

Datasheet - BNS 300-01ZG-ST

Safety sensors / BNS 300

 Preferred typ

- thermoplastic enclosure
- Long life
- no mechanical wear
- Ø M30
- Suitable for food processing industry
- Insensitive to transverse misalignment
- Insensitive to soiling
- With integral evaluation
- Connector M12, 4-pole

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

Ordering details

Product type description	BNS 300-01ZG-ST
Article number	101144214
EAN code	4030661131795

Approval

Approval



BG




USA/CAN

Classification

Standards	EN ISO 13849-1
B10d Opener (NC)	20.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{ap} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

Global Properties

Product name	BNS 300
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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 nuts	thermoplastic
Weight	50 g
Coding available (Y/N)	Yes
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	
Recommended actuator	BPS 300, BPS 303, BPS 303 SS

Mechanical data

Design of electrical connection	Connector M12
AWG-Number	
mechanical installation conditions	quasi-flush
Active area	
Ensured switch distance ON	5 mm
Ensured switch distance OFF	15 mm
Type of actuation	Magnet
Direction of motion	head-on with regard to the active surface
resistance to shock	30 g / 11 ms
Resistance to vibration	10 ... 55 Hz, Amplitude 1 mm
Tightening torque for nuts	A/F 36 max. 300 Ncm
Tightening torque for connectors	

Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+55 °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)	Yes
Cross circuit/short circuit recognition possible (Y/N)	No
Voltage type	DC
Switch frequency	max. 5 Hz
Switching voltage	max. 250 VAC
Switching current	max. 3 A
Switching capacity	max. 750 W
Utilisation category	DC-13: 24 V / 30 mA

Outputs

Design of control output	
Number of shutters	0 piece
Number of openers	1 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	1 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	0 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	
- Length of sensor	78 mm
- Diameter of sensor	M30

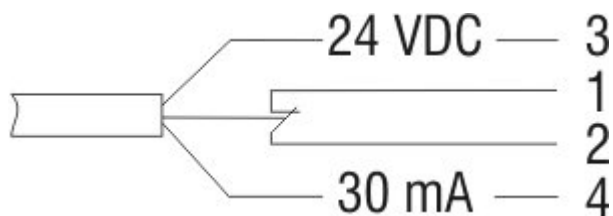
notice

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






Included in delivery

Actuators must be ordered separately.	
Mounting accessories	2 Nuts M 30 x 1,5

Diagram



Note Diagram

-  positive break NC contact
-  active
-  no active
-  Normally-open contact
-  Normally-closed contact

Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.

Order example: BNS 300-01ZG-ST-2211

...-2211 higher switching distance
Sar: 8 mm
Sao: 18 mm

Ordering code

BNS 300-01ZG-(1)-(2)

(1)

without

ST

(2)

2211

2230

2246

with cable

male connector M12

higher switching distance

supplementary signalling output

U_e 42 VAC

Documents

Operating instructions and Declaration of conformity (jp) 710 kB, 16.09.2011

Code: mrl_bns300_jp

Operating instructions and Declaration of conformity (pt) 418 kB, 16.04.2012

Code: mrl_bns300_pt

Operating instructions and Declaration of conformity (es) 846 kB, 02.11.2010

Code: mrl_bns300_es

Operating instructions and Declaration of conformity (en) 991 kB, 04.10.2010

Code: mrl_bns300_en

Operating instructions and Declaration of conformity (nl) 538 kB, 27.01.2011

Code: mrl_bns300_nl

Operating instructions and Declaration of conformity (de) 993 kB, 04.10.2010

Code: mrl_bns300_de

Operating instructions and Declaration of conformity (pl) 419 kB, 16.04.2012

Code: mrl_bns300_pl

Operating instructions and Declaration of conformity (fr) 847 kB, 14.12.2010

Code: mrl_bns300_fr

Operating instructions and Declaration of conformity (it) 536 kB, 26.01.2011

Code: mrl_bns300_it

Operating instructions and Declaration of conformity (da) 407 kB, 27.08.2012

Code: mrl_bns300_da

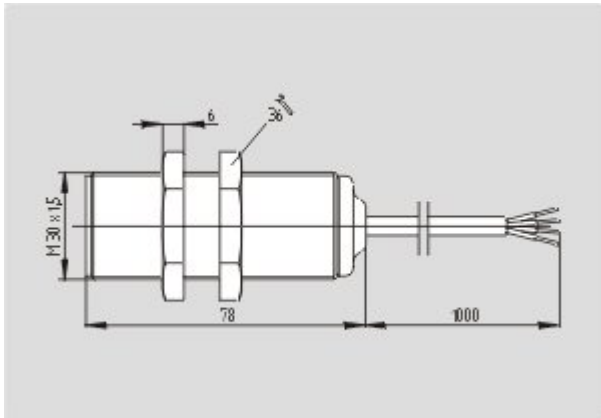
BG-test certificate (en) 559 kB, 05.01.2011

Code: z_b30p02

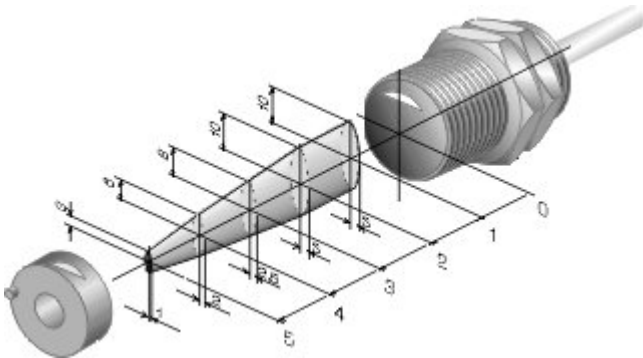
BG-test certificate (de) 571 kB, 05.01.2011

Code: z_b30p01

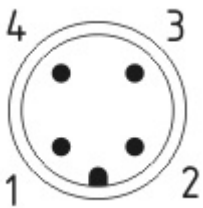
Images



Dimensional drawing (basic component)



Characteristic curve



Contact arrangement

System components

Actuator



101113734 - BPS 300

101117076 - BPS 303

• Suitable for food processing industry



Connector



A-K4M12

- Pre-wired cable
- 4-pole

Mounting accessories



101068520 - MOUNTING CLAMP H 30

- For a smooth fitting of the proximity switches with cylindric shape \varnothing 30 mm or thread M30

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

Generiert am 22.08.2014 - 04:52:02h Kasbase 2.2.18.F DBI

