

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
- thermoplastic enclosure
- Individual contact outlet
- 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 |

Approval

Approval



BG



USA/CAN

Classification

| | |
|---|--|
| Standards | EN ISO 13849-1 |
| B _{10d} Opener/Normally open contact (NC/NO) | 25.000.000 |
| - notice | at max. 20% contact load |
| Mission time | 20 Years |
| notice | $MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$ |

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 | 75 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

| | |
|--|---|
| 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 = 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

| | |
|--|--------|
| 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 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) | 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 |

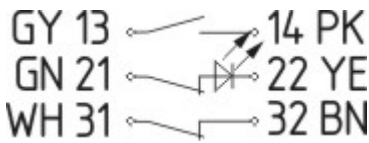
notice

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) 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

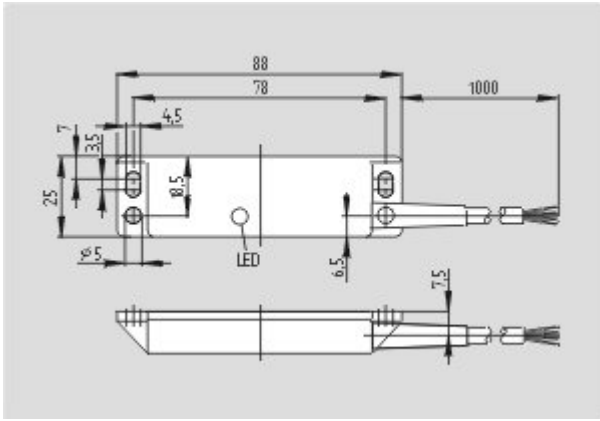
Operating instructions and Declaration of conformity (nl) 424 kB, 05.11.2009

Code: mrl_bns33-2187-2363_nl

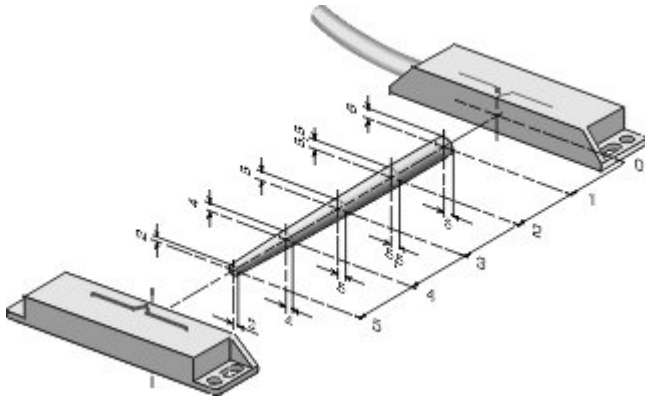
Operating instructions and Declaration of conformity (en) 698 kB, 21.01.2010

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

