

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

Approval

Approval



Classification

Standards	EN ISO 13849-1
B _{10d} Opener (NC)	25.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{ap} \times h_{cp} \times 3600 \text{ s/h}}{t_{cycle}}$

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	

Mechanical data

Design of electrical connection	Cable
Cable length	1 m
Conductors	0,25 mm ²
AWG-Number	23
mechanical installation conditions	not flush
Active area	Side
Ensured switch distance ON	5 mm / 8 mm
- BPS 33-2326 = 8 mm Actuating magnet	
- BPS 33 = 5 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

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	VAC/DC
Switch frequency	max. 5 Hz
Switching voltage	max. 100 VAC/DC
Switching current	max. 250 mA
Switching capacity	max. 3 W

Outputs

Design of control output	Other, Reed kontakts
Number of shutters	0 piece
Number of openers	2 piece

Electrical data - Safety outputs

Number of secure semi-conductor outputs	0 piece
Number of secure outputs with contact	0 piece

Electrical data - Diagnostic output

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

LED switching conditions display (Y/N)	No
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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

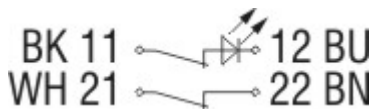
notice

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)	
without	without LED switching conditions display
G	with LED switching conditions display

(3)

without

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) 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 (sv) 308 kB, 16.04.2012

Code: mrl_bns33-2187-2363_sv

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) 302 kB, 29.07.2013

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

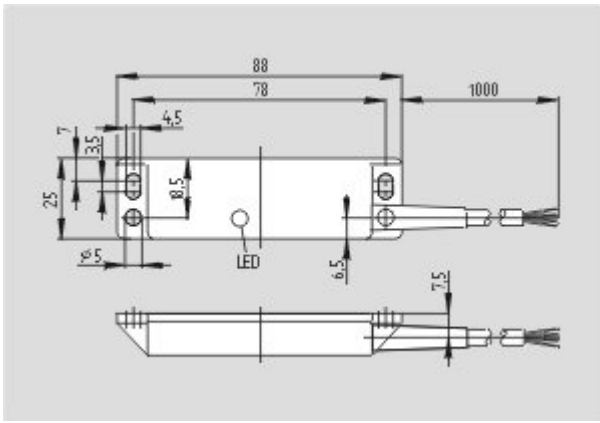
Operating instructions and Declaration of conformity (nl) 424 kB, 05.11.2009

Code: mrl_bns33-2187-2363_nl

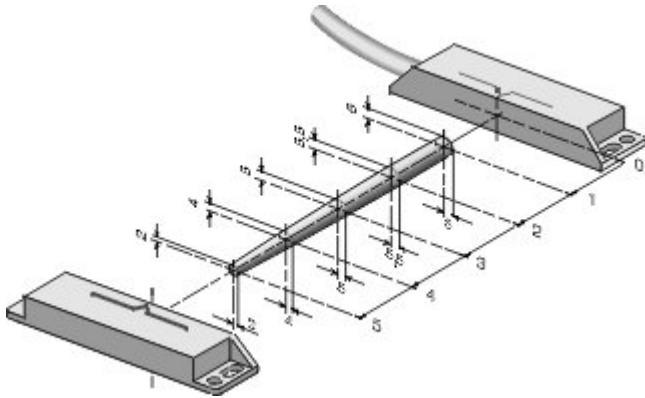
Operating instructions and Declaration of conformity (en) 698 kB, 21.01.2010

Code: mrl_bns33-2187-2363_en

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

