



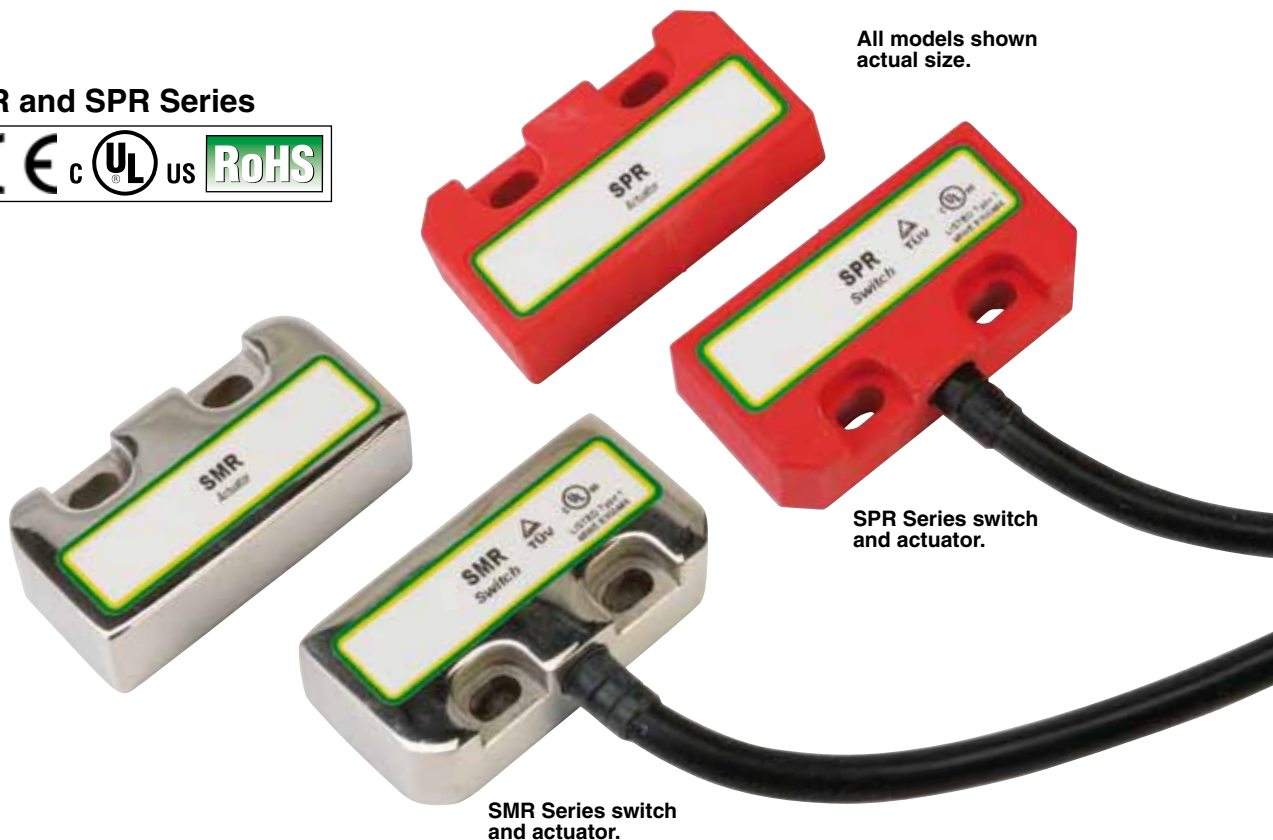
Magnetic Non-Contact Safety Switches

With Universal 22 mm (0.87") Fitting

SMR and SPR Series



All models shown actual size.



- ✓ Magnetic High Power Switching Up to 1 A
- ✓ Volt Free Contacts
- ✓ High Temperature Stability
- ✓ Wide Sensing at 12 mm (0.47") with High Tolerance to Guard Misalignment
- ✓ Will Operate with Most Safety Relays
- ✓ Universal Fitting—Established 22 mm (0.87") Fixing Footprint
- ✓ Can Be High Pressure Hosed at High Temperature Due to NEMA PW12 (IP69K) Rating
- ✓ Up to: PLe ISO13849-1
- ✓ 2 NC 1 NO Circuits—High Switching Life—No Moving Parts
- ✓ SMR Series: 316 SS Body Mirror Polished to Ra4—Suitable for CIP and SIP Cleaning—Food Splash Zones EHEDG Guidelines
- ✓ SPR Series: High Specification Polyester Housing with Integral Back Plate

SMR and SPR Series magnetic non-contact safety switches with universal 22 mm (0.87") fitting have been designed to enable the conformance to EN60947-5-3 and be used as directed by ISO12100, ISO14121

and EN60204-1. They have magnetic sensing which provides a wide sensing distance and provides a high tolerance to misalignment after sensing. They can operate from 4 directions even in extreme environments of temperature and moisture. They have volt free high power switching capability and can be used independently to switch low risk applications or connect to a safety relay to provide higher safety levels. When used in combination with most dual channel safety monitoring relays they can be used to provide up to PLe/Category 4 to ISO13849-1.

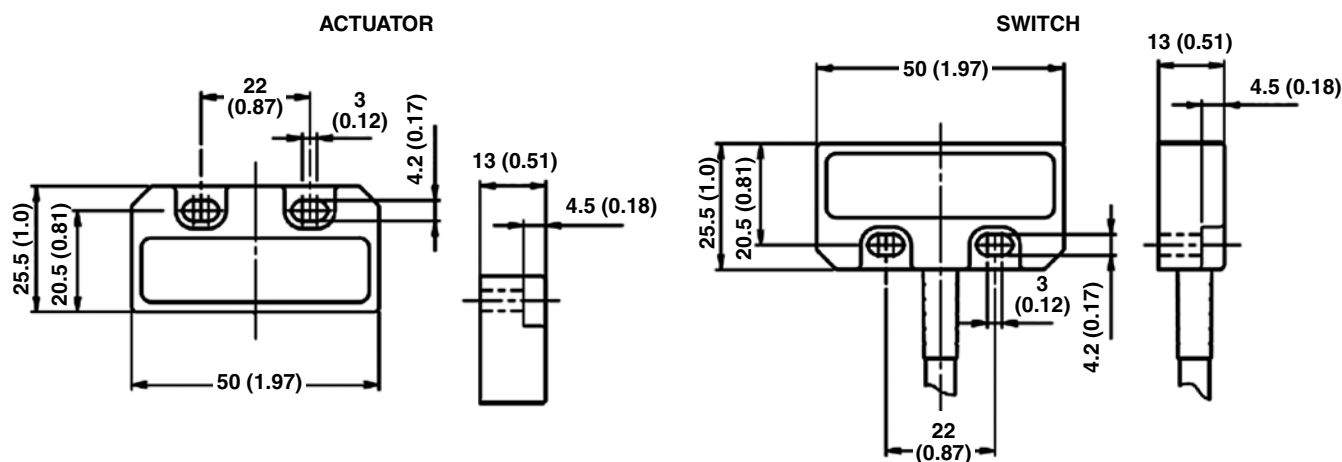
SMR and SPR Series magnetic non-contact safety switches are designed to interlock hinged, sliding or removable guard doors. SMR Series stainless steel safety switches have been designed for applications in the food processing, pharmaceutical, packaging and petro chemical industries. SPR Series switches have been developed for applications in general factory automation, packaging and some food processing industries.

They are specifically advantageous when:

- Poor guard alignment exists and a wide tolerance to misalignment is required
- High levels of hygiene is a requirement, e.g. high pressure chemical or water hosing in the food industry environment
- Environments where high switching capacity is a requirement



Dimensions: mm (inch)



Specifications

Standards: ISO14119, EN60947-5-1, EN60204-1, ISO13849-1, EN62061, UL508

Safety Classification and Reliability Data:

Mechanical Reliability B10d: 3.3×10^6 operations at 100 mA load

ISO13849-1: Up to PLe Category 4 depending upon system architecture

EN62061: Up to SIL3 depending upon system architecture

Safety Data-Annual Usage: 8 cycles per hour/25 hours per day/365 days

PFHd: 2.52×10^{-8}

Proof Test Interval (Life): 47 years

MTTFd: 470 years

Safety Channel 1 NC: Voltage free, 250 Vac 1.0 A max rating

Safety Channel 2 NC: Voltage free, 250 Vac 1.0 A max rating

Safety Channel 3 NO: Voltage free, 24 Vdc 0.2 A max rating

Fuse: Internal 1.0 A (F); External 0.8 A (F) (User)

Contact Release Time: <2 ms

Initial Contact Resistance: <500 mΩ

Minimum Switched Current: 10 Vdc, 1 mA

Dielectric: Withstand 250 Vac

Insulation Resistance: 100 MΩ

Recommended Setting Gap: 5 mm (0.2")

Switching Distance: Sao 10 mm (0.4") Close

(Target to Target): Sar 20 mm (0.8") open

Tolerance to Misalignment: 5 mm (0.2") in any direction from 5 mm (0.2") setting gap

Switching Frequency: 1.0 Hz maximum

Approach Speed: 200 mm/min to 1000 mm/sec

Body Material:

SMR Series: 316 SS mirror polished finish to Ra4 (CIP SIP Cleaning)

SPR Series: UL approved polyester

Operating Temperature:

SMR Series (CIP SIP Cleaning): -25 to 105°C (-13 to 221°F)

SPR Series: -25 to 80°C (-13 to 176°F)

Enclosure Protection: NEMA PW12 (IP69K), NEMA 6 (IP67)

Shock Resistance: IEC68-2-27; 11 ms, 30 g

Vibration Resistance: IEC68-2-6; 10 to 55 Hz, 1 mm (0.04")

Cable Type: PVC 6 core, 6 mm (0.23") OD; conductors, 0.25 mm²

Mounting Bolts: 2 x M4; tightening torque, 1.0 Nm

Mounting Position: Any

Dimensions: See dimensional drawing above

Weight (of Switch, Actuator and Cable):

SMR Series: 380 g (0.84 lb) with 5 m (16.4') cable; 630 g (1.39 lb) with 10 m (32.8') cable

SPR Series: 310 g (0.68 lb) with 5 m (16.4') cable; 560 g (1.23 lb) with 10 m (32.8') cable

To Order			
Model No.	Description	Circuits	Cable Length
SMR-139014	Stainless steel magnetic non-contact safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	5 m (16.4')
SMR-139015	Stainless steel magnetic non-contact safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	10 m (32.8')
SPR-111014	Magnetic non-contact safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	5 m (16.4')
SPR-111015	Magnetic non-contact safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	10 m (32.8')

All switches include actuator.

Ordering Example: SPR-111014 magnetic non-contact safety switch with universal 22 mm (0.87") fitting, 2 NC (safety) and 1 NO (auxiliary) circuits and 5 m (16.4') cable.