

## Datasheet - BNS-B20-12zG-R

Safety sensors / BNS-B20



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

- thermoplastic enclosure
- Non-contact safety switch
- Does not protrude into the door opening
- 119,5 mm x 140 mm x 43,3 mm
- Substitutes door-handle and safety switch, no further door fittings required
- Modern and symmetric design
- Tamper-proof because of integral coded safety sensor
- Ergonomic operation
- Suitable for hinged and sliding guards
- No protruding actuator
- Simple mounting with 4 Screws
- Pre-wired cable

### Ordering details

Product type description	BNS-B20-12ZG-R
Article number	101186265
EAN code	4030661333489

### Approval

Approval



BG




USA/CAN

### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> 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-B20
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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	146.5 g
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	
Recommended actuator	BNS-B20-B01

### Mechanical data

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Design of electrical connection	Cable
Cable output	bottom
Cable length	1 m
Conductors	6 x 0,25 mm <sup>2</sup>
AWG-Number	
mechanical installation conditions	quasi-flush
Ensured switch distance ON	0 mm
Ensured switch distance OFF	22 mm
Type of actuation	Magnet
restistance to shock	30 g / 11 ms
Resistance to vibration	10 ... 55 Hz, Amplitude 1 mm
Latching force	100 N
Door hinge	right
Max. door weight	
- sliding guard	3 kg
- hinged guard	5 kg

### Ambient conditions

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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

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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

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Design of control output

Number of shutters	1 piece
Number of openers	2 piece
Design of output signal switching device	

### Electrical data - Safety outputs

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Number of secure semi-conductor outputs	0 piece
Number of secure outputs with contact	2 piece

### Electrical data - Diagnostic output

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Number of semi-conductor outputs with signaling function	0 piece
Number of outputs with signaling function that already have a contact	1 piece

### LED switching conditions display

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LED switching conditions display (Y/N)	Yes
- The LED is illuminated when the guard is closed.	

### ATEX

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Explosion protection categories for gases	None
Explosion protected category for dusts	None

### Dimensions

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Dimensions of the sensor	
- Width of sensor	119.5 mm
- Height of sensor	140 mm
- Length of sensor	43.3 mm

### notice

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Contact symbols shown for the closed condition of the guard device.

The contact configuration for versions with or without LED is identical.

Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

Contact S21-S22 must be integrated in the safety circuit

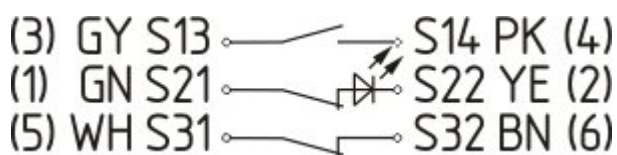
### Included in delivery

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Actuators must be ordered separately.

### Diagram


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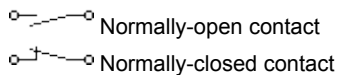


Note Diagram

 positive break NC contact

 active

 no active



## Ordering code

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### BNS-B20-(1)Z(2)-(3)-(4)

<b>(1)</b>	
<b>12</b>	1 Normally open contact (NO) / 2 Opener (NC)
<b>11</b>	1 Normally open contact (NO) / 1 Opener (NC)
<b>02</b>	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>	
<i>without</i>	with Pre-wired cable bottom
<b>H</b>	with Pre-wired cable rear
<b>ST</b>	with Connector M12 bottom
<b>(4)</b>	
<b>L</b>	Door hinge on left-hand side ( <i>Only for Pre-wired cable bottom or Plug-in connection</i> )
<b>R</b>	Door hinge on right-hand side ( <i>Only for Pre-wired cable bottom or Plug-in connection</i> )

## Documents

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**Operating instructions and Declaration of conformity** (pt) 535 kB, 06.07.2012

Code: mrl\_bns-b20\_pt

**Operating instructions and Declaration of conformity** (es) 513 kB, 11.08.2011

Code: mrl\_bns-b20\_es

**Operating instructions and Declaration of conformity** (it) 496 kB, 13.09.2011

Code: mrl\_bns-b20\_it

**Operating instructions and Declaration of conformity** (en) 659 kB, 16.08.2011

Code: mrl\_bns-b20\_en

**Operating instructions and Declaration of conformity** (pl) 497 kB, 30.07.2013

Code: mrl\_bns-b20\_pl

**Operating instructions and Declaration of conformity** (de) 576 kB, 16.08.2011

Code: mrl\_bns-b20\_de

**Operating instructions and Declaration of conformity** (jp) 663 kB, 10.11.2011

Code: mrl\_bns-b20\_jp

**Operating instructions and Declaration of conformity** (fr) 497 kB, 13.09.2011

Code: mrl\_bns-b20\_fr

**Operating instructions and Declaration of conformity** (nl) 520 kB, 19.08.2011

Code: mrl\_bns-b20\_nl

**Operating instructions and Declaration of conformity** (da) 513 kB, 23.08.2012

Code: mrl\_bns-b20\_da

**BG-test certificate** (en) 643 kB, 27.02.2007

Code: z\_bnbp02

**BG-test certificate** (de) 648 kB, 27.02.2007

Code: z\_bnbp01

**Brochure** (fr) 337 kB, 08.10.2004

Code: b\_b20p03

**Brochure** (en) 290 kB, 07.10.2004

Code: b\_b20p02

**Brochure** (de) 296 kB, 07.10.2004

Code: b\_b20p01

**Brochure** (it) 297 kB, 07.10.2004

Code: b\_b20p05

**notice** (de, en) 60 kB, 21.03.2006

Code: s\_b20p01

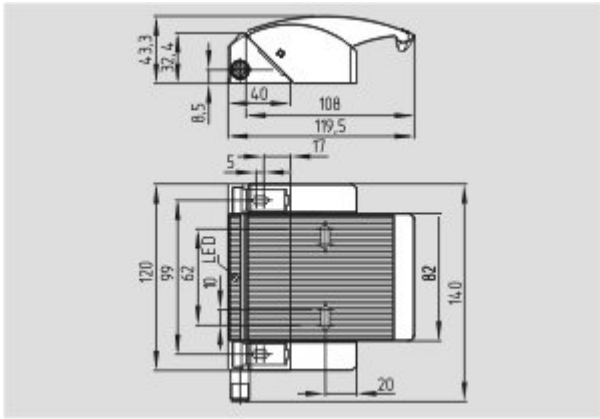
## Images

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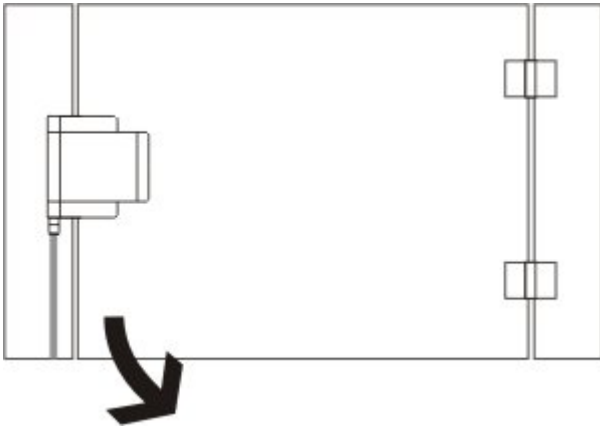


Product photo

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Dimensional drawing (basic component)



Clipart

## System components

### Actuator



101177737 - BNS-B20-B01

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

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Image

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