

## Datasheet - BNS 303-11Z-ST

Safety sensors / BNS 303



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

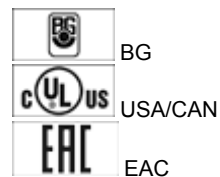
- Thermoplastic enclosure
- Long life
- Suitable for food processing industry only in combination with BPS 303 SS
- no mechanical wear
- Ø M30
- Insensitive to transverse misalignment
- Insensitive to soiling
- Connector M12, 4-pole

### Ordering details

Product type description	BNS 303-11Z-ST
Article number	101161543
EAN Code	4030661195377
eCl@ss	27-27-24-02

### Approval


Approval



### Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact/Normally open contact (NC/NO)	25.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{ap} \times h_{cp} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	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
Weight	45
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	SRB301AN 24VAC/DC, AES 1337
Recommended actuator	BPS 300 , BPS 303 , BPS 303 SS

## Mechanical data

Design of electrical connection	Connector M12
mechanical installation conditions	quasi-flush
Active area	
Ensured switch distance ON $S_{ao}$	5 mm
Ensured switch distance OFF $S_{ar}$	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
Tightening torque for connectors	

## 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 kontakts
Number of shutters	1
Number of openers	1

### Electrical data - Safety outputs

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

### Electrical data - Diagnostic output

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

### LED switching conditions display

LED switching conditions display (Y/N)	No
--	----

### 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

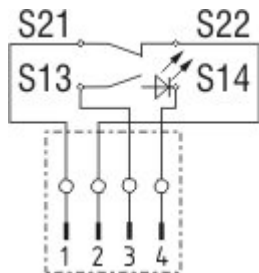
### notice

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-ST-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** (it) 445 kB, 03.01.2018

Code: mrl\_bns303\_it

**Operating instructions and Declaration of conformity** (nl) 447 kB, 03.01.2018

Code: mrl\_bns303\_nl

**Operating instructions and Declaration of conformity** (pt) 450 kB, 03.01.2018

Code: mrl\_bns303\_pt

**Operating instructions and Declaration of conformity** (jp) 551 kB, 03.01.2018

Code: mrl\_bns303\_jp

**Operating instructions and Declaration of conformity** (fr) 451 kB, 03.01.2018

Code: mrl\_bns303\_fr

**Operating instructions and Declaration of conformity** (es) 448 kB, 03.01.2018

Code: mrl\_bns303\_es

**Operating instructions and Declaration of conformity** (de) 413 kB, 15.12.2017

Code: mrl\_bns303\_de

**Operating instructions and Declaration of conformity** (en) 449 kB, 15.12.2017

Code: mrl\_bns303\_en

**Operating instructions and Declaration of conformity (pl)** 480 kB, 03.01.2018

Code: mrl\_bns303\_pl

**Operating instructions and Declaration of conformity (da)** 447 kB, 03.01.2018

Code: mrl\_bns303\_da

**Operating instructions and Declaration of conformity (cs)** 481 kB, 02.01.2018

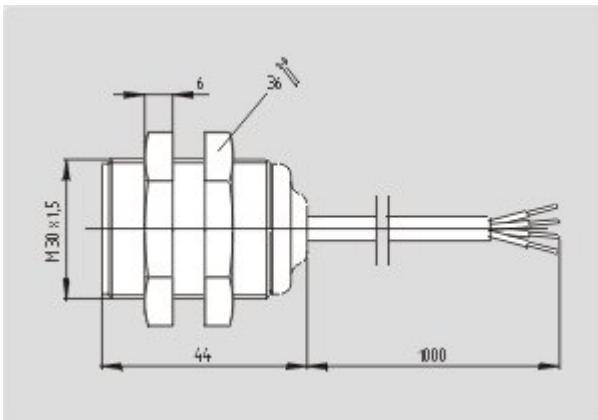
Code: mrl\_bns303\_cs

**EAC certification (ru)** 782 kB, 05.10.2015

Code: q\_6044p17\_ru

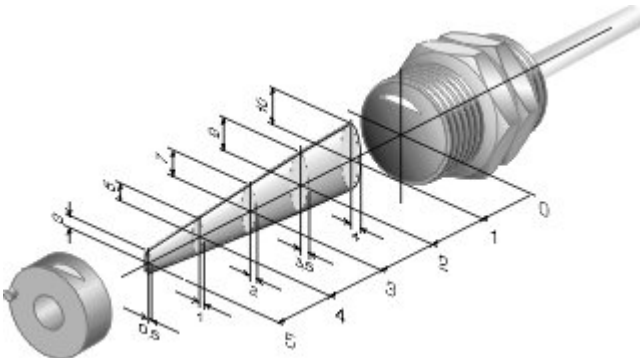
## Images

---



Dimensional drawing (basic component)

---



Characteristic curve

---

## System components

---

### Actuator



101113734 - BPS 300

101117076 - BPS 303

---



- Suitable for food processing industry



---

**101141156 - BPS 303 SS**

- Suitable for food processing industry

---

**Connector**



**A-K4M12**

- Pre-wired cable
- 4-pole

---

**Mounting accessories**



**101068520 - MOUNTING CLAMP H 30**

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