

## Datasheet - BNS-B20-12z-H

Safety sensors / BNS-B20

 Preferred typ

- 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

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

### Ordering details

Product type description	BNS-B20-12Z-H
Article number	101186262
EAN code	4030661326825

### 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
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	120 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

Design of electrical connection	Cable
Cable output	rear
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
resistance 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

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. 110 VAC/DC
Switching current	max. 250 mA
Switching capacity	max. 3 W

### Outputs

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

### Electrical data - Safety outputs

Number of secure semi-conductor outputs	0 piece
Number of secure outputs with contact	2 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	1 piece

### LED switching conditions display

LED switching conditions display (Y/N)	No
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### ATEX

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

### Dimensions

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

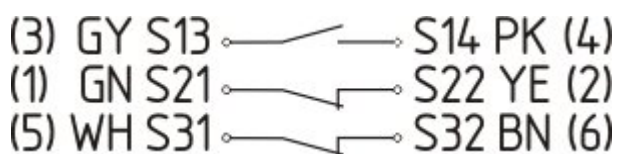
### notice

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

Actuators must be ordered separately.

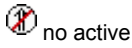
### Diagram



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)

11 1 Normally open contact (NO) / 1 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) 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\_bnbsp02

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

Code: z\_bnbsp01

**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

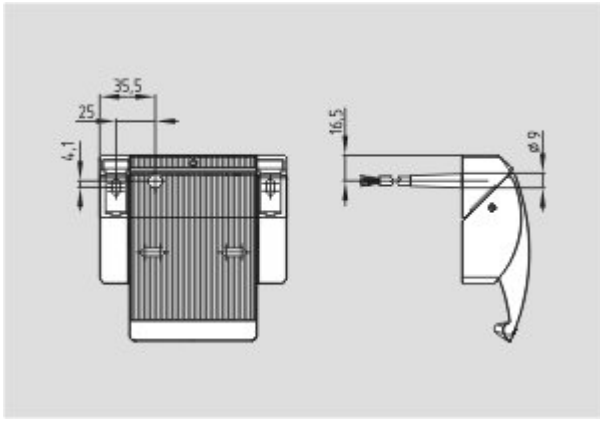
## Images

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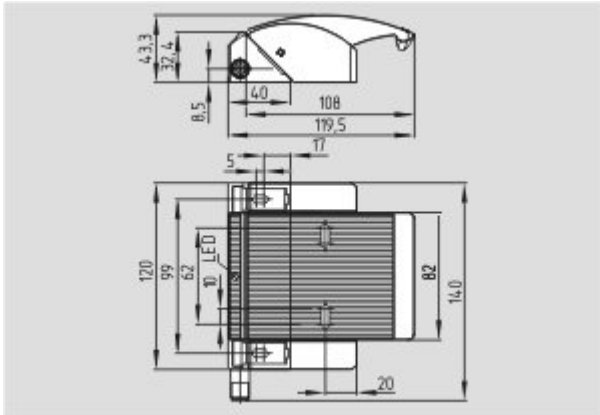


Product photo

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Dimensional drawing (basic component)



Dimensional drawing (basic component)

## System components

### Actuator



101177737 - BNS-B20-B01

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

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

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