

## Datasheet - BNS 303-11Z 5,0M

Safety sensors / BNS 303



Preferred typ



- 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 5,0M
Article number	101123708
EAN code	4030661049090
eCl@ss	27-27-24-02

### Approval


Approval



### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> Normally-closed contact/Normally open contact (NC/NO)	25.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{top}}$
	$n_{top} = \frac{d_{act} \times h_{app} \times 3600 \text{ h}}{t_{cycle}}$

### 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	195 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	5 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
resistance 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 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)	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 5.0M-2211

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...-2211 higher switching distance  
 S<sub>ar</sub>: 8 mm  
 S<sub>ac</sub>: 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 (it) 403 kB, 14.03.2014  
 Code: mrl\_bns303\_it

Operating instructions and Declaration of conformity (nl) 410 kB, 25.03.2014  
 Code: mrl\_bns303\_nl

Operating instructions and Declaration of conformity (pt) 432 kB, 05.07.2012  
 Code: mrl\_bns303\_pt

Operating instructions and Declaration of conformity (jp) 531 kB, 14.03.2014  
 Code: mrl\_bns303\_jp

Operating instructions and Declaration of conformity (fr) 410 kB, 08.04.2014  
 Code: mrl\_bns303\_fr

Operating instructions and Declaration of conformity (es) 410 kB, 31.03.2014  
 Code: mrl\_bns303\_es

Operating instructions and Declaration of conformity (de) 416 kB, 12.01.2016  
 Code: mrl\_bns303\_de

Operating instructions and Declaration of conformity (en) 411 kB, 12.01.2016  
 Code: mrl\_bns303\_en

Operating instructions and Declaration of conformity (pl) 443 kB, 27.07.2015

Code: mrl\_bns303\_pl

Operating instructions and Declaration of conformity (da) 411 kB, 23.08.2012

Code: mrl\_bns303\_da

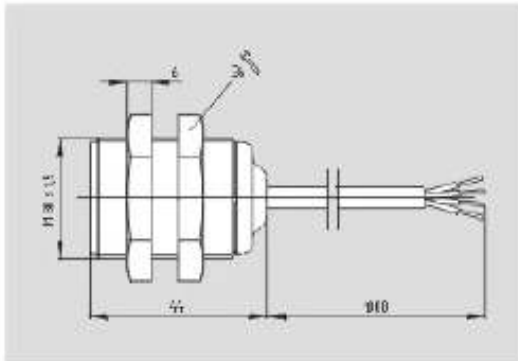
Operating instructions and Declaration of conformity (cs) 442 kB, 28.07.2015

Code: mrl\_bns303\_cs

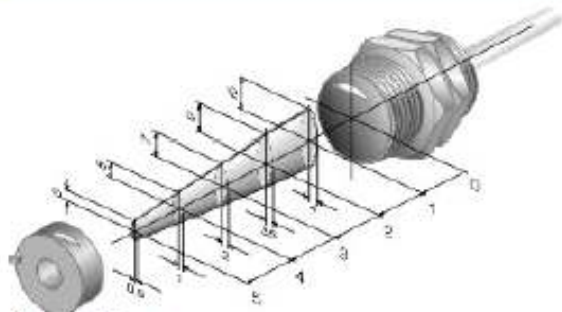
EAC certification (ru) 782 kB, 05.10.2015

Code: q\_6044p17\_ru

## Images



Dimensional drawing (basic component)



Characteristic curve

## System components

### Actuator



101113734 - BPS 300

101117076 - BPS 303

• Suitable for food processing industry



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101141156 - BPS 303 SS

- Suitable for food processing industry



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**Mounting accessories**



101068520 - 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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