

Datasheet - BNS 303-11ZG 3,0M

Safety sensors / BNS 303



- LED version
- 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 303-11ZG 3,0M
Article number	1139171
EAN code	4030661282053

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	Plastic, glass-fibre reinforced thermoplastic
- Material of the nuts	thermoplastic
- Material of the cable mantle	PVC
Weight	130 g
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	AES, SRB 202C., SRB 400C., SRB 211AN, SRB 207AN
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 mm ²
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	VDC
Switch frequency	max. 5 Hz
Switching voltage	max. 24 VDC
Switching current	max. 10 mA
Switching capacity	max. 240 mW

Outputs

Design of control output	Other, Reed kontakts
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)	Yes
- The LED is illuminated when the guard door is open.	

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 303-11ZG 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

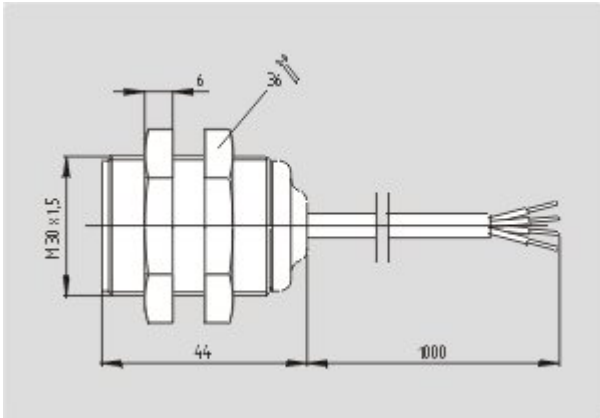
Operating instructions and Declaration of conformity (es) 871 kB, 25.01.2010

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

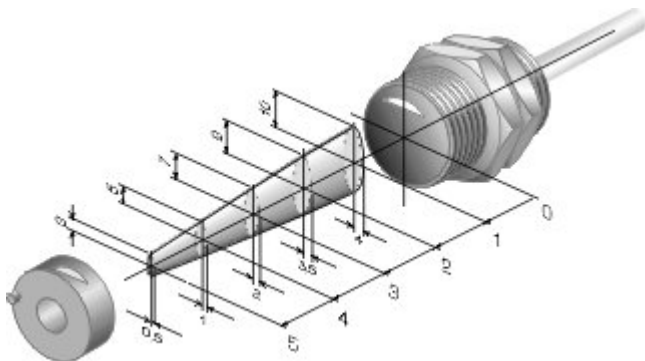
Operating instructions and Declaration of conformity (jp) 879 kB, 19.03.2010

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

Images



Dimensional drawing (basic component)

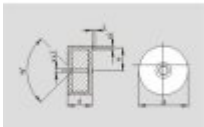


Characteristic curve

System components

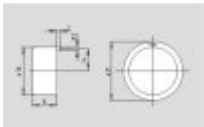
Actuator

1113734 - BPS 300



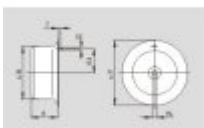
1117076 - BPS 303

- 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 \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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