

Datasheet - BNS 120-12z

Safety sensors / BNS 120



Preferred typ



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

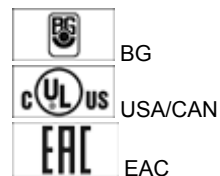
- Thermoplastic enclosure
- Suitable for food processing industry only in combination with BP 15 SS
- Particularly large switching distance
- Ø M12
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

Ordering details

Product type description	BNS 120-12Z
Article number	101128297
EAN Code	4030661050874
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	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

Global Properties

Permanent light	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	50
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
Conductors	4 x 0,25
AWG-Number	23
mechanical installation conditions	quasi-flush
Active area	
Ensured switch distance ON S_{ao}	10 mm / 20 mm
- Actuating magnet BP 10	20
- Actuating magnet BP 6	10
- Actuating magnet BP 8	10
- Actuating magnet BP 15 SS	20
Ensured switch distance OFF S_{ar}	22 mm / 32 mm
- Actuating magnet BP 15 SS	32
- Actuating magnet BP 10	32
- Actuating magnet BP 6	22
- Actuating magnet BP 8	22
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
Number of openers	2
Design of output signal switching device	

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	1

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) 470 kB, 09.10.2017

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) 383 kB, 17.02.2017

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) 373 kB, 20.07.2018

Code: mrl_bns120_nl

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

Code: mrl_bns120_de

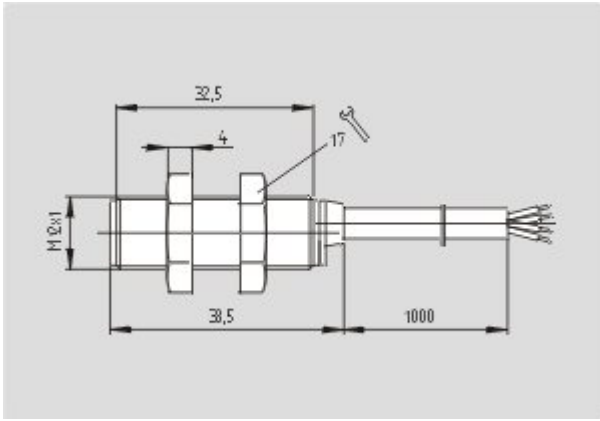
Operating instructions and Declaration of conformity (fr) 383 kB, 29.04.2016

Code: mrl_bns120_fr

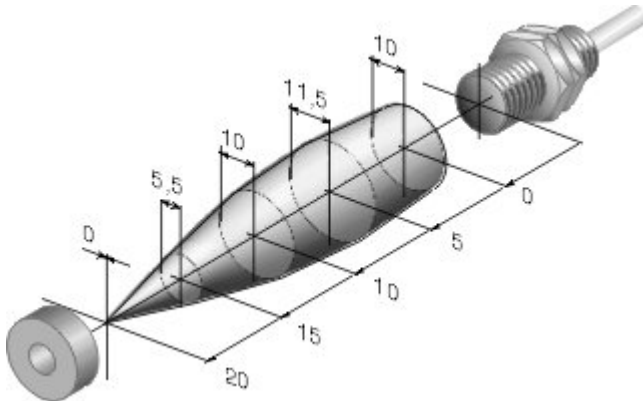
EAC certification (ru) 782 kB, 05.10.2015

Code: q_6044p17_ru

Images



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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