

## Datasheet - EX-BNS 33-12Z-2187-3G/D

Safety sensors / EX-BNS 33



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

- Ex certified
- Thermoplastic enclosure
- Insensitive to soiling
- 88 mm x 25 mm x 13 mm
- no mechanical wear
- Long life
- Concealed mounting possible
- Insensitive to transverse misalignment
- Individual contact outlet

### Ordering details

Product type description	EX-BNS 33-12Z-2187-3G/D
Article number	101188374
EAN code	4030661346038
eCl@ss	27-27-24-02

### Approval

Approval	ATEX
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### Classification

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

### Global Properties

Product name	EX-BNS 33
Standards	EN 60079-0, EN 60079-15, EN 60079-31, IEC 60947-5-3, EN 13463-1, EN 13463-5, 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	Block
Weight	69 g
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	Yes
Recommended safety-monitoring module	

## Mechanical data

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Design of electrical connection	Cable
Cable length	1 m
Conductors	6 x 0,25 mm <sup>2</sup>
AWG-Number	23
mechanical installation conditions	not flush
Active area	Side
Ensured switch distance ON S <sub>ao</sub>	5 mm
Ensured switch distance OFF S <sub>ar</sub>	15 mm
Repeat accuracy R <sub>R</sub>	≤ 0,1 x S <sub>ao</sub>
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

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Ambient temperature	
Storage and transport temperature	
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. 100 VAC/DC
Switching current	max. 250 mA
Switching capacity	max. 3 W

## Outputs

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Design of control output	Other, Reed kontakts
Number of shutters	1 piece
Number of openers	2 piece

## Electrical data - Safety outputs

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

## Electrical data - Diagnostic output

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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

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LED switching conditions display (Y/N)

No

## ATEX

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	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	
- Width of sensor	88 mm
- Height of sensor	25 mm
- Length of sensor	13 mm

## notice

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Contact symbols shown for the closed condition of the guard device.  
The contact configuration for versions with or without LED is identical.

## Included in delivery

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Actuators must be ordered separately.

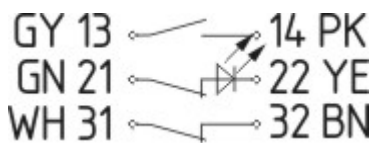
## Keywords

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

Keywords Ex, EEx, ATEX, Ex BNS33, Ex BNS 33, BNS33 Ex, BNS33ex, BNS 33ex, ATEX BNS 33

## Diagram

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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)** 281 kB, 19.11.2014

Code: mrl\_ex-bns33-2187\_de

**Operating instructions and Declaration of conformity (en)** 283 kB, 12.08.2014

Code: mrl\_ex-bns33-2187\_en

**Operating instructions and Declaration of conformity** (en) 545 kB, 06.07.2010

Code: mrl\_ex-bns33-2187\_en

**Operating instructions and Declaration of conformity** (en) 278 kB, 19.11.2014

Code: mrl\_ex-bns33-2187\_en

**Operating instructions and Declaration of conformity** (it) 276 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_it

**Operating instructions and Declaration of conformity** (es) 278 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_es

**Operating instructions and Declaration of conformity** (pl) 349 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_pl

**Operating instructions and Declaration of conformity** (pt) 280 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_pt

**Operating instructions and Declaration of conformity** (jp) 379 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_jp

**Operating instructions and Declaration of conformity** (nl) 278 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_nl

**Operating instructions and Declaration of conformity** (cs) 307 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_cs

**Operating instructions and Declaration of conformity** (sv) 276 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_sv

**Operating instructions and Declaration of conformity** (da) 279 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_da

**Operating instructions and Declaration of conformity** (fr) 278 kB, 15.12.2014

Code: mrl\_ex-bns33-2187\_fr

**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

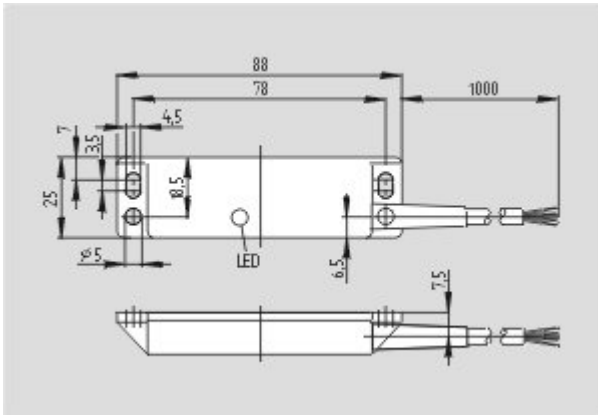
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## Images

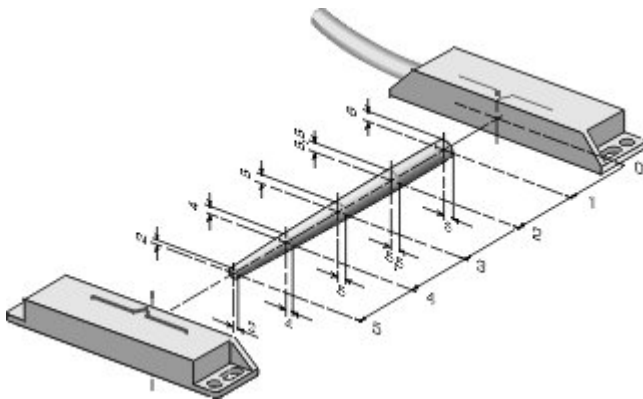
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Product photo



Dimensional drawing (basic component)



Characteristic curve

## System components

### Actuator

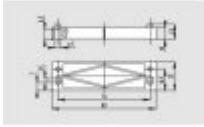
101185182 - EX-BPS 33-3G/D



### Accessories

101158893 - SPACER BN 31/33

- to mount the magnetic safety sensor and actuator on ferromagnetic material



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

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