

## Datasheet - BNS 250-11Z

Safety sensors / BNS 250



Preferred typ



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

- Thermoplastic enclosure
- Small body
- Concealed mounting possible
- 33 mm x 25 mm x 13 mm
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

### Ordering details

Product type description	BNS 250-11Z
Article number	101120670
EAN Code	4030661049175
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 250
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	50
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	Yes
Recommended safety-monitoring module	
Recommended actuator	BPS 250

## Mechanical data

---

Design of electrical connection	Cable
Cable length	1
Conductors	0,25
AWG-Number	23
mechanical installation conditions	not flush
Active area	front side
Ensured switch distance ON $S_{ao}$	4 mm
Ensured switch distance OFF $S_{ar}$	14 mm
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
- Max. environmental temperature	+70
Storage and transport temperature	
- Min. Storage and transport temperature	-25
- Max. Storage and transport temperature	+70
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. 100 mA
Switching capacity	max. 1 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	33
- Height of sensor	25
- Length of sensor	13

### 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 250-(1)Z(2)-(3)

<b>(1)</b>	
<b>11</b>	1 Normally open contact (NO) / 1 Opener (NC)
<b>12</b>	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>	
<b>2187</b>	Individual contact outlet ( <i>without LED switching conditions display</i> )

## Documents

---

**Operating instructions and Declaration of conformity** (fr) 274 kB, 29.04.2016

Code: mrl\_bns250\_fr

**Operating instructions and Declaration of conformity** (da) 278 kB, 27.08.2012

Code: mrl\_bns250\_da

**Operating instructions and Declaration of conformity** (pt) 273 kB, 27.05.2016

Code: mrl\_bns250\_pt

**Operating instructions and Declaration of conformity** (de) 276 kB, 04.03.2016

Code: mrl\_bns250\_de

**Operating instructions and Declaration of conformity** (jp) 512 kB, 22.08.2017

Code: mrl\_bns250\_jp

**Operating instructions and Declaration of conformity** (pl) 301 kB, 15.04.2016

Code: mrl\_bns250\_pl

**Operating instructions and Declaration of conformity** (en) 274 kB, 04.03.2016

Code: mrl\_bns250\_en

**Operating instructions and Declaration of conformity** (it) 270 kB, 15.04.2016

Code: mrl\_bns250\_it

**Operating instructions and Declaration of conformity** (es) 263 kB, 09.03.2016

Code: mrl\_bns250\_es

**Operating instructions and Declaration of conformity** (nl) 286 kB, 28.06.2018

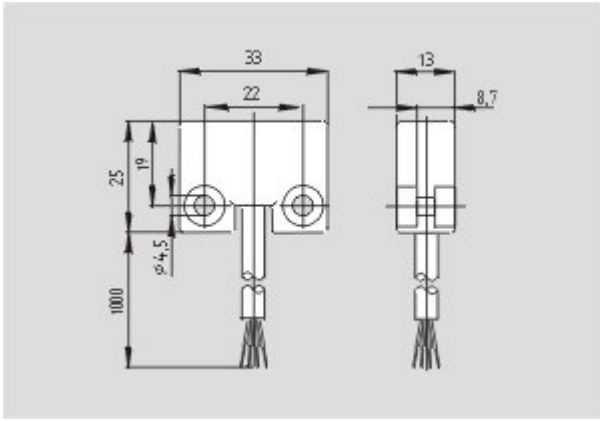
Code: mrl\_bns250\_nl

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

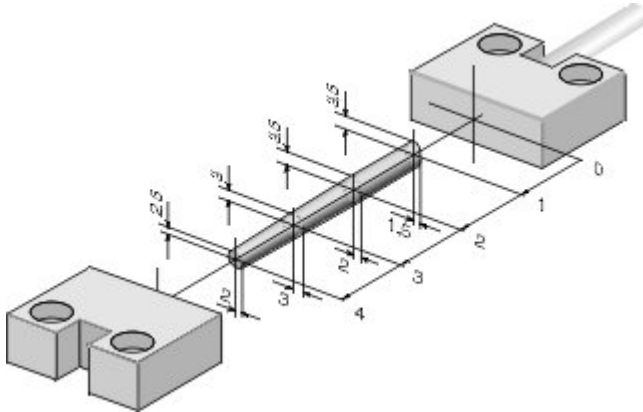
Code: q\_6044p17\_ru

## Images

---



Dimensional drawing (basic component)



Characteristic curve

## System components

### Actuator



**101120594 - BPS 250**

- Thermoplastic enclosure

### Accessories



**101131223 - SPACER BNS 250**

- to mount the magnetic safety sensor and actuator on ferromagnetic material
- Suitable for food processing industry

K.A. Schmersal GmbH & Co. KG, Möddinghofe 30, D-42279 Wuppertal

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

Generiert am 18.09.2018 - 06:56:54h Kasbase 3.3.0.F.64I