

## Datasheet - EX-BNS 250-12ZG-3G/D

Safety sensors / EX-BNS 250



- Ex certified
- LED version
- Thermoplastic enclosure
- Small body
- 33 mm x 25 mm x 13 mm
- Concealed mounting possible
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

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

### Ordering details

Product type description	EX-BNS 250-12ZG-3G/D
Article number	10EX-BNS 250-12ZG-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 250
Standards	EN 60079-0, EN 60079-15, EN 60079-31, IEC 60947-5-3, EN 13463-1,

Compliance with the Directives (Y/N) 

Yes

**Materials**

- Material of the housings
- Material of the cable mantle

Plastic, glass-fibre reinforced thermoplastic

PVC

Housing construction form

Block

Weight

Coding available (Y/N)

Yes

Monitoring function of downstream devices (Y/N)

No

Prerequisite evaluation unit

Yes

Recommended safety-monitoring module

Recommended actuator

EX-BPS 250-3G/D

**Mechanical data**

Design of electrical connection

Cable

Cable length

1

Conductors

4 x 0,25

AWG-Number

23

mechanical installation conditions

not flush

Active area

front side

Ensured switch distance ON  $S_{ao}$ 

4 mm

Ensured switch distance OFF  $S_{ar}$ 

14 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. 1 Nm

**Ambient conditions**

Ambient temperature

- Min. environmental temperature

-25 °C

- Min. environmental temperature

-25

- Max. environmental temperature

+70

Storage and transport temperature

- Min. Storage and transport temperature

-25 °C

- Min. Storage and transport temperature

-25

- Max. Storage and transport temperature

+70 °C

- 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

VDC

Switch frequency

max. 5 HZ

Switching voltage

24 VDC max.

Switching current

100 mA max.

Switching capacity

1 W max.

**Outputs**

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

### Electrical data - Safety outputs

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

### 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	0

### LED switching conditions display

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LED switching conditions display (Y/N)	Yes
- The LED is illuminated when the guard door is open.	

### 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	
- Width of sensor	33
- Height of sensor	25
- Length of sensor	13

### 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 BNS250, Ex BNS 250, BNS250 Ex, BNS250ex, BNS 250ex, ATEX BNS 250
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### 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** (da) 247 kB, 03.06.2013

Code: mrl\_ex-bns250\_da

**Operating instructions and Declaration of conformity** (de) 289 kB, 04.10.2017

Code: mrl\_ex-bns250\_de

**Operating instructions and Declaration of conformity** (it) 289 kB, 10.10.2017

Code: mrl\_ex-bns250\_it

**Operating instructions and Declaration of conformity** (fr) 287 kB, 24.10.2017

Code: mrl\_ex-bns250\_fr

**Operating instructions and Declaration of conformity** (pl) 333 kB, 01.02.2018

Code: mrl\_ex-bns250\_pl

**Operating instructions and Declaration of conformity** (jp) 654 kB, 14.09.2011

Code: mrl\_ex-bns250\_jp

**Operating instructions and Declaration of conformity** (nl) 310 kB, 11.07.2018

Code: mrl\_ex-bns250\_nl

**Operating instructions and Declaration of conformity** (pt) 295 kB, 10.10.2017

Code: mrl\_ex-bns250\_pt

**Operating instructions and Declaration of conformity** (es) 292 kB, 10.10.2017

Code: mrl\_ex-bns250\_es

**Operating instructions and Declaration of conformity** (en) 290 kB, 04.10.2017

Code: mrl\_ex-bns250\_en

**Operating instructions and Declaration of conformity** (cs) 263 kB, 03.06.2013

Code: mrl\_ex-bns250\_cs

**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

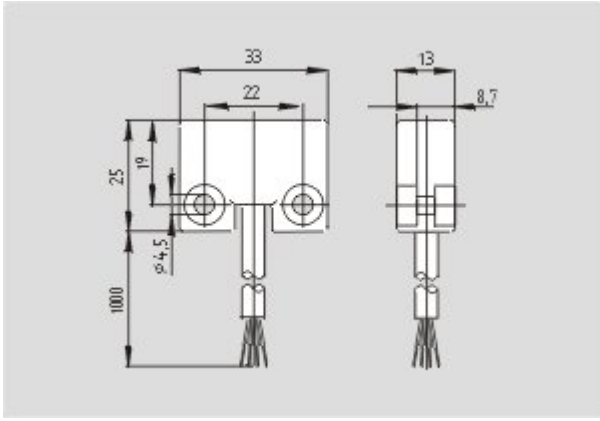
Code: b\_atep05

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

Code: b\_atep09

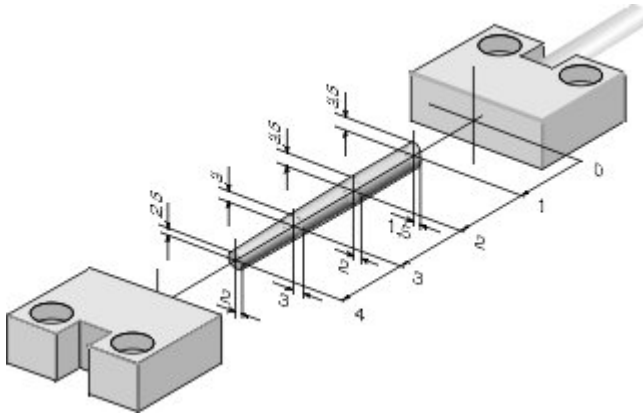
## Images

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Dimensional drawing (basic component)

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Characteristic curve

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## System components

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### Actuator



101183235 - EX-BPS 250-3G/D

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### Accessories



101131223 - SPACER BNS 250

- to mount the magnetic safety sensor and actuator on ferromagnetic material
  - Suitable for food processing industry
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