

## Datasheet - ZS 336-11z

Position switch / 336 thermoplastic enclosure - DIN EN 50041 with Actuator / 336 Plunger S



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

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

### Ordering details

|                          |               |
|--------------------------|---------------|
| Product type description | ZS 336-11Z    |
| Article number           | 1156136       |
| EAN code                 | 4030661177458 |

### Approval

Approval



### Classification

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

### Global Properties

|              |                          |
|--------------|--------------------------|
| Product name | 336 Druckbolzen S        |
| 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                                                                                                         | B to EN 50041                                                     |
| Materials                                                                                                             |                                                                   |
| - Material of the housings                                                                                            | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| - Material of the contacts                                                                                            | Silver                                                            |
| Housing coating                                                                                                       | None                                                              |
| Housing construction form                                                                                             | Norm construction design                                          |
| Weight                                                                                                                | 105 g                                                             |

## Mechanical data

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|                                        |                                                                               |
|----------------------------------------|-------------------------------------------------------------------------------|
| Design of actuating element            | Plunger                                                                       |
| 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                                                                  |
| Actuating force                        | min. 12 N                                                                     |
| Bounce duration                        | in accordance with actuating speed                                            |
| Switchover time                        | < 2 ms                                                                        |
| Actuating speed for vertical actuation |                                                                               |
| - Min. Actuating speed                 |                                                                               |
| - Max. Actuating speed                 | 0,5 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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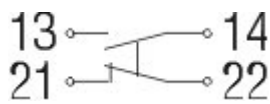
|                                                                                                                 |                                          |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 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        | 40.5 mm  |
| - Height of sensor       | 103.5 mm |
| - Length of sensor       | 38 mm    |

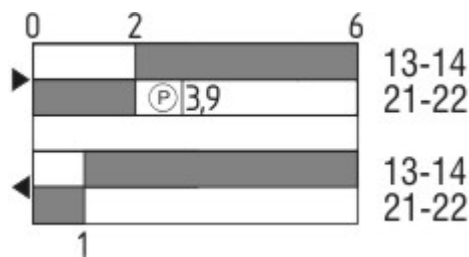
Diagram



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

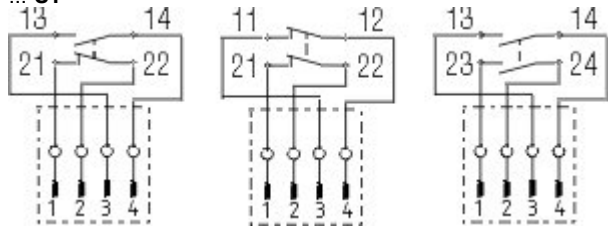
Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.  
Order example: ZS 336-11z-**NPT**

...-**NPT**

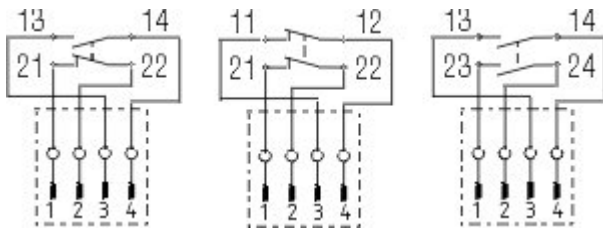
Cable entry NPT 1/2"

...-**ST**



M12 connector with A-coding

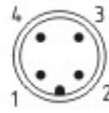
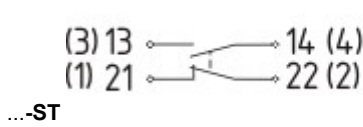
...- **2310**



M12 connector with B-coding

...-1637

0,3 µm gold-plated contacts



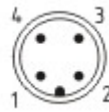
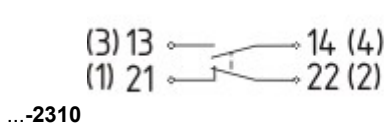
M12 connector with A-coding

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

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

## Ordering code

(1)(2) 336-(3)Z(4)-(5)-(6)-(7)

(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)

**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

(4)

**H** Slow action with staggered contacts

**UE** Slow action with overlapping contacts

(5)

*without* Cable entry M20

**NPT** cable entry NPT 1/2"

**ST** M12 connector with A-coding

**2310** M12 connector with B-coding

(6)

**2138** Roller lever 7H for Position switches with safety function

(7)

## Documents

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**Operating instructions and Declaration of conformity** (pt) 586 kB, 01.03.2010  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/PT/mrl\\_zt332-335-336-355\\_pt.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/PT/mrl_zt332-335-336-355_pt.pdf)

**Operating instructions and Declaration of conformity** (nl) 710 kB, 01.12.2009  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/NL/mrl\\_zt332-335-336-355\\_nl.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/NL/mrl_zt332-335-336-355_nl.pdf)

**Operating instructions and Declaration of conformity** (cn) 797 kB, 02.03.2010  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/CN/mrl\\_zt332-335-336-355\\_cn.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/CN/mrl_zt332-335-336-355_cn.pdf)

**Operating instructions and Declaration of conformity** (de) 581 kB, 27.11.2009  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/DE/mrl\\_zt332-335-336-355\\_de.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/DE/mrl_zt332-335-336-355_de.pdf)

**Operating instructions and Declaration of conformity** (en) 605 kB, 22.03.2010  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/EN/mrl\\_zt332-335-336-355\\_en.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/EN/mrl_zt332-335-336-355_en.pdf)

**Operating instructions and Declaration of conformity** (es) 516 kB, 27.11.2009  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/ES/mrl\\_zt332-335-336-355\\_es.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/ES/mrl_zt332-335-336-355_es.pdf)

**Operating instructions and Declaration of conformity** (jp) 1 MB, 22.11.2010  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/JP/mrl\\_zt332-335-336-355\\_jp.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/JP/mrl_zt332-335-336-355_jp.pdf)

**Operating instructions and Declaration of conformity** (fr) 525 kB, 01.12.2009  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/FR/mrl\\_zt332-335-336-355\\_fr.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/FR/mrl_zt332-335-336-355_fr.pdf)

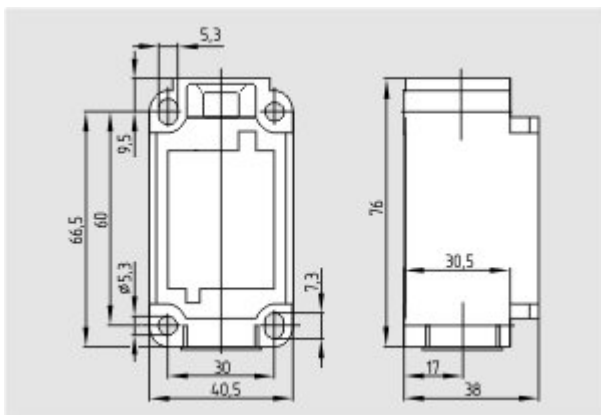
**Operating instructions and Declaration of conformity** (it) 513 kB, 01.12.2009  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Z332/bedien/IT/mrl\\_zt332-335-336-355\\_it.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Z332/bedien/IT/mrl_zt332-335-336-355_it.pdf)

**CCC certification** (cn) 605 kB, 12.12.2006  
[http://127.0.0.1/Bilddata/Si\\_f1/Pdf/Zt235/zertifikat/q\\_347p03.pdf](http://127.0.0.1/Bilddata/Si_f1/Pdf/Zt235/zertifikat/q_347p03.pdf)

**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)

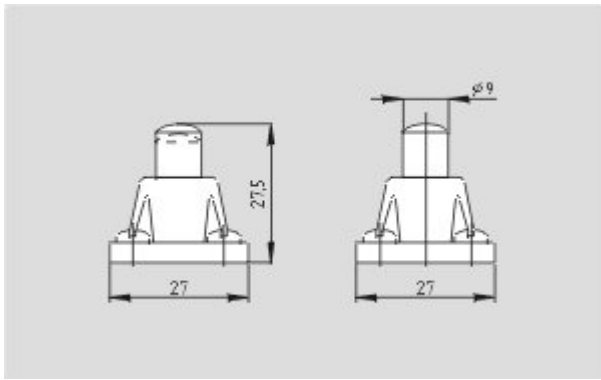
## Images

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Dimensional drawing (basic component)

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Dimensional drawing (actuator)

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

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