



# Machine safety

Our machine safety products not only increase the efficiency and usability of machines and complex systems – they also protect people, machines and the environment from hazards.

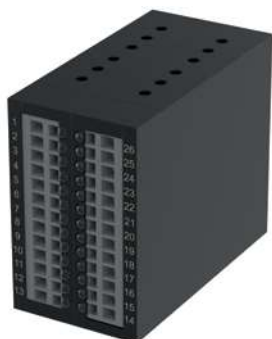
Magnetically operated or RFID-actuated safety sensors enable tailor-made solutions in the temperature range of  $-25^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  for monitoring moveable guards or positions up to PLe/SIL 3.

Our safety sensors are generally available up to protection class IP69K and enable space-saving and

time-saving installation. The different housing designs offer great flexibility for a wide range of applications, especially in confined spaces.

ATEX compliant solutions are available for potentially explosive environments. Hygienically designed designs allow use in hygienic applications. These variants are used in the Food & Beverage sector, among others.

# Safe signal evaluation



**Safety relay  
46212**



**eloProg  
base module  
485EPB**

Safety control units monitor safety signals and perform functions such as switching off the machine in the event of a fault. With up to 128 signal inputs and 16 redundant outputs, they are suitable for safety applications with a wide range of complexity up to PLe/SIL 3. They are compatible with all conventional signal transmitters.

LED displays allow fast on-site diagnostics while diagnostics outputs provide detailed information to the machine control. Different, compact housing designs and the option of pluggable terminals enable use in a wide variety of machines.

Safety control units ensure the monitoring of safety sensors and emergency stop buttons with minimal space requirements in the switch cabinet.

eloProg and eloFlex are safety evaluation units. The difference between the two systems is that the eloFlex is configured according to customer specifications and delivered with protection against manipulation, while the customer can configure the eloProg themselves. The included software enables flexible use, so that the eloProg can also be used as a stand-alone device.

An online configurator is available for configuring the eloFlex, which can be used to determine up to four safety functions.



**eloFlex 471EFR**



**eloFlex Mini 470EFR**

**Interfaces for  
input expansion**

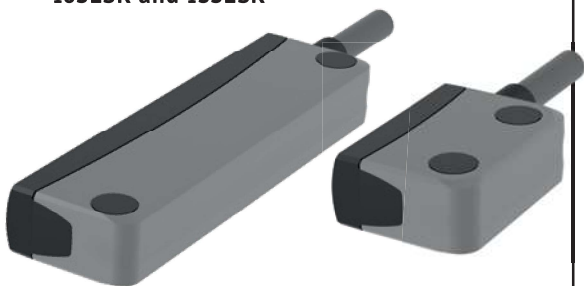


Input expansions are an inexpensive alternative to single wiring. You can connect up to 40 sensors to one evaluation unit and have a performance level up to PLd.

# Safe condition detection

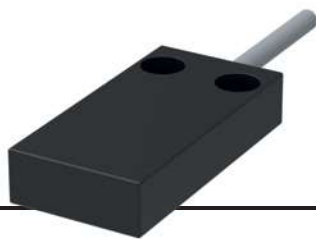
We offer a comprehensive range of RFID and magnetically actuated safety sensors. Compact systems with magnetic safety sensors and integrated evaluation are also part of the portfolio. These are supplemented by emergency stop buttons and contact elements for the safe shutdown of machines or systems. The focus is on the safety requirements of people and machines – without impairing the efficient use of the machine or system.

**Safety sensor  
eloProtect E  
163ESK and 153ESK**



eloProtect E sensors use RFID technology, which enables individual coding. The large offset values simplify installation. An additional advantage is that the integrated evaluation electronics and the high switching power enable direct monitoring via the EDM input as well as direct control of the contactors with up to 400 mA per contactor. This saves you wiring effort and expense, space in the switch cabinet and the costs for the respective safety component.

**Safety  
sensor 114**



Available in all common contact forms, our safety sensors support series connection up to PLe and offer an LED display for fast diagnostics. Cable and plug connections as well as the option of concealed installation make them particularly flexible to use.

**Safety sensor 122MSV**



**Safety sensor  
eloProtect M  
153MSK**



Compact systems are safety sensors with integrated evaluation that save space and costs. They are particularly suitable for applications with only one safety function. Potential-free contacts enable the subsequent integration of safety functions into existing systems and are therefore also of interest in retrofits. Control contacts and LEDs are optionally available for diagnostic purposes.

**Safety sensor 117**

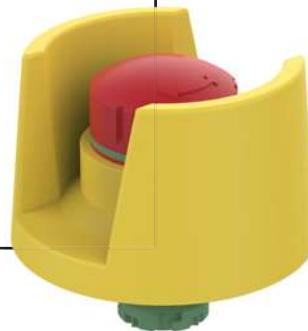


Emergency stop buttons for safe shutdown are fundamental for the safety of any machine. Depending on the application, there are emergency stop buttons in different versions, for example illuminated, lockable or hygienically designed.

**Emergency stop button NHT04S**



**Emergency stop button NHT05D**



**Emergency stop button NHT01D**

**Safety interlock ZS**



Safety interlocks mechanically lock protective caps, cover hoods and doors. With a locking force of up to 2500 N, impermissible access to the machine is prevented. Each of the variants is available with the closed-circuit or open-circuit principle.

The flexibility results from the fact that the installation can be carried out in any position and the heads can be turned in 90° increments on all models. The die-cast aluminium actuator head and the IP67 protection rating are testament to high resistance under extreme environmental conditions.



**Safety interlock ZM**

**Safety interlock ZD**

