

## Datasheet - BNS-B20-12zG-L

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-L |
| Article number           | 101186266      |
| EAN Code                 | 4030661333496  |
| 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-B20                                       |
| 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   | 143   |
| 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                            |
| Conductors                           | 6 x 0,25                     |
| AWG-Number                           |                              |
| mechanical installation conditions   | quasi-flush                  |
| Ensured switch distance ON $S_{ao}$  | 0 mm                         |
| Ensured switch distance OFF $S_{ar}$ | 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                           | left                         |
| Max. door weight                     |                              |
| - sliding guard                      | 3                            |
| - hinged guard                       | 5                            |

## 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   | VAC/DC          |
| Switch frequency                                       | max. 5 HZ       |
| Switching voltage                                      | max. 100 VAC/DC |
| Switching current                                      | max. 10 mA      |
| Switching capacity                                     | max. 240 mW     |

## Outputs

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|  |   |
|--|---|
| Design of control output                 |   |
| Number of shutters                       | 1 |
| Number of openers                        | 2 |
| Design of output signal switching device |   |

### Electrical data - Safety outputs

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

### Electrical data - Diagnostic output

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

### 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

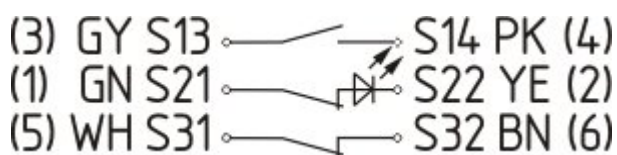
### Included in delivery

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Actuators must be ordered separately.

### Diagram

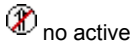
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Note Diagram

☉ positive break NC contact

⊕ active



- Normally-open contact
- Normally-closed contact

## Ordering code

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

(1)

12 1 Normally open contact (NO) / 2 Opener (NC)  
02 2 Opener (NC)

(2)

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

(3)

without with Pre-wired cable bottom  
H with Pre-wired cable rear  
ST with Connector M12 bottom

(4)

L Door hinge on left-hand side (*Only for Pre-wired cable bottom or Plug-in connection*)  
R Door hinge on right-hand side (*Only for Pre-wired cable bottom or Plug-in connection*)

## Documents

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**Operating instructions and Declaration of conformity (pt)** 524 kB, 16.10.2017

Code: mrl\_bns-b20\_pt

**Operating instructions and Declaration of conformity (es)** 485 kB, 28.09.2017

Code: mrl\_bns-b20\_es

**Operating instructions and Declaration of conformity (it)** 499 kB, 16.10.2017

Code: mrl\_bns-b20\_it

**Operating instructions and Declaration of conformity (en)** 484 kB, 14.09.2017

Code: mrl\_bns-b20\_en

**Operating instructions and Declaration of conformity (pl)** 554 kB, 01.03.2018

Code: mrl\_bns-b20\_pl

**Operating instructions and Declaration of conformity (de)** 488 kB, 14.09.2017

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)** 485 kB, 25.09.2017

Code: mrl\_bns-b20\_fr

**Operating instructions and Declaration of conformity (nl)** 517 kB, 28.06.2018

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, 03.05.2005

Code: b\_b20p03

**Brochure** (en) 290 kB, 03.05.2005

Code: b\_b20p02

**Brochure** (de) 296 kB, 03.05.2005

Code: b\_b20p01

**Brochure** (it) 297 kB, 03.05.2005

Code: b\_b20p05

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

Code: q\_6044p17\_ru

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

Code: s\_b20p01

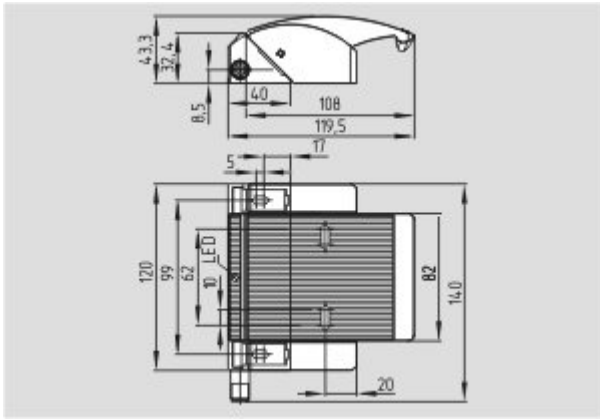
## Images

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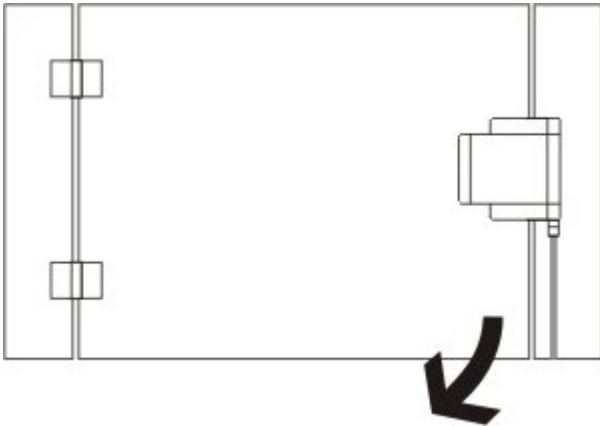


Product photo

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Dimensional drawing (basic component)



Clipart

## System components

### Actuator



101177737 - BNS-B20-B01