

Datasheet - EX-BNS 120-12Z-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 120-12Z-3G/D
Article number	10EX-BNS 120-12z-3G/D
EAN Code	
eCl@ss	27-27-24-02

Approval

Approval	ATEX
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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	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	
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	front side
Ensured switch distance ON S_{ao}	10 mm / 20 mm
- Actuating magnet BP 10	20
- Actuating magnet BP 6	10
- Actuating magnet BP 15 SS	20
- Actuating magnet BP 8	10
Ensured switch distance OFF S_{ar}	22 mm / 32 mm
- Actuating magnet BP 15 SS	32
- Actuating magnet BP 10	32
- Actuating magnet BP 8	22
- BP 6 = 22 mm Actuating magnet	
Type of actuation	Magnet
Direction of motion	head-on with regard to the active surface
restistance 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
- Max. environmental temperature	+70
Storage and transport temperature	
- Min. Storage and transport temperature	-25
- Max. Storage and transport temperature	+70
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

EX-marking	EX II 3D Ex tc IIIC 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
- 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



Note Diagram

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

Documents

Operating instructions and Declaration of conformity (fr) 418 kB, 07.12.2017

Code: mrl_ex-bns120_fr

Operating instructions and Declaration of conformity (es) 420 kB, 19.12.2017

Code: mrl_ex-bns120_es

Operating instructions and Declaration of conformity (pl) 433 kB, 29.03.2018

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) 416 kB, 19.12.2017

Code: mrl_ex-bns120_it

Operating instructions and Declaration of conformity (nl) 418 kB, 06.08.2018

Code: mrl_ex-bns120_nl

Operating instructions and Declaration of conformity (de) 394 kB, 09.11.2017

Code: mrl_ex-bns120_de

Operating instructions and Declaration of conformity (pt) 423 kB, 19.12.2017

Code: mrl_ex-bns120_pt

Operating instructions and Declaration of conformity (en) 419 kB, 09.11.2017

Code: mrl_ex-bns120_en

Brochure (de) 7 MB, 19.10.2016

Code: b_atep01_de

Brochure (en) 7 MB, 19.10.2016

Code: b_atep01_en

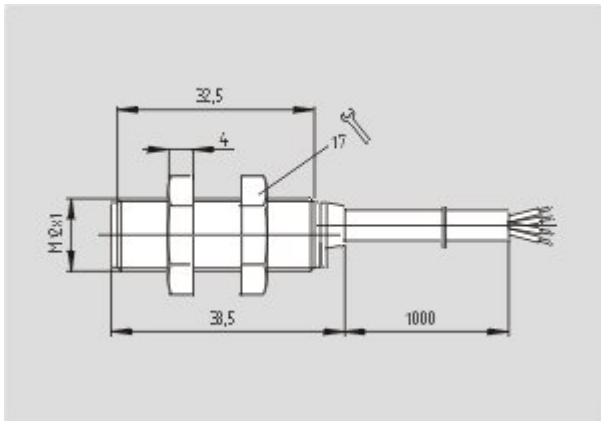
Brochure (it) 3 MB, 20.07.2007

Code: b_atep05

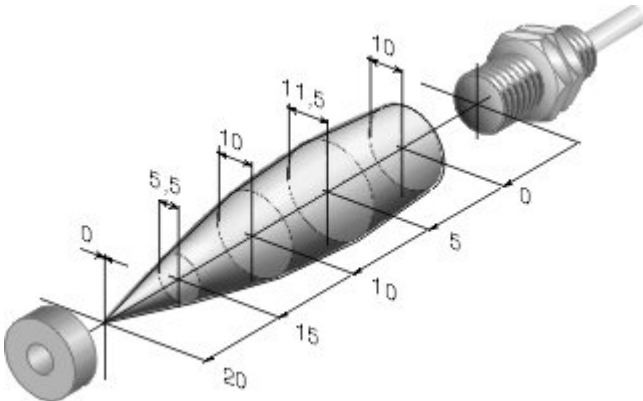
Brochure (es) 5 MB, 18.08.2009

Code: b_atep09

Images



Dimensional drawing (basic component)



Characteristic curve