

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
- 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

Approval

Approval



BG




USA/CAN

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	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{ap} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

Global Properties

Product name	BNS 120
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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

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

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. 250 mA
Switching capacity	max. 5 W

Outputs

Design of control output	
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	38.5 mm
- Diameter of sensor	M12

notice

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


Actuators must be ordered separately.


Diagram





Note Diagram

 positive break NC contact

 active

 no active

 Normally-open contact

 Normally-closed contact

Ordering code

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

Operating instructions and Declaration of conformity (jp) 878 kB, 30.08.2011

Code: mrl_bns120_jp

Operating instructions and Declaration of conformity (it) 542 kB, 02.08.2010

Code: mrl_bns120_it

Operating instructions and Declaration of conformity (es) 556 kB, 02.08.2010

Code: mrl_bns120_es

Operating instructions and Declaration of conformity (pl) 397 kB, 19.03.2012

Code: mrl_bns120_pl

Operating instructions and Declaration of conformity (en) 410 kB, 20.02.2014

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) 553 kB, 02.08.2010

Code: mrl_bns120_nl

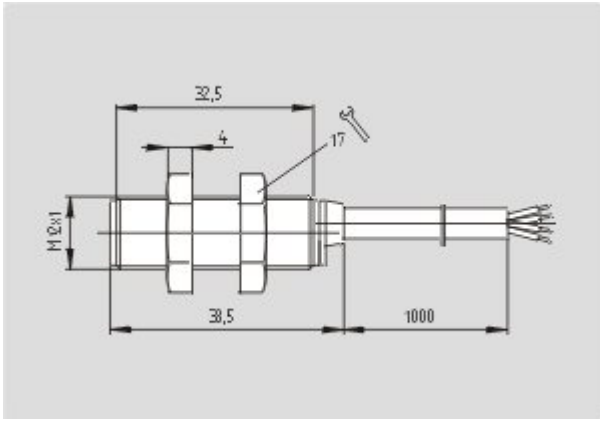
Operating instructions and Declaration of conformity (de) 366 kB, 24.02.2014

Code: mrl_bns120_de

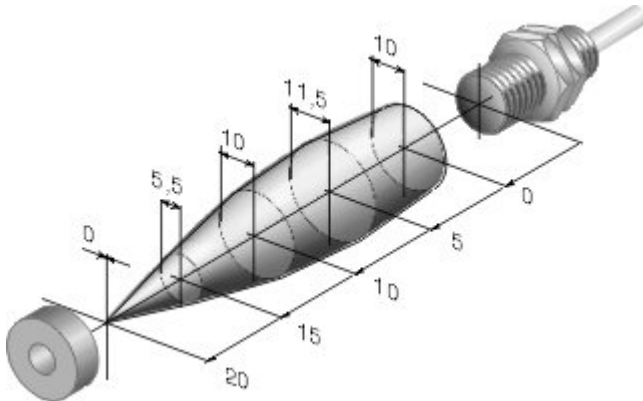
Operating instructions and Declaration of conformity (fr) 566 kB, 02.08.2010

Code: mrl_bns120_fr

Images



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.

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