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

1. Mechanical protective door monitoring with electronic 3RM1 motor starter

   EMERGENCY STOP mushroom pushbutton in enclosure, 2 NC
   Pushbutton, green, in gray enclosure, 1 NO
   Standard position switch
   Safety position switch
   Actuator for safety position with transverse fixing
   3SK1 input extension, 24 V DC
   3SK1 device connector
   3SK1 safety relay, basic unit Advanced
   3RM1 motor starter (direct-on-line starter) Safety, 24 V DC
   3SK1 device termination connector

   Article number
   3SU1851-0NB00-2AA2
   3SU1801-0AB00-2AB1
   3SE5212-0CK21
   3SE5212-0RV40
   3SE5000-0AV03
   3K1220-1AB40
   3Z1212-1BA00
   3K1122-1AB40
   3RM1101-1AA04
   3ZY1212-1BA00

2. Non-contact protective door monitoring with magnetically-operated switch and two 3RT2 contactors

   Pushbutton, green, in gray enclosure, 1 NO
   3SK1 safety relay, basic unit Standard, 24 V AC/DC
   Switching component, right-hand door hinge, 3m cable
   Solenoid, right-hand door hinge
   2 contactors, 24 V DC, 1 NC, 3 kW

   Article number
   3SU1801-0AB00-2AB1
   3SK1111-1AB30
   3NE627-2CA04
   3SE6714-2CA
   3RT2015-1BB42


   Article number
   3SK2 safety relay, basic units, 24 V DC
   Non-contact RFID safety switch, family-coded
   Actuator for RFID switches
   Cable for RFID switch, 3 m
   2 contactors, 24 V DC, 1 NC, 3 kW

   Article number
   3SK2112-1AA10
   3SE6315-0BB01
   3SE6310-0BC01
   3SX5601-2GA03
   3RT2015-1BB42

Example of product selection for implementing protective door monitoring

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 the subject of position switches: http://siie.ag/2d9cjKZ

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