

Datasheet - BNS-B20-12z-ST-R

Safety sensors / BNS-B20



Preferred typ



(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
- Connector M12 x 1, 8-pole

Ordering details

Product type description	BNS-B20-12Z-ST-R
Article number	101186260
EAN Code	4030661326801
eCl@ss	27-27-24-02

Approval

Approval



BG




USA/CAN

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
Weight	105
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 S_{ao}	0 mm
Ensured switch distance OFF S_{ar}	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
- hinged guard	5

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. 240 mA
Switching capacity	max. 3 W

Outputs

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

Electrical data - Safety outputs

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

Electrical data - Diagnostic output

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

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.

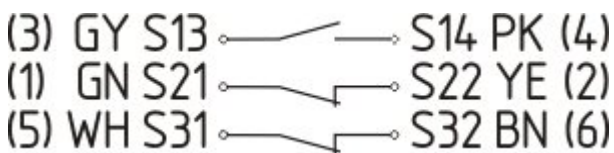
Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

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

 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)
02	2 Opener (NC)
(2)	
<i>without</i>	without LED switching conditions display
G	with LED switching conditions display
(3)	
<i>without</i>	with Pre-wired cable bottom
H	with Pre-wired cable rear
ST	with Connector M12 bottom
(4)	
L	Door hinge on left-hand side (<i>Only for Pre-wired cable bottom or Plug-in connection</i>)
R	Door hinge on right-hand side (<i>Only for Pre-wired cable bottom or Plug-in connection</i>)

Documents

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_bnbsp01

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

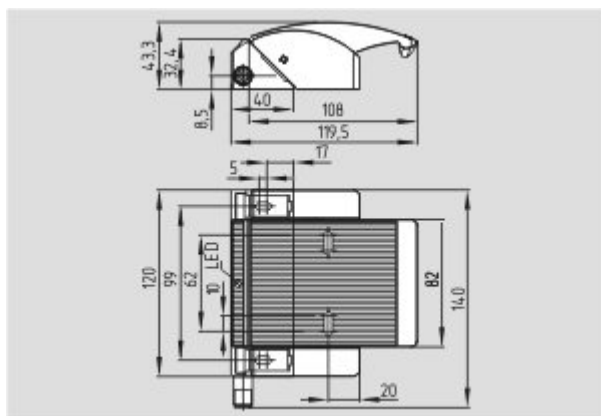
notice (de, en) 60 kB, 21.03.2006

Code: s_b20p01

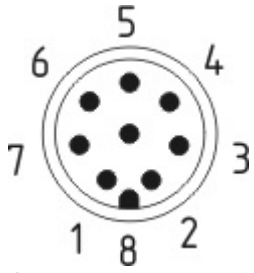
Images



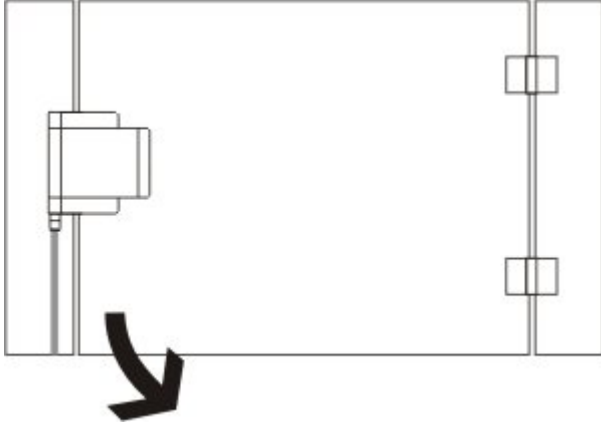
Product photo



Dimensional drawing (basic component)



Contact arrangement



Clipart

System components

Actuator



101177737 - BNS-B20-B01

Connector



A-K8M12

- Pre-wired cable
- 8-pole