

SIRIUS Position and Safety Switches

Detecting

| | Mechanical position and safety switches | | Safety switches with separate actuator | | Non-contact safety switches | | RFID safety switches | RFID safety switches with tumbler |
|---|---|--|---|---|---|---|---|-----------------------------------|
| | Standard/compact 3SE51/3SE52/3SE54 3SF1 AS-i variant | Safety hinge 3SE51/3SE52 3SF1 AS-i variant | without tumbler 3SE51/3SE52 3SF1 AS-i variant | with tumbler 3SE53 3SF1 AS-i variant | Magnet safety switches 3SE66/3SE67 | RFID safety switches 3SE63 | RFID safety switches with tumbler 3SE64 | |
|  Positive opening operation as per IEC 60947-5-1, positive drive, necessary in safety applications |  |  |  |  |  |  |  | |

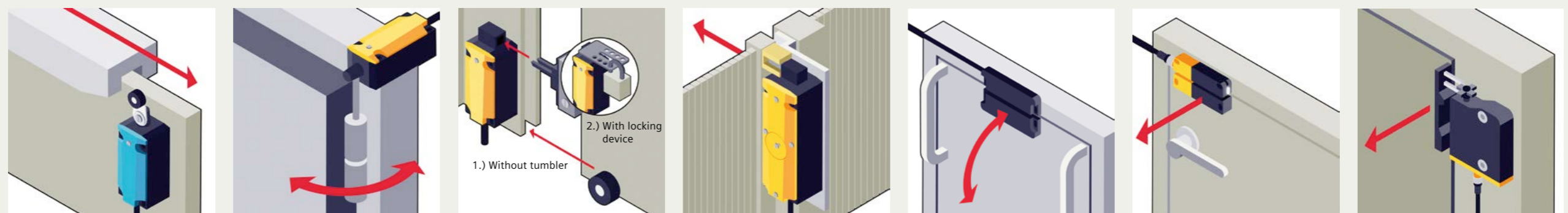
| | | | | | | | |
|---|----------------------------|--|----------------------------|--|-----------------------------|---|---|
| Design type | 1 | 1 | 2 | 2 | 4 | 4 | 4 |
| Tampering protection (Acc. to DIN EN ISO 14119, TÜV certificate) | low, actuator head uncoded | low, shaft uncoded | low, 3D-coded actuator | low, 3D-coded actuator | low, coded switching magnet | low or high (to choose), coded RFID security switches | low or high (to choose), coded RFID security switches |
| Maximum safety Safety Integrity Level SIL (IEC 62061/ IEC 61508)/Performance Level PL (ISO 13849-1) | Monitoring of 1 NO contact | Monitoring of 2 NO contacts or 1 NO and 1 NC contact | Monitoring of 1 NO contact | Monitoring of 2 NO contacts or 1 NO and 1 NC contact | Monitoring of 1 NO contact | Monitoring of 2 NO contacts or 1 NO and 1 NC contact | Monitoring of 2 NO contacts or 1 NO and 1 NC contact |
| With 1x switch | SIL 1/PL c | SIL 1/PL c | SIL 1/PL c | SIL 2/PL d | SIL 1/PL c | SIL 2/PL d | SIL 3/PL e |
| With 2x switches (enabling individual switch combinations) | SIL 3/PL e | SIL 3/PL e | SIL 3/PL e | SIL 3/PL e | SIL 3/PL e | SIL 3/PL e | SIL 3/PL e |

Application examples

With the position and safety switches almost all requirements in the industry can be met.

Various application examples e.g. for guard door monitoring can be found here:

support.industry.siemens.com/cs/ww/en/ps/16403/ae



Position switch with twist lever: Detection of positions and end positions of moving machine and system parts, such as e.g. conveyor belts and assembly lines

Pivoting doors and flaps, with fixed positive connection between switch and door hinge, switching angle 10°

Roller door or position monitoring of grilles or doors

Additional interlocking requirement, e.g. in the working area of a robot system: Shutdown of machines requires closed safety doors with tumbler guarding

Monitoring of maintenance flaps (hoods, doors, grilles), especially suitable for confined spaces

Monitoring of swing doors, flaps, hoods, grilles, vibration-proof and robust IP69, large switching interval

Interlocking requirement for rotating, laterally movable or removable safety guards IP69, with latching, optimized hygiene standard with simultaneous highest personnel and process protection

Evaluating

SIMATIC ET 200SP



siemens.com/et200sp

SIRIUS 3SK safety relays



siemens.com/safety-relays

SIMATIC controller



siemens.com/simatic-safety

**Application manual
SIRIUS Safety Integrated**



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92224 Amberg
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