

## Datasheet - ZV7H 236-11z-2138



Position switch / 236 Thermoplastic enclosure - EN 50047 with Actuator / 236 Roller lever  
7H-2138

☒ Preferred typ



- 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
- Actuator heads can be repositioned by 4 x 90°
- Lever angle adjustable in 10° steps

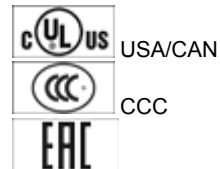
(Minor differences between the printed image and the original product may exist!)

### Ordering details

|                          |                   |
|--------------------------|-------------------|
| Product type description | ZV7H 236-11z-2138 |
| Article number           | 101122969         |
| EAN code                 | 4030661070728     |
| eCl@ss                   | 27-27-26-01       |

### Approval

Approval



### Classification

|                                               |                                                                                                                        |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Standards                                     | ISO 13849-1                                                                                                            |
| B <sub>10d</sub> Normally-closed contact (NC) | 20.000.000                                                                                                             |
| Mission time                                  | 20 Years                                                                                                               |
| notice                                        | $MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$ |

Global Properties

|                                                                                                                        |                                                                   |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Product name                                                                                                           | Z 236 Rollenschwenkhebel 7H-2138                                  |
| Standards                                                                                                              | IEC 60947-5-1, ISO 13849-1, 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 |
| - 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

|                                                         |                                                                               |
|---------------------------------------------------------|-------------------------------------------------------------------------------|
| Design of electrical connection                         | Screw connection                                                              |
| Cable section                                           |                                                                               |
| - Min. Cable section                                    | 0,75 mm²                                                                      |
| - Max. Cable section                                    | 2.5 mm²                                                                       |
| Mechanical life                                         | 20.000.000 operations                                                         |
| Switching frequency                                     | max. 5000/h                                                                   |
| notice                                                  | All indications about the cable section are including the conductor ferrules. |
| Design of actuating element                             | Roller lever                                                                  |
| 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                                  | 240 mm/min                                                                    |
| - Max. Actuating speed                                  | 1 m/s                                                                         |

Ambient conditions

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

Electrical data

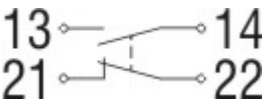
|                                                                                                                 |                                          |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Design of control element                                                                                       | Normally open contact (NO), Opener (NC)  |
| Switching principle                                                                                             | 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 |
| Required rated short-circuit current                                                                            | 1000 A                                   |
| Max. fuse rating                                                                                                | 6 A gG D-fuse                            |

Dimensions

Dimensions of the sensor

|                    |          |
|--------------------|----------|
| - Width of sensor  | 30 mm    |
| - Height of sensor | 158.5 mm |
| - Length of sensor | 49 mm    |

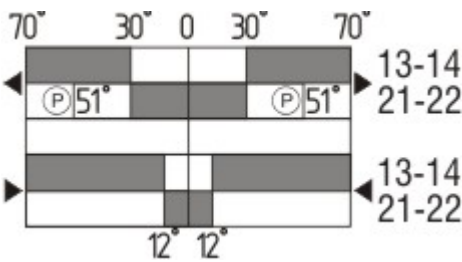
Diagram



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

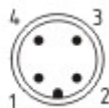
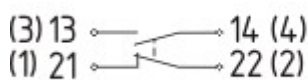
The applicable ordering suffix is added at the end of the part number of the safety switch.  
Order example: ZV7H 236-11z-2138-**1637**

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

...Z

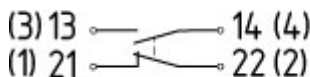
Actuator head gasket

...ST



M12 connector with A-coding  
Rated impulse withstand voltage  $U_{imp}$ : 4 kV  
Rated insulation voltage  $U_i$ : 250 V  
Rated operating voltage  $U_e$ : 230 V  
Operating current  $I_e$ : 4 A

...2310



M12 connector with B-coding  
Rated impulse withstand voltage  $U_{imp}$ : 4 kV  
Rated insulation voltage  $U_i$ : 250 V  
Rated operating voltage  $U_e$ : 230 V  
Operating current  $I_e$ : 4 A

## 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

AF

Spring rod lever AF

(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

|                |                                                            |
|----------------|------------------------------------------------------------|
| <b>ST-2310</b> | M12 connector with B-coding                                |
| <b>(7)</b>     |                                                            |
| <b>1297</b>    | Enclosure with transverse slotted holes                    |
| <b>(8)</b>     |                                                            |
| <b>2138</b>    | Roller lever 7H for Position switches with safety function |
| <b>(9)</b>     |                                                            |
| <b>1637</b>    | gold-plated contacts                                       |

## Documents

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**Operating instructions and Declaration of conformity (da)** 304 kB, 21.08.2013

Code: mrl\_ZT235\_236\_da

**Operating instructions and Declaration of conformity (de)** 302 kB, 09.03.2016

Code: mrl\_ZT235\_236\_de

**Operating instructions and Declaration of conformity (en)** 334 kB, 09.03.2016

Code: mrl\_ZT235\_236\_en

**Operating instructions and Declaration of conformity (pl)** 354 kB, 25.07.2016

Code: mrl\_ZT235\_236\_pl

**Operating instructions and Declaration of conformity (pt)** 321 kB, 25.07.2016

Code: mrl\_ZT235\_236\_pt

**Operating instructions and Declaration of conformity (es)** 318 kB, 22.11.2016

Code: mrl\_ZT235\_236\_es

**Operating instructions and Declaration of conformity (br)** 323 kB, 01.03.2017

Code: mrl\_ZT235\_236\_br

**Operating instructions and Declaration of conformity (it)** 314 kB, 25.07.2016

Code: mrl\_ZT235\_236\_it

**Operating instructions and Declaration of conformity (fr)** 320 kB, 25.07.2016

Code: mrl\_ZT235\_236\_fr

**Operating instructions and Declaration of conformity (jp)** 627 kB, 22.05.2017

Code: mrl\_ZT235\_236\_jp

**Operating instructions and Declaration of conformity (nl)** 318 kB, 16.04.2014

Code: mrl\_ZT235\_236\_nl

**CCC certification (cn)** 4 MB, 27.10.2017

Code: q\_235p02

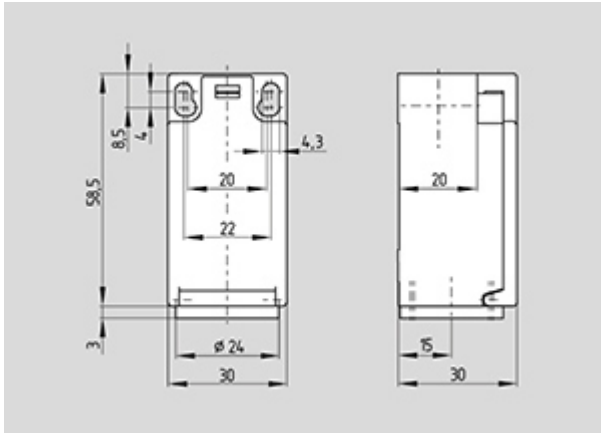
**CCC certification (en)** 4 MB, 27.10.2017

Code: q\_235p01

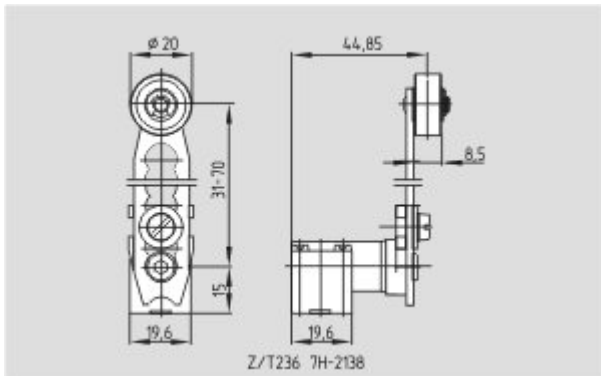
**EAC certification (ru)** 844 kB, 05.10.2015

Code: q\_6037p17\_ru

## Images



Dimensional drawing (basic component)



Dimensional drawing (actuator)