

## Datasheet - BNS 33-12ZG-ST

Safety sensors / BNS 33



Preferred typ



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

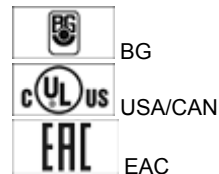
- Connector M8 x 1, 4-pole
- Thermoplastic enclosure
- LED version
- Concealed mounting possible
- Insensitive to transverse misalignment
- 88 mm x 25 mm x 13 mm
- Long life
- no mechanical wear
- Insensitive to soiling
- AS-Interface Safety at Work available

### Ordering details

Product type description	BNS 33-12ZG-ST
Article number	101144401
EAN Code	4030661133331
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
Mission time notice	20 Years
	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$
	$n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	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
Weight	26
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	Connector M8
mechanical installation conditions	not flush
Active area	Side
Ensured switch distance ON $S_{ao}$	5 mm / 8 mm
- BPS 33-2326 = 8 mm Actuating magnet	
- BPS 33 = 5 mm Actuating magnet	
Ensured switch distance OFF $S_{ar}$	15 mm / 18 mm
- BPS 33-2326 = 18 mm Actuating magnet	
- BPS 33 = 15 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
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)	No
Voltage type	VDC
Switch frequency	max. 5 HZ
Switching voltage	max. 24 VDC
Switching current	max. 10 mA
Switching capacity	max. 240 mW

## Outputs

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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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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.

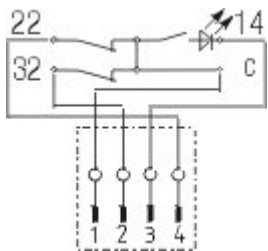
## Included in delivery

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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)

<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

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**Operating instructions and Declaration of conformity** (jp) 551 kB, 18.08.2017

Code: mrl\_bns33\_jp

**Operating instructions and Declaration of conformity** (es) 298 kB, 16.09.2016

Code: mrl\_bns33\_es

**Operating instructions and Declaration of conformity** (pt) 300 kB, 03.06.2016

Code: mrl\_bns33\_pt

**Operating instructions and Declaration of conformity** (en) 299 kB, 04.03.2016

Code: mrl\_bns33\_en

**Operating instructions and Declaration of conformity** (fr) 299 kB, 29.04.2016

Code: mrl\_bns33\_fr

**Operating instructions and Declaration of conformity** (pl) 327 kB, 29.04.2016

Code: mrl\_bns33\_pl

**Operating instructions and Declaration of conformity** (de) 300 kB, 04.03.2016

Code: mrl\_bns33\_de

**Operating instructions and Declaration of conformity** (cs) 307 kB, 08.01.2013

Code: mrl\_bns33\_cs

**Operating instructions and Declaration of conformity** (nl) 322 kB, 28.06.2018

Code: mrl\_bns33\_nl

**Operating instructions and Declaration of conformity** (da) 282 kB, 08.01.2013

Code: mrl\_bns33\_da

**Operating instructions and Declaration of conformity** (sv) 279 kB, 09.01.2013

Code: mrl\_bns33\_sv

**Operating instructions and Declaration of conformity** (it) 294 kB, 02.09.2016

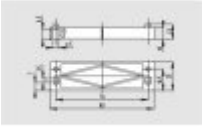
Code: mrl\_bns33\_it

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

Code: q\_6044p17\_ru

## Images





### 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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