

Datasheet - BNS 303-11Z 3,0M

Safety sensors / BNS 303



- thermoplastic enclosure
- Long life
- no mechanical wear
- Ø M30
- Suitable for food processing industry
- Insensitive to transverse misalignment
- Insensitive to soiling

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

Ordering details

Product type description	BNS 303-11Z 3,0M
Article number	1203870
EAN code	4030661367309

Approval

Approval



Classification

Standards	EN ISO 13849-1
B _{10d} Normally-closed contact/Normally open contact (NC/NO)	25.000.000
- notice	at max. 20% contact load
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	BNS 303
Standards	IEC 60947-5-3, BG-GS-ET-14

Compliance with the Directives (Y/N) 

Yes

Materials

- Material of the housings
- Material of the nuts
- Material of the cable mantle

Plastic, glass-fibre reinforced thermoplastic
thermoplastic
PVC

Weight

137 g

Coding available (Y/N)

Yes

Monitoring function of downstream devices (Y/N)

No

Prerequisite evaluation unit

Recommended safety-monitoring module

SRB 301AN, AES 1337

Recommended actuator

BPS 300 , BPS 303 , BPS 303 SS

Mechanical data

Design of electrical connection

Cable

Cable length

3 m

Conductors

4 x 0,25 mm²

AWG-Number

23

mechanical installation conditions

quasi-flush

Active area

Ensured switch distance ON

5 mm

Ensured switch distance OFF

15 mm

Type of actuation

Magnet

Direction of motion

head-on with regard to the active surface

restistance to shock

30 g / 11 ms

Resistance to vibration

10 ... 55 Hz, Amplitude 1 mm

Tightening torque for nuts

A/F 36 max. 300 Ncm

Ambient conditions

Ambient temperature

- Min. environmental temperature

- 25°C

- Max. environmental temperature

+ 70°C

Storage and transport temperature

- Min. Storage and transport temperature

- 25°C

- Max. Storage and transport temperature

+ 70°C

Protection class

IP67

Electrical data

Integrated Safety monitoring module available (Y/N)

No

Cross circuit/short circuit recognition possible (Y/N)

Yes

Voltage type

VAC/DC

Switch frequency

max. 5 Hz

Switching voltage

max. 100 VAC/DC

Switching current

max. 400 mA

Switching capacity

max. 10 W

Outputs

Design of control output

Other, Reed contacts

Number of shutters

1 piece

Number of openers

1 piece

Design of output signal switching device

Electrical data - Safety outputs

Number of secure semi-conductor outputs	0 piece
Number of secure outputs with contact	2 piece

Electrical data - Diagnostic output

Number of semi-conductor outputs with signaling function	0 piece
Number of outputs with signaling function that already have a contact	0 piece

LED switching conditions display

LED switching conditions display (Y/N)	No
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ATEX

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

Dimensions

Dimensions of the sensor	
- Length of sensor	44 mm
- Diameter of sensor	M30

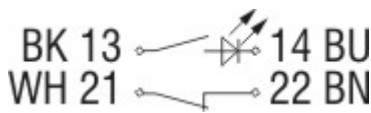
notice

Contact symbols shown for the closed condition of the guard device.
The contact configuration for versions with or without LED is identical.

Included in delivery

Actuators must be ordered separately.	
Mounting accessories - Nuts M 30 x 1,5	2 piece

Diagram



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

Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.

Order example: BNS 303-11Z 3,0M-**2211**

...-**2211**

higher switching distance
Sar: 8 mm
Sao: 18 mm

Ordering code

BNS 303-**(1)Z(2)-(3)-(4)**

(1)

- 11** 1 Normally open contact (NO) / 1 Opener (NC)
- 12** 1 Normally open contact (NO) / 2 Opener (NC)
- 02** - / 2 Opener (NC)
- 03** - / 3 Opener (NC)

(2)

- without* without LED switching conditions display
- G** with LED switching conditions display

(3)

- without* with cable
- ST** with connector M12

(4)

- 2187** Individual contact outlet
- 2211** higher switching distance

Documents

Operating instructions and Declaration of conformity (en) 963 kB, 25.01.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/en/mrl_bns303_en.pdf

Operating instructions and Declaration of conformity (fr) 871 kB, 25.01.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/fr/mrl_bns303_fr.pdf

Operating instructions and Declaration of conformity (it) 869 kB, 25.01.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/it/mrl_bns303_it.pdf

Operating instructions and Declaration of conformity (nl) 874 kB, 25.01.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/nl/mrl_bns303_nl.pdf

Operating instructions and Declaration of conformity (de) 970 kB, 25.01.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/de/mrl_bns303_de.pdf

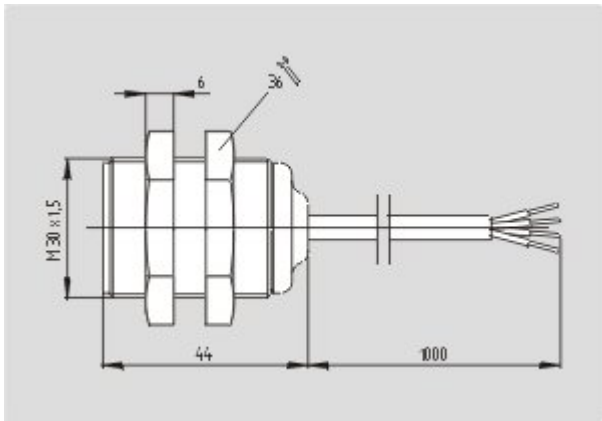
Operating instructions and Declaration of conformity (es) 871 kB, 25.01.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/es/mrl_bns303_es.pdf

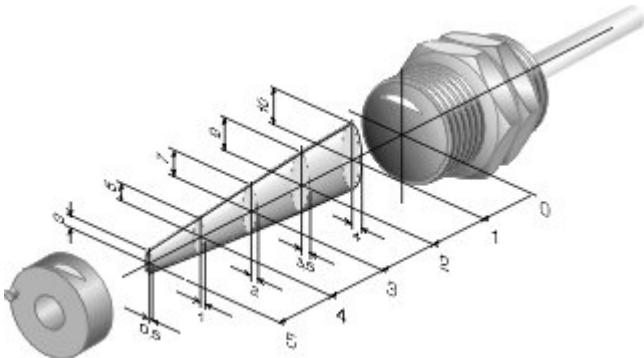
Operating instructions and Declaration of conformity (jp) 879 kB, 19.03.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/jp/mrl_bns303_jp.pdf

Images



Dimensional drawing (basic component)

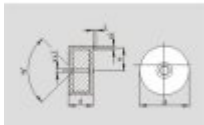


Characteristic curve

System components

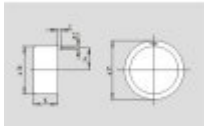
Actuator

1113734 - BPS 300



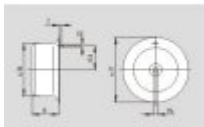
1117076 - BPS 303

- Suitable for food processing industry



1141156 - BPS 303 SS

- Suitable for food processing industry



Mounting accessories

1068520 - MOUNTING CLAMP H 30

- For a smooth fitting of the proximity switches with cylindric shape Ø 30 mm or thread M30



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

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