

Datasheet - EX-BNS 120-11Z-3G/D

Safety sensors / EX-BNS 120



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

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

Ordering details

Product type description	EX-BNS 120-11Z-3G/D
Article number	101184987
EAN code	4030661333106
eCl@ss	27-27-24-02

Approval

Approval	ATEX
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Classification

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

Global Properties

Product name	EX-BNS 120
Standards	EN 60079-0, EN 60079-15, EN 60079-31, 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
Housing construction form	cylinder, thread
Weight	55 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	front side
Ensured switch distance ON S _{ao}	10 mm / 20 mm
- Actuating magnet BP 15 SS	20 mm
- Actuating magnet BP 6	10 mm
- Actuating magnet BP 10	20 mm
- Actuating magnet BP 8	10 mm
Ensured switch distance OFF S _{ar}	22 mm / 32 mm
- Actuating magnet BP 8	22 mm
- BP 6 = 22 mm Actuating magnet	
- 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
Impact energy	max. 2 Nm

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

EX-marking	EX II 3D Ex tc IIC T80°C Dc X EX II 3G Ex nC IIC T6 Gc X
Explosion protection categories for gases	3G
Explosion protection Zones for gases	2
Explosion protected category for dusts	3D
Explosion protection Zones for dusts	22

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.






Keywords

Keywords	Ex, EEx, ATEX, Ex BNS120, Ex BNS 120, BNS120 Ex, BNS120ex, BNS 120 ex, ATEX BNS 120
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Diagram

BK 13 — 14 BU
WH 21 — 22 BN

Note Diagram

-  positive break NC contact
-  active
-  no active
-  Normally-open contact
-  Normally-closed contact

Documents

Operating instructions and Declaration of conformity (fr) 379 kB, 08.09.2014

Code: mrl_ex-bns120_fr

Operating instructions and Declaration of conformity (es) 385 kB, 08.09.2015

Code: mrl_ex-bns120_es

Operating instructions and Declaration of conformity (pl) 132 kB, 20.08.2014

Code: mrl_ex-bns120_pl

Operating instructions and Declaration of conformity (jp) 471 kB, 09.09.2014

Code: mrl_ex-bns120_jp

Operating instructions and Declaration of conformity (it) 371 kB, 03.09.2014

Code: mrl_ex-bns120_it

Operating instructions and Declaration of conformity (nl) 373 kB, 08.10.2014

Code: mrl_ex-bns120_nl

Operating instructions and Declaration of conformity (de) 388 kB, 12.08.2014

Code: mrl_ex-bns120_de

Operating instructions and Declaration of conformity (en) 384 kB, 12.08.2014

Code: mrl_ex-bns120_en

Brochure (de) 7 MB, 25.02.2011

Code: b_atep01

Brochure (en) 8 MB, 28.08.2012

Code: b_atep02

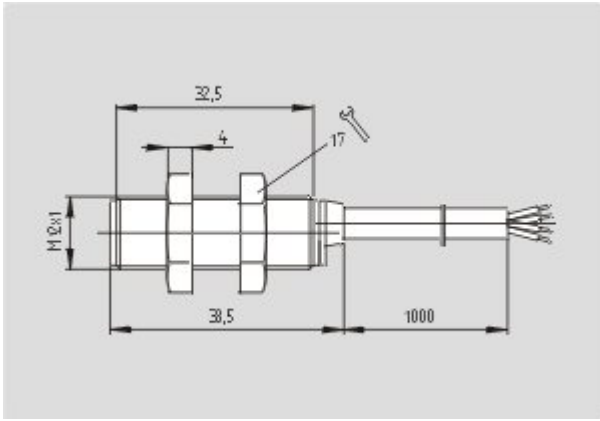
Brochure (it) 3 MB, 20.07.2007

Code: b_atep05

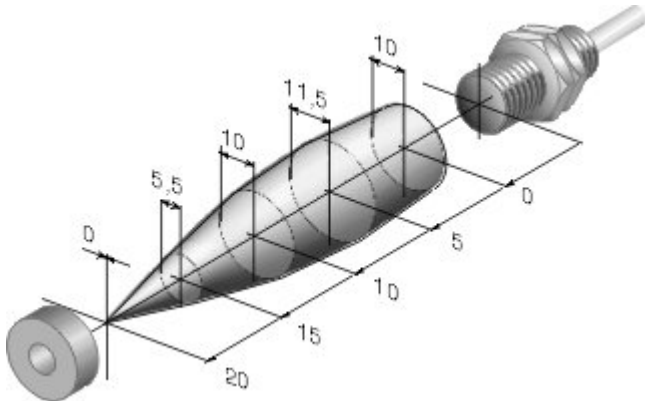
Brochure (es) 5 MB, 18.08.2009

Code: b_atep09

Images



Dimensional drawing (basic component)



Characteristic curve

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

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