Safety switch
Series SGS

Description: SGS-SU1Z W F6 230V

Operating symbol
Termination electromagnet with contact position

Operating diagram
(Return by E-magnet)

Fixed positioning for safety applications
Mounting screw M5 according to DIN EN ISO 4762

Operating symbol:
- On
- Off

Tolerances:
- Operating point ± 0.3 mm;
- Operating force ± 2 N

Breakout for M20x1,5

Termination electromagnet with contact position

Technical modifications and errors excepted.
The technical datasheet corresponds to the technical state as of 2019-09-24 and will not be removed in case of changes.
## Technical Data

### Elektrische Daten

Electrical data  II, totally insulated

**Protection class**

<table>
<thead>
<tr>
<th>Contact elements</th>
<th>$U_I$</th>
<th>250 V AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated insulation voltage</td>
<td>$I_{in}$</td>
<td>10 A</td>
</tr>
<tr>
<td>Conv. thermal current</td>
<td>AC-15, $U_I, I_{in}$</td>
<td>240 V / 3 A</td>
</tr>
<tr>
<td>Utilization category</td>
<td>DC-13, $U_I, I_{in}$</td>
<td>250 V / 0,27 A</td>
</tr>
<tr>
<td>Min. Voltage</td>
<td>24 V</td>
<td></td>
</tr>
<tr>
<td>Min. Current</td>
<td>5 mA</td>
<td></td>
</tr>
</tbody>
</table>

Direct opening action  according to IEC/EN 60947-5-1, Annex K

Short-circuit protective device  Fuse 4 A gG

**Electro magnets**

Temperature class  B (130 °C)

Rated operational voltage  $U_E$  230 V AC

Operational voltage range  $U_B$  -15 % $\leq U_I \leq +10 %$

Rated operational current  $I_E$  0,23 A -15 %

On-Time  $ED$  3 %

Min. On-Time  $T_i$  0,2 s

Max. On-Time  $T_e$  10 s

Min. Off-Time  $T_p$  180 s

### Mechanical data

Enclosure  Thermoplastic GV self-extinguishing

Cover  Thermoplastic GV self-extinguishing

Actuating  Plunger (thermoplastic)

Velocity for actuating  $V_{max} 0,5 m/s$

Ambient air temperature  -25 °C ... +50 °C

Contact type  1 NC, 1 NO (Zb)

Switching principle  Magnetic snap action, bistable

Mechanical life  $5 \times 10^4$ operating cycles

Assembly  $2 \times M4 / 2 \times M5$ for safety applications

Connection - contact elements  4 screw terminals (M3,5)

Conductor cross-sections  Solid: 0,5 ... 1,5 mm²

Litz wire with ferrules: 0,5 ... 1,5 mm²

Connection - Electro magnets  2x butt connector similar to DIN 46341 (crushing zone 0,5 – 1,5 mm²)

Cable entrance  3x M20x1,5 breakout, left, right and upside

Installation position  Operator definable

Contact opening  2 x >2 mm

Protection type  IP65 acc. to IEC/EN 60529

### ID for safety engineering

B10d  1 x $10^5$ cycles

### Actuation

Actuation only in plunger direction
## Technical Data

### Standards

<table>
<thead>
<tr>
<th>Standard</th>
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<tbody>
<tr>
<td>VDE 0660 T100, DIN EN 60947-1, IEC 60947-1</td>
</tr>
<tr>
<td>VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1</td>
</tr>
<tr>
<td>DIN EN ISO 13849-1</td>
</tr>
<tr>
<td>DIN EN 81-1; 81-2; 81-20</td>
</tr>
</tbody>
</table>

### EU Conformity

acc. to directive 2014/35/EU (Low-Voltage-Directive)

### Approvals

<table>
<thead>
<tr>
<th>Approval</th>
</tr>
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<tbody>
<tr>
<td>TÜV SÜD</td>
</tr>
<tr>
<td>cCSAeS A300 (same polarity)</td>
</tr>
<tr>
<td>CCC</td>
</tr>
</tbody>
</table>

### Notes

1x cable gland M20x1,5 provided.
The degree of protection specified (IP code) applies only to a properly closed cover and the use of an equivalent cable gland with adequate cable.
The switch may not be used as a mechanical stop.