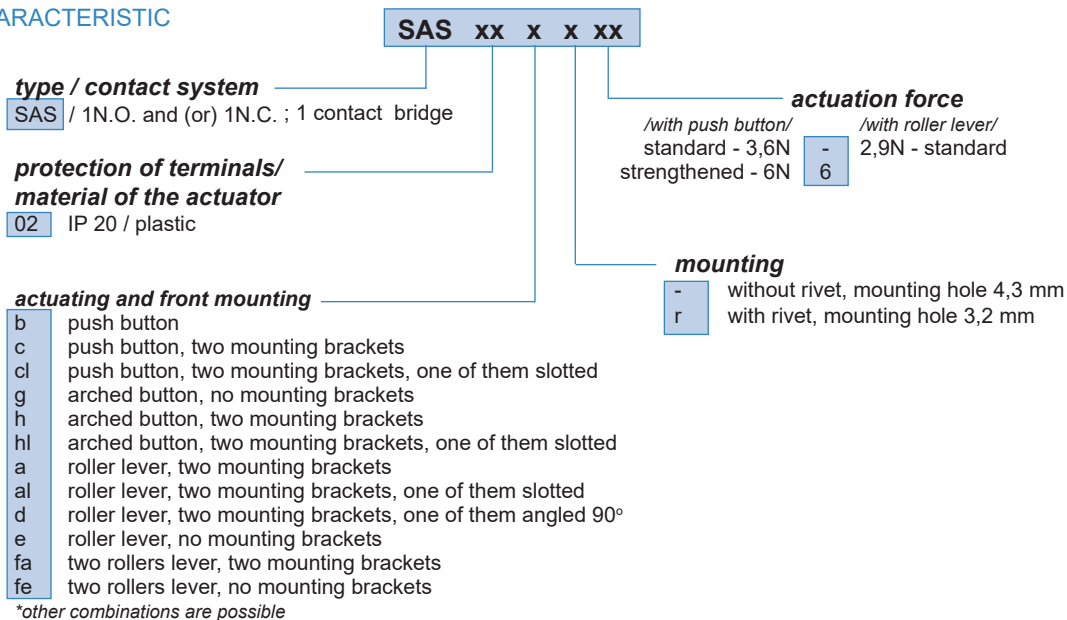


SNAP ACTION SWITCH TYPE SAS-02





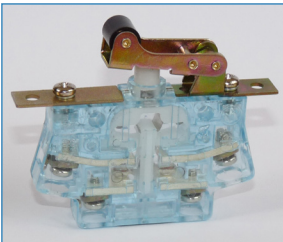



SAS 02 Series snap-action switches have one NO and one NC contacts. The change of the switching position is realized by the mechanism, which ensures rapid switching and gives the possibility for switching of high currents. The electric circuit interrupts by double break. The snap-action switches are in the possession 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.

IP 20 of terminals!

TYPE CHARACTERISTIC



EXAMPLE

	SAS 02g	SAS 02gr	SAS 02b
			
	Hom.No 680200	Hom.No 6802xx	Hom.No 680220
	SAS 02a	SAS 02er	SAS 02fa
			
	Hom.No 680210	Hom.No 680255	Hom.No 6802xx

TECHNICAL DATA	Standard	SAS 02 /b, c, g, h/	SAS 02 with roller lever /a, d, e/	SAS 02 with two roller levers /fa, fe/
Contact configuration	EN 60947	1N.O. and (or) 1N.C. ; 1 contact bridge		
Conventional thermal current I_t	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.		
Actuation travel	--	2.35 mm	3.60 mm	3.50 mm
Actuation force (standard)	EN 60947	3.6 N min.	2.9 N min.	
Max. actuating travel	--	3.2 mm	5.40 mm	9.00 mm
Actuation speed	EN 60947	≥ 1 mm/s		
Positive opening force	EN 60947	35 N	26 N	26 N
Mechanical life, cycles	EN 60947	10^7		
Wire connecting type (single-core or multi-core)	--	AWG 18...14 (0.75 ... 2.5 mm ²)		
Wire connecting type when ferrule is used	--	max. AWG 16 (1.5 mm ² max.)		
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 20		
Casing material	--	transparent light blue polycarbonate		
Sea level	EN 60947	up to 2 000 m		
Operating conditions	--	normal fire hazard		
Ambient temperature	EN 60947	- 40°C ÷ + 85°C		
Weight	--	28 g	39 g	41 g

BREAKING CAPACITY at:

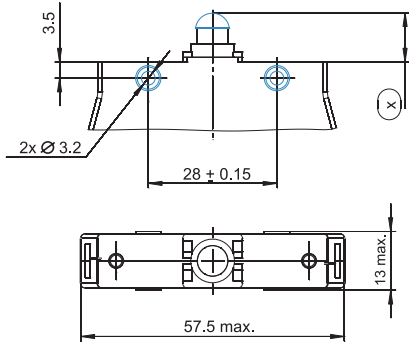
Value	Symbol	Measure	DC				AC	
			DC - 13				AC - 1	AC - 15
Rated operating voltage	U_e	V	12	24	40	110	230	
Rated operating current	I_e	A	8	4	2.5	1	10	1,6
Breaking capacity	cycles	pcs.	10^6	10^6	10^6	10^6	10^6	

TECHNICAL DATA FOR CONTACT SYSTEM

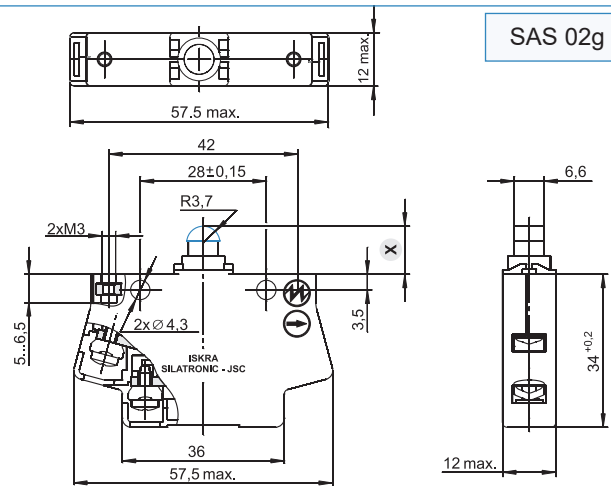
Actuator position	SAS 02 a, d, e	SAS 02 b, c	SAS 02 g, h	SAS 02 fa, fe
	Dimension "x"	Dimension "x"	Dimension "x"	Dimension "x"
Free position	20.00 mm \pm 0.35mm	8.85 mm \pm 0.20 mm	10.45 mm \pm 0.20mm	26.50 mm \pm 0.25 mm
Operating position	16.40 mm \pm 0.35mm	6.50 mm \pm 0.25 mm	8.20 mm \pm 0.35 mm	23.00 mm \pm 0.35 mm
Release position	18.20 mm \pm 0.35mm	7.70 mm \pm 0.25 mm	9.40 mm \pm 0.35 mm	24.50 mm \pm 0.35 mm
Total positive opening travel	14.6	5.65	7.25 mm	17.50 mm
Total travel position	14.6 mm \pm 0.15mm	5.65 mm \pm 0.15 mm	7.25 mm \pm 0.15 mm	17.50 mm \pm 0.15 mm

OVERALL AND CONNECTING DIMENSIONS

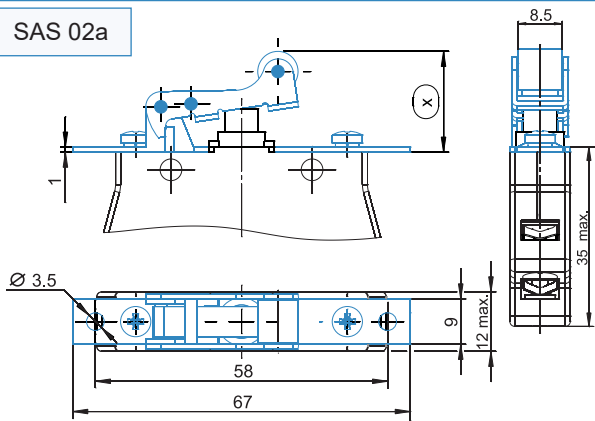
SAS 02gr



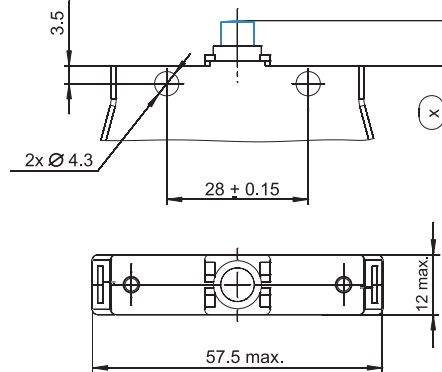
SAS 02g



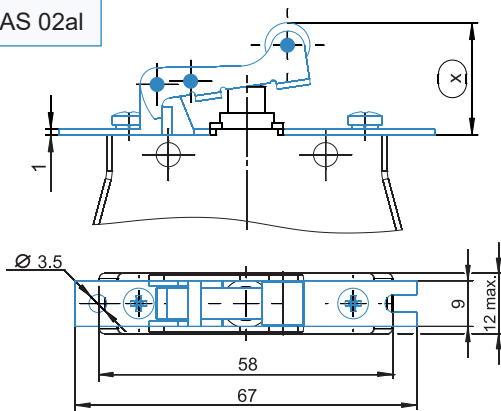
SAS 02a



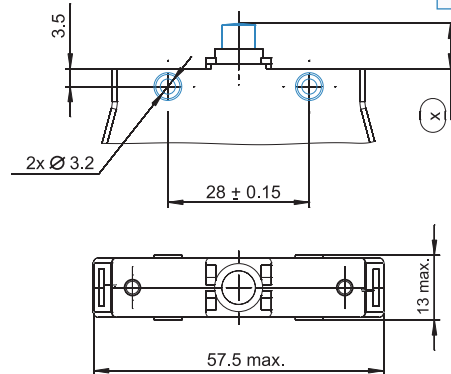
SAS 02b



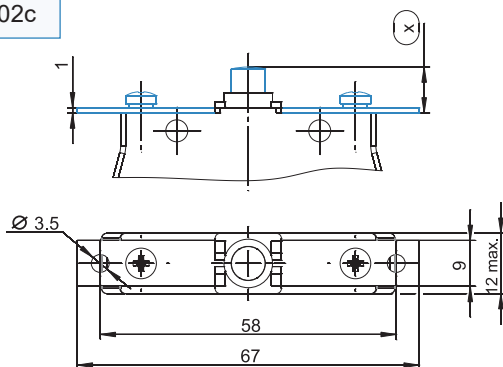
SAS 02al



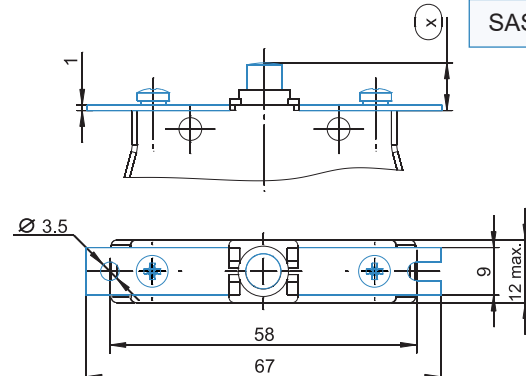
SAS 02br

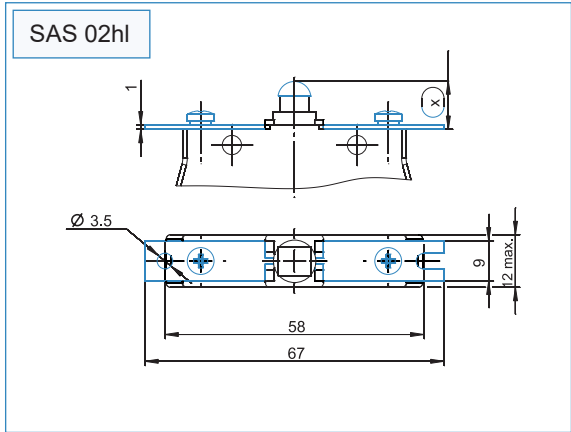
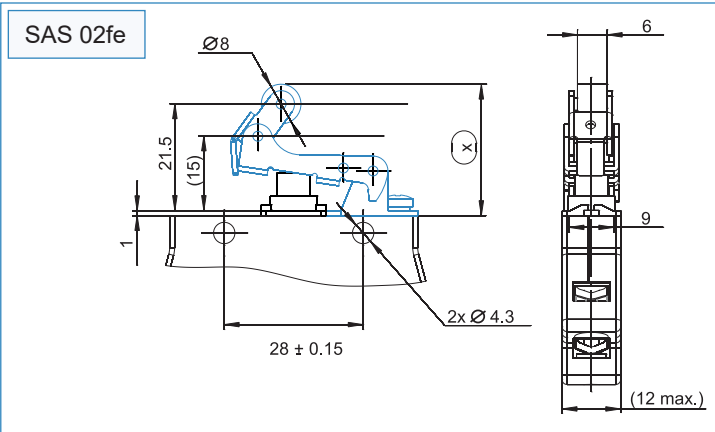
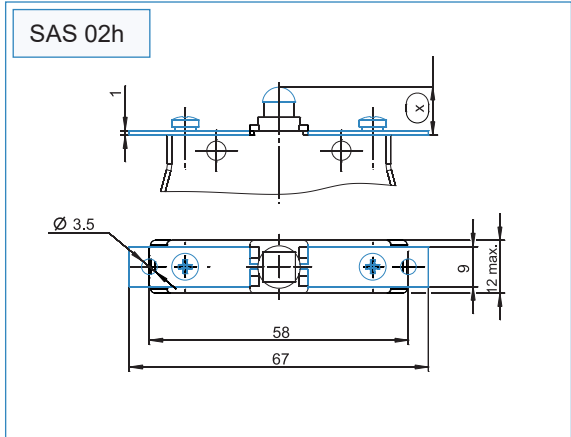
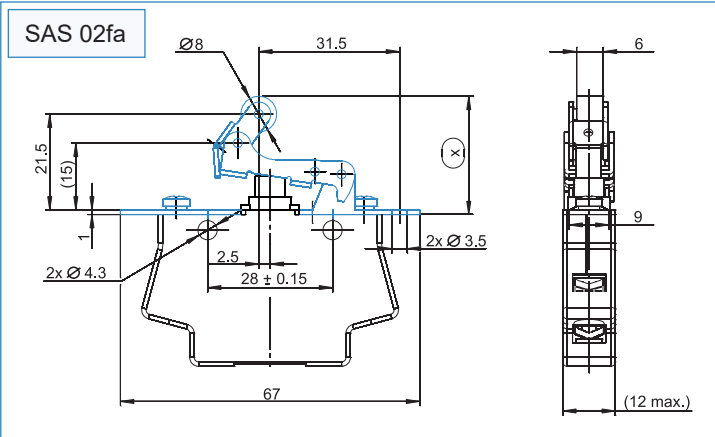
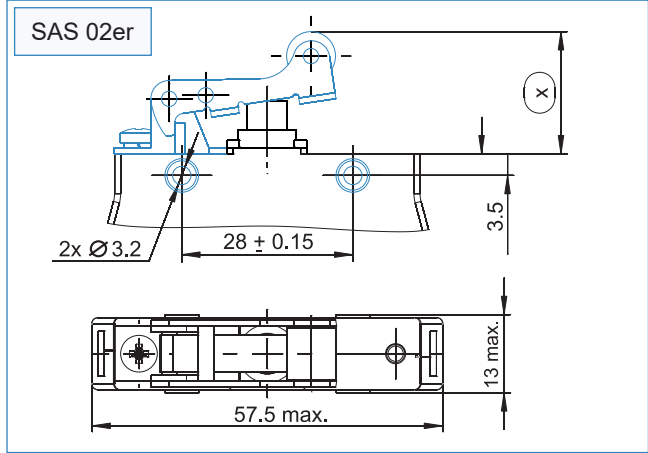
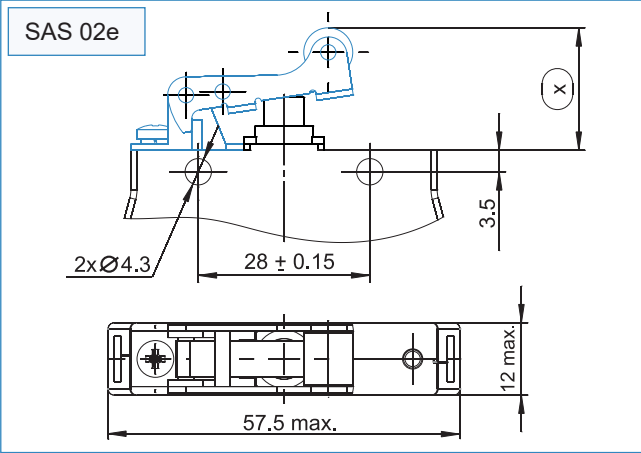
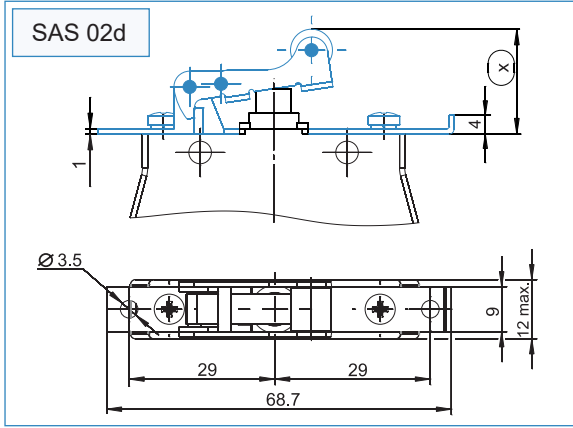


SAS 02c



SAS 02cl





ACTUATION TRAVELS

The snap-action switches (type “b” and “c”) are intended for actuation without roller lever – (axle or sideways travel). In case of axle travel, the actuating mechanism (button) can be pushed also under max. angle of 15° (from all sides).

With roller lever are the types “a” , “ e” and “f “.

The roller lever is required:

- If the actuation direction deviates more than $\pm 15^\circ$ from the axle of the actuating organ, there has to be applied horizontal actuating mechanisms such as cam discs, trigger cams etc.;
- If the max. actuating speed of the horizontal actuating mechanism is $\leq 1,0$ m / sec.

The snap-action switches (types “g” and “h”) with actuating organ “arched button” are designed for actuation without roller lever (axle and sideways travel) .

- In case of axle travel the actuating mechanism can be pushed also under angle 30° longitudinal.
- If the actuation direction deviates more than $\pm 30^\circ$ from the axle of the actuating organ, there has to be applied horizontal actuating mechanisms such as cam discs, trigger cams etc.;

MOUNTING

ELECTRICAL CONNECTION

* SCREW-TYPE TERMINALS

- Connected to the snap action switches wires can be single and multiple 0,75 mm² to 2,5 mm² (AWG 18...14). At mounting of ferrules the maximum wire gauge is 1.5mm² max. 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 Nm ... 0,9 Nm.

MECHANICAL FASTENING

* FRONT MOUNTING

- At SAS 02 b by way of the nut retainers (M3), inserted in the housing of the snap action switch. Tightening torque must be max. 0,9 Nm.
- At switches with roller levers (SAS 02 a, SAS 02 c и SAS 02 d) - by way of the mounting brackets.

* GANGING (lateral mounting) for SAS 02 e and SAS 02 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.