



sustainable solutions

made in Germany

RFID



eloProtect<sub>E</sub>  
RFID Safety Sensors

**electronic – compact – safe**

RFID safety sensors for monitoring moving guards



## eloProtect<sup>E</sup> – the benefits at a glance

RFID Safety Sensors

### Maximum cost-effectiveness

- Long service life due to wear-free technology
- Convenient status query via LED and diagnostic output
- Smallest design of RFID safety sensors
- Dimensions of housing and mounting holes are equal to those of magnetically actuated elobau safety sensors
- Can be used as a stand-alone solution without additional evaluation



153... series

### Maximum safety

- Highest possible tampering protection in accordance with DIN EN 14119
- Screw covers prevent easy removal
- Series connection up to PL e/SIL3

### Maximum variability

- Dual mounting options
- High protection classes IP67 and IP6K9K for use in harsh environments
- Complies with the strict hygiene and cleaning requirements of the food and packaging industry
- 3 different coding levels can be selected
- EDM input for monitoring contactors or start buttons



165... series

# The Bodyguard

## eloProtect – the RFID safety sensor from the eloProtect family

RFID Safety Sensors

### Your partner for machine safety

elobau was the first manufacturer to establish magnetically operated safety sensors on the market. For over 40 years the company has been developing and producing customised solutions for mechanical engineering and plant construction. With this experience and expertise, elobau is now defining the next step in the development of safety sensors – the eloProtect series with the eloProtect E electronic safety sensors based on RFID technology.

### eloProtect E – the new standard

The application of eloProtect E sensors can be extremely variable due to the compact and versatile design. They can be attached to or integrated in all kinds of protective equipment. The variety of

designs and the applied technology with complete mechanical compatibility make them especially valuable for users.

The used RFID technology enables the eloProtect E sensors to be coded individually and in a scalable way. Therefore the tampering protection can be selected according to the application. At the highest coding level, the sensor accepts only one corresponding actuator.

The use of this reliable technology simplifies the mounting conditions through higher misalignment tolerance and enables the installation of series connections up to PL e/SIL3. As a result, nothing stands in the way of simple integration of eloProtect E sensors in an existing safety concept. These safety sensors also offer a flexible and cost-effective solution for modifying machines.

## Applications

eloProtect E is ideally suited for use in many applications in many different areas of industry: food • packaging • beverages • chemicals • pharmaceuticals • printing • paper • logistics • wind energy • solar • injection moulding



Resistant to aggressive media, e.g. cleaning agents used in the food industry.



Waterproof housing in compliance with IP67 and IP6K9K.

## Cost-effective and reliable solutions – maximum variability for actuation

### Actuator coded

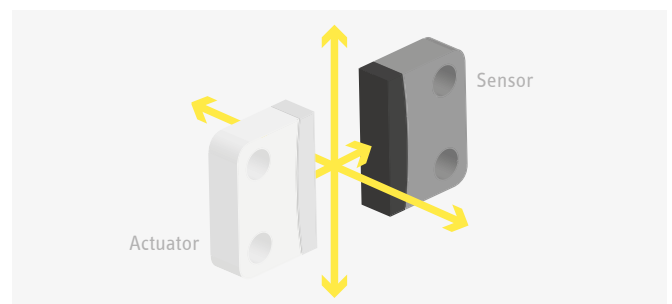
The actuator is not assigned to the sensor. A check is performed to verify whether or not the actuator is authorised for use with the sensor.

### Actuator individual

During commissioning, the actuator is programmed (teach-in) and permanently assigned to the sensor. This process can be repeated if necessary.

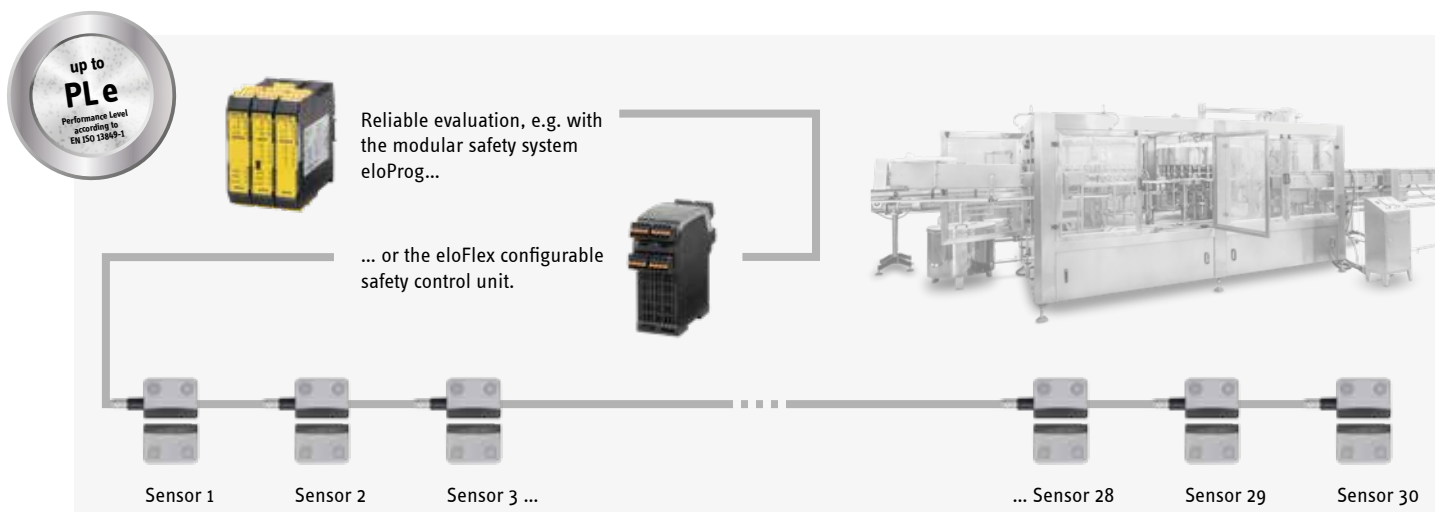
### Actuator unique

When the actuator leaves the factory, it is permanently assigned to the sensor and cannot be replaced by another actuator.



Actuation options

## Maximum safety from series connection of up to 30 sensors



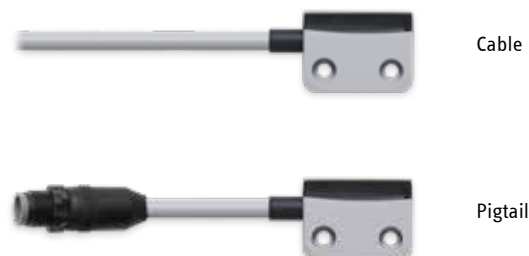
## Technical data

Series	153...	165...
Sensing distances	$s_{ao}$ = 8 mm $s_{ar}$ = 18 mm	
Protection class	IP67 IP6K9K	
Safety outputs	OSSD (p-switching, short-circuit-proof)	
Diagnostic output	Electronic (p-switching, short-circuit-proof)	
Operating temperature range	-25 °C ... +70 °C	
Housing material	PBT (grey) PC (black)	
Dimensions (H x W x D)	26 x 36 x 13 mm	25 x 88 x 13 mm
Safety-related data	SIL 3 SIL <sub>CL</sub> 3 PL e	
Approvals	TÜV UL/CSA	

$s_{ao}$  = assured operating distance,  $s_{ar}$  = assured release distance

## Connectivity

Cable or pigtail – eloProtect E satisfies all requirements with regard to connectivity. Cables and connectors approved for the food industry complement the range of sensors perfectly.



## Ordering information

Sensor options			
Connection	J	Connector M12x1, 8-pin, pigtail (control contact)	
	K	Cable, basic length 1 m	
Coding	1	<b>coded</b> in combination with eloProtect E actuator	
	2	<b>unique</b> in combination with individually coded eloProtect E actuator	
	3	<b>individual</b> in combination with programmable (teach-in) eloProtect E actuator	
Input	1	EDM input automatic	
	2	Start input monitored (start button)	
Extra cable length	-3	Cable length 3 m	
	-5	Cable length 5 m	
	-10	Cable length 10 m	
<div><div>Sensor</div><div><div>153</div><div>ESK</div><div>00</div><div>.</div><div>.</div><div>.</div><div>.</div></div><div><div>165</div><div>ESK</div><div>00</div><div>.</div><div>.</div><div>.</div><div>.</div></div></div>			
<div><div>Actuator</div><div><div>153</div><div>EBK</div><div>001</div><div>coded</div></div><div><div>165</div><div>EBK</div><div>001</div><div>coded</div></div></div>			

## Accessories

- Connector M12x1, 8-pin



### Ordering example:

#### Sensor 153ESK00K11-5

- 153 series
- Cable, length 5 m
- Coded in combination with eloProtect E actuator 153EBK001
- EDM input automatic

#### Actuator 153EBK001

- 153 series
- Coded



## **elobau** sensor technology.

### The company.

As an expanding, globally active, medium-sized family business with more than 700 employees, we develop and manufacture sensor technology and operator interface controls for the industrial machine and off highway vehicle sectors. Our high-quality products are characterised by a high vertical range of manufacture and are manufactured in a carbon-neutral manner in Germany. With our innovative, non-contact sensor products, we support our customers worldwide in manufacturing industrial machines and vehicles that set standards in terms of performance, operator comfort, safety and quality.

### Your global partner.

Select your region under  
[www.elobau.com](http://www.elobau.com) ► Contact



Get to know our special unit for machine safety:  
[www.machine-safety.technology](http://www.machine-safety.technology)



GmbH & Co. KG  
 Zeppelinstr. 44  
 88299 Leutkirch  
 Germany

☎ +49 | (0) 7561 970-317  
 📠 +49 | (0) 7561 970-100  
[www.elobau.com](http://www.elobau.com)  
[machinesafety@elobau.com](mailto:machinesafety@elobau.com)