Datasheet - TV1H 236-11z

Position switch / 236 thermoplastic enclosure - DIN EN 50047
with Actuator / 236 Roller lever 1H



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

- thermoplastic enclosure
- Good resistance to oil and petroleum spirit
- Wide range of alternative actuators
- 30 mm x 58,5 mm x 30 mm
- Lever angle adjustable in 10° steps
- 1 Cable entry M 20 x 1.5
- Double-insulated ⧈
- Mounting details to EN 50047
- Actuator heads can be repositioned by 4 x 90°

Ordering details

Product type description	TV1H 236-11Z
Article number	1160988
EAN code	4030661191829

Approval

Approval	cULus USA/CAN CCC

Classification

Standards	EN ISO 13849-1

B_{10d} Normally-closed contact (NC)	20.000.000
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600\ s/h}{t_{zyklus}}$

Global Properties

Product name	T 236 Rollenschwenkhebel 1 H
Standards	EN 60947-5-1 BG-GS-ET-15
Compliance with the Directives (Y/N) CE	Yes
Suitable for safety functions (Y/N)	Yes
Actuator type	A to EN 50047
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Lever material	Plastic
- Roller material	Plastic
- Material of the contacts	Silver
Housing coating	None
Housing construction form	Norm construction design
Weight	70 g

Mechanical data

Design of actuating element	Roller lever
Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	1.5 mm²
- Max. Cable section	2.5 mm²
Mechanical life	20.000.000 operations
Switching frequency	max. 5000/h
actuating torque	min. 15 Ncm
Bounce duration	in accordance with actuating speed
Switchover time	in accordance with actuating speed
Positive break torque	18.5 Ncm
Actuating speed with actuating angle 30° to switch axis	
- Min. Actuating speed	492 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

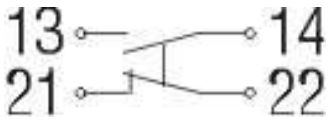
Electrical data

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	30 mm
- Height of sensor	109 mm
- Length of sensor	42.5 mm

Diagram



Note Diagram

⊖ positive break NC contact

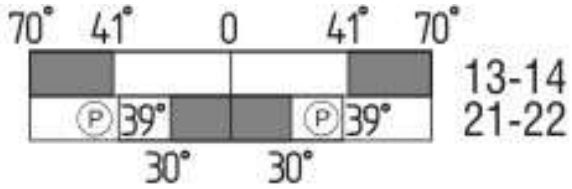
⇑ active

⇑ no active

Normally-open contact

Normally-closed contact

Switch travel diagram



Notes Switch travel diagram

Contact closed

Contact open

Setting range

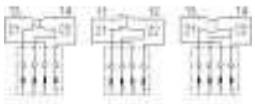
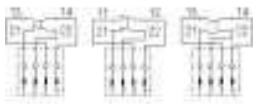
Break point

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: TV1H 236-11z**-Z**

...**-Z**	Actuator head gasket
...**-1637**	0,3 µm gold-plated contacts
...**- ID**	IDC method of termination
...**-NPT**	Cable entry NPT 1/2“
...**-ST** 	M12 connector with A-coding
...**- 2310** 	M12 connector with B-coding
...**-1297**	Enclosure with transverse slotted holes

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://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/PT/mrl_ZT235_236_pt.pdf

Operating instructions and Declaration of conformity (jp) 564 kB, 15.04.2010
http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/JP/mrl_ZT235_236_jp.pdf

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

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

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

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

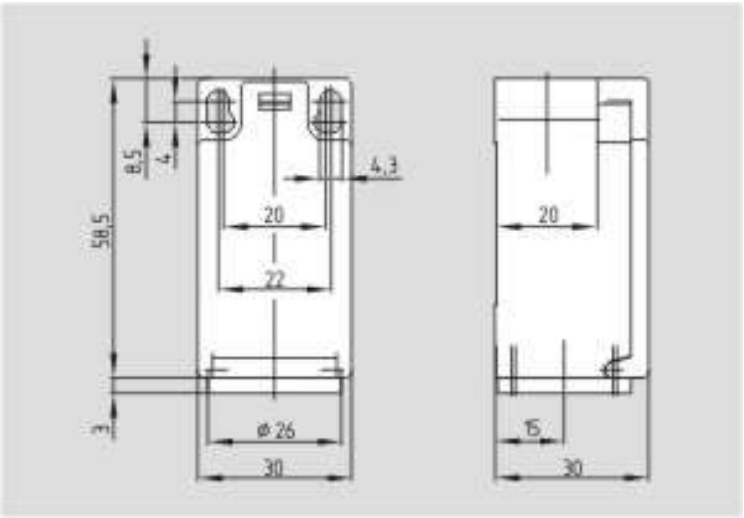
Operating instructions and Declaration of conformity (fr) 400 kB, 15.04.2010
http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/FR/mrl_ZT235_236_fr.pdf

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

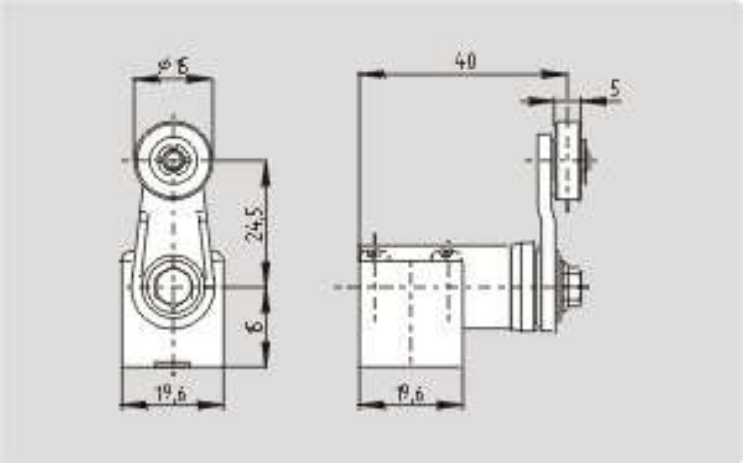
CCC certification (en) 584 kB, 12.12.2006
http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p02.pdf

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

Images



Dimensional drawing (basic component)



Dimensional drawing (actuator)

K.A. Schmersal GmbH, Möddinghofe 30, D-42279 Wuppertal
The data and values have been checked throroughly. Technical modifications and errors excepted.
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