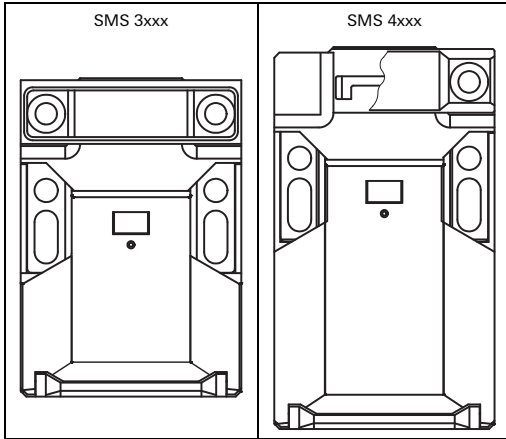


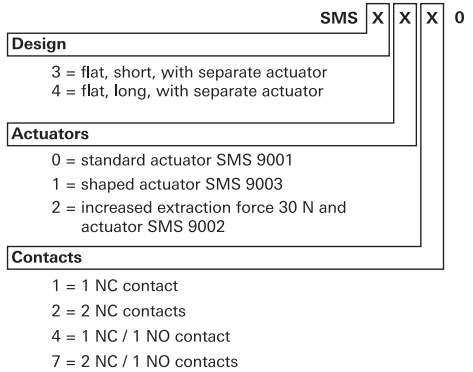
Operating Instructions
(Translation of the original instructions)

SMS 3xxx/SMS 4xxx
Safety switch with separate actuator

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Identifikation



Type designation

Article number
Please quote this article number in all correspondence and when placing orders with Wieland Electric GmbH.



Production code
WW/YY
Week/year

NOTE

Failure to follow these instructions (intended use, safety instructions, installation and connection by trained personnel, safe function test) will invalidate any liability.

DANGER

⚠ Improper installation or manipulation of the safety switch renders the personal protection function useless and can cause serious injury or accidental death.

SAFETY INSTRUCTIONS

- ⚠ Installation, commissioning, modification and retrofitting must only be performed by a qualified electrician.
- Disconnect the device/the system from the power supply before starting work. In the case of installation and system errors, mains voltage can be present on the control circuit in the case of non-galvanically isolated devices.
- Observe the electrotechnical and professional trade association safety regulations for installation of the equipment.
- Opening the case or other manipulation voids any warranty.

SAFETY INSTRUCTIONS

- In the case of improper use or any use other than for the intended purpose, the device must no longer be used and any warranty claim is void. Invalidating causes can be: strong mechanical loading of the device, such as occur when falling or voltages, currents, temperatures, humidity outside the specifications.
- Always check all safety functions in accordance with the applicable regulations during initial commissioning of your machine/ system and observe the specified inspection cycles for safety devices.
- To maintain the safety level, the safety switches should only be ordered and installed as a unit together with the corresponding actuator.

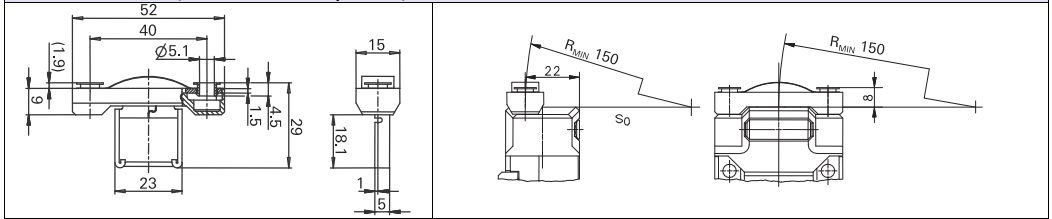
1 Intended use

The SMS 3xxx/4xxx encapsulated safety switches with separate actuator are suitable for mounting on safety facilities.

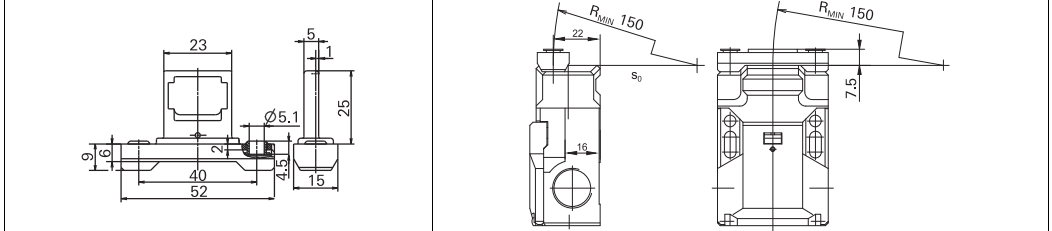
They are used for the purpose of initiating switching and control operations.

Actuators: Dimensions and approach radii

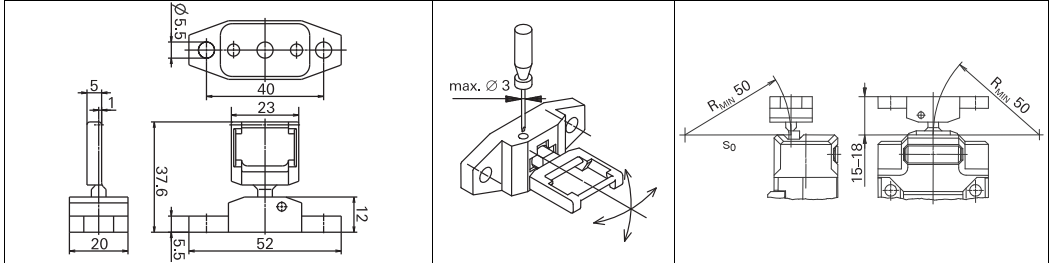
SMS 9001, standard (included with safety switch)



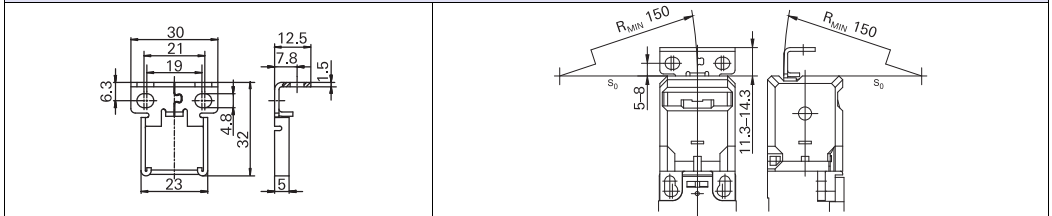
SMS 9002



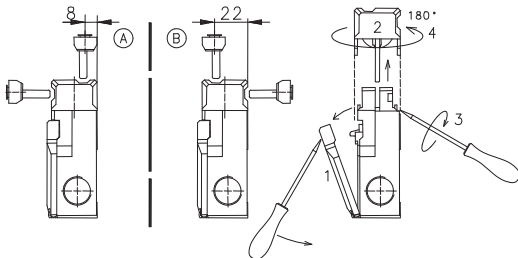
SMS 9003, shaped actuator



SMS 9004



5 Engagement options



Four approach directions by repositioning the cap (position A and B).

Cover (1) must be opened before repositioning cap (2).

Insert tip of screwdriver in gap between cap and enclosure and turn (cap releases) (3).

Remove cap and turn through 180° as illustrated (4), fit in enclosure and close cover.

Close off the unused cap slot with the snap-in insert.

6 Installation

ATTENTION

- The safety switch must not be used as a mechanical stop.
- Foreign particles must be prevented from entering the actuator opening when the safety guard is open.
- Installation must be carried out in accordance with DIN EN 1088. Particular attention must be paid to measures designed to reduce the possibilities of bypassing the system.

Two M5 screws are to be used to secure the switching device.

Actuator


Secure the actuator form-fit. It must not be possible to dismantle the actuator with simple tools.

The SMS 9002 and 9003 actuators are mounted with two M5 screws in accordance with DIN 912.

M4 × 8 screws with one-way head are to be used to mount the SMS 9001 and 9004 actuators and prevent tampering.

When mounting, the switch and the actuator are to be aligned in such a way as to ensure no transverse forces act on the actuating head even after several opening/closing operations. The minimum radii apply to a pivot point on the level of the upper edge of the enclosure S0. Radius actuation (see Page 8) may reduce the mechanical service life. The switch can be fitted in any position that enables the switch to be inspected and, if necessary, exchanged by authorised technical personnel. The installation position should be selected such that no foreign particles can enter the opening of the actuating device.

Close off the unused cap slot with the snap-in insert.

ATTENTION	
	After mounting, the cap must be fitted on to the actuator. The cap prevents the actuator from being dismantled and also prevents the safety facility moving over the switching device in the event of poorly fitted mechanical limit stops.

Press-out blank

At least one of the three press-out blanks must be removed in order to feed in a cable.

Screw in the required screw connection (SMS 4xxx = M20 × 1.5, SMS 3... = M16 × 1.5). In so doing the press-out blank is separated and pressed into the enclosure. Open the cover with a screwdriver (see Fig. below). Remove the press-out blank. It must not be left in the enclosure (see Fig. below).

The position switches must not be used as a mechanical stop.

The switch is opened by releasing the cover with a screwdriver (see illustration below).

The electrical contacts of the contact elements SMS xx10 have two M3.5 screw connections. **Tightening torque M = 0.8 Nm.**

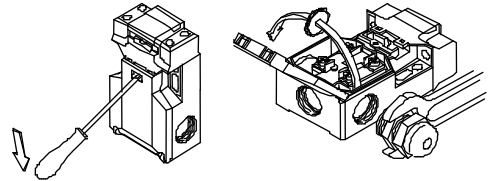
The electrical contacts of the contact elements SMS xx20 and SMS xx40 have four M3.5 screw connections. **Tightening torque M = 0.8 Nm.**

The electrical contacts of the contact element SMS xx70 have six M3 screw connections. **Tightening torque M = 0.6 Nm.**

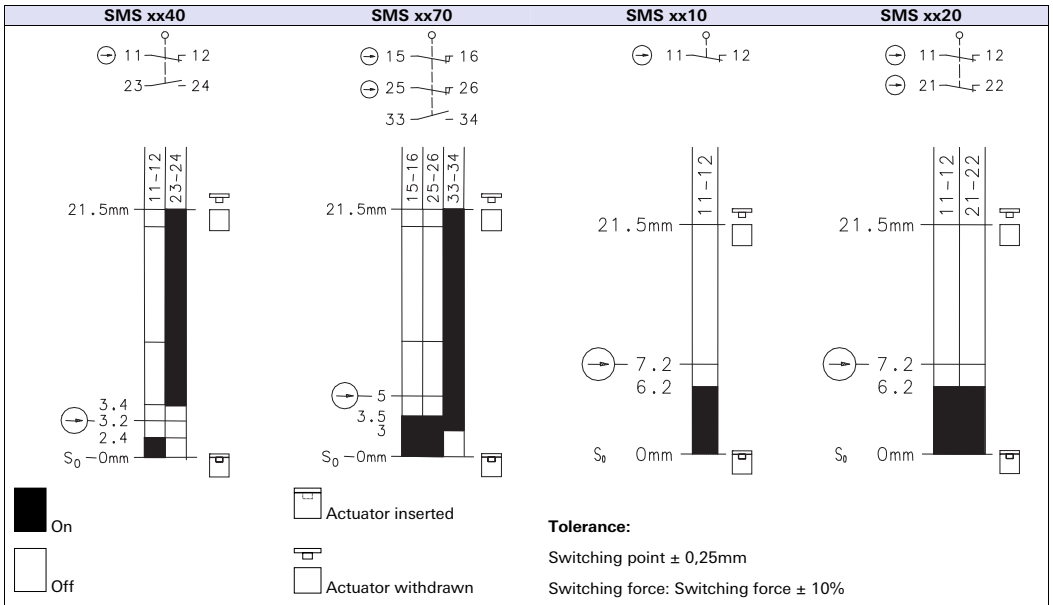
See "Circuit Symbols and Circuit Diagram" for contact assignments.

The connection requires a stranded wire with ferrule or a solid wire with a cross section of 0.5–1.5 mm².

As a safety switch in accordance with EN 60204, the NC contacts are to be used.



7 Circuit symbols and circuit diagrams



8 Electrical function test

Connect the switching device to your application.


Operate the device to check the switching function.

- The power supply to the drive system must be interrupted when the safety facility is opened.

- Electrical power should only be supplied to the drive system when the safety facility is closed.

In the event of malfunctions, disconnect the switching device from the power supply. Rectify the fault and repeat the functional test.

9 Technical Data

Output circuit			
Rated isolation voltage	SMS xx10, xx20, xx40	U_i	250 V AC
	SMS xx70	U_i	400 V AC
Rated impulse withstand voltage		U_{IMP}	2,5 kV
Conventional thermal current	SMS xx20, xx40	I_{THE}	10 A
	SMS xx10, xx70	I_{THE}	5 A
Utilization category			AC-15, Ue 240 V
	SMS xx20, xx40		le 3 A
	SMS xx10, xx70		le 1,5 A
B10d (switching cycles without load)			$2 \cdot 10^6$ $2 \cdot 10^5$ with increased actuating force 30 N
Pollution degree			3
Direct opening action			acc. to IEC/EN 60947-5-1, Annex K
Rated conditional short-circuit			1000 A acc. to DIN EN 60947-5-1
Short circuit protection	SMS xx40		Fuse 10 A gL/gG
	SMS xx10, xx20, xx70		Fuse 6A gL/gG
Protection degree			II, totally insulated
Mechanical data			
Enclosure			Glass-fibre reinforced thermoplastic (UL94-V0)
Cover			Glass-fibre reinforced thermoplastic (UL94-V0)
Actuator			Separate actuator (see page 8)
Extraction force			10 N or 30 N (SMS 32xx/42xx)
Approach speed			0,2 m/s
Mechanical life			10^6 switching cycles
			10^5 switching cycles (at increased actuating force)
Switching frequency			30 / min.
General data			
Ambient operating/storage temperature (no freezing over/no condensation)			-30 °C to +80 °C
Connection			Screw connections
Tightening torque			See section "Press-out blank"
Conductor cross section (solid/stranded with ferrule)			0,5–1,5 mm ² (20–16 AWG)
Cable entrance	SMS 4xxx		3x M20 x 1,5
	SMS 3xxx		3x M16 x 1,5
Weight			0,13 kg ... 0,15 kg (depending on version)
Protection type acc. to EN 60529 ¹⁾			IP65
Standards			EN 60947-1, EN 60947-5-1
Approvals			TÜV, cCSAus.

¹⁾ The specified type of protection (IP code) of the switches applies only with the cover closed and using a cable gland of at least equivalent quality specification with corresponding cable.

10 Maintenance / Service

The switching device is maintenance-free.

For long and trouble-free operation, regular checks should be carried out to ensure that:

- all components are fitted securely
- the switching function operates reliably
- all sealing elements are in good condition
- there are no signs of wear and tear

The complete switching device should be replaced if any defects are found.

The actuator opening must be protected to prevent the penetration and accumulation of foreign particles (e.g. metal chips, dust, ...).

11 Accessories

Actuator	Order no.
SMS 9001	R1.320.9001.0
SMS 9002	R1.320.9002.0
SMS 9003	R1.320.9003.0
SMS 9004	R1.320.9004.0