



Coded Non-Contact Safety Switches

With Universal 22 mm (0.87") Fitting

SMC and SPC Series



SMC-139006 switch and actuator.



SPC-111006 switch and actuator.

All models shown actual size.

- ✓ Coded Magnetic Actuation
- ✓ Wide Sensing at 14 mm (0.55") with High Tolerance to Misalignment
- ✓ Will Operate with Most Safety Relays
- ✓ Universal Fitting—Established 22 mm (0.87") Footprint Suitable for Most Applications
- ✓ LED Indication
- ✓ Withstands Environments Where High Humidity or Hose Down is Required
- ✓ Up to: PLe ISO13849-1
- ✓ 2 NC 1 NO Circuits—High Switching Life—No Moving Parts
- ✓ SMC Series: 316 SS Body Mirror Polished to Ra4—Specifically Designed for Food Processing and Pharmaceutical Applications
- ✓ SPC Series: High Specification and Durable Polyester Housing

The SMC and SPC Series coded 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 coded magnetic sensing which provides a wide sensing distance and provides a high tolerance to misalignment after sensing. They can be fitted behind stainless steel fittings and can operate from 4 directions even in extreme environments of temperature and moisture. When used in combination with most dual channel safety monitoring relays they can be used to provide up to PLe to ISO13849-1.

These switches are designed to interlock hinged, sliding or removable guard doors. SMC Series stainless steel safety switches are designed for use in the food processing and pharmaceutical industries. SPC 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
- Anti tamper sensing is required
- High hygiene requirements exist, e.g. food industry hose down
- Long life is required (no moving or touching parts)
- LED status indication is desirable



Specifications

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

Safety Classification and Reliability Data:

ISO13849-1: Up to PLe Category 4

EN62061: Up to SIL3

PFHd: 8.71×10^{-11}

Proof Test Interval (Life): 20 years

MTTFd: 866 years

Safety Channel 1: NC 24 Vdc, 0.2 A max rating

Safety Channel 2: NC 24 Vdc, 0.2 A max rating

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

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 in any direction from 5 mm setting gap

Switching Frequency: 1.0 Hz maximum

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

Body Material:

SMC Series: 316SS mirror polished to Ra4

SPC Series: UL approved polyester

Operating Temperature:

SMC Series (CIP SIP Cleaning): -25 to 105°C (-221 to 176°F)

SPC 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

Cable Type: PVC 6 or 8 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 diagram below

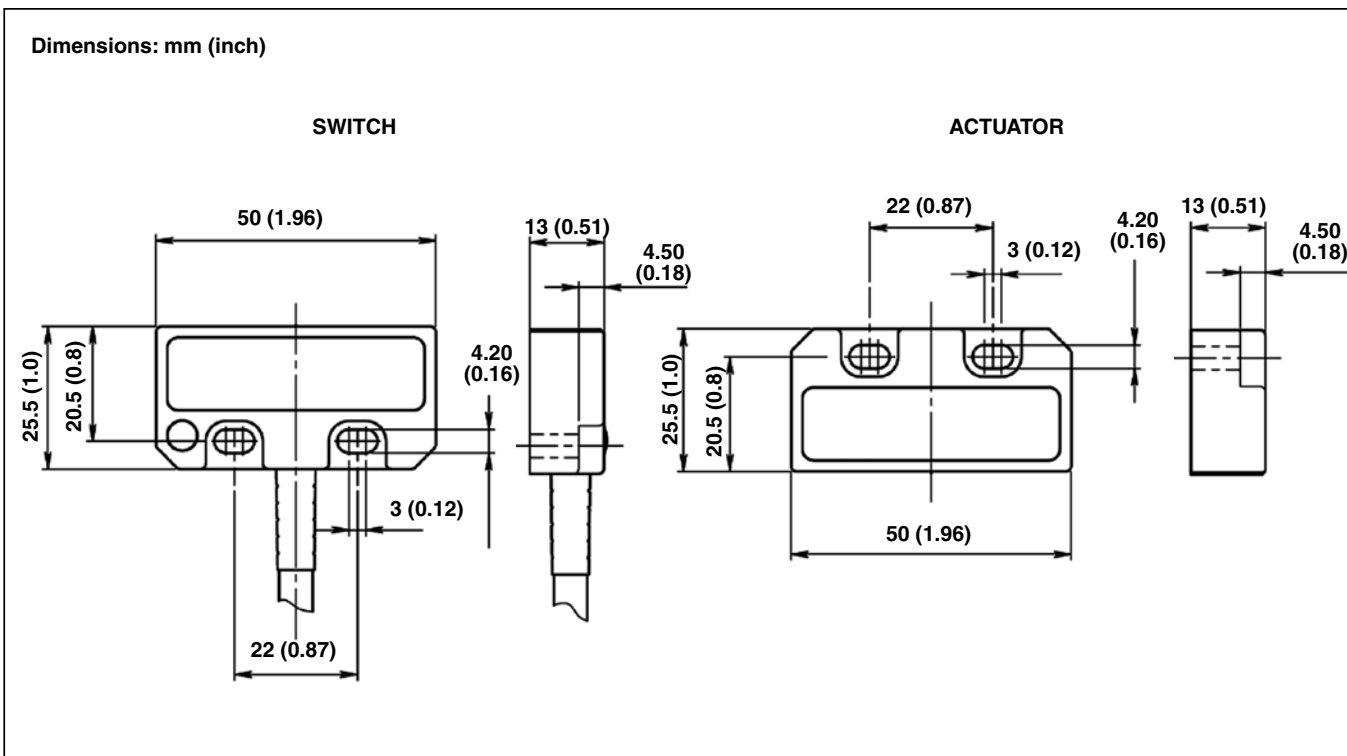
Weight (of Switch, Actuator and Cable):

SMC Series: 370 g (0.82 lb) with 5 m (16.4') cable;

620 g (1.37 lb) with 10 m (32.8') cable

SPC Series: 305 g (0.63 lb) with 5 m (16.4') cable;

555 g (1.22 lb) with 10 m (32.8') cable



To Order

Model No.	Description	Circuits	Cable Length
SMC-139006	Coded non-contact stainless steel safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	5 m (16.4')
SMC-139007	Coded non-contact stainless steel safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	10 m (32.8')
SPC-111006	Coded non-contact safety switch with universal 22 mm (0.87") fitting	2 NC (safety) 1 NO (auxiliary)	5 m (16.4')
SPC-111007	Coded 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: SPC-111006 coded non-contact safety switch with 2 NC (safety) and 1 NO (auxiliary) circuits and 5 m (16.4') cable.