

Datasheet - TK4 236-11z



Position switch / 236 thermoplastic enclosure - DIN EN 50047 with Actuator / 236 Angle roller lever K4



- thermoplastic enclosure
- Good resistance to oil and petroleum spirit
- Wide range of alternative actuators
- 30 mm x 58,5 mm x 30 mm
- 1 Cable entry M 20 x 1.5
- Double-insulated
- Mounting details to EN 50047
- Actuator heads can be repositioned by 4 x 90°

(Minor differences between the printed image and the original product may exist!)

Ordering details

Product type description	TK4 236-11Z
Article number	1168167
EAN code	4030661221137

Approval


Approval	 USA/CAN  CCC
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Classification

Standards	EN ISO 13849-1
B _{10d} Opener (NC)	20 million operations
Mission time notice	20 Years
	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{zyklus}}$

Global Properties

Product name	T 236 Winkelhebel K4
Standards	EN 60947-5-1 BG-GS-ET-15

Compliance with the Directives (Y/N) 	Yes
Suitable for safety functions (Y/N)	Yes
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Material of the contacts	Silver
Housing coating	None
Housing construction form	Norm construction design
Weight	65 g


Mechanical data

Design of actuating element	Angle roller lever
Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	1.5 mm ²
- Max. Cable section	2.5 mm ²
Mechanical life	20.000.000 operations
Switching frequency	max. 5000/h
Actuating force	min. 6 N
Bounce duration	in accordance with actuating speed
Switchover time	in accordance with actuating speed
Positive break force	16 N
Actuating speed with actuating angle 30° to switch axis	
- Min. Actuating speed	336 mm/min
- Max. Actuating speed	1 m/s
notice	All indications about the cable section are including the conductor ferrules.

Ambient conditions

Ambient temperature	
- Min. environmental temperature	- 30°C
- Max. environmental temperature	+ 80°C
Protection class	IP67

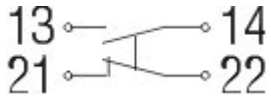
Electrical data

Design of control element	Normally open contact (NO), Opener (NC)
Switching principle	Creep circuit element
- positive break NC contact 	
Number of auxiliary contacts	1 piece
Number of safety contacts	1 piece
Rated impulse withstand voltage U _{imp}	6 kV
Rated insulation voltage U _i	500 V
Thermal test current I _{the}	10 A
Utilisation category	AC-15: 230 V / 4 A, DC-13: 24 V / 1 A
Max. fuse rating	6 A gG D-fuse

Dimensions

Dimensions of the sensor	
- Width of sensor	32 mm
- Height of sensor	107 mm
- Length of sensor	30 mm

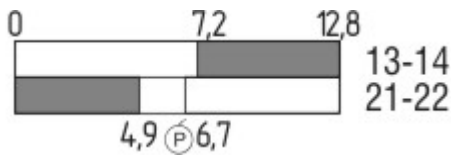
Diagram



Note Diagram

- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

Switch travel diagram



Notes Switch travel diagram

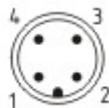
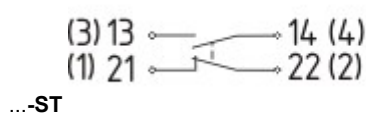
- Contact closed
- Contact open
- Setting range
- Break point
- Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.

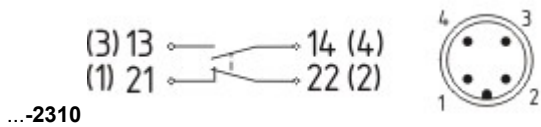
Order example: TK4 236-11z-**1637**

...-1637	0,3 µm gold-plated contacts
...- ID	IDC method of termination
...-NPT	Cable entry NPT 1/2"
...-1297	Enclosure with transverse slotted holes



M12 connector with A-coding
 Rated impulse withstand voltage U_{imp} : 0,8 kV
 Rated insulation voltage U_i : 50 V
 Operating current I_e : AC-15: 50 V / 4 A
 Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.

M12 connector with B-coding
 Rated impulse withstand voltage U_{imp} : 0,8 kV
 Rated insulation voltage U_i : 50 V
 Operating current I_e : AC-15: 50 V / 4 A



Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.

Ordering code

(1)(2) 2(3)6-(4)Z(5)-(6)-(7)-(8)-(9)

(1)

Z Snap action
T Slow action

(2)

S Plunger S
R Roller plunger R
4S Plunger 4S
4R Roller plunger 4R
1R Offset roller lever 1R
K Offset roller lever K
3K Angle roller lever 3K
4K Angle roller lever 4K
K4 Angle roller lever K4
1H Roller lever 1H
7H Roller lever 7H
10H Rod lever 10H
12H Roller lever 12H
14H Roller lever 14H

(3)

3 slim design
5 large design

(4)

02 2 Opener (NC)
11 1 Normally open contact (NO) / 1 Opener (NC)
20 2 Normally open contact (NO), (*Switch with 2 NO contacts are not for security tasks*)

(5)

H Slow action with staggered contacts
UE Slow action with overlapping contacts

(6)

without Cable entry M20
ID IDC method of termination
NPT cable entry NPT 1/2"
ST M12 connector with A-coding
2310 M12 connector with B-coding

(7)

1297 Enclosure with transverse slotted holes

(8)

2138 Roller lever 7H for Position switches with safety function

(9)

1637 gold-plated contacts

Documents

Operating instructions and Declaration of conformity (pt) 395 kB, 15.04.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/PT/mrl_ZT235_236_pt.pdf

Operating instructions and Declaration of conformity (jp) 1 MB, 17.11.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/JP/mrl_ZT235_236_jp.pdf

Operating instructions and Declaration of conformity (nl) 383 kB, 27.11.2009
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/NL/mrl_ZT235_236_nl.pdf

Operating instructions and Declaration of conformity (de) 644 kB, 06.04.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/DE/mrl_ZT235_236_de.pdf

Operating instructions and Declaration of conformity (en) 535 kB, 01.03.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/EN/mrl_ZT235_236_en.pdf

Operating instructions and Declaration of conformity (es) 392 kB, 15.04.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/ES/mrl_ZT235_236_es.pdf

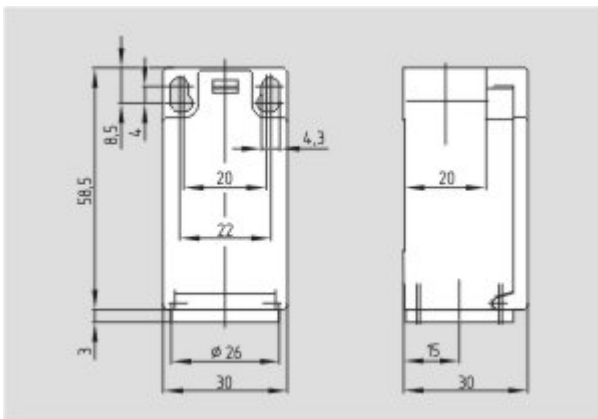
Operating instructions and Declaration of conformity (fr) 400 kB, 15.04.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/FR/mrl_ZT235_236_fr.pdf

Operating instructions and Declaration of conformity (it) 377 kB, 15.04.2010
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/bedien/zt235/IT/mrl_ZT235_236_it.pdf

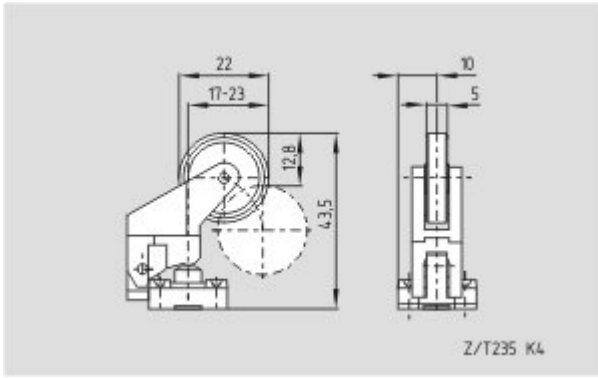
CCC certification (cn) 605 kB, 12.12.2006
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p03.pdf

CCC certification (en) 584 kB, 12.12.2006
http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p02.pdf

Images



Dimensional drawing (basic component)



Dimensional drawing (actuator)

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The data and values have been checked thoroughly. Technical modifications and errors excepted.
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