

SAS 00 and 03 Series snap-action switches have one NO and one NC contacts. The change of the switching position is realized by the mechanism, which ensures rapid switching and gives the possibility for switching of high currents. The electric circuit interrupts by double break. The snap-action switches are in the procession of a mechanism, which in case of short-circuit breaks forced the welded normally closed contact. The contact system is placed in a small design made of transparent light blue plastic material with high electrical and mechanical characteristics. The contact system in various versions is actuated directly or through lever system.

APPLICATION

Limit control track switches; command controllers and reversers for battery-operated and diesel trucks; electric driving; automatical devices; transport means; household appliances; non inductive and low inductive resistance furnaces; DC magnet and contactor control

TYPE CHARACTERISTIC

SAS xx x x xx

type / contact system

SAS / 1N.O. and (or) 1N.C. ; 1 contact bridge

**protection of terminals/
material of the actuator**

00 IP 00 / metal actuator
03 IP 00 / metal actuator and flat tabs
(6.3 x 0.8 mm) DIN 46247, preferably with insulated cable sleeves

actuating and front mounting

- b push button
 - c push button, two mounting brackets
 - cl push button, two mounting brackets, one of them slotted
 - a roller lever, two mounting brackets
 - al roller lever, two mounting brackets, one of them slotted
 - d roller lever, two mounting brackets, one of them angled 90°
 - e roller lever, no mounting brackets
 - fa two rollers lever, two mounting brackets
 - fe two rollers lever, no mounting brackets
- *other combinations are possible*

actuation force

/with push button/ standard - 3N	-	/with roller lever/ 2N - standard
strengthened - 3,5N	3,5	
stronger - 9N	9	

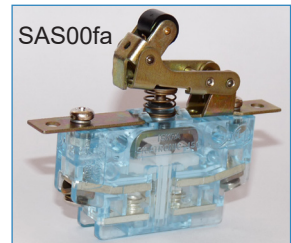
mounting

- without rivet, mounting hole 4,3 mm
r with rivet, mounting hole 3,2 mm



	Article No.
	680013

EXAMPLES



	Article No.	Article No.	ArticleNo.	Article No.
	680010	680030	680040	680100
	680011	680031	680041	
	680012	680032	680042	



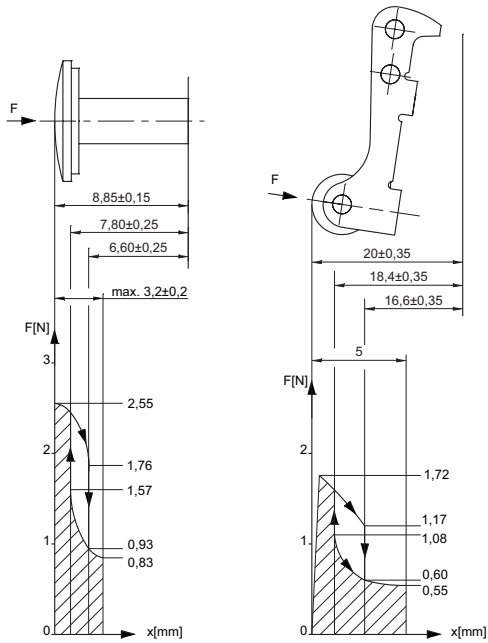
	Article No.	Article No.	Article No.	Article No.
	680020	680025	680050	680055
	680021	680026	680051	680056
	680022	680027	680052	680057

TECHNICAL DATA	Standard	SAS 00 , SAS 03 /b, c/	SAS 00 , SAS 03 /a, d, e/
Contact configuration	EN 60947	1N.O. and (or) 1N.C. ; 1 contact bridge	
Conventional thermal current I_c	EN 60947	16 A	
Rated insulation voltage U_i	EN 60947	400 V	
Pollution degree	EN 60947	3	
Rated impulse withstand voltage U_{imp}	EN 60947	4 kV	
Utilization category	EN 60947	AC - 15, 230 VAC / 1.6A DC - 13, 110 VDC / 1A	
Contact material	--	Silver (Ag)	
N.C. Contact force	EN 60947	0,70 N min.	
Acuation travel	--	2.25 mm	3.40 mm
Actuation force (standard)	EN 60947	3 N min.	2 N min.
Actuation speed	EN 60947	1 mm/s min.	
Mechanical life, cycles	EN 60947	10^7	
Wire connecting type	--	multi-core 0.75 ÷ 2.5 mm ²	
Max.number of wires for one terminal	--	2 pcs.	
Tightening torque of terminal screws	EN 60947	0.9 Nm	
Protection degree	EN 60529	contact system - IP 40 terminals - IP 00	
Casing material	--	transparent light blue polycarbonate	
Sea level	EN 60947	up to 2000 m	
Operating conditions	--	normal fire hazard	
Ambient temperature	EN 60947	- 40°C ÷ + 85°C	
Weight	--	30 ÷ 40 g	

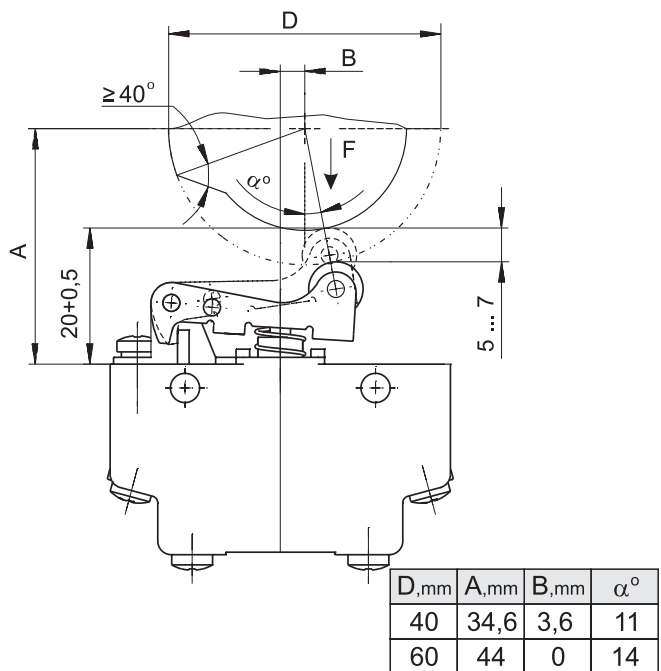
BREAKING CAPACITY at:

Value	Symbol	Measure	DC				AC	
			DC - 13				AC - 1	AC - 15
Rated operating voltage	U_e	V	12	24	40	110	230	
Rated operating current	I_e	A	8	4	2.5	1	10	1,6
Breaking capacity	cycles	pcs.	10^6	10^6	10^6	10^6	10^6	

ACTUATION FORCE
RELEASE FORCE



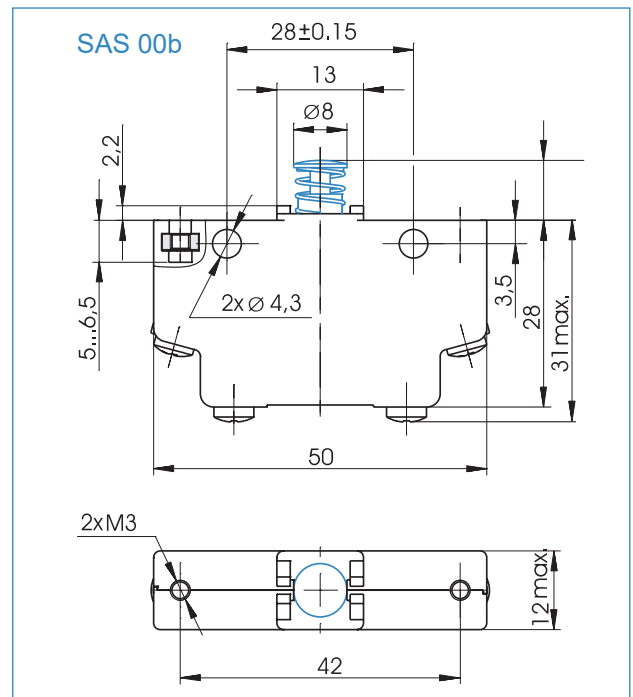
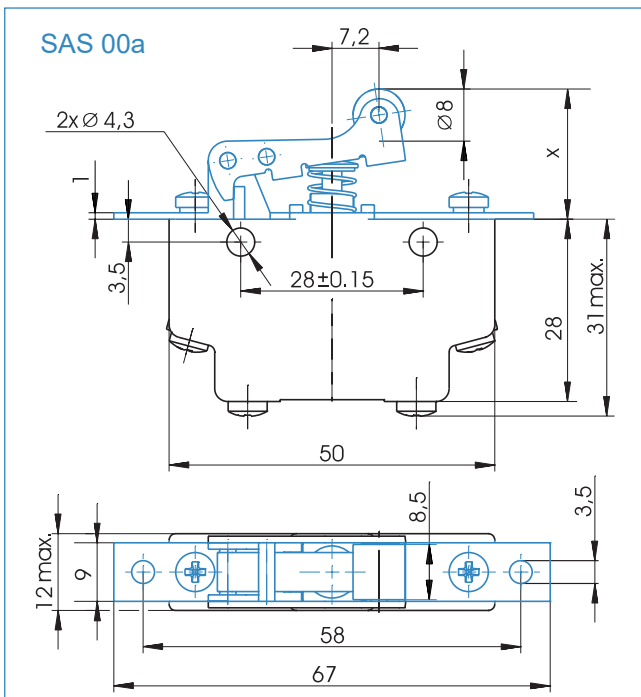
SWITCH WITH ROLLER LEVER
ACTUATED BY CAM DISK

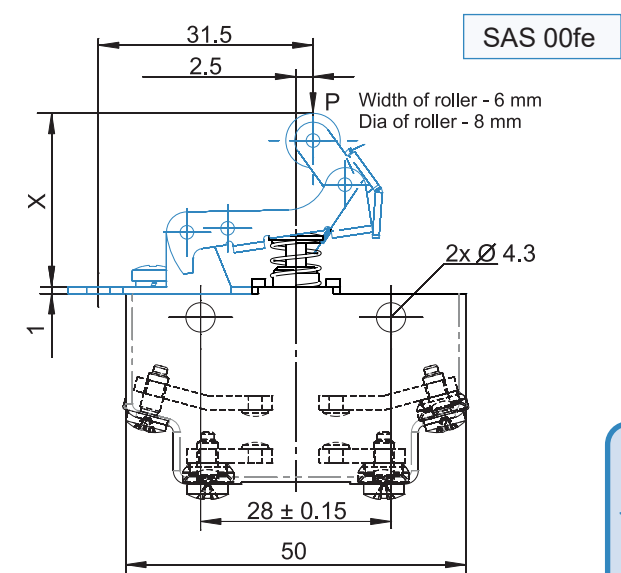
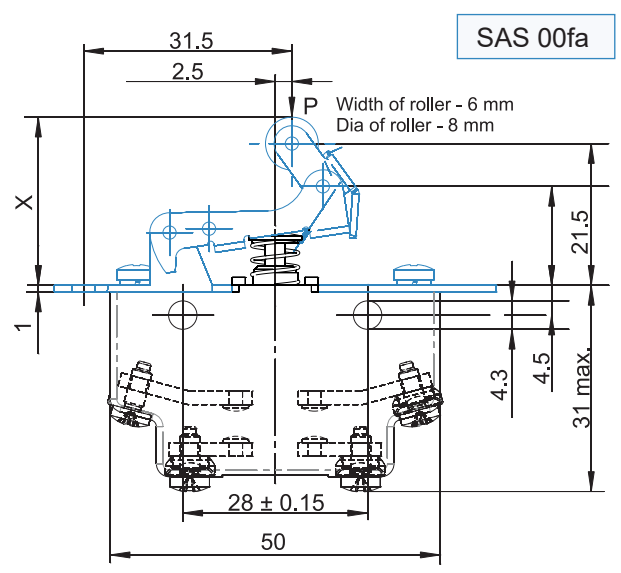
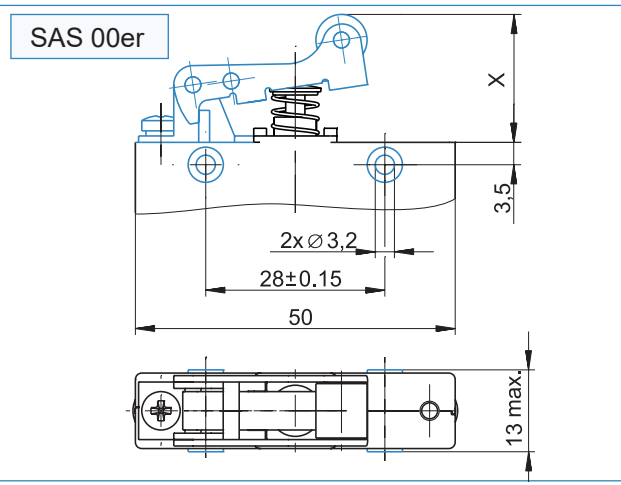
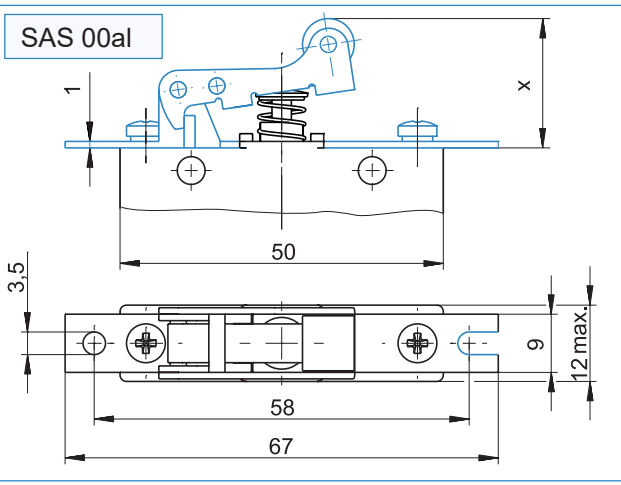
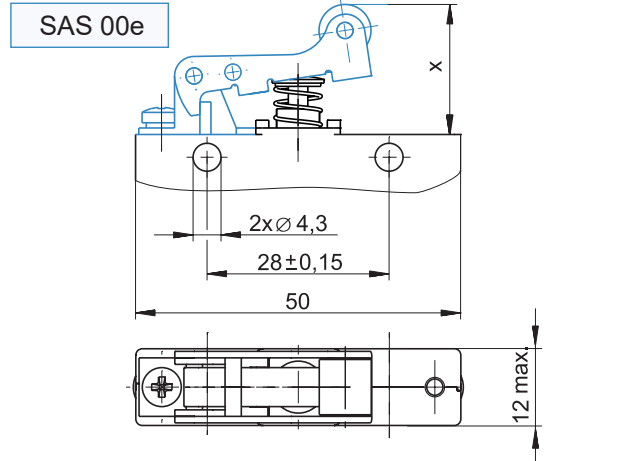
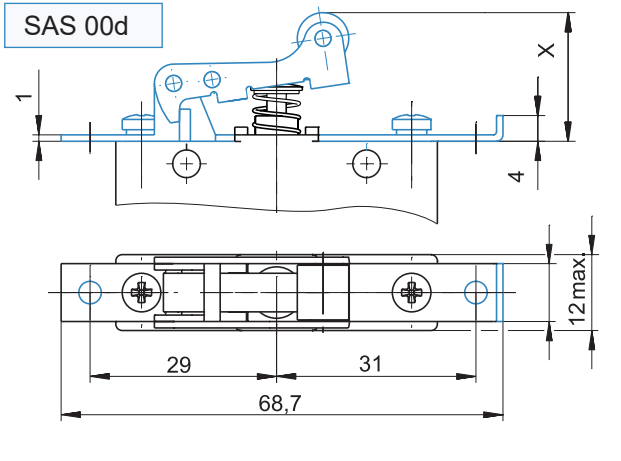
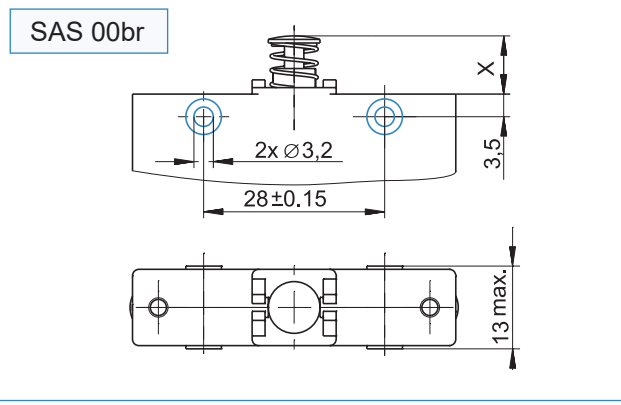
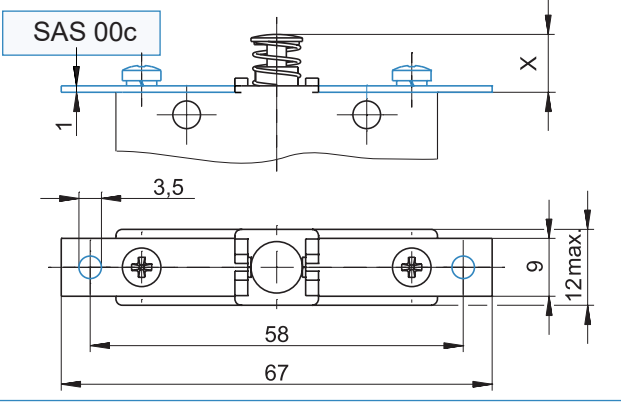


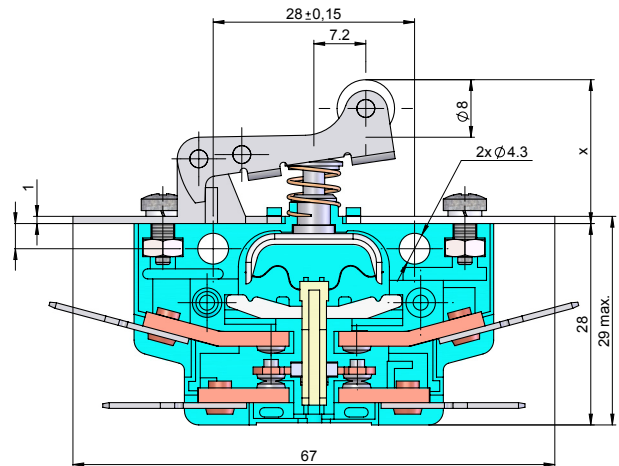
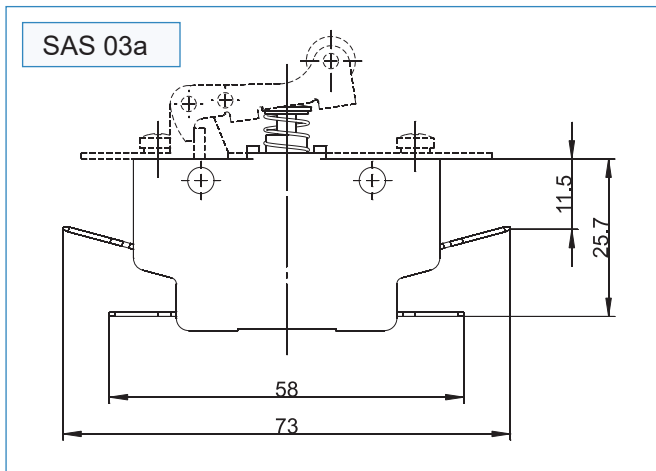
TECHNICAL DATA FOR CONTACT SYSTEM

Actuator position	SAS 00 /b, c/	SAS 00 /a, d, e/	SAS-00 fa
	Dimension "x"	Dimension "x"	Dimension "x"
Free position	8.85 mm ± 0.15 mm	20.00 mm ± 0.35 mm	26.50 mm ± 0.52 mm
Operating position	6.60 mm ± 0.25 mm	16.60 mm ± 0.35 mm	25.50 mm ± 0.35 mm
Release position	7.80 mm ± 0.25 mm	18.40 mm ± 0.35 mm	24.00 mm ± 0.35 mm
Total travel position	5.65 mm ± 0.15 mm	13.20 mm ± 0.15 mm	16.50 mm ± 0.50 mm

OVERALL AND CONNECTING DIMENSIONS







ELECTRICAL CONNECTION

* SCREW-TYPE TERMINALS

- Connected to the snap action switches wires can be single and multiple $0,75 \text{ mm}^2$ to $2,5 \text{ mm}^2$ (AWG 18...14). At mounting of ferrules the maximum wire gauge is $1,5 \text{ mm}^2$ (AWG 16).
- Two conductors max can be clamped per terminal with the same wire gauge.
- Wire insulation must be flush with the clamping unit.
- Tightening torque of terminal screws should be within $0,5 \text{ Nm}$... $0,9 \text{ Nm}$.

* FLAT QUICK-CONNECT TERMINALS (for SAS 03)

- Use flat tabs $6,3 \text{ mm} \times 0,8 \text{ mm}$ (DIN 46247), preferably with insulated cable sleeves.
- If necessary, the terminals are provided with a forming point where the flat tab can be angled by $< 90^\circ$.

MECHANICAL FASTENING

* FRONT MOUNTING

- At SAS 00 b by way of the nut retainers (M3), inserted in the housing of the snap action switch. Tightening torque must be max. $0,9 \text{ Nm}$.
- At switches with roller levers (SAS 00 a, SAS 00 c и SAS 00 d) - by way of the mounting brackets.

* GANGING (lateral mounting) for SAS 00 e and SAS 00 b

- Without rivets - through the two transversal bore holes with 4 mm screws or bolts.
- With rivets - through the two transversal bore holes with 3 mm screws or bolts.
- Between the bolts head and snap action switches place feder washer.
- In order to safeguard clearance and creepage distances it is necessary to use insulating plates when ganging or mounting switches on uninsulated surface.

ATTENTION:

1. At mechanical mounting make sure to have 2 fixing points!
2. The values for maximum tightening torque must not be exceeded.
3. Be sure that after mounting, the wires are free of mechanical tension!
4. When using of screw-retaining varnish, cleaning agents, adhesives etc., they must be compatible with polycarbonate.