

## Datasheet - BNS 250-12Z-2187

Safety sensors / BNS 250



Preferred typ



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

- Thermoplastic enclosure
- Small body
- Concealed mounting possible
- 33 mm x 25 mm x 13 mm
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling
- Individual contact outlet

### Ordering details

Product type description	BNS 250-12Z-2187
Article number	101168734
EAN code	4030661224237
eCl@ss	27-27-24-02

### Approval

Approval




### 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

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Product name	BNS 250
Standards	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
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	Yes
Recommended safety-monitoring module	
Recommended actuator	BPS 250

## Mechanical data

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Design of electrical connection	Cable
Cable length	1 m
Conductors	0,25 mm <sup>2</sup>
AWG-Number	23
mechanical installation conditions	not flush
Active area	front side
Ensured switch distance ON	4 mm
Ensured switch distance OFF	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

## Ambient conditions

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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

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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	max. 24 VDC
Switching current	max. 100 mA
Switching capacity	max. 1 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
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## ATEX

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Explosion protection categories for gases	None
Explosion protected category for dusts	None

## Dimensions

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Dimensions of the sensor	
- Width of sensor	33 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.

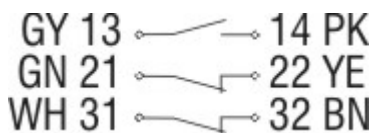
## Included in delivery

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Actuators must be ordered separately.


## Diagram


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



Note Diagram

 positive break NC contact

 active

 no active

 Normally-open contact

 Normally-closed contact

## Ordering code

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BNS 250-(1)Z(2)-(3)

<b>(1)</b>	
<b>11</b>	1 Normally open contact (NO) / 1 Opener (NC)
<b>12</b>	1 Normally open contact (NO) / 2 Opener (NC)
<b>(2)</b>	
<i>without</i>	without LED switching conditions display
<b>G</b>	with LED switching conditions display
<b>(3)</b>	
<b>2187</b>	Individual contact outlet ( <i>without LED switching conditions display</i> )

## Documents

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**Operating instructions and Declaration of conformity** (en) 264 kB, 12.01.2016

Code: mrl\_bns250-12z-2187\_en

**Operating instructions and Declaration of conformity** (pl) 285 kB, 03.02.2015

Code: mrl\_bns250-12z-2187\_pl

**Operating instructions and Declaration of conformity** (es) 420 kB, 07.05.2010

Code: mrl\_bns250-12z-2187\_es

**Operating instructions and Declaration of conformity** (nl) 416 kB, 06.05.2010

Code: mrl\_bns250-12z-2187\_nl

**Operating instructions and Declaration of conformity** (de) 269 kB, 12.01.2016

Code: mrl\_bns250-12z-2187\_de

**Operating instructions and Declaration of conformity** (it) 405 kB, 06.05.2010

Code: mrl\_bns250-12z-2187\_it

**Operating instructions and Declaration of conformity** (jp) 498 kB, 05.07.2011

Code: mrl\_bns250-12z-2187\_jp

**Operating instructions and Declaration of conformity** (pt) 280 kB, 22.05.2012

Code: mrl\_bns250-12z-2187\_pt

**Operating instructions and Declaration of conformity** (da) 272 kB, 27.08.2012

Code: mrl\_bns250-12z-2187\_da

**Operating instructions and Declaration of conformity** (fr) 427 kB, 06.05.2010

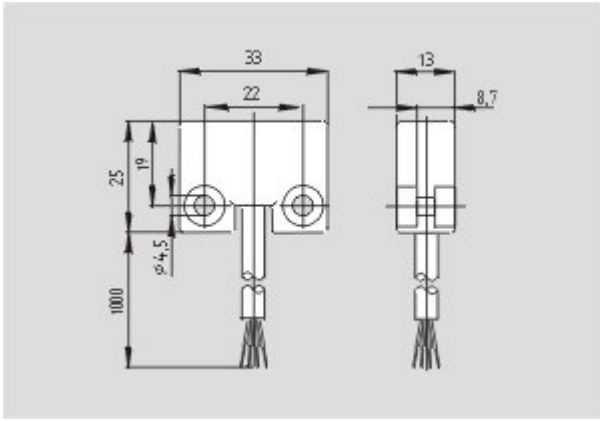
Code: mrl\_bns250-12z-2187\_fr

**EAC certification** (ru) 782 kB, 05.10.2015

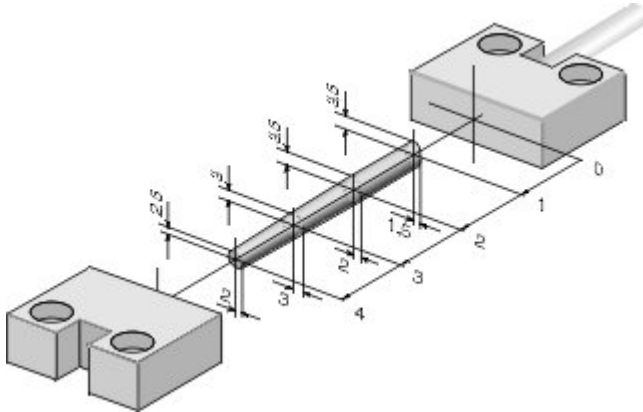
Code: q\_6044p17\_ru

## Images

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Dimensional drawing (basic component)



Characteristic curve

## System components

### Actuator



**101120594 - BPS 250**

- Thermoplastic enclosure

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

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