

Datasheet - BNS 30-01zG

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

Ordering details

Product type description	BNS 30-01ZG
Article number	BNS 30-01zG
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	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

Global Properties

Permanent light	BNS 30
-----------------	--------

Standards	IEC 60947-5-3, BG-GS-ET-14
Compliance with the Directives (Y/N) 	Yes
Materials	
- Material of the housings	Brass
- Material of the cable mantle	PVC
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	Cable
Cable length	1
Conductors	4 x 0,75
AWG-Number	18
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
restistance 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

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

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)	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

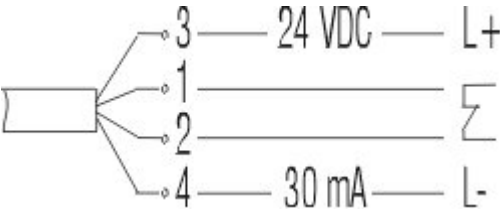
notice

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 30-01zG-**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 Ue 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

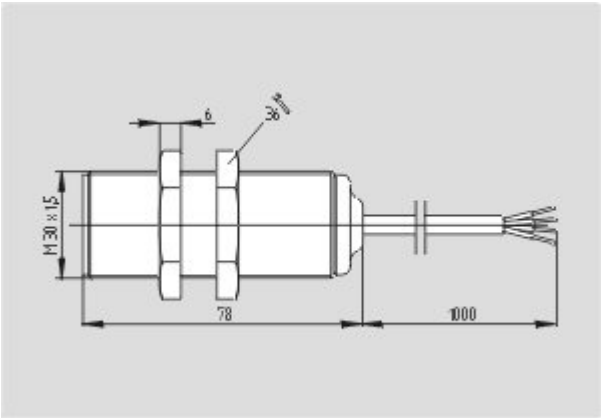
Operating instructions and Declaration of conformity (ip) 1 MB, 14.12.2010

Code: mrl_bns30_jp

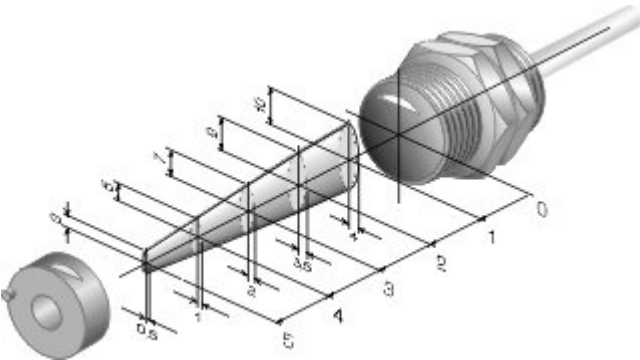
BG-test certificate (en) 559 kB, 05.01.2011

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



Mounting accessories



101068520 - MOUNTING CLAMP H 30

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

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

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

Generiert am 13.02.2019 - 14:24:14h Kasbase 3.3.0.F.64l