

RFID



eloProtect 
RFID Safety Sensors

electronic – compact – safe

RFID safety sensors for monitoring moving guards

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.



eloProtect^E – 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

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

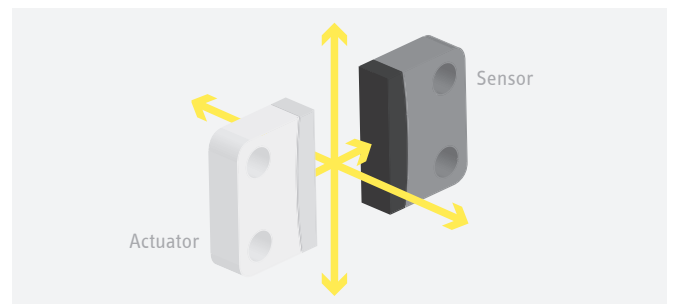
The actuator is not assigned to the sensor. A check is performed to verify whether or not the actuator is authorised for use with the sensor.

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



Reliable evaluation, e.g. with the modular safety system eloProg...

... or the eloFlex configurable safety control unit.



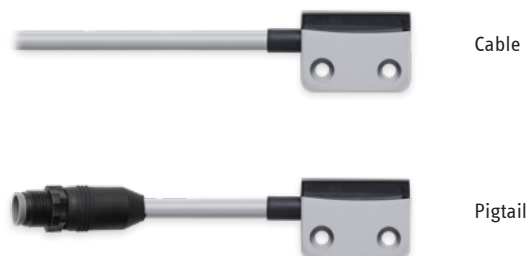
Technical data

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 _{CL} 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	coded in combination with eloProtect E actuator	
	2	unique in combination with individually coded eloProtect E actuator	
	3	individual 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	
Sensor 153 ESK 00 			
165 ESK 00 			
Actuator			
153 EBK 001 coded			
165 EBK 001 coded			

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



The company.

elobau is an internationally active foundation-owned company and development partner for manufacturers of mobile machinery and industrial equipment. Based on non-contact sensor technology, the company develops operating elements, sensor solutions and systems for level measurement and machine safety – available as standard products or tailored individually to the respective application. The close integration of development, toolmaking, production and testing at the company's site in Germany enables short paths from the initial concept through to series production.

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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
machinesafety@elobau.com