

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

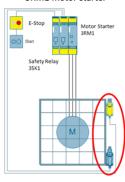
- Mechanical and non-contact solution
- In connection with the 3SK safety relays perfect solution according to DIN standard
- Solutions for high demands (ultimate protection against tampering, rough environmental conditions)

SIEMENS

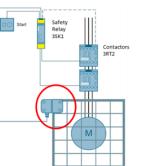
siemens.com/safety-integrated

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

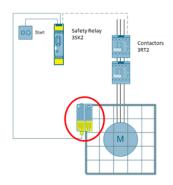
 Mechanical protective door monitoring with electronic 3RM1 motor starter



2. Non-contact protective door monitoring with 3SE66/67 magnetically-operated switch.



 Non-contact protective door monitoring with 3SE63 RFID switch



Example of product selection for implementing protective door monitoring

1. Mechanical protect	ive 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
	Switching component, right-hand door hinge, 3m cable Solenoid, right-hand door hinge	3SE6627-2CA04 3SE6714-2CA
3. Non-contact protect	Solenoid, right-hand door hinge	3SE6714-2CA
3. Non-contact protect	Solenoid, right-hand door hinge 2 contactors, 24 V DC, 1 NC, 3 kW	3SE6714-2CA 3RT2015-1BB42
	Solenoid, right-hand door hinge 2 contactors, 24 V DC, 1 NC, 3 kW ive door monitoring with RFID and two 3RT2 contactors	3SE6714-2CA 3RT2015-1BB42 Article number
3. Non-contact protect	Solenoid, right-hand door hinge 2 contactors, 24 V DC, 1 NC, 3 kW tive door monitoring with RFID and two 3RT2 contactors Pushbutton, green, in grey enclosure, 1NO	3SE6714-2CA 3RT2015-1BB42 Article number 3SU1801-0NA00-2AA2
	Solenoid, right-hand door hinge 2 contactors, 24 V DC, 1 NC, 3 kW tive door monitoring with RFID and two 3RT2 contactors Pushbutton, green, in grey enclosure, 1NO 3SK2 safety relay, basic units, 24V DC	3SE6714-2CA 3RT2015-1BB42 Article number 3SU1801-0NA00-2AA2 3SK2112-1AA10
	Solenoid, right-hand door hinge 2 contactors, 24 V DC, 1 NC, 3 kW ive door monitoring with RFID and two 3RT2 contactors Pushbutton, green, in grey enclosure, 1NO 3SK2 safety relay, basic units, 24V DC Non-contact RFID safety switch, family-coded	3SE6714-2CA 3RT2015-1BB42 Article number 3SU1801-0NA00-2AA2 3SK2112-1AA10 3SE6315-0BB01-1AP0

More Information

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

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