

## Datasheet - ZV1H 236-02z



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



- thermoplastic enclosure
- Good resistance to oil and petroleum spirit
- Wide range of alternative actuators
- 30 mm x 58,5 mm x 30 mm
- Snap action with constant contact pressure up to switching point
- 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°

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

### Ordering details

Product type description	ZV1H 236-02Z
Article number	1154488
EAN code	4030661172477

### Approval


Approval	 USA/CAN  CCC
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### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> Normally-closed contact (NC)	20.000.000
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	Z 236 Rollenschwenkhebel 1H
Standards	EN 60947-5-1 BG-GS-ET-15

Compliance with the Directives (Y/N) 	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	72 g

## Mechanical data

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Design of actuating element	Roller lever
Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	1.5 mm <sup>2</sup>
- Max. Cable section	2.5 mm <sup>2</sup>
Mechanical life	20.000.000 operations
Switching frequency	max. 5000/h
actuating torque	min. 15 Ncm
Bounce duration	< 3 ms
Switchover time	< 5.5 ms
Positive break torque	18.5 Ncm
Actuating speed with actuating angle 30° to switch axis	
- Min. Actuating speed	92 mm/min
- Max. Actuating speed	1 m/s
notice	All indications about the cable section are including the conductor ferrules.


## Ambient conditions

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

## Electrical data

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Design of control element	Opener (NC)
Switching principle	Snap switch element
- positive break NC contact 	
Number of auxiliary contacts	0 piece
Number of safety contacts	2 piece
Rated impulse withstand voltage U <sub>imp</sub>	6 kV
Rated insulation voltage U <sub>i</sub>	500 V
Thermal test current I <sub>the</sub>	10 A
Utilisation category	AC-15: 230 V / 4 A, DC-13: 24 V / 1 A
Max. fuse rating	6 A gG D-fuse

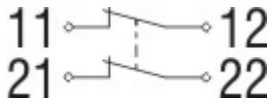
## Dimensions

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Dimensions of the sensor

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

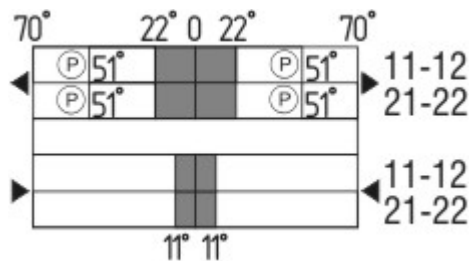
## Diagram



Note Diagram

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

## Switch travel diagram



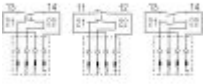
Notes Switch travel diagram

- 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: ZV1H 236-02z-**Z**

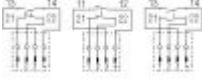
...- <b>Z</b>	Actuator head gasket
...- <b>1637</b>	0,3 µm gold-plated contacts
...- <b>ID</b>	IDC method of termination
...- <b>NPT</b>	Cable entry NPT 1/2"



...ST

M12 connector with A-coding

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...- 2310

M12 connector with B-coding

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...-1297

Enclosure with transverse slotted holes

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## Ordering code

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(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

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**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](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/DE/mrl_ZT235_236_de.pdf)

**Operating instructions and Declaration of conformity** (pt) 451 kB, 01.03.2010  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/bedien/PT/mrl\\_ZT235\\_236\\_pt.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/PT/mrl_ZT235_236_pt.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](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/NL/mrl_ZT235_236_nl.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](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/EN/mrl_ZT235_236_en.pdf)

**Operating instructions and Declaration of conformity** (es) 391 kB, 27.11.2009  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/bedien/ES/mrl\\_ZT235\\_236\\_es.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/ES/mrl_ZT235_236_es.pdf)

**Operating instructions and Declaration of conformity** (fr) 399 kB, 27.11.2009  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/bedien/FR/mrl\\_ZT235\\_236\\_fr.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/FR/mrl_ZT235_236_fr.pdf)

**Operating instructions and Declaration of conformity** (it) 375 kB, 27.11.2009  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/bedien/IT/mrl\\_ZT235\\_236\\_it.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/IT/mrl_ZT235_236_it.pdf)

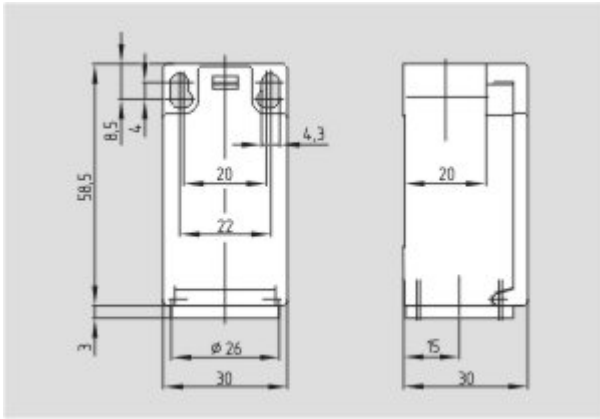
**Operating instructions and Declaration of conformity** (jp) 562 kB, 27.11.2009  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/bedien/JP/mrl\\_ZT235\\_236\\_jp.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/bedien/JP/mrl_ZT235_236_jp.pdf)

**CCC certification** (en) 584 kB, 12.12.2006  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/zertifikat/q\\_347p02.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p02.pdf)

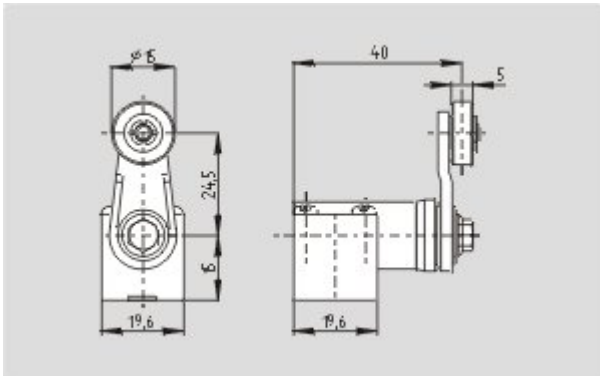
**CCC certification** (cn) 605 kB, 12.12.2006  
[http://www.schmersal.net/Bilddata/Si\\_f1/Pdf/Zt235/zertifikat/q\\_347p03.pdf](http://www.schmersal.net/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p03.pdf)

## Images

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Dimensional drawing (basic component)



Dimensional drawing (actuator)