

## Datasheet - EX-BNS 180-12Z-2187-2-3G/D

Safety sensors / EX-BNS 180



(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 M18
- Particularly large switching distance
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

### Ordering details

Product type description	EX-BNS 180-12Z-2187-2-3G/D
Article number	101185256
EAN Code	4030661333328
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	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{cp} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	EX-BNS 180
Standards	IEC 60947-5-3, EN 60079-0, EN 60079-15, EN 60079-31, 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	46
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
Conductors	6 x 0,25
AWG-Number	23
mechanical installation conditions	quasi-flush
Active area	front side
Ensured switch distance ON $S_{ao}$	8 mm / 18 mm
- Actuating magnet BP 6	8
- Actuating magnet BP 15 SS	18
- Actuating magnet BP 8	8
- Actuating magnet BP 10	18
Ensured switch distance OFF $S_{ar}$	22 mm / 32 mm
- Actuating magnet BP 6	20
- Actuating magnet BP 10	28
- Actuating magnet BP 15 SS	28
- Actuating magnet BP 8	20
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

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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

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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. 120 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
Number of openers	2
Design of output signal switching device	

## Electrical data - Safety outputs

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

## Electrical data - Diagnostic output

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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

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LED switching conditions display (Y/N)	No
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## ATEX

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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

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Dimensions of the sensor	
- Length of sensor	36
- Diameter of sensor	M18

## 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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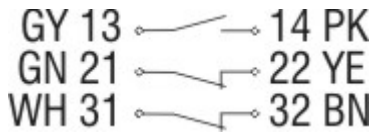
Actuators must be ordered separately.

## Keywords






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Keywords	Ex, EEx, ATEX, Ex BNS180, EX BNS 180, BNS 180 Ex, BNS180ex, BNS 180 ex, ATEX BNS 180
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## Diagram



Note Diagram

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

## Documents

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**Operating instructions and Declaration of conformity (de)** 477 kB, 09.11.2017

Code: mrl\_ex-bns180\_de

**Operating instructions and Declaration of conformity (pt)** 488 kB, 12.01.2018

Code: mrl\_ex-bns180\_pt

**Operating instructions and Declaration of conformity (fr)** 480 kB, 09.09.2014

Code: mrl\_ex-bns180\_fr

**Operating instructions and Declaration of conformity (es)** 500 kB, 19.12.2017

Code: mrl\_ex-bns180\_es

**Operating instructions and Declaration of conformity (it)** 494 kB, 16.01.2018

Code: mrl\_ex-bns180\_it

**Operating instructions and Declaration of conformity (en)** 500 kB, 09.11.2017

Code: mrl\_ex-bns180\_en

**Operating instructions and Declaration of conformity (nl)** 500 kB, 07.08.2018

Code: mrl\_ex-bns180\_nl

**Operating instructions and Declaration of conformity (pl)** 534 kB, 27.03.2018

Code: mrl\_ex-bns180\_pl

**Operating instructions and Declaration of conformity (jp)** 595 kB, 09.09.2014

Code: mrl\_ex-bns180\_jp

**Brochure (de)** 7 MB, 19.10.2016

Code: b\_atep01\_de

**Brochure (en)** 7 MB, 19.10.2016

Code: b\_atep01\_en

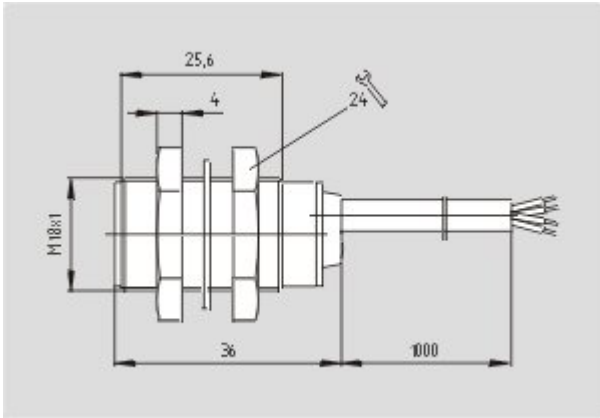
**Brochure (it)** 3 MB, 20.07.2007

Code: b\_atep05

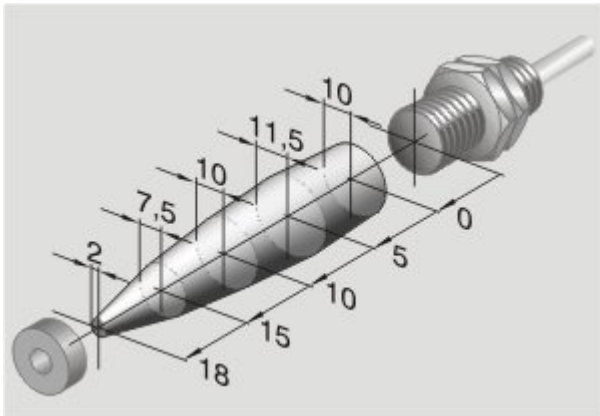
**Brochure (es)** 5 MB, 18.08.2009

Code: b\_atep09

## Images



Dimensional drawing (basic component)



Characteristic curve

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

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