

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	BG USA/CAN EAC
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Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact/Normally open contact (NC/NO) - notice	25.000.000 at max. 20% contact load
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
- 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
restistance 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

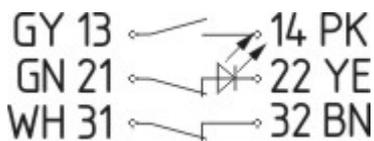
notice

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	2 Opener (NC)
11	1 Normally open contact (NO) / 1 Opener (NC)
12	1 Normally open contact (NO) / 2 Opener (NC)
(2)	

<i>without</i>	without LED switching conditions display
G	with LED switching conditions display
(3)	
<i>without</i>	with cable
ST	with connector M8
(4)	
2187	Individual contact outlet
2187-10	Individual contact outlet, with LED
2237	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) 581 kB, 14.06.2019

Code: mrl_bns33-2187-2363_jp

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

Code: mrl_bns33-2187-2363_nl

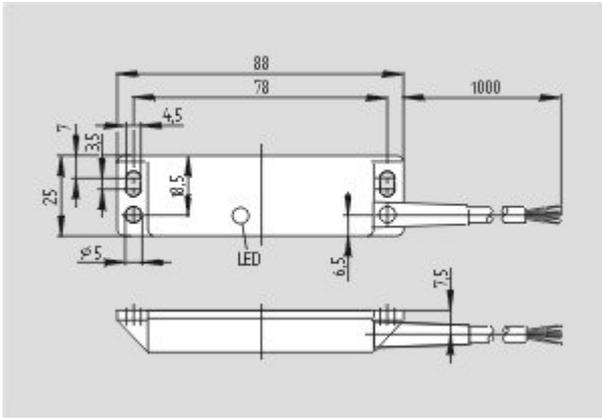
Operating instructions and Declaration of conformity (en) 336 kB, 21.08.2018

Code: mrl_bns33-2187-2363_en

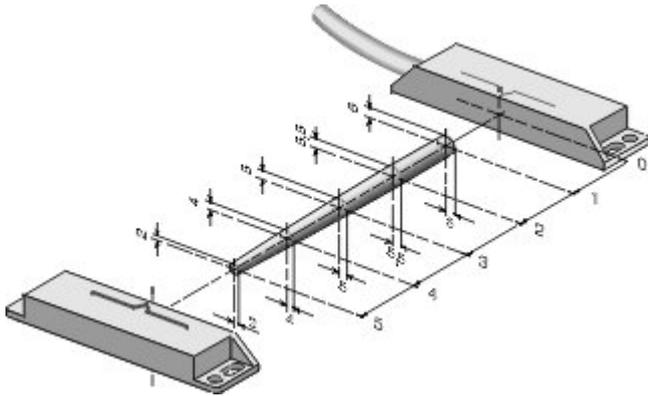
EAC certification (ru) 1 MB, 14.01.2020

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

