



## Ex position switch Ex ES 97 TKK-11 -60°C Material number: 1451424

### Features/Options:

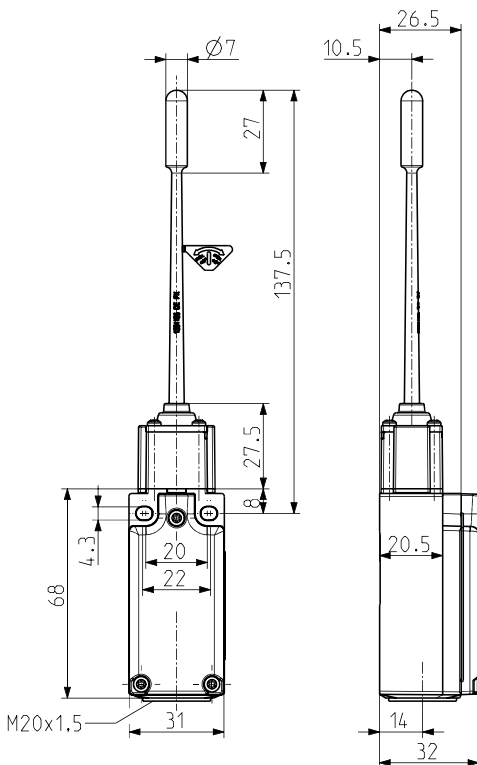
- Ex zone 1 and 21
- Thermoplastic enclosure
- Cold-resistant down to -60 °C, return of TKK spring rod actuator is restricted at temperatures < -20 °C
- High degree of protection IP 66 / IP 67 / IP 69
- Design to EN 50047

- Wiring compartment
- Double insulated
- Actuator: Plastic spring rod TKK (insensitive to soiling)
- Attention: Please state required international approvals with your order!

### Notes

- 1 Ex"e" cable gland M20x1.5 included in delivery

### Dimensions



### Technical data

|                      |  |
|----------------------|--|
| Applied standards    | EN 60947-5-1, EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31  |
| Enclosure            | thermoplastic, glass-fibre reinforced, impact resistant, self-extinguishing UL 94 V-0  |
| Sealing              | silicone   |
| Cover                | thermoset, glass-fibre reinforced, impact resistant, self-extinguishing UL 94 V-0  |
| Tightening torque    | cover screws: 0.4 ... 0.45 Nm<br>connecting thread of cable gland: max. 2 Nm<br>cap nut of cable gland: max. 5 Nm  |
| Degree of protection | IP 66 to EN 60079-0 + IEC/EN 60529 (... -60 °C)<br>IP 67 to EN 60079-0 + IEC/EN 60529 (... -20 °C)<br>IP 67 / IP 69 to IEC/EN 60529<br>IP 69K to ISO 20653                         |
| Switch insert        | 1 x 8080/1-1   |
| Contact material     | Silver, nickel-plated  |
| Switching system     | slow action  |
| Switching elements   | 1 NC/1 NO contact, type Zb   |
| Connection           | screw connection terminals   |
| Cable cross-section  | min. 0,75 mm <sup>2</sup> / AWG 18, max. 1,5 mm <sup>2</sup> / AWG 16, incl. conductor ferrules  |
| Cable entry          | M20 x 1,5; screwing depth max. 9 mm; use only Ex approved and certified cable glands with min. degree of protection IP 66 and suitable for the specified ambient temperature range |

Errors and omissions excepted.



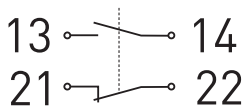
Ex position switch  
 Ex ES 97 TKK-11 -60°C  
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## Technical data

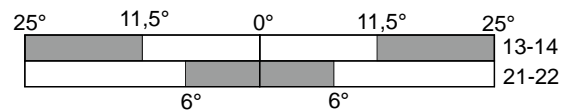
|                               |  |
|-------------------------------|--|
| Utilisation category          | AC-15  |
| Rated operating current $I_e$ | max. 2 A or 4 A <input type="checkbox"/>   |
| Rated operating voltage $U_e$ | max. 500 VAC, max. 250 VAC for unequal potential   |
| Degree of pollution           | 3  |
| Mechanical life               | > 1 million operations   |
| Impact energy                 | max. 7 J   |
| Temperature class             | T6   |
| Ambient temperature           | -60 °C ... +55 °C max. 4 A, +60 °C max. 2 A  |
| Short-circuit protection      | 2 A / 4 A gG/gN fuse   |
| Ex marking                    | Ⓜ II 2G Ex db eb IIC T6 Gb,<br>Ⓜ II 2D Ex tb IIIC T80 °C Db<br>IECEX Ex db eb IIC T6 Gb,<br>Ex tb IIIC T80 °C Db |
| Approvals                     | BVS 16 ATEX E 052<br>IECEX BVS 16.0052   |



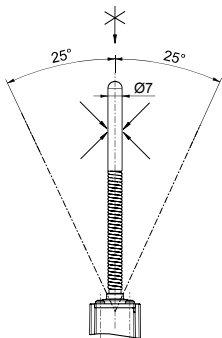
## Contact diagram



## Switching diagram



## Switching angle



Errors and omissions excepted.