

## Datasheet - ZV7H 236-11z



Position switch / 236 thermoplastic enclosure - DIN EN 50047 with Actuator / 236 Roller lever 7H



- 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
- 1 Cable entry M 20 x 1.5
- Double-insulated
- Mounting details to EN 50047
- **only for positioning tasks**
- Lever angle adjustable in 10° steps
- 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 | ZV7H 236-11Z  |
| Article number           | 1156069       |
| EAN code                 | 4030661177199 |

### Approval


|          |  |
|----------|--|
| Approval |  USA/CAN<br> CCC |
|----------|--|

### 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 7H |
| Standards    | EN 60947-5-1 BG-GS-ET-15    |

|   |   |
|---|---|
| Compliance with the Directives (Y/N)  | Yes   |
| Suitable for safety functions (Y/N)   | No  |
| Materials   |   |
| - Material of the housings  | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| - Lever material  | Metal film  |
| - Roller material   | Plastic   |
| - Material of the contacts  | Silver  |
| Housing coating   | None  |
| Housing construction form   | Norm construction design  |
| Weight  | 95 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  |
| Actuating speed with actuating angle 30° to switch axis |   |
| - Min. Actuating speed                                  | 240 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   | Normally open contact (NO), Opener (NC)  |
| Switching principle   | Snap switch element                      |
| - positive break NC contact  |  |
| Number of auxiliary contacts  | 1 piece                                  |
| Number of safety contacts   | 1 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,<br>DC-13: 24 V / 1 A |
| Max. fuse rating  | 6 A gG D-fuse                            |

## Dimensions

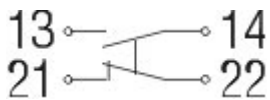
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|                          |          |
|--------------------------|----------|
| Dimensions of the sensor |          |
| - Width of sensor        | 30 mm    |
| - Height of sensor       | 158.5 mm |






- Length of sensor

49 mm

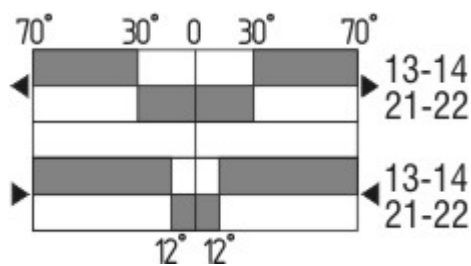
## Diagram








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: ZV7H 236-11z-**1637**

...-**1637**

0,3 µm gold-plated contacts

...- **ID**

IDC method of termination

...-**NPT**

Cable entry NPT 1/2"

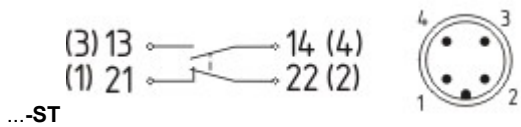
...-**1297**

Enclosure with transverse slotted holes

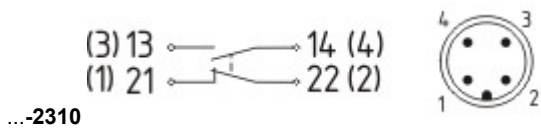
...-**Z**

Actuator head gasket

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

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**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](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](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](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](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](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](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](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](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

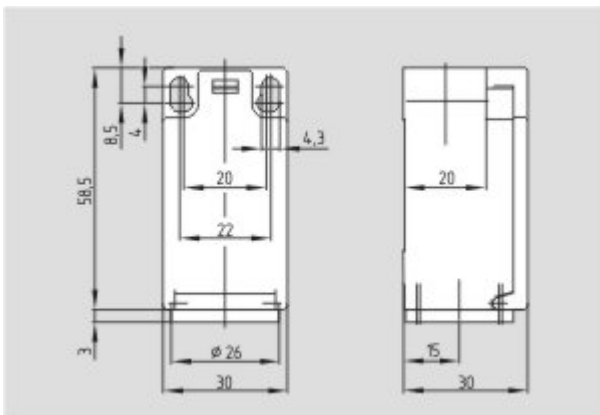
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**CCC certification (en)** 584 kB, 12.12.2006

[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Zt235/zertifikat/q\\_347p02.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p02.pdf)

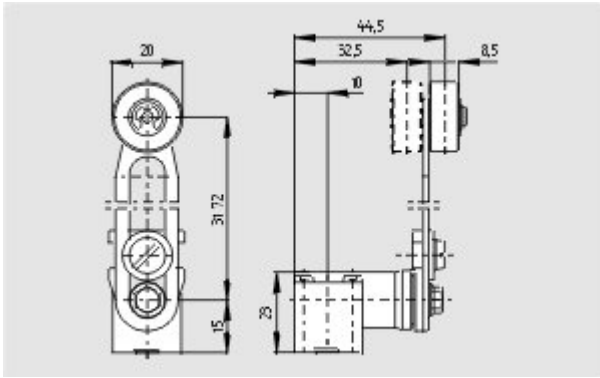
## Images

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Dimensional drawing (basic component)

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Dimensional drawing (actuator)

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K.A. Schmersal GmbH, Möddinghofe 30, D-42279 Wuppertal  
The data and values have been checked thoroughly. Technical modifications and errors excepted.  
Generiert am 21.04.2011 - 17:06:59h Kasbase 1.4.7 DBI