

## Datasheet - BNS 303-11z

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
Article number	1115682
EAN code	4030661049052

### Approval

Approval




### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> Opener/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	Plastic, glass-fibre reinforced thermoplastic
- Material of the nuts	thermoplastic
- Material of the cable mantle	PVC
Weight	65 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

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Design of electrical connection	Cable
Cable length	1 m
Conductors	4 x 0,25 mm <sup>2</sup>
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

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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

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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

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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

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

## Electrical data - Diagnostic output

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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

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LED switching conditions display (Y/N)	No
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## ATEX

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

## Dimensions

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

## notice

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

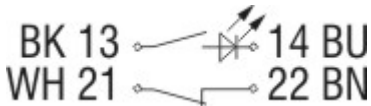
## Included in delivery

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

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

## Diagram

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Note Diagram

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

## Ordering suffix

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

Order example: BNS 303-11z-**2211**

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...-**2211**

higher switching distance

Sar: 8 mm

Sao: 18 mm

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## Ordering code

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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

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**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](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](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](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](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](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

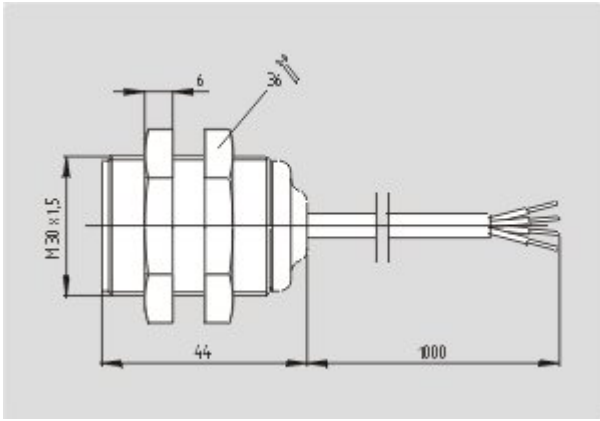
[http://www.schmersal.net/Bilddata/Si\\_senso/Pdf/Bns303/bedien/es/mrl\\_bns303\\_es.pdf](http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/es/mrl_bns303_es.pdf)

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

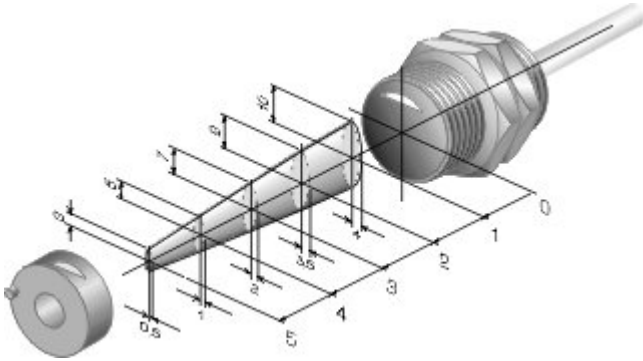
[http://www.schmersal.net/Bilddata/Si\\_senso/Pdf/Bns303/bedien/jp/mrl\\_bns303\\_jp.pdf](http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns303/bedien/jp/mrl_bns303_jp.pdf)

## Images

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Dimensional drawing (basic component)

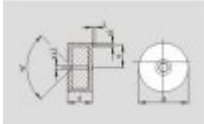


Characteristic curve

## System components

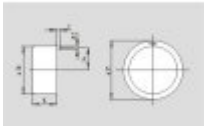
### Actuator

**1113734 - BPS 300**



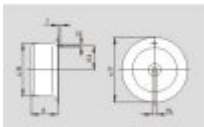
**1117076 - BPS 303**

- 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  $\varnothing$  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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