

## Datasheet - BNS 120-11z

Safety sensors / BNS 120



Preferred typ



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

- Thermoplastic enclosure
- Suitable for food processing industry only in combination with BP 15 SS
- Particularly large switching distance
- Ø M12
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

### Ordering details

Product type description	BNS 120-11Z
Article number	101128296
EAN code	4030661050850
eCl@ss	27-27-24-02

### Approval

Approval




### Classification

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

## Global Properties

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Product name	BNS 120
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 cable mantle	PVC
Weight	45 g
Coding available (Y/N)	No
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	
Recommended actuator	BP 6, BP 8, BP 10, BP 15 SS

## Mechanical data

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Design of electrical connection	Cable
Cable length	1 m
Conductors	4 x 0,25 mm <sup>2</sup>
AWG-Number	23
mechanical installation conditions	quasi-flush
Active area	
Ensured switch distance ON S <sub>ao</sub>	10 mm / 20 mm
- Actuating magnet BP 8	10 mm
- Actuating magnet BP 6	10 mm
- Actuating magnet BP 15 SS	20 mm
- Actuating magnet BP 10	20 mm
Ensured switch distance OFF S <sub>ar</sub>	22 mm / 32 mm
- Actuating magnet BP 15 SS	32 mm
- Actuating magnet BP 6	22 mm
- Actuating magnet BP 8	22 mm
- Actuating magnet BP 10	32 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

## 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. 250 mA
Switching capacity	max. 5 W

## Outputs

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

## Electrical data - Safety outputs

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

## Electrical data - Diagnostic output

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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

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LED switching conditions display (Y/N)	No
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## 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	38.5 mm
- Diameter of sensor	M12

## notice

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

The safety sensor must be mounted in such a way that actuation with another magnet is impossible (concealed mounting according to EN 1088)

## Included in delivery

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Actuators must be ordered separately.


## Diagram

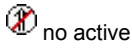
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Note Diagram

 positive break NC contact

 active



- Normally-open contact
- Normally-closed contact

## Ordering code

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BNS 120-(1)Z

(1)	
11	1 Normally open contact (NO) / 1 Opener (NC)
12	1 Normally open contact (NO) / 2 Opener (NC)
02	2 Opener (NC)

## Documents

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**Operating instructions and Declaration of conformity** (jp) 490 kB, 14.03.2014

Code: mrl\_bns120\_jp

**Operating instructions and Declaration of conformity** (it) 378 kB, 08.04.2016

Code: mrl\_bns120\_it

**Operating instructions and Declaration of conformity** (es) 372 kB, 06.04.2016

Code: mrl\_bns120\_es

**Operating instructions and Declaration of conformity** (pl) 444 kB, 08.04.2016

Code: mrl\_bns120\_pl

**Operating instructions and Declaration of conformity** (en) 381 kB, 15.03.2016

Code: mrl\_bns120\_en

**Operating instructions and Declaration of conformity** (pt) 421 kB, 04.07.2012

Code: mrl\_bns120\_pt

**Operating instructions and Declaration of conformity** (da) 396 kB, 08.08.2012

Code: mrl\_bns120\_da

**Operating instructions and Declaration of conformity** (nl) 365 kB, 21.03.2014

Code: mrl\_bns120\_nl

**Operating instructions and Declaration of conformity** (de) 383 kB, 15.03.2016

Code: mrl\_bns120\_de

**Operating instructions and Declaration of conformity** (fr) 383 kB, 29.04.2016

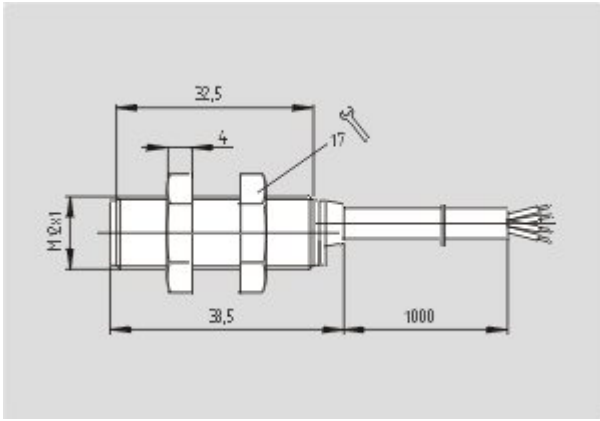
Code: mrl\_bns120\_fr

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

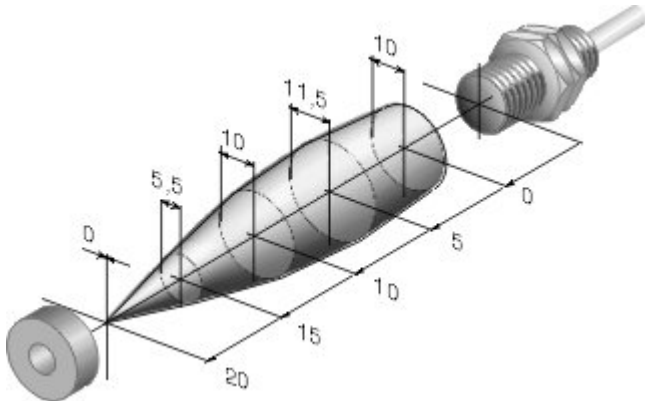
Code: q\_6044p17\_ru

## Images

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Dimensional drawing (basic component)



Characteristic curve

## System components

### Actuator



#### 101054816 - BP 8

- Unenclosed
- S-pole marked red



#### 101057531 - BP 10

- Unenclosed
- Colour coding of poles by labels



#### 101139818 - BP 15 SS

- Suitable for food processing industry
- Stainless steel

## Safety control modules

AES 113x



- Monitoring of BNS range magnetic safety sensors
- 1 safety contact, STOP 0
- 2 Signalling outputs



#### **AES 1102**

- Monitoring of BNS range magnetic safety sensors
- 1 safety contact, STOP 0

### **Mounting accessories**



#### **101068880 - MOUNTING CLAMP H 12**

- For a smooth fitting of the proximity switches with cylindric shape  $\varnothing$  12 mm or thread M12

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

Generiert am 21.12.2016 - 14:34:04h Kasbase 3.2.6.F.64I