

Datasheet - BNS 300-01zG

Safety sensors / BNS 300



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

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

Ordering details

Product type description	BNS 300-01ZG
Article number	1110514
EAN code	4030661048895

Approval

Approval




Classification

Standards	EN ISO 13849-1
B _{10d} Opener (NC)	20.000.000
- 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 300
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	110 g
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	
Recommended actuator	BPS 300, BPS 303, BPS 303 SS

Mechanical data

Design of electrical connection	Cable
Cable length	1 m
Conductors	4 x 0,75 mm ²
AWG-Number	18
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	+ 55°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)	Yes
Cross circuit/short circuit recognition possible (Y/N)	No
Voltage type	DC
Switch frequency	max. 5 Hz
Switching voltage	max. 250 VAC
Switching current	max. 3 A
Switching capacity	max. 750 W
Utilisation category	DC-13: 24 V / 30 mA

Outputs

Design of control output	
Number of shutters	0 piece
Number of openers	1 piece

Electrical data - Safety outputs

Number of secure semi-conductor outputs	0 piece
Number of secure outputs with contact	1 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 is closed.	

ATEX

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

Dimensions

Dimensions of the sensor	
- Length of sensor	78 mm
- Diameter of sensor	M30

notice

Contact symbols shown for the closed condition of the guard device.






Included in delivery

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

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 300-01zG-**2211**

...-**2211**

higher switching distance
S_{ar}: 8 mm
S_{ao}: 18 mm

Ordering code

BNS 300-01ZG-(1)-(2)

(1)

without with cable

ST male connector M12

(2)

2211 higher switching distance

2230 supplementary signalling output

2246 U_e 42 VAC

Documents

Operating instructions and Declaration of conformity (de) 492 kB, 03.08.2009

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns300/montage/de/mrl_bns300_de.pdf

Operating instructions and Declaration of conformity (en) 852 kB, 05.03.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns300/bedien/en/mrl_bns300_en.pdf

Operating instructions and Declaration of conformity (de) 853 kB, 05.03.2010

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns300/bedien/de/mrl_bns300_de.pdf

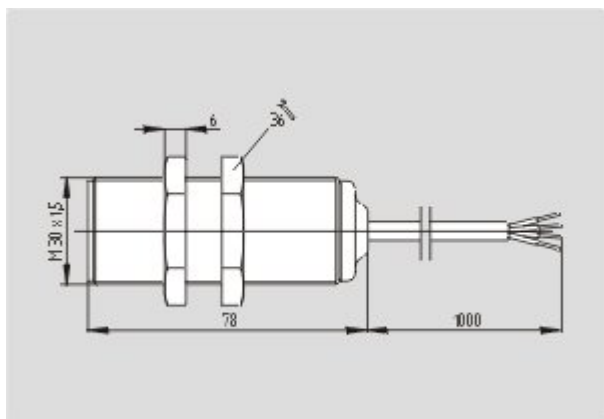
BG-test certificate (en) 564 kB, 08.04.2009

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns300/baumuste/z_b_3p02.pdf

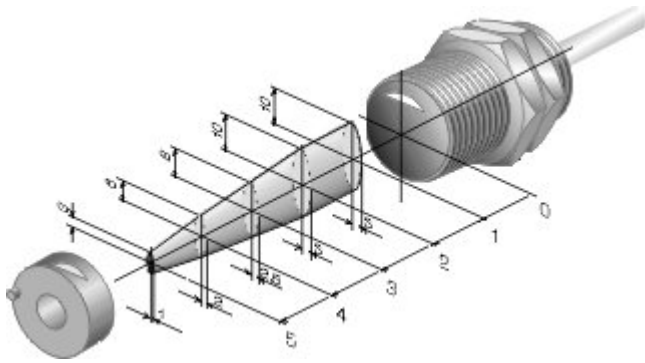
BG-test certificate (de) 1 MB, 08.04.2009

http://www.schmersal.net/Bilddata/Si_senso/Pdf/Bns300/baumuste/z_b_3p01.pdf

Images



Dimensional drawing (basic component)

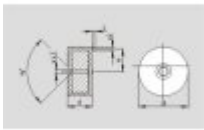


Characteristic curve

System components

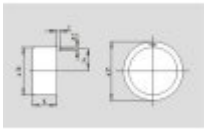
Actuator

1113734 - BPS 300



1117076 - BPS 303

- 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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