

Datasheet - BNS-B20-12zG-ST-R

Safety sensors / BNS-B20



- 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
- AS-Interface Safety at Work available
- No protruding actuator
- Simple mounting with 4 Screws
- Connector M12 x 1, 8-pole

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

Ordering details

Product type description	BNS-B20-12ZG-ST-R
Article number	1177734
EAN code	4030661309194

Approval

Approval



Classification

Standards	EN ISO 13849-1
B _{10d} Opener/Normally open contact (NC/NO)	25.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{zyklus}}$

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

Weight

115 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

Connector M12

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

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

VDC

Switch frequency

max. 5 Hz

Switching voltage

max. 24 VDC

Switching current

max. 10 mA

Switching capacity

max. 240 mW

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)	Yes
- The LED is illuminated when the guard is closed.	

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

 no active

 Normally-open contact

 Normally-closed contact

Ordering code

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

Operating instructions and Declaration of conformity (de) 926 kB, 26.02.2010

http://127.0.0.1/Bilddata/Si_senso/Pdf/B20/bedien/de/mrl_bns-b20_de.pdf

Operating instructions and Declaration of conformity (en) 909 kB, 26.02.2010

http://127.0.0.1/Bilddata/Si_senso/Pdf/B20/bedien/en/mrl_bns-b20_en.pdf

BG-test certificate (de) 648 kB, 27.02.2007

http://127.0.0.1/Bilddata/Si_senso/Pdf/B20/baumuste/z_bntp01.pdf

BG-test certificate (en) 643 kB, 27.02.2007

http://127.0.0.1/Bilddata/Si_senso/Pdf/B20/baumuste/z_bntp02.pdf

Brochure (fr) 337 kB, 08.10.2004

http://127.0.0.1/Bilddata/broschue/b_b20p03.pdf

Brochure (it) 297 kB, 07.10.2004

http://127.0.0.1/Bilddata/broschue/b_b20p05.pdf

Brochure (en) 290 kB, 07.10.2004

http://127.0.0.1/Bilddata/broschue/b_b20p02.pdf

Brochure (de) 296 kB, 07.10.2004

http://127.0.0.1/Bilddata/broschue/b_b20p01.pdf

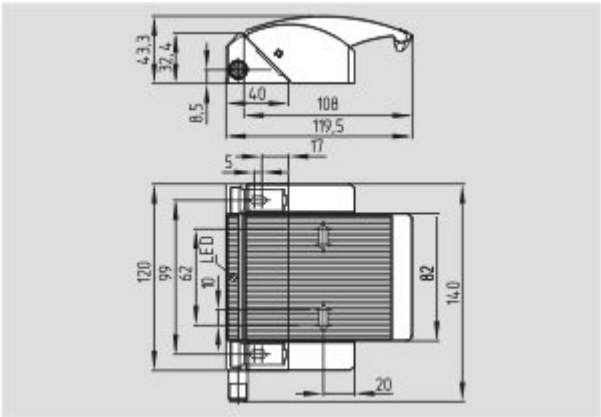
notice (de, en) 60 kB, 21.03.2006

http://127.0.0.1/Bilddata/Si_senso/Pdf/B20/montage/s_b20p01.pdf

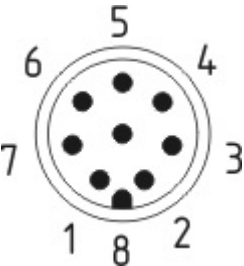
Images



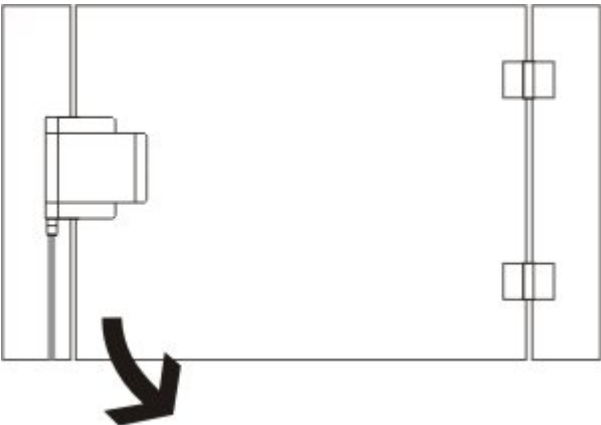
Product photo



Dimensional drawing (basic component)



Contact arrangement



Clipart

System components

Actuator



1177737 - BNS-B20-B01

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

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

Generiert am 21.04.2011 - 16:13:35h Kasbase 1.4.7 DBI