines
- And many more




Cut safely and economically

Innovative guillotine shear optical sensor technology

Innovative optical technology ensures no constant guarding of guillotine shear feed and withdrawal areas. Checks up new perspectives for the machine designer versus conventional mechanical guarding. In addition to being very economical, this solution provides ergonomic advantages for the design of modern guillotine shears.


When considering total manufacturing costs, the optical sensor solution is clearly superior to mechanical safety guards.

The multifunctional SafeCIS3 safety controller can monitor both the emergency stop and light curtain circuit simultaneously. So an additional emergency stop relay versus conventional mechanical guarding is no longer needed.

Economical guillotine shear safety guarding - We have the solution!

Features:

- Complete shear safety solution for less than 1000 Euro
- Operates faultlessly
- Faster production times
- Quick and simple safety integration

Efficient coating

The ObjectC100 / Object100 light curtain measurement system contributes significantly to the efficiency and quality of the coating process in automatic coating systems.


Object100 detects the size and position of the object to be coated. In this way the spray gun can be optimally positioned to coat each and every object. This brings about a clear improvement in the quality of the applied colour.

Not needed spray gun is deactivated, thus reducing coating material usage. Due to the fine light beam pitch the Object100 detects even small objects. The light curtain system's high sampling rate permits rapid pass rates for items to be coated.

Object100 - for high efficiency and top quality

Features:

- Rapid and precise object detection
- Efficiency and increased coating quality
- Simplicity of system integration
- Improved economy
- Object recognition down to 3 mm




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