

## Datasheet - BNS 300-01ZG-ST

Safety sensors / BNS 300

 Preferred typ

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

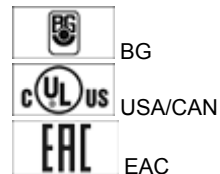
- Thermoplastic enclosure
- Long life
- Suitable for food processing industry only in combination with BPS 303
- no mechanical wear
- Ø M30
- Insensitive to transverse misalignment
- Insensitive to soiling
- With integral evaluation
- Connector M12, 4-pole

### Ordering details

Product type description	BNS 300-01ZG-ST
Article number	101144214
EAN Code	4030661131795
eCl@ss	27-27-24-02

### Approval

Approval




### Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact (NC)	20.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

## Global Properties

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Permanent light	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
Weight	50
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

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Design of electrical connection	Connector M12
AWG-Number	
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
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
Tightening torque for connectors	

## Ambient conditions

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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

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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

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Design of control output	
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Number of shutters	0
Number of openers	1
Design of output signal switching device	

### Electrical data - Safety outputs

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Number of secure semi-conductor outputs	0
Number of secure outputs with contact	1

### Electrical data - Diagnostic output

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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

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LED switching conditions display (Y/N)	Yes
- The LED is illuminated when the guard is closed.	

### 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	78 mm
- Diameter of sensor	M30

### notice

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

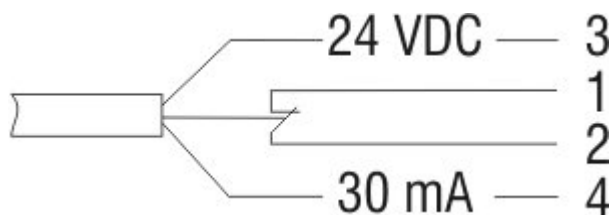
### Included in delivery

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


### 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 300-01ZG-ST-2211

...-2211 higher switching distance  
Sar: 8 mm  
Sao: 18 mm

## Ordering code

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

(1)

without

ST

(2)

2211

2230

2246

with cable

male connector M12

higher switching distance

supplementary signalling output

U<sub>e</sub> 42 VAC

## Documents

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**Operating instructions and Declaration of conformity (jp)** 710 kB, 16.09.2011

Code: mrl\_bns300\_jp

**Operating instructions and Declaration of conformity (pt)** 417 kB, 22.02.2017

Code: mrl\_bns300\_pt

**Operating instructions and Declaration of conformity (es)** 416 kB, 18.05.2016

Code: mrl\_bns300\_es

**Operating instructions and Declaration of conformity (en)** 415 kB, 26.04.2016

Code: mrl\_bns300\_en

**Operating instructions and Declaration of conformity (nl)** 448 kB, 30.07.2018

Code: mrl\_bns300\_nl

**Operating instructions and Declaration of conformity (de)** 562 kB, 26.04.2016

Code: mrl\_bns300\_de

**Operating instructions and Declaration of conformity (pl)** 430 kB, 03.06.2016

Code: mrl\_bns300\_pl

**Operating instructions and Declaration of conformity (fr)** 418 kB, 29.04.2016

Code: mrl\_bns300\_fr

**Operating instructions and Declaration of conformity (it)** 414 kB, 29.04.2016

Code: mrl\_bns300\_it

**Operating instructions and Declaration of conformity (da)** 407 kB, 27.08.2012

Code: mrl\_bns300\_da

**BG-test certificate** (en) 559 kB, 05.01.2011

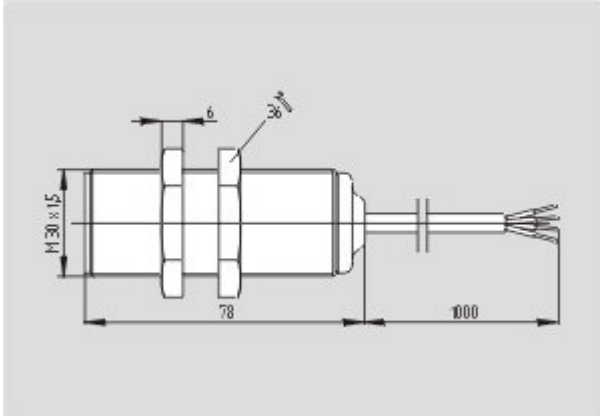
Code: z\_b30p02

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

Code: q\_6044p17\_ru

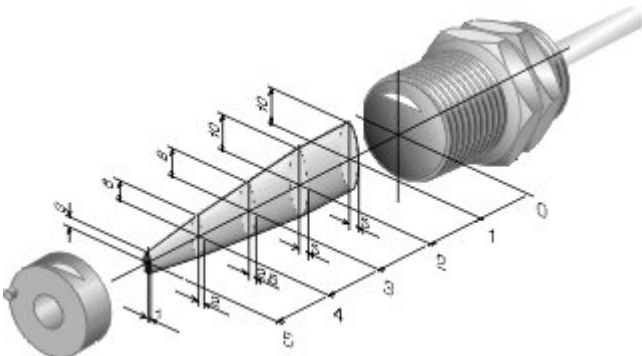
## Images

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Dimensional drawing (basic component)

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Characteristic curve

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## System components

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### Actuator



101113734 - BPS 300



101117076 - BPS 303

• Suitable for food processing industry

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### Connector



#### **A-K4M12**

- Pre-wired cable
- 4-pole

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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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