

BASIC INFORMATION

Simple and safe to implement Protective door monitoring

Reliable protective door monitoring is one of the most common safety requirements that has to be provided for machines: hazardous machine movements must be reliably brought to a standstill when a protective door is opened. SIRIUS 3SK safety relays from Siemens provide the perfect solution for every safety application on the basis of standard DIN EN ISO 14119: mechanical protective door monitoring with standard and safety position switches, non-contact protective door monitoring with magnetically operated switches, protective door monitoring with non-contact RFID safety switches for the ultimate protection against tampering.

Customer benefits / application

Mechanical protective door monitoring with SIRIUS 3SE5 position switches

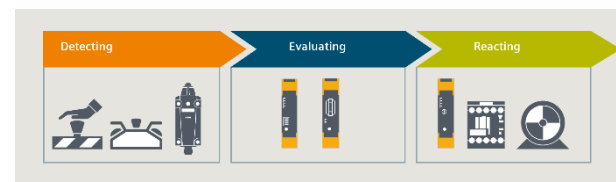
- Modular design for versatile use (different actuator heads)
- Quick connection system and simple plug-in installation
- Suitable for higher currents
- Safe shutdown without action by the machine controller
- Absolute protection against electromagnetic interference
- 3D-coded actuators rule out the possibility of simple tampering

Non-contact protective door monitoring with coded 3SE6 magnetically operated switches

- Two safety contacts + 1 signaling contact (diagnostics option)
- Long service life due to wear-free switching
- Particularly suitable for areas exposed to contamination, cleaning and disinfecting

Non-contact protective door monitoring with 3SE63 RFID safety switches offer *additional* benefits:

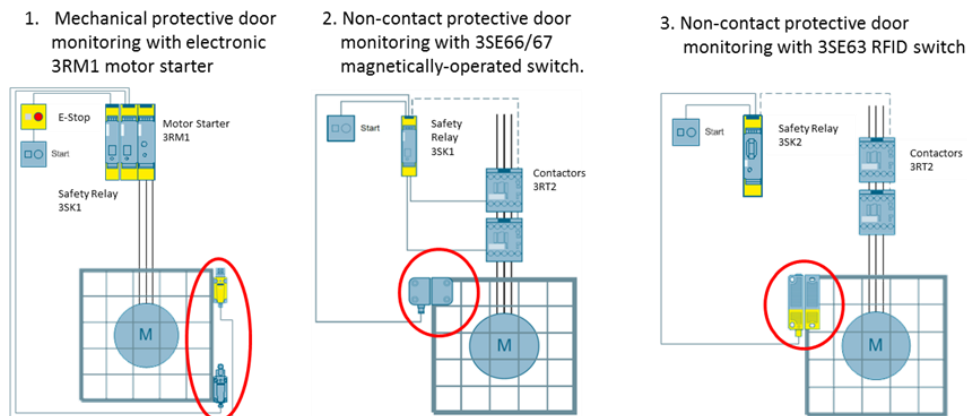
- Protection against tampering thanks to individual coding
- Extensive diagnostics functions provided by LEDs increase plant availability
- High IP69K degree of protection for use in extreme environmental conditions



Highlights

- Mechanical and non-contact solution
- In connection with the 3SK safety relays perfect solution according to DIN standard
- Solutions for high demands (ultimate protection against tampering, rough environmental conditions)

Overview of options for protective door monitoring, tamper-proof, up to SIL3/PL e



Example of product selection for implementing protective door monitoring

1. Mechanical protective door monitoring with 3RM1 motor starter		Article number
	EMERGENCY STOP mushroom pushbutton in enclosure, 2 NC	3SU1851-0NB00-2AA2
	Pushbutton, green, in grey enclosure, 1NO	3SU1801-0AB00-2AB1
	Standard position switch	3SE5232-0HK21
	Safety position switch	3SE5232-0RV40
	Actuator for safety position with transverse fixing	3SE5000-0AV03
	3SK1 input extensions, 24V DC	3SK1220-1AB40
	3SK1 device connector, 17.5 mm	3ZY1212-1BA00
	3SK1 safety relay, basic unit Advanced	3SK1122-1AB40
	3SK1 device connector, 22.5 mm	3ZY1212-2BA00
	3RM1 motor starter (direct-on-line starter) Safety, 24V DC	3RM1101-1AA04
	3SK1 device termination connector	3ZY1212-2FA00
2. Non-contact protective door monitoring with magnetically operated switch and two 3RT2 contactors		Article number
	Pushbutton, green, in grey enclosure, 1 NO	3SU1801-0AB00-2AB1
	3SK1 safety relay, basic unit Standard, 24V AC/DC	3SK1111-1AB30
	Switching component, right-hand door hinge, 3m cable	3SE6627-2CA04
	Solenoid, right-hand door hinge	3SE6714-2CA
	2 contactors, 24 V DC, 1 NC, 3 kW	3RT2015-1BB42
3. Non-contact protective door monitoring with RFID and two 3RT2 contactors		Article number
	Pushbutton, green, in grey enclosure, 1NO	3SU1801-0NA00-2AA2
	3SK2 safety relay, basic units, 24V DC	3SK2112-1AA10
	Non-contact RFID safety switch, family-coded	3SE6315-0BB01-1AP0
	Actuator for RFID switches	3SE6310-0BC01
	Cable for RFID switch, 3m	3SX5601-2GA03
	2 contactors, 24 V DC, 1 NC, 3kW	3RT2015-1BB42

More Information

- SIRIUS Safety Integrated application manual: <https://support.industry.siemens.com/cs/ww/de/view/81366718>
- Example application for RFID switches: <https://support.industry.siemens.com/cs/ww/de/view/109485646>
- Podcast on position switches: <http://sie.ag/2d9cjKZ>
- Questions also regarding position switches answered in a video: <http://www.siemens.com/sirius-explained>