

## Datasheet - BNS 33-02Z-2187

Safety sensors / BNS 33



Preferred typ



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

- Thermoplastic enclosure
- Concealed mounting possible
- Insensitive to transverse misalignment
- 88 mm x 25 mm x 13 mm
- Long life
- no mechanical wear
- Insensitive to soiling
- AS-Interface Safety at Work available
- Individual contact outlet

### Ordering details

Product type description	BNS 33-02Z-2187
Article number	101128792
EAN code	4030661049595
eCl@ss	27-27-24-02

### Approval

Approval



### Classification

Standards	EN ISO 13849-1
B10d Opener (NC)	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

Product name	BNS 33
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
Weight	70 g
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	Yes

Recommended safety-monitoring module

Recommended actuator

BPS 33, BPS 33-2326

## 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	Side
Ensured switch distance ON	5 mm / 8 mm
- BPS 33 = 5 mm Actuating magnet	
- BPS 33-2326 = 8 mm Actuating magnet	
Ensured switch distance OFF	15 mm / 18 mm
- BPS 33-2326 = 18 mm Actuating magnet	
- BPS 33 = 15 mm Actuating magnet	
Repeat accuracy R	≤ 0,1 x
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

## 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	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	0 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	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.

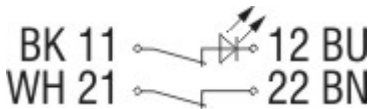
## Included in delivery

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

Actuators must be ordered separately.

## 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 33-(1)Z(2)-(3)-(4)

(1)	
02	2 Opener (NC)
11	1 Normally open contact (NO) / 1 Opener (NC)
12	1 Normally open contact (NO) / 2 Opener (NC)
(2)	
without	without LED switching conditions display

<b>G</b>	with LED switching conditions display
<b>(3)</b>	
<i>without</i>	with cable
<b>ST</b>	with connector M8
<b>(4)</b>	
<b>2187</b>	Individual contact outlet
<b>2187-10</b>	Individual contact outlet, with LED
<b>2237</b>	Actuation from cable direction

## Documents

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**Operating instructions and Declaration of conformity (cn)** 374 kB, 27.05.2015

Code: mrl\_bns33-2187-2363\_cn

**Operating instructions and Declaration of conformity (it)** 791 kB, 16.11.2009

Code: mrl\_bns33-2187-2363\_it

**Operating instructions and Declaration of conformity (pt)** 314 kB, 16.04.2012

Code: mrl\_bns33-2187-2363\_pt

**Operating instructions and Declaration of conformity (de)** 617 kB, 21.01.2010

Code: mrl\_bns33-2187-2363\_de

**Operating instructions and Declaration of conformity (es)** 417 kB, 11.11.2009

Code: mrl\_bns33-2187-2363\_es

**Operating instructions and Declaration of conformity (da)** 303 kB, 27.08.2012

Code: mrl\_bns33-2187-2363\_da

**Operating instructions and Declaration of conformity (fr)** 418 kB, 05.11.2009

Code: mrl\_bns33-2187-2363\_fr

**Operating instructions and Declaration of conformity (pl)** 317 kB, 02.12.2014

Code: mrl\_bns33-2187-2363\_pl

**Operating instructions and Declaration of conformity (sv)** 308 kB, 16.04.2012

Code: mrl\_bns33-2187-2363\_sv

**Operating instructions and Declaration of conformity (jp)** 1 MB, 23.11.2010

Code: mrl\_bns33-2187-2363\_jp

**Operating instructions and Declaration of conformity (nl)** 424 kB, 05.11.2009

Code: mrl\_bns33-2187-2363\_nl

**Operating instructions and Declaration of conformity (en)** 698 kB, 21.01.2010

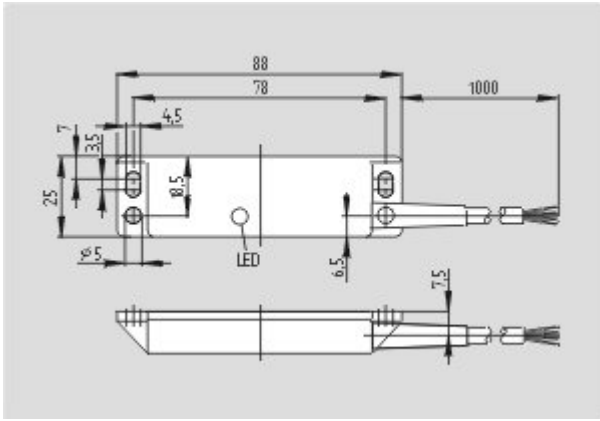
Code: mrl\_bns33-2187-2363\_en

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

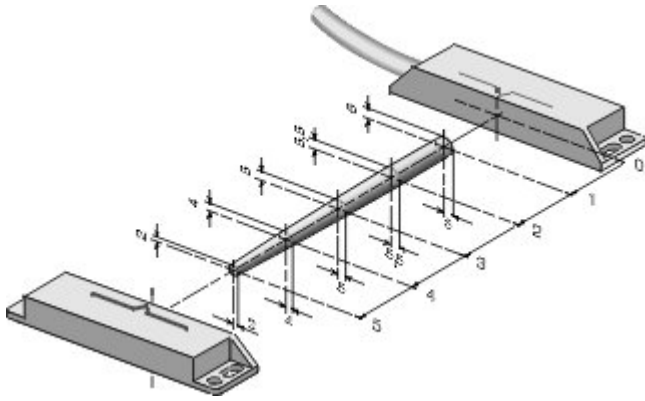
Code: q\_6044p17\_ru

## Images

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Dimensional drawing (basic component)



Characteristic curve

## System components

### Actuator

101107771 - BPS 33



101148482 - BPS 33-2326

- higher switching distance  $S_{ao}$  8 mm



### Accessories

101158893 - SPACER BN 31/33

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

