

## Datasheet - ZR 335-11z

Position switch / 335 Metal enclosure - DIN EN 50041 with Actuator / 335 Roller plunger r



Preferred typ



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

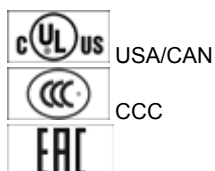
- Metal enclosure
- Wide range of alternative actuators
- Good resistance to oil and petroleum spirit
- 40,5 mm x 76 mm x 38 mm
- Snap action with constant contact pressure up to switching point
- Actuator heads can be repositioned by 4 x 90°
- 1 Cable entry M 20 x 1.5
- Design to EN 50041

### Ordering details

Product type description	ZR 335-11Z
Article number	101154447
EAN code	4030661172286
eCl@ss	27-27-26-01

### Approval


Approval



### Classification

Standards	EN 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 335 Rollendruckbolzen R
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	C to EN 50041
Materials	
- Material of the housings	Aluminium
- Material of the contacts	Silver
Housing coating	painted
Housing construction form	Norm construction design
Weight	135 g


## Mechanical data

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	30.000.000 operations
Switching frequency	max. 5000 /h
notice	All indications about the cable section are including the conductor ferrules.
Design of actuating element	Roller plunger
Actuating force	min. 12 N
Bounce duration	in accordance with actuating speed
Switchover time	< 2 ms
Actuating speed with actuating angle 30° to switch axis	
- Min. Actuating speed	
- Max. Actuating speed	0,5 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 $U_{imp}$	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 / 4 A
Required rated short-circuit current	1000 A
Max. fuse rating	6 A gG D-fuse

## ATEX

Explosion protection categories for gases	None
Explosion protected category for dusts	None

## Dimensions

Dimensions of the sensor	
- Width of sensor	40.5 mm
- Height of sensor	116.6 mm
- Length of sensor	38 mm

## notice

The positioning of the head must be carried out in factory.

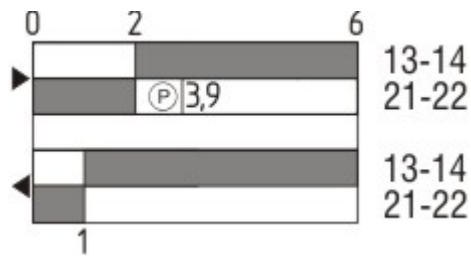
## Diagram



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: ZR 335-11z-**1637**

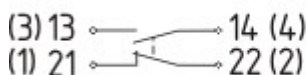
...-**1637**

0,3 µm gold-plated contacts

...-NPT

Cable entry NPT 1/2"

...-ST



M12 connector with A-coding

Rated impulse withstand voltage  $U_{imp}$ : 0,8 kV

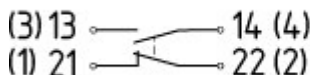
Rated insulation voltage  $U_i$ : 50 V

Rated operating voltage  $U_e$ : 50 V

Operating current  $I_e$ : 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

Rated operating voltage  $U_e$ : 50 V

Operating current  $I_e$ : 4 A

Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.

## Ordering code

(1)(2) 3(3)5-(4)Z(5)-(6)-(7)-(8)-(9)

(1)

Z

Snap action

T

Slow action

(2)

S

Plunger S

R

Roller plunger R

H

Roller lever H

10H

Rod lever 10H

7H

Roller lever 7H

1K

Offset roller lever 1K

3K

Angle roller lever 3K

(3)

3

slim design

5

large design

(4)

11

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

02

2 Opener (NC)

20

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

01/01

1 Opener (NC) left / 1 Opener (NC) right

12

1 Normally open contact (NO) / 2 Opener (NC)

03

3 Opener (NC)

(5)

H

Slow action with staggered contacts

UE

Slow action with overlapping contacts

(6)

G24

with LED

(7)

without

Cable entry M20

NPT

cable entry NPT 1/2"

ST

M12 connector with A-coding (*Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.*)

<b>ST-2310</b>	M12 connector with B-coding (Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.)
<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** (de) 310 kB, 03.04.2013

Code: mrl\_zt332-335-336-355\_de

**Operating instructions and Declaration of conformity** (it) 308 kB, 04.04.2013

Code: mrl\_zt332-335-336-355\_it

**Operating instructions and Declaration of conformity** (fr) 325 kB, 04.04.2013

Code: mrl\_zt332-335-336-355\_fr

**Operating instructions and Declaration of conformity** (nl) 321 kB, 04.04.2013

Code: mrl\_zt332-335-336-355\_nl

**Operating instructions and Declaration of conformity** (jp) 1 MB, 22.11.2010

Code: mrl\_zt332-335-336-355\_jp

**Operating instructions and Declaration of conformity** (cs) 371 kB, 07.10.2014

Code: mrl\_zt332-335-336-355\_cs

**Operating instructions and Declaration of conformity** (pt) 327 kB, 04.04.2013

Code: mrl\_zt332-335-336-355\_pt

**Operating instructions and Declaration of conformity** (es) 323 kB, 04.04.2013

Code: mrl\_zt332-335-336-355\_es

**Operating instructions and Declaration of conformity** (da) 323 kB, 04.04.2013

Code: mrl\_zt332-335-336-355\_da

**Operating instructions and Declaration of conformity** (en) 355 kB, 05.08.2014

Code: mrl\_zt332-335-336-355\_en

**Operating instructions and Declaration of conformity** (pl) 372 kB, 06.02.2015

Code: mrl\_zt332-335-336-355\_pl

**CCC certification** (en) 187 kB, 03.08.2015

Code: q\_347p02

**CCC certification** (cn) 166 kB, 03.08.2015

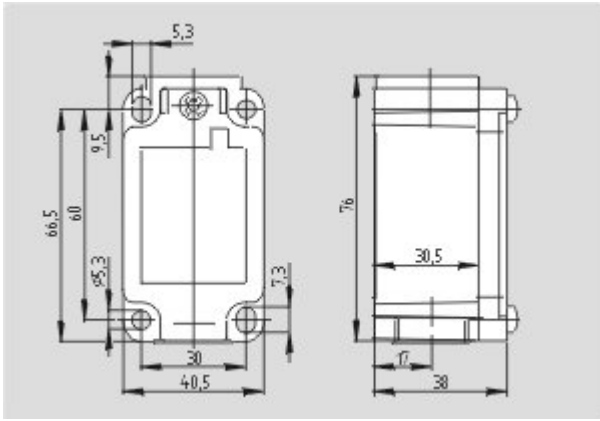
Code: q\_347p03

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

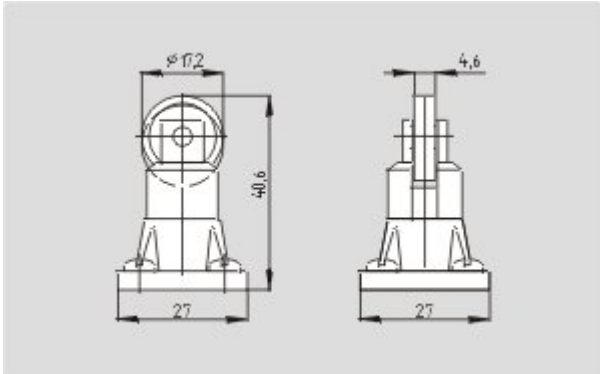
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## Images

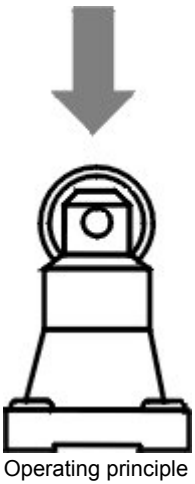
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Dimensional drawing (basic component)



Dimensional drawing (actuator)



Operating principle

K.A. Schmersal GmbH & Co. KG, Möddinghofe 30, D-42279 Wuppertal

The data and values have been checked thoroughly. Technical modifications and errors excepted.

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