



## Ex position switch Ex ES 97 TK-11 -60°C Material no.: 1415038

### Product features

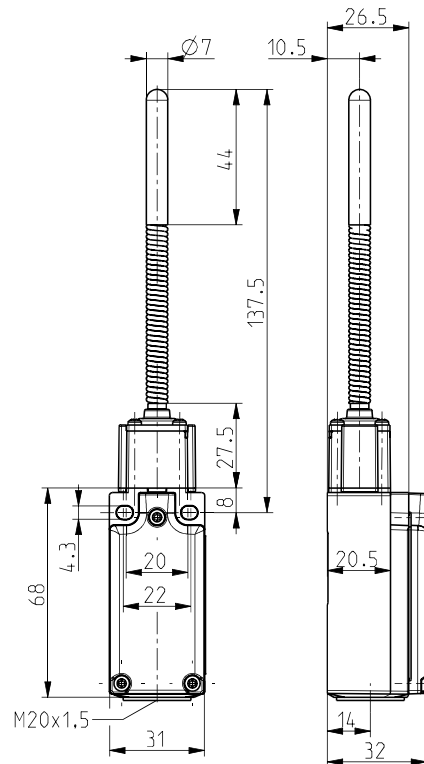


- Ex zone 1 and 21
- Thermoplastic enclosure
- Cold-resistant down to -60 °C
- High degree of protection IP66 / IP67 / IP69
- Design to EN 50047
- Wiring compartment
- Double insulated
- Actuator: Spring rod with plastic tip TK

### Notes

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

### Dimensions



### Technical data

#### Applied standards

EN 60947-5-1, EN IEC 60079-0, EN 60079-1, EN IEC 60079-7, EN 60079-31

#### Enclosure

thermoplastic, glass-fibre reinforced, shockproof, self-extinguishing UL 94 V-0

#### Cover

thermoset, glass-fibre reinforced, shockproof, self-extinguishing UL 94 V-0

#### Sealing

silicone

#### Tightening torque

cover screws: 0.4 ... 0.45 Nm

#### Degree of protection

IP66 to EN 60079-0 + IEC/EN 60529 (... -60 °C)  
IP67 to EN 60079-0 + IEC/EN 60529 (... -20 °C)  
IP67 / IP69 to IEC/EN 60529  
IP69K to ISO 20653

#### 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 IP66 and suitable for the specified ambient temperature range

#### Clamping range

7 ... 12 mm

#### Utilisation category

AC-15

#### Rated operating current I<sub>e</sub>

max. 2 A or 4 A

Errors and omissions excepted.



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### Technical data (contd.)

**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

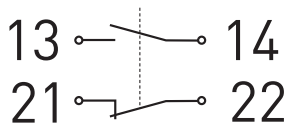
**Short-circuit protection**  
2 A / 4 A gG/gN fuse

**Ex marking**  
 Ⓜ II 2G Ex db eb IIC T6 Gb,  
 Ⓜ II 2D Ex tb IIIC T80 °C Db  
 IECEx Ex db eb IIC T6 Gb,  
 Ex tb IIIC T80 °C Db

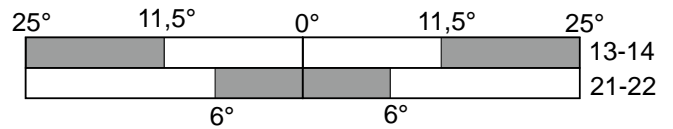
**Approvals**  
 BVS 16 ATEX E 052  
 IECEx BVS 16.0052

**Weight**  
123 g

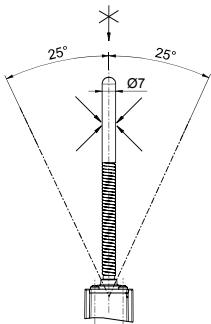
### Contact diagram



### Switching diagram



### Switching angle



Errors and omissions excepted.