

## Datasheet - ZV14H 235-11z



Position switch / 235 Metal enclosure - DIN EN 50047 with Actuator / 235 Roller lever 14H

Preferred typ



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

- Metal enclosure
- Wide range of alternative actuators
- Good resistance to oil and petroleum spirit
- 30 mm x 63,5 mm x 30 mm
- Snap action with constant contact pressure up to switching point
- Actuator heads can be repositioned by 4 x 90°
- Mounting details to EN 50047
- 1 Cable entry M 20 x 1.5
- Lever angle adjustable in 10° steps

### Ordering details

Product type description	ZV14H 235-11Z
Article number	101161649
EAN code	4030661196220

### Approval

Approval



USA/CAN


CCC

### Classification

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

### Global Properties

Product name	Z 235 Rollenschwenkhebel 14H
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	Zink
- Lever material	Metal film
- Roller material	Plastic
- Material of the contacts	Silver
Housing coating	painted
Housing construction form	Norm construction design
Weight	205 g

## Mechanical data

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Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	0,75 mm <sup>2</sup>
- Max. Cable section	2.5 mm <sup>2</sup>
Mechanical life	20.000.000 operations
Switching frequency	max. 5000 /h
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	687 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, DC-13: 24 V / 1 A
Required rated short-circuit current	1000 A
Max. fuse rating	6 A gG D-fuse

## ATEX

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Explosion protection categories for gases	None
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Explosion protected category for dusts

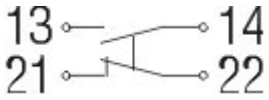
None

## Dimensions






Dimensions of the sensor

- Width of sensor	30 mm
- Height of sensor	114 mm
- Length of sensor	46 mm

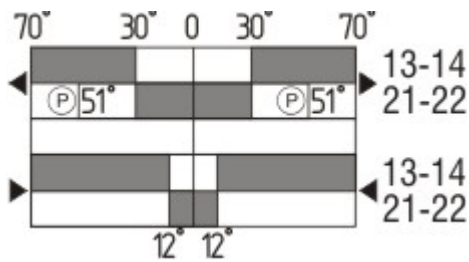
## Diagram








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: ZV14H 235-11z-**1637**

....**1637** 0,3 µm gold-plated contacts

....**NPT** Cable entry NPT 1/2"

....**1297** Enclosure with transverse slotted holes

...-Z

Actuator head gasket

...-RMS

Available with metal roller

...-ST



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.

...-2310



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)5-(4)Z(5)-(6)-(7)-(8)-(9)

(1)

Z

T

(2)

S

R

4S

4R

1R

K

3K

4K

K4

1H

7H

10H

12H

14H

AF

(3)

3

5

(4)

02

11

20

(5)

H

UE

(6)

without

Snap action

Slow action

Plunger S

Roller plunger R

Plunger 4S

Roller plunger 4R

Offset roller lever 1R

Offset roller lever K

Angle roller lever 3K

Angle roller lever 4K

Angle roller lever K4

Roller lever 1H

Roller lever 7H

Rod lever 10H

Roller lever 12H

Roller lever 14H

Spring rod lever AF

slim design

large design

2 Opener (NC)

1 Normally open contact (NO) / 1 Opener (NC)

2 Normally open contact (NO), (Switch with 2 NO contacts are not for security tasks)

Slow action with staggered contacts

Slow action with overlapping contacts

Cable entry M20

<b>ID</b>	IDC method of termination
<b>NPT</b>	cable entry NPT 1/2"
<b>ST</b>	M12 connector with A-coding ( <i>Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.</i> )
<b>2310</b>	M12 connector with B-coding ( <i>Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.</i> )
<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) 305 kB, 06.03.2014

Code: mrl\_ZT235\_236\_de

**Operating instructions and Declaration of conformity** (en) 338 kB, 06.03.2014

Code: mrl\_ZT235\_236\_en

**Operating instructions and Declaration of conformity** (pt) 308 kB, 21.08.2013

Code: mrl\_ZT235\_236\_pt

**Operating instructions and Declaration of conformity** (es) 303 kB, 02.01.2013

Code: mrl\_ZT235\_236\_es

**Operating instructions and Declaration of conformity** (it) 329 kB, 17.01.2013

Code: mrl\_ZT235\_236\_it

**Operating instructions and Declaration of conformity** (fr) 306 kB, 30.04.2013

Code: mrl\_ZT235\_236\_fr

**Operating instructions and Declaration of conformity** (jp) 410 kB, 14.01.2013

Code: mrl\_ZT235\_236\_jp

**Operating instructions and Declaration of conformity** (nl) 296 kB, 12.04.2013

Code: mrl\_ZT235\_236\_nl

**CCC certification** (cn) 324 kB, 03.02.2014

Code: q\_235p02

**CCC certification** (en) 352 kB, 03.02.2014

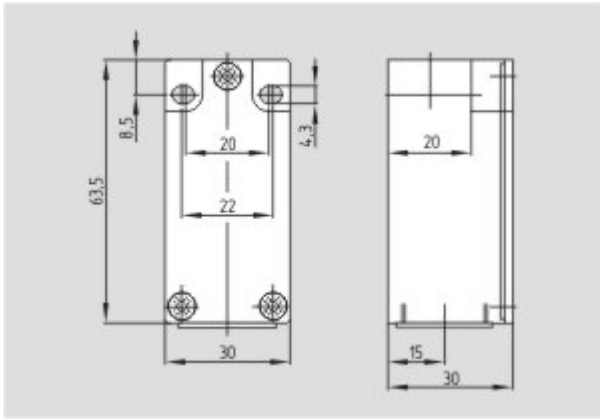
Code: q\_235p01

**Gost certification** (ru) 2 MB, 07.07.2011

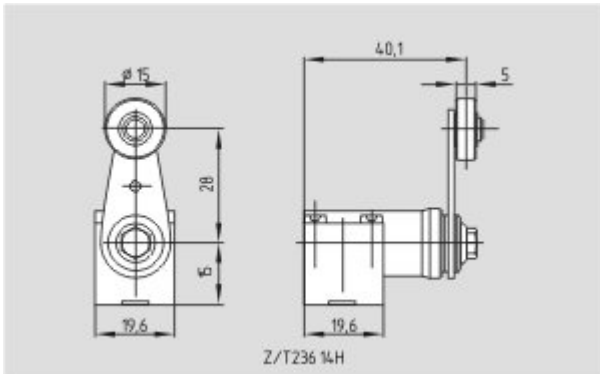
Code: q\_az1p01

## Images

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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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