

Datasheet - BNS 30-01Z-ST

Safety sensors / BNS 30



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

- Metal enclosure
- Long life
- Suitable for food processing industry only in combination with BPS 303 SS
- no mechanical wear
- Ø M30
- Insensitive to transverse misalignment
- Insensitive to soiling
- With integral evaluation
- Connector M12, 4-pole

Ordering details

Product type description	BNS 30-01Z-ST
Article number	BNS 30-01Z-ST
EAN Code	
eCl@ss	27-27-24-02

Approval

Approval




BG

Classification

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

Global Properties

Permanent light	BNS 30
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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	Brass
Housing coating	nickel-plated
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 S_{ao}	5 mm
Ensured switch distance OFF S_{ar}	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	VDC
Switch frequency	max. 5 HZ
Switching voltage	max. 250 V
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
Number of openers	1
Design of output signal switching device	

Electrical data - Safety outputs

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

Electrical data - Diagnostic output

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

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	
- Length of sensor	78 mm
- Diameter of sensor	M30

notice

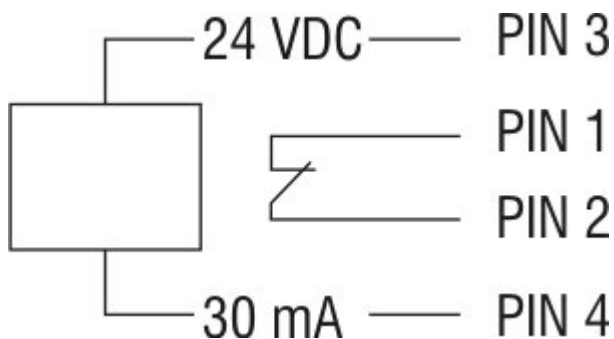
Contact symbols shown for the closed condition of the guard device.

Included in delivery


Actuators must be ordered separately.


Mounting accessories	2 Nuts M 30 x 1,5
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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 30-01Z-ST-2211

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

Ordering code

BNS 30-01Z(1)-(2)-(3)

(1)
without without LED switching conditions display

G with LED switching conditions display (*at Versions with cable*)

(2)
without with cable

ST Connector M12

(3)
2211 higher switching distance

2334 higher switching distance and supplementary signalling output

2246 U_e 42 VAC

Documents

Operating instructions and Declaration of conformity (es) 423 kB, 18.05.2016

Code: mrl_bns30_es

Operating instructions and Declaration of conformity (pl) 437 kB, 18.05.2016

Code: mrl_bns30_pl

Operating instructions and Declaration of conformity (de) 426 kB, 26.04.2016

Code: mrl_bns30_de

Operating instructions and Declaration of conformity (nl) 455 kB, 30.07.2018

Code: mrl_bns30_nl

Operating instructions and Declaration of conformity (fr) 425 kB, 29.04.2016

Code: mrl_bns30_fr

Operating instructions and Declaration of conformity (da) 419 kB, 27.08.2012

Code: mrl_bns30_da

Operating instructions and Declaration of conformity (en) 422 kB, 26.04.2016

Code: mrl_bns30_en

Operating instructions and Declaration of conformity (pt) 424 kB, 08.05.2017

Code: mrl_bns30_pt

Operating instructions and Declaration of conformity (it) 421 kB, 24.06.2016

Code: mrl_bns30_it

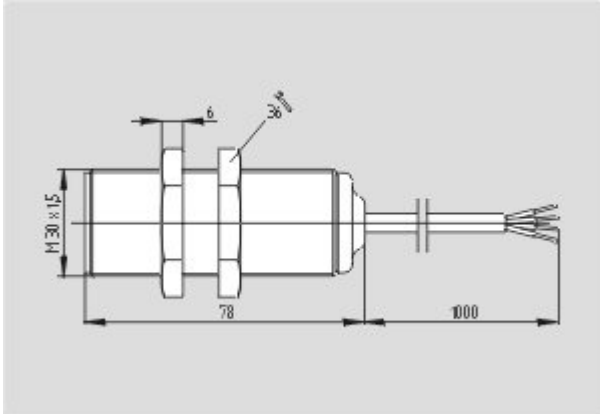
Operating instructions and Declaration of conformity (jp) 1 MB, 14.12.2010

Code: mrl_bns30_jp

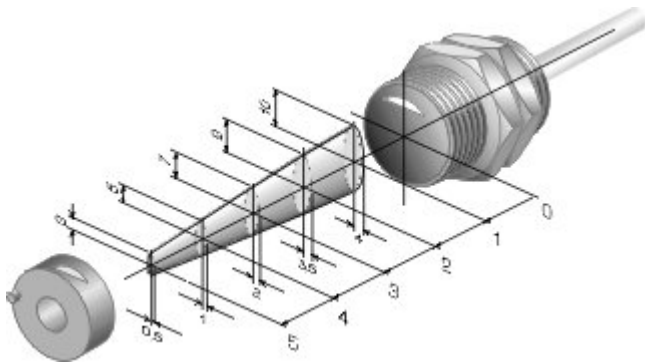
BG-test certificate (en) 559 kB, 05.01.2011

Code: z_b30p02

Images



Dimensional drawing (basic component)



Characteristic curve

System components

Actuator



101113734 - BPS 300



101117076 - BPS 303

- Suitable for food processing industry

101141156 - BPS 303 SS

- Suitable for food processing industry
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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.

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