

Datasheet - Z4S 255-02z

Position switch / Metal enclosure 255 - EN 50047 with Actuator / 255 Plunger with central mounting 4S



- Metal enclosure
- Wide range of alternative actuators
- Good resistance to oil and petroleum spirit
- 63 mm x 63,5 mm x 30 mm
- Snap action with constant contact pressure up to switching point
- 3 cable entries M 20 x 1.5
- Actuator heads can be repositioned by 4 x 90°
- Mounting details to EN 50047

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

Ordering details

| | |
|--------------------------|---------------|
| Product type description | Z4S 255-02Z |
| Article number | 101174990 |
| EAN Code | 4030661338132 |
| eCl@ss | 27-27-26-01 |

Approval


Approval



Classification

| | |
|-----------------------------------|--|
| Standards | ISO 13849-1 |
| B10d Normally-closed contact (NC) | 20.000.000 |
| Mission time notice | 20 Years |
| | $MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{cp} \times 3600 \text{ s/h}}{t_{cycle}}$ |

Global Properties

| | |
|--|---|
| Permanent light | Z 255 Druckbolzen mit Zentralbefestigung 4S |
| 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 |
| - Material of the contacts | Silver |
| Housing coating | painted |
| Housing construction form | Norm construction design |
| Weight | 96 |


Mechanical data

| | |
|--|---|
| Design of electrical connection | Screw connection |
| Cable section | |
| - Min. Cable section | 0,75 |
| - Max. Cable section | 2.5 |
| 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 | Plunger |
| Actuating force | min. 9 N |
| Bounce duration | < 3 |
| Switchover time | > 5.5 |
| Positive break force | 19 N |
| Actuating speed for vertical actuation | |
| - Min. Actuating speed | 10 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

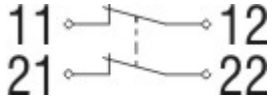
| | |
|---|--|
| Design of control element | Opener (NC) |
| Switching principle | Snap switch element |
| positive break NC contact  | |
| Number of auxiliary contacts | 0 |
| Number of safety contacts | 2 |
| Rated impulse withstand voltage U_{imp} | 6 kV |
| Rated insulation voltage U_i | 500 V |
| Thermal test current I_{the} | 10 A |
| Utilisation category | AC-15: 230 V / 4 A, DC-13: 24 V / 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 63 mm
- Height of sensor 103.5 mm
- Length of sensor 30 mm

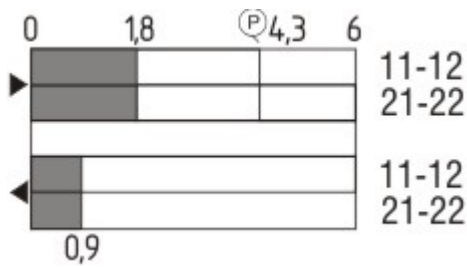
Diagram



Note Diagram

- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

Switch travel diagram



Notes Switch travel diagram

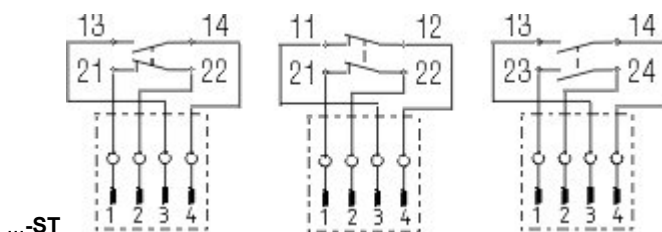
- Contact closed
- Contact open
- Setting range
- Break point
- Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.
 Order example: Z4S 255-02z-1637

...-1637

0,3 µm gold-plated contacts



...-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.



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.

...-2310

...-NPT

Cable entry NPT 1/2"

...-1297

Enclosure with transverse slotted holes

Ordering code

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

(1)

Z
T

Snap action
Slow action

(2)

S
R
4S
4R
1R
K
3K
4K
K4
1H
7H
10H
12H
14H
AF

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

(3)

3
5

slim design
large design

(4)

02
11
20

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)

(5)

H
UE

Slow action with staggered contacts
Slow action with overlapping contacts

(6)

without
ID
NPT
ST

Cable entry M20
IDC method of termination
cable entry NPT 1/2"
M12 connector with A-coding (Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.)
M12 connector with B-coding (Caution! The versions with connector may

ST-2310

only be used in PELV circuits to EN 60204-1.)

(7)

2574

(8)

2138

Roller lever 7H for Position switches with safety function

(9)

1637

gold-plated contacts

Documents

Operating instructions and Declaration of conformity (en) 160 kB, 15.06.2018

Code: mrlk_zt235_236_en

Operating instructions and Declaration of conformity (es) 161 kB, 21.06.2018

Code: mrlk_ZT235_236_es

Operating instructions and Declaration of conformity (de) 160 kB, 15.06.2018

Code: mrlk_ZT235_236_de

Operating instructions and Declaration of conformity (pl) 198 kB, 27.06.2018

Code: mrlk_ZT235_236_pl

Operating instructions and Declaration of conformity (nl) 162 kB, 15.06.2018

Code: mrlk_ZT235_236_nl

Operating instructions and Declaration of conformity (pt) 163 kB, 27.06.2018

Code: mrlk_ZT235_236_pt

Operating instructions and Declaration of conformity (it) 162 kB, 15.06.2018

Code: mrlk_ZT235_236_it

Operating instructions and Declaration of conformity (fr) 164 kB, 15.06.2018

Code: mrlk_ZT235_236_fr

Operating instructions and Declaration of conformity (cs) 194 kB, 25.01.2019

Code: mrlk_ZT235_236_cs

Declaration of conformity (es) 91 kB, 18.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_es

Declaration of conformity (pl) 130 kB, 18.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_pl

Declaration of conformity (it) 89 kB, 18.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_it

Declaration of conformity (pt) 90 kB, 18.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_pt

Declaration of conformity (fr) 89 kB, 18.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_fr

Declaration of conformity (de) 581 kB, 07.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_de

Declaration of conformity (en) 579 kB, 07.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_en

Declaration of conformity (nl) 89 kB, 18.06.2018

Code: KAS_konfi_nsr_zt2xx-3xx_nl

CCC certification (cn) 4 MB, 11.04.2018

Code: q_235p02

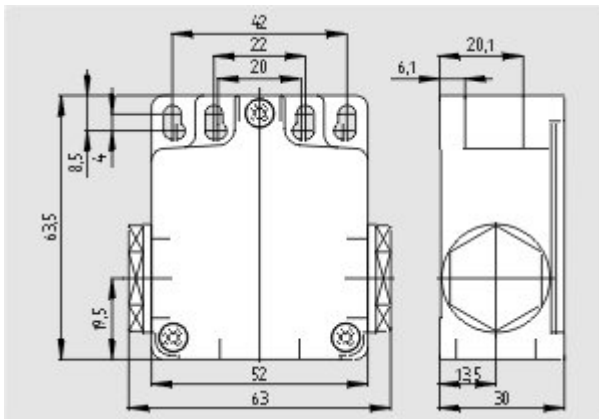
CCC certification (en) 4 MB, 27.10.2017

Code: q_235p01

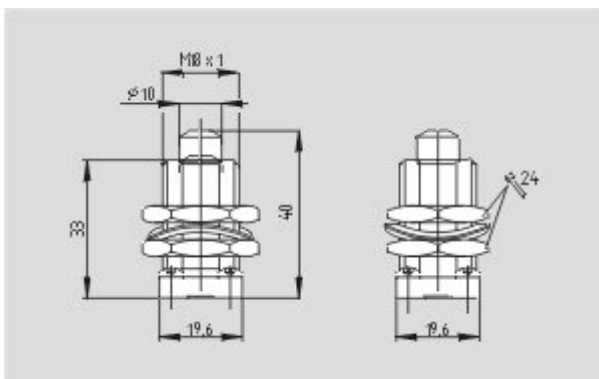
EAC certification (ru) 844 kB, 05.10.2015

Code: q_6037p17_ru

Images



Dimensional drawing (basic component)



Dimensional drawing (actuator)

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

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

Generiert am 13.02.2019 - 13:46:17h Kasbase 3.3.0.F.64I