

Datasheet - BNS 33-11Z-ST

Safety sensors / BNS 33



Preferred typ



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

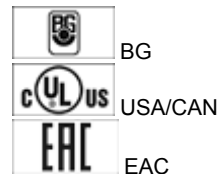
- Thermoplastic enclosure
- Concealed mounting possible
- Insensitive to transverse misalignment
- 88 mm x 25 mm x 13 mm
- Long life
- no mechanical wear
- Insensitive to soiling
- AS-Interface Safety at Work available
- Connector M8 x 1, 4-pole

Ordering details

| | |
|--------------------------|---------------|
| Product type description | BNS 33-11Z-ST |
| Article number | 101140997 |
| EAN Code | 4030661120201 |
| 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 | $MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$ |

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 | 20 |
| 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 | Connector M8 |
| 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 33-2326 = 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

| | |
|--|--------|
| 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. 60 VAC/DC |
| Switching current | max. 400 mA |
| Switching capacity | max. 10 W |

Outputs

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

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) | No |
|--|----|

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 |

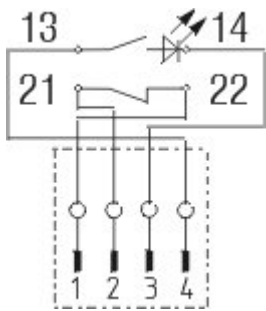
notice

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 (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

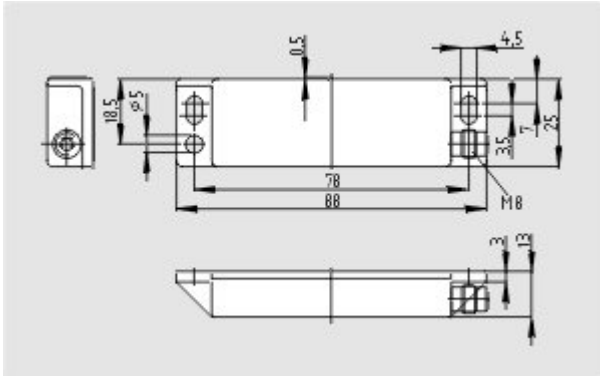
Operating instructions and Declaration of conformity (it) 294 kB, 02.09.2016

Code: mrl_bns33_it

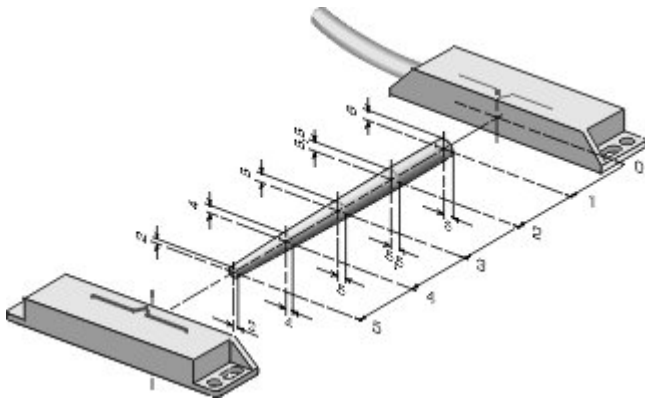
EAC certification (ru) 782 kB, 05.10.2015

Code: q_6044p17_ru

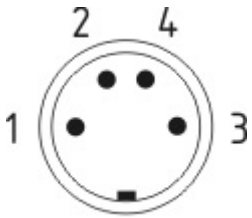
Images



Dimensional drawing (basic component)



Characteristic curve



Contact arrangement

System components

Actuator

101107771 - BPS 33

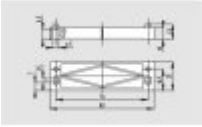


101148482 - BPS 33-2326

• higher switching distance S_{ao} 8 mm



Accessories



101158893 - SPACER BN 31/33

- to mount the magnetic safety sensor and actuator on ferromagnetic material

Connector



101194059 - BNS-Y-11

- enables the interconnection and the connection of BNS safety sensors to a common safety monitoring module
- for BNS 33, BNS 36, BNS 260 (with 1 NC/1 NO)

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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