

Datasheet - EX-BNS 180-12Z-2187-2-3G/D 5,0M

Safety sensors / EX-BNS 180



- Ex certified
- Thermoplastic enclosure
- Suitable for food processing industry only in combination with BP 15 SS
- Ø M18
- Particularly large switching distance
- Long life
- no mechanical wear
- Insensitive to transverse misalignment
- Insensitive to soiling

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

Ordering details

Product type description	EX-BNS 180-12Z-2187-2-3G/D 5,0M
Article number	101192525
EAN code	4030661352657
eCl@ss	27-27-24-02

Approval

Approval	ATEX
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Classification

Standards	EN ISO 13849-1
B _{10d} Opener/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

Product name	EX-BNS 180
Standards	IEC 60947-5-3, EN 60079-0, EN 60079-15, EN 60079-31, BG-GS-ET-14

Compliance with the Directives (Y/N) 

Yes

Materials

- Material of the housings
- Material of the cable mantle

Plastic, glass-fibre reinforced thermoplastic
PVC

Housing construction form

cylinder, thread

Weight

235 g

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

5 m

Conductors

6 x 0,25 mm²

AWG-Number

23

mechanical installation conditions

quasi-flush

Active area

front side

Ensured switch distance ON S_{ao}

8 mm / 18 mm

- Actuating magnet BP 15 SS

18 mm

- Actuating magnet BP 6

8 mm

- Actuating magnet BP 8

8 mm

- Actuating magnet BP 10

18 mm

Ensured switch distance OFF S_{ar}

22 mm / 32 mm

- Actuating magnet BP 10

28 mm

- Actuating magnet BP 8

20 mm

- Actuating magnet BP 15 SS

28 mm

- Actuating magnet BP 6

20 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

Impact energy

max. 2 Nm

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. 120 VAC/DC

Switching current

max. 250 mA

Switching capacity max. 5 W

Outputs

Design of control output
Number of shutters 1 piece
Number of openers 2 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 2 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 1 piece

LED switching conditions display

LED switching conditions display (Y/N) No

ATEX

EX-marking EX II 3D Ex tc IIC T80°C Dc X
EX II 3G Ex nC IIC T6 Gc X
Explosion protection categories for gases 3G
Explosion protection Zones for gases 2
Explosion protected category for dusts 3D
Explosion protection Zones for dusts 22

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)

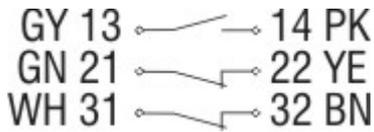
Included in delivery

Actuators must be ordered separately.

Keywords

Keywords Ex, EEx, ATEX, Ex BNS180, EX BNS 180, BNS 180 Ex, BNS180ex, BNS 180 ex, ATEX BNS 180

Diagram



Note Diagram

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

Documents

Operating instructions and Declaration of conformity (de) 477 kB, 09.11.2017

Code: mrl_ex-bns180_de

Operating instructions and Declaration of conformity (pt) 482 kB, 10.09.2015

Code: mrl_ex-bns180_pt

Operating instructions and Declaration of conformity (fr) 480 kB, 09.09.2014

Code: mrl_ex-bns180_fr

Operating instructions and Declaration of conformity (es) 116 kB, 20.08.2014

Code: mrl_ex-bns180_es

Operating instructions and Declaration of conformity (it) 471 kB, 03.09.2014

Code: mrl_ex-bns180_it

Operating instructions and Declaration of conformity (en) 500 kB, 09.11.2017

Code: mrl_ex-bns180_en

Operating instructions and Declaration of conformity (nl) 477 kB, 03.09.2014

Code: mrl_ex-bns180_nl

Operating instructions and Declaration of conformity (pl) 510 kB, 11.01.2016

Code: mrl_ex-bns180_pl

Operating instructions and Declaration of conformity (jp) 595 kB, 09.09.2014

Code: mrl_ex-bns180_jp

Brochure (de) 7 MB, 19.10.2016

Code: b_atep01_de

Brochure (de) 7 MB, 25.02.2011

Code: b_atep01

Brochure (en) 8 MB, 28.08.2012

Code: b_atep02

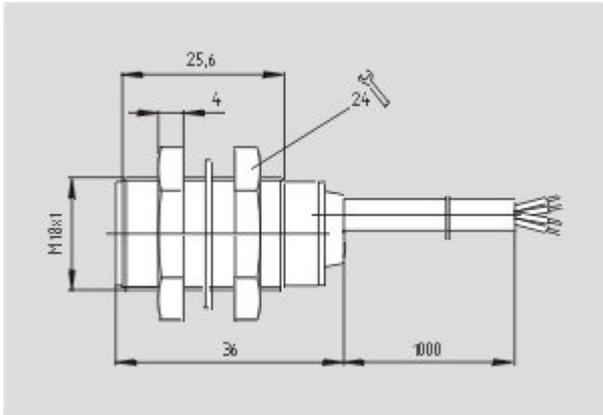
Brochure (en) 7 MB, 19.10.2016

Code: b_atep01_en

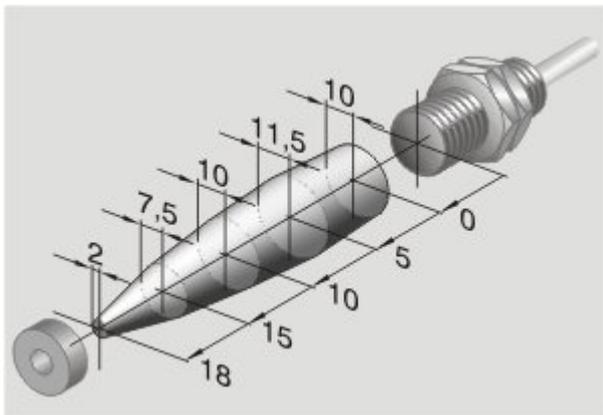
Brochure (it) 3 MB, 20.07.2007

Code: b_atep05

Images



Dimensional drawing (basic component)



Characteristic curve
