

## Datasheet - BNS 33-12ZG-2187

Safety sensors / BNS 33

 Preferred typ

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

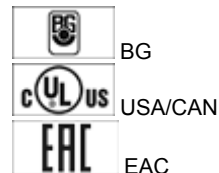
- LED version
- Individual contact outlet
- Thermoplastic enclosure
- Concealed mounting possible
- Insensitive to transverse misalignment
- 88 mm x 25 mm x 13 mm
- Long life
- no mechanical wear
- Insensitive to soiling
- AS-Interface Safety at Work available

### Ordering details

Product type description	BNS 33-12ZG-2187
Article number	101128196
EAN Code	4030661026947
eCl@ss	27-27-24-02

### Approval

Approval



### 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	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{ap} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	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	75

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

---

Design of electrical connection	Cable
Cable length	1
Conductors	0,25
AWG-Number	23
mechanical installation conditions	not flush
Active area	Side
Ensured switch distance ON $S_{ao}$	5 mm / 8 mm
- BPS 33 = 5 mm Actuating magnet	
- BPS 33-2326 = 8 mm Actuating magnet	
Ensured switch distance OFF $S_{ar}$	15 mm / 18 mm
- BPS 33 = 15 mm Actuating magnet	
- BPS 33-2326 = 18 mm Actuating magnet	
Repeat accuracy $R_R$	$\leq 0,1 \times S_{ao}$
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

---

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

---

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. 10 mA
Switching capacity	max. 240 mW

## Outputs

---

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

## Electrical data - Safety outputs

---

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

Number of secure outputs with contact 0

## Electrical data - Diagnostic output

---

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

---

LED switching conditions display (Y/N) Yes

- The LED is illuminated when the guard is closed.

## ATEX

---

Explosion protection categories for gases None

Explosion protected category for dusts None

## Dimensions

---

Dimensions of the sensor

- Width of sensor 88 mm

- Height of sensor 25 mm

- Length of sensor 13 mm

## notice

---

Contact symbols shown for the closed condition of the guard device.

The contact configuration for versions with or without LED is identical.

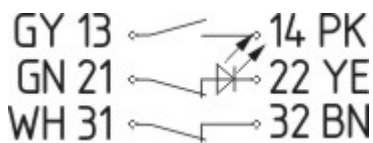
## Included in delivery

---


Actuators must be ordered separately.

## Diagram


---





Note Diagram

 positive break NC contact

 active

 no active

 Normally-open contact

 Normally-closed contact

## Ordering code

---

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

(1)

02

11

2 Opener (NC)

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>	
<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

---

### Operating instructions and Declaration of conformity (it) 327 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_it

### Operating instructions and Declaration of conformity (pt) 336 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_pt

### Operating instructions and Declaration of conformity (de) 294 kB, 21.08.2018

Code: mrl\_bns33-2187-2363\_de

### Operating instructions and Declaration of conformity (es) 333 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_es

### Operating instructions and Declaration of conformity (da) 333 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_da

### Operating instructions and Declaration of conformity (fr) 335 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_fr

### Operating instructions and Declaration of conformity (pl) 370 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_pl

### Operating instructions and Declaration of conformity (sv) 332 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_sv

### Operating instructions and Declaration of conformity (jp) 557 kB, 06.06.2018

Code: mrl\_bns33-2187-2363\_jp

### Operating instructions and Declaration of conformity (nl) 332 kB, 23.08.2018

Code: mrl\_bns33-2187-2363\_nl

### Operating instructions and Declaration of conformity (en) 336 kB, 21.08.2018

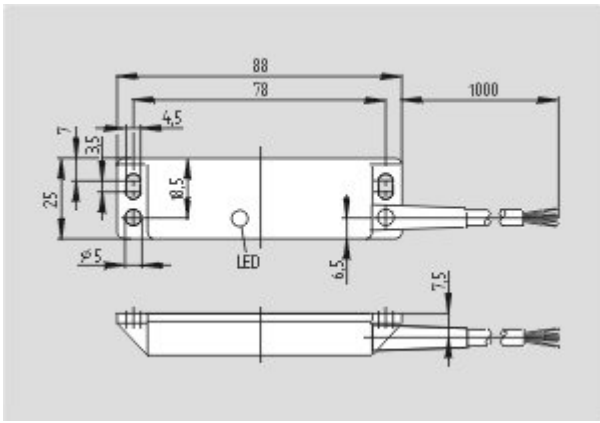
Code: mrl\_bns33-2187-2363\_en

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

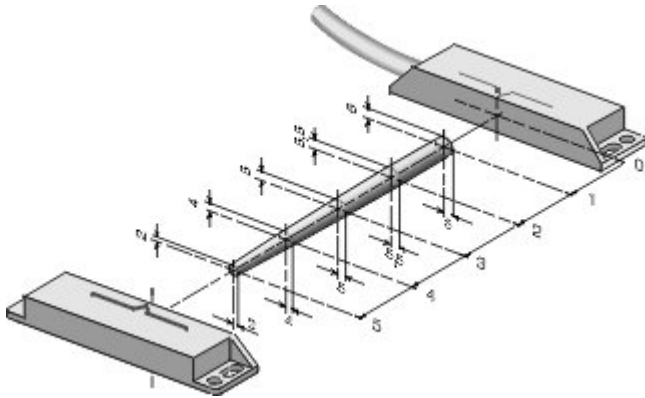
Code: q\_6044p17\_ru

## Images

---



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

