

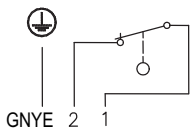
# Safety switch

## Series Safety Hinge Switch SHS

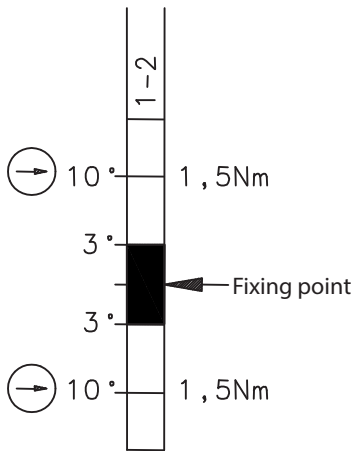
Description **SHS-A1Z-KA 5**

Article number **6019261011**

### Circuit diagram



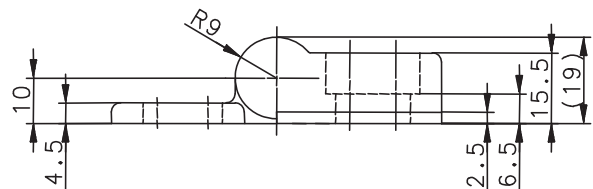
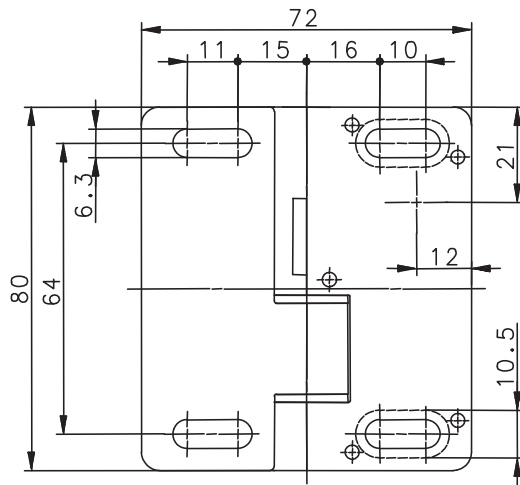
### Operating diagram



Fixing point in the range 0° ... 180° 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

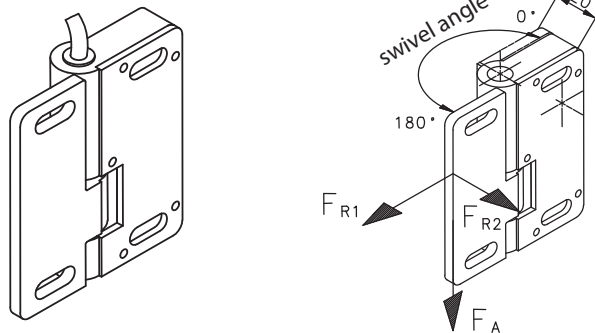


Illustration with fixed shaft and sheared-off set screw.

| 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 (cable securely laid)   |
| Contact type   | 1 NC   |
| Mechanical life  | 1 x 10 <sup>6</sup> operating cycles   |
| Switching frequency  | max. 1200 switching operations / hour  |
| Attachment   | 4 x M6 screws DIN 7984 or DIN 6912   |
| Connection type  | Fixed connecting cable 3 x 0,5 mm <sup>2</sup> (AWG20) x 5 m<br>Minimum bending radius = 25 mm |
| Weight   | ≈ 0,7 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 <sup>6</sup> switching cycles |

| Standards |  |
|-----------|--|
|           | VDE 0660 T100, DIN EN 60947-1, IEC 60947-1     |
|           | VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1 |
|           | DIN EN ISO 13849-1                             |

| EU Conformity |                              |
|---------------|------------------------------|
|               | acc. to directive 2006/42/EC |

| Approvals |                         |
|-----------|-------------------------|
|           | DGUV                    |
|           | cCSA <sub>US</sub> 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 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: EN 294, EN 349, EN 953, EN 1088, ... .  
The switch may not be used as a stop.