

Datasheet - BNS 180-02z

Safety sensors / BNS 180

 Preferred typ

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

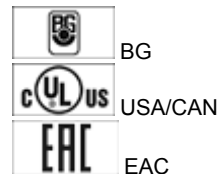
- Thermoplastic enclosure
- Suitable for food processing industry only in combination with BP 15 SS
- Particularly large switching distance
- Ø M 18 x 1
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

Ordering details

Product type description	BNS 180-02Z
Article number	101133009
EAN Code	4030661279640
eCl@ss	27-27-24-02

Approval


Approval



Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact (NC)	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 180
Standards	IEC 60947-5-3, BG-GS-ET-14
Compliance with the Directives (Y/N) 	Yes
Category safety pursuant to EN ISO 13849-1	
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
- Material of the cable mantle	PVC
Weight	50
Coding available (Y/N)	No
Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	
Recommended actuator	BP 6, BP 8, BP 10, BP 15 SS

Mechanical data

Design of electrical connection	Cable
Cable length	1
Conductors	4 x 0,25
AWG-Number	23
mechanical installation conditions	quasi-flush
Active area	
Ensured switch distance ON S_{ao}	10 mm / 20 mm
- Actuating magnet BP 6	10
- Actuating magnet BP 8	10
- Actuating magnet BP 15 SS	20
- Actuating magnet BP 10	20
Ensured switch distance OFF S_{ar}	22 mm / 32 mm
- Actuating magnet BP 15 SS	32
- Actuating magnet BP 6	22
- Actuating magnet BP 10	32
- Actuating magnet BP 8	22
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

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	VAC/DC

Switch frequency	max. 5 HZ
Switching voltage	max. 100 VAC/DC
Switching current	max. 250 mA
Switching capacity	max. 3 W

Outputs

Design of control output	
Number of shutters	0
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	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	36 mm
- Diameter of sensor	M18

notice

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

The safety sensor must be mounted in such a way that actuation with another magnet is impossible (concealed mounting according to EN 1088)


Included in delivery

Actuators must be ordered separately.

Diagram

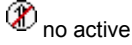


Note Diagram

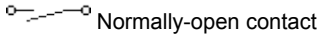
 positive break NC contact



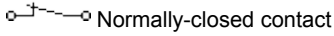
active



no active



Normally-open contact



Normally-closed contact

Ordering code

BNS 180-(1)Z-(2)

(1)

11 1 Normally open contact (NO) / 1 Opener (NC)

12 1 Normally open contact (NO) / 2 Opener (NC)

02 2 Opener (NC)

(2)

2187-2 Individual contact outlet

Documents

Operating instructions and Declaration of conformity (nl) 398 kB, 30.07.2018

Code: mrl_bns180_nl

Operating instructions and Declaration of conformity (pl) 412 kB, 08.04.2016

Code: mrl_bns180_pl

Operating instructions and Declaration of conformity (en) 384 kB, 15.03.2016

Code: mrl_bns180_en

Operating instructions and Declaration of conformity (pt) 385 kB, 09.03.2017

Code: mrl_bns180_pt

Operating instructions and Declaration of conformity (es) 385 kB, 08.04.2016

Code: mrl_bns180_es

Operating instructions and Declaration of conformity (de) 385 kB, 15.03.2016

Code: mrl_bns180_de

Operating instructions and Declaration of conformity (jp) 623 kB, 22.08.2017

Code: mrl_bns180_jp

Operating instructions and Declaration of conformity (da) 401 kB, 08.08.2012

Code: mrl_bns180_da

Operating instructions and Declaration of conformity (fr) 385 kB, 29.04.2016

Code: mrl_bns180_fr

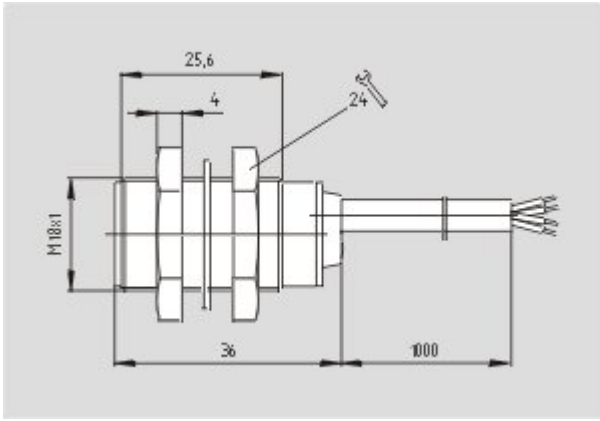
Operating instructions and Declaration of conformity (it) 380 kB, 11.04.2016

Code: mrl_bns180_it

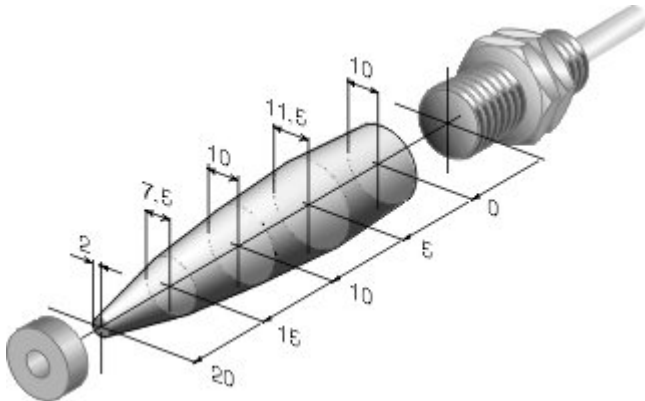
EAC certification (ru) 782 kB, 05.10.2015

Code: q_6044p17_ru

Images



Dimensional drawing (basic component)



Characteristic curve

System components

Actuator



1091837 - BP 6

- Unenclosed
- S-pole marked red

101054816 - BP 8

- Unenclosed
- S-pole marked red



101057531 - BP 10

- Unenclosed
- Colour coding of poles by labels



1139818 - BP 15 SS

- Suitable for food processing industry
- Stainless steel



Mounting accessories



101068879 - MOUNTING CLAMP H 18

- For a smooth fitting of the proximity switches with cylindric shape Ø 18 mm or thread M18

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

Generiert am 13.02.2019 - 14:23:16h Kasbase 3.3.0.F.64I