

Inductive Safety Sensors

Reliably detect metal – rugged and wear-free

Protection for people and equipment

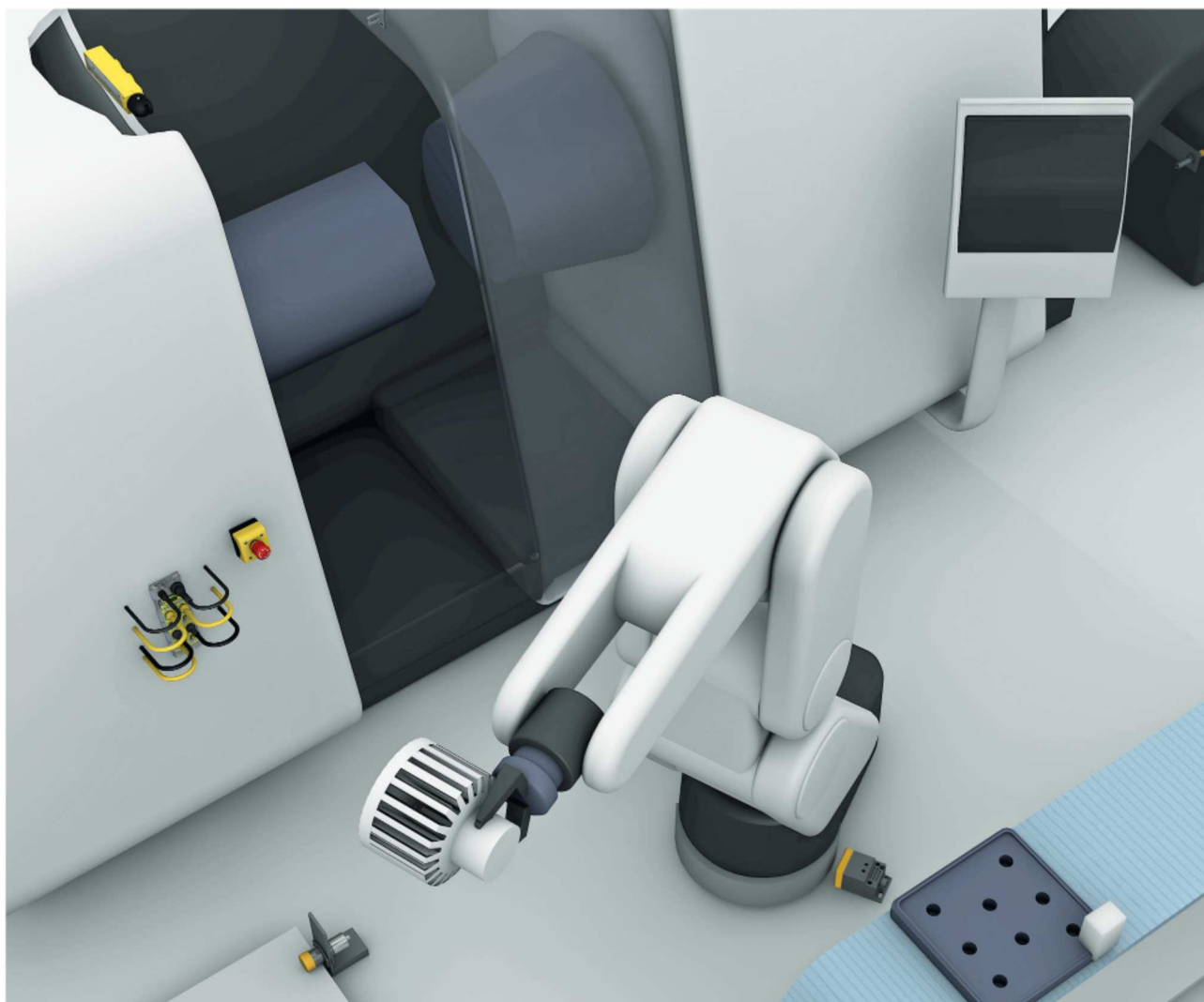
BES inductive safety sensors protect people and equipment by detecting the approach of metallic objects without contact, thereby providing the necessary safety signals for position and end-of-travel.

Direct detection of metallic tool holders is simple and reliable with these sensors. Unlike traditional safety switches, these require no special target. Instead, these safety switches can be connected to any desired safety processor: safety relays, programmable logic modules, or safety controllers. A standard M12 plug connection is all you need for wiring.

Another feature: our sensors are so flexible that they can also be used as pulse transmitters for counting tasks or for stop monitoring.

Benefits

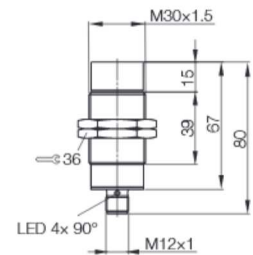
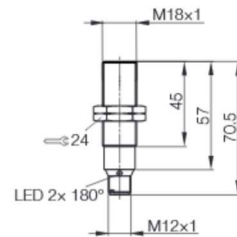
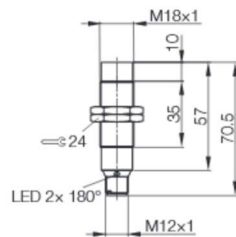
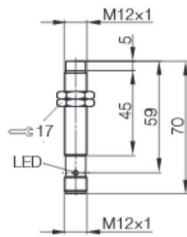
- Reliably detect end-of-travel, speed and stop condition without contact and wear-free
- Compact and common form factors from M12 to Q40
- Simple connection using M12 plugs
- Easy to link to any processor using OSSD outputs



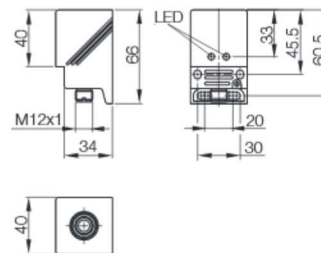
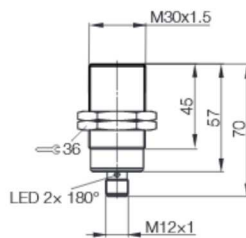
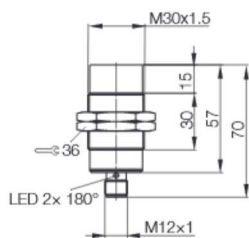
Inductive safety sensors protect people and equipment. They can be connected to any safety processor.



	BES0574	BES0575	BES0576	BES0577
Performance Level/SIL	d/2	d/2	d/2	e/3
Safety category	2	2	2	4
Dimension	M12 × 70 mm	M18 × 70.5 mm	M18 × 70 mm	M30 × 80 mm
Installation	non-flush	non-flush	flush	non-flush
Switching distance	0.5...4 mm	1...8 mm	1...5 mm	6...12 mm
Degree of protection	IP67	IP67	IP67	IP68, IP69K
Switching output	2 × OSSD	2 × OSSD	2 × OSSD	2 × OSSD
Ambient temperature	-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
Housing material	1.4404 stainless steel	1.4571 stainless steel	Brass	1.4404 stainless steel
Connection	M12 male, 4-pin	M12 male, 4-pin	M12 male, 4-pin	M12 male, 4-pin



	BES0578	BES0579	BES057A	BES057C
Performance Level/SIL	d/2	d/2	e/3	e/3
Safety category	2	2	4	4
Dimension	M30 × 70 mm	M30 × 70 mm	40 × 40 × 66 mm	40 × 40 × 66 mm
Installation	non-flush	flush	flush/non-flush	non-flush
Switching distance	1...15 mm	1...10 mm	10...15 mm	4...20 mm
Degree of protection	IP67	IP67	IP67	IP67
Switching output	2 × OSSD	2 × OSSD	2 × OSSD	2 × OSSD
Ambient temperature	-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+60 °C
Housing material	1.4571 stainless steel	Brass	Die-cast zinc	Die-cast zinc
Connection	M12 male, 4-pin	M12 male, 4-pin	M12 male, 4-pin	M12 male, 4-pin



Non-contact, magnetically coded safety switch

Rugged, proven technology

Wear-free because of contact-free operating principle

Non-contact magnetically coded safety switches are outstanding for monitoring guard doors – especially in environments where contamination or dust is expected. The non-contact operating principle means they are insensitive to mechanical play, for example, when doors settle or are imprecisely guided. This makes our safety switches simple to install.

The proven magnetic technology with intelligent arrangement of the reed contacts in the switch housing offers high tamper security and reduces the risk of bypassing the safety function. With separate processing electronics the safety switch can be used for applications up to PLe/SIL 3. With the optional spacer you can even install the safety switch in a ferromagnetic environment.

Benefits

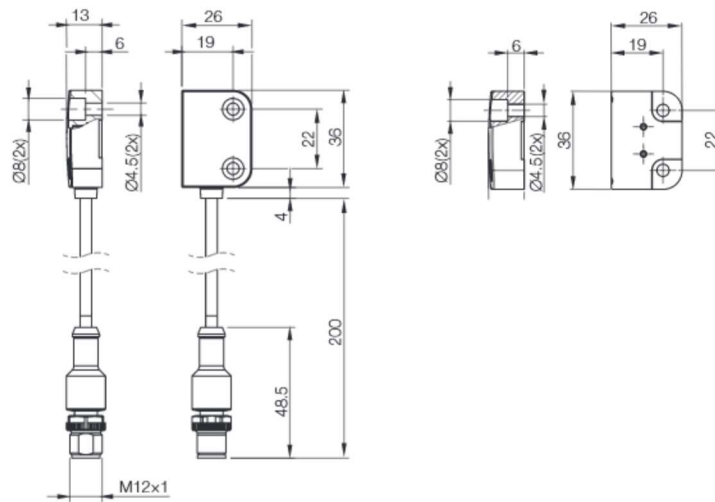
- Insensitive to contamination because of contact-free operating principle
- Standardized M12, 5-pin connection technology saves money
- Suitable for direct connection to safe Balluff IO-Link I/O module
- Simple connection to any safety controller
- Magnetic operating principle, reed contact



Non-contact, magnetically coded safety switches monitor guard doors.



	BID0007	BID000T
Operating principle	Reed safety switch	Magnetically coded actuator
Coding level	low	
Performance Level/SIL	up to PL e with suitable logic unit per IEC 60947-5-3	
Degree of protection	IP67	
Switching output	2 x normally closed	
Switching voltage	max. 24 V DC	
Switching current	max. 10 mA	
Ambient temperature	-25...+70 °C	-25...+70 °C
Housing material	Fiberglass reinforced thermoplastic	Fiberglass reinforced thermoplastic
Connection	Cable with connector M12, 5-pin, A-coded	



Compact, non-contact RFID safety sensors

Tamper resistant, wear-free access protection – with options for installation and utilization

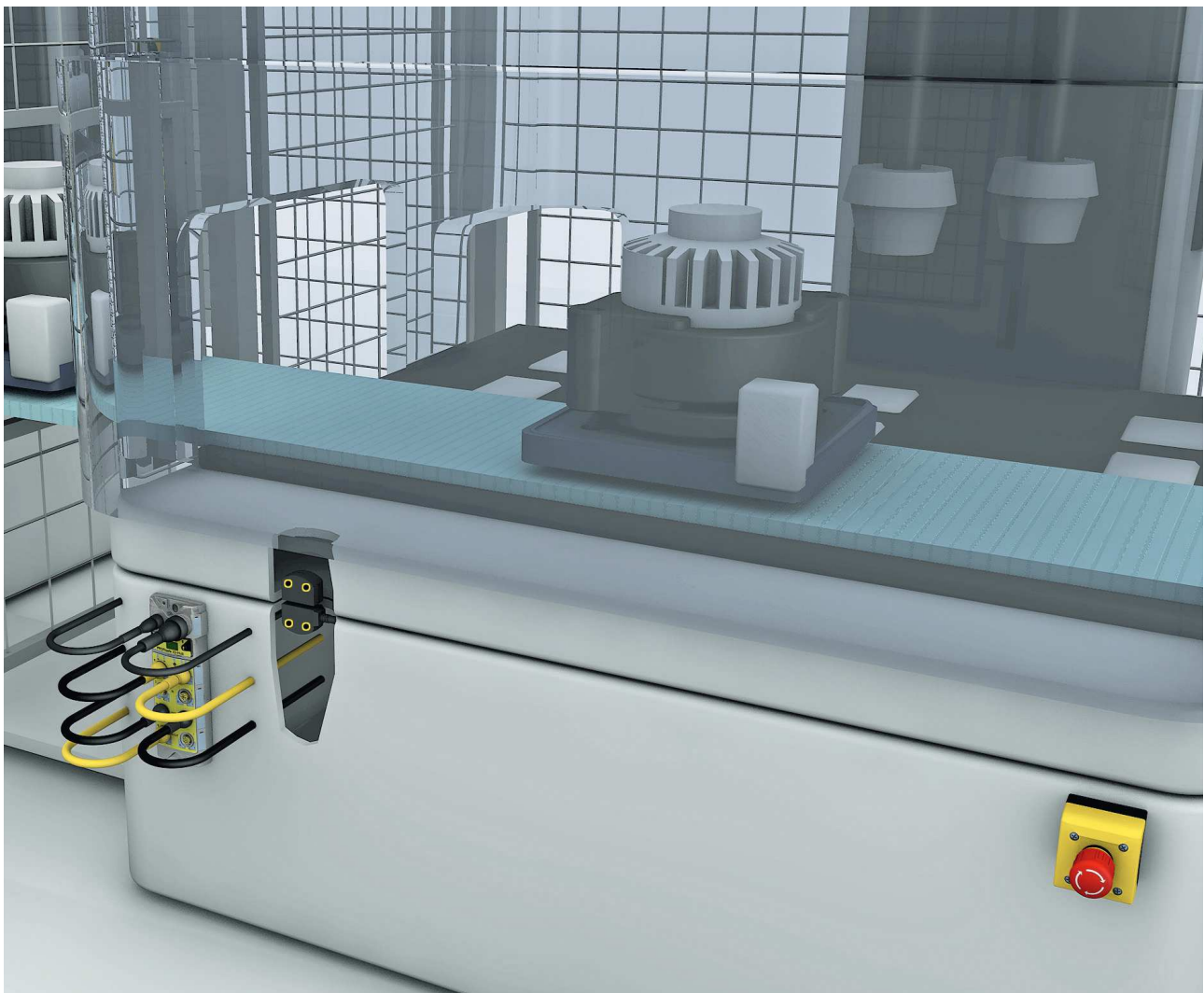
Tamper-proof RFID operating principle

Non-contact, transponder-coded safety sensors are ideal for monitoring guard doors and flaps. These enable high coding levels and therefore high tamper protection, since the sensor uniquely identifies the passive RFID transponder.

The sensor is ideal especially in environments where high levels of dust or contamination are expected. The large operating range of the sensor makes it insensitive to vibration and mechanical play on the safety guard, for example, when doors settle or are poorly aligned. The large operating range also simplifies your installation. The compact size provides additional flexibility when integrating. It's easy to use the devices in applications up to PLe and SIL 3 thanks to the built-in safety logic and the OSSD output stage.

Benefits

- Tamper-proof RFID operating principle available with low or high coding level
- Vibration-proof and insensitive to contamination thanks to non-contact operating principle
- Simple, time-saving installation with generous operating range
- Standardized M12, 5-pin connection technology saves money
- Suitable for direct connection to safe Balluff IO-Link I/O module



Non-contact, transponder-coded safety sensors monitor guard doors and offer high tamper protection.



	BID0008	BID0009	BID000U	BID000W
Operating principle	RFID safety sensor	RFID safety sensor	RFID transponder	RFID transponder
Coding level	low	high		
Performance Level/SIL	e/3	e/3		
Safety category	4	4		
Degree of protection	IP65/IP67	IP65/IP67		
Switching output	2 x OSSD	2 x OSSD		
Ambient temperature	-25...+65 °C	-25...+65 °C	-25...+65 °C	-25...+65 °C
Housing material	Thermoplastic resin	Thermoplastic resin	Thermoplastic resin	Thermoplastic resin
Connection	Cable with connector M12, Cable with connector 5-pin, A-coded			
		M12, 5-pin, A-coded		

