

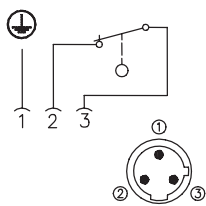
Safety switch

Series Safety Hinge Switch SHS

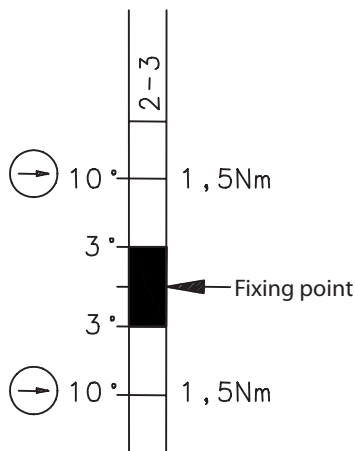
Description **SHS-A1Z-SR-BG**

Article number **6019261018**

Circuit diagram



Operating diagram

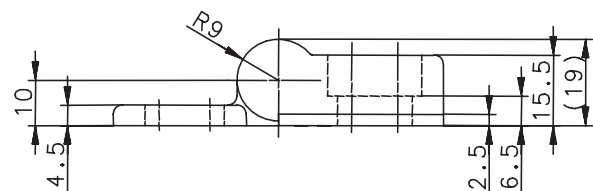
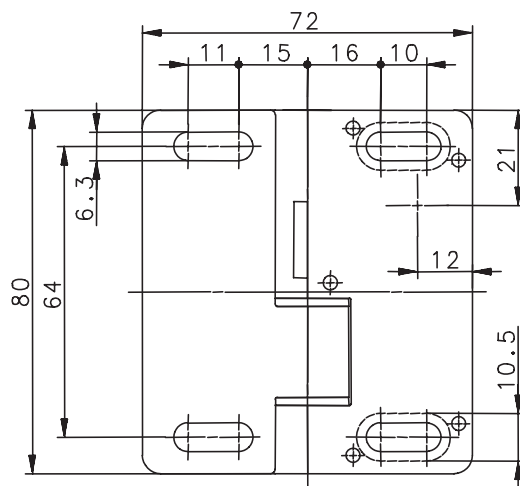


Fixing point in the range 0° ... 225° freely selectable



Tolerances:

switching angle (opening) $+2,0^\circ / -1,5^\circ$,
 direct opening torque 10 %,
 direct opening angle $+0,5^\circ / -3^\circ$
 Switching angle hysteresis
 (closing the N.C. contact $-1,0^\circ$)
 from the hinge's typical switch-off point



Connection

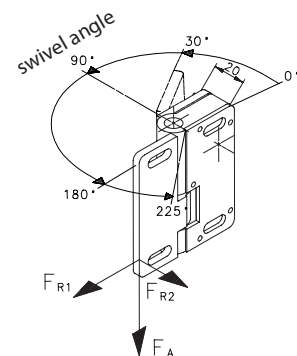
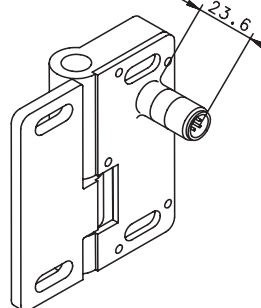


Illustration with fixed shaft and sheared-off set screw.

Electrical Data		
Rated insulation voltage	U_i	250 V
Rated impulse withstand voltage	U_{imp}	2,5 kV
Conv. thermal current	I_{the}	3 A
Rated operational voltage	U_e	230 V AC / 60 V DC
Utilization category		AC-15, 230 V AC / 1,5 A, DC-13, 60 V DC / 0,5 A
Direct opening action	⤵	acc. to IEC/EN 60947-5-1, annex K
Short-circuit protective device		Fuse 4 A gG
Protection class		I

Mechanical data	
Enclosure	GD-Zn
Cover	GD-Zn
Wing	GD-Zn
Ambient air temperature	-25 °C to +70 °C
Contact type	1 NC
Mechanical life	1 x 10 ⁶ operating cycles
Switching frequency	max. 1200 switching operations / hour
Attachment	4 x M6 screws DIN 7984 or DIN 6912
Connection type	Plug M12x1, metal thread
Weight	≈ 0,4 kg
Installation position	operator definable
Protection type	IP 67 in acc. with IEC/EN 60529
Switching angle	+/- 3 ° from fixing point
Direct opening angle	+/- 10 ° from fixing point
Direct opening torque	1,5 Nm
Mechanical load	F_{R1} = max. 1000 N
(see dimensioned drawing for the introduction direction of the forces)	F_{R2} = max. 500 N
	F_A = max. 750 N

ID for safety engineering	
B10d	2 x 10 ⁶ cycles

Standards	
	DIN EN 60947-5-1
	DIN EN ISO 13849-1

EU Conformity	
	acc. to directive 2006/42/EC (Safety-of-Machinery-Directive)

Approvals	
	DGUV
	cCSA _{US} C300
	CCC

Notes

The safety fixture must always be attached by at least two SHS! See max. load.
If the risk assessment of the machine permits a single-channel evaluation, an empty hinge can be used as the support element.
If the SHS is used at an ambient temperature of 70 °C, it is possible that the connecting cable will age more rapidly!
The connecting cable must be protected against mechanical damage.
The cable can be installed in tubes or cable ducts.
The electrical connection for a SHS with DGUV inspection certificate is only permitted with the following cable couplings (Bernstein range; cable length: 5 m):
3251103234 (with straight plug) or 3251103236 (with angled plug)



The fastening nut of the connecting cable coupling must be in a closed area after assembly that can only be opened with a tool (manipulation guard; e.g. hollow profile, machine stand, frame,...).

The manufacturer / supplier of the machine / system is obligated to observe the applicable standards for the size of the safety intervals between the separating safety fixture and the hazard point.
These regulations include: DIN EN ISO 13857, DIN EN ISO 13854, DIN EN ISO 14120, DIN EN ISO 14119, ...
The switch may not be used as a stop.
For a CSA/UL application it is essential to use CSA/UL approved cable for connection.
The suggested protection type (IP code), applies only when at least an equivalent cable coupling is used.