

## Datasheet - EX-BNS40S-12Z

Safety sensors / EX-BNS40S



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

- Stainless steel enclosure
- Cable connection suitable for the food industry
- Concealed mounting possible
- 88 mm x 27 mm x 14,5 mm
- Long life
- no mechanical wear
- Insensitive to soiling
- Insensitive to transverse misalignment
- Suitable for food processing industry
- Ex certified

### Ordering details

Product type description	EX-BNS40S-12Z
Article number	103002167
EAN Code	
eCl@ss	27-27-24-02


### Approval

Approval	ATEX
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### Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact/Normally open contact (NC/NO)	25.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{cp} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	EX-BNS40S
Standards	IEC 60947-5-3, BG-GS-ET-14, EN 60079-0, EN 60079-15, EN 60079-31
Compliance with the Directives (Y/N) 	Yes
Materials	
- Material of the housings	Stainless steel (V4A)
- Material of the cable mantle	LiYY
Housing construction form	Block
Weight	
Coding available (Y/N)	Yes
Concealed threaded holes on the back (Y/N)	No
Monitoring function of downstream devices (Y/N)	No

Prerequisite evaluation unit	Yes
Recommended safety-monitoring module	AES 1135, AES 1136, AES 1165, AES 1166, AES 1165-2250, AES 1185, AES 1235, AES 1236, AES 1265, AES 1266, AES 1337, AES 2135, AES 2136, AES 2335, AES 2336, AES 2535, AES 2536, AES 2365, AES 2565, AES 2566, AES 2285, AES 3075, SRB 202C., SRB 400C., AES 3075, SRB 201LC, SRB301MC
Recommended actuator	BPS 40S-1, BPS 40S-2, BPS 40S-1-C, BPS 40S-2-C

## Mechanical data

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Design of electrical connection	Cable
Cable length	1
Conductors	6 x 0,25
AWG-Number	23
mechanical installation conditions	not flush
Active area	Side
Ensured switch distance ON	8
Ensured switch distance OFF	18
Type of actuation	Magnet
Direction of motion	head-on with regard to the active surface
restistance to shock	30 / 11
Resistance to vibration	10 ... 55 HZ, Amplitude 1 mm
Impact energy	7

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-20
- Max. environmental temperature	+60
Storage and transport temperature	
- Min. Storage and transport temperature	-25
- Max. Storage and transport temperature	+80
Protection class	IP65 / IP67 to IEC/EN 60529

## Electrical data

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Integrated Safety monitoring module available (Y/N)	No
Cross circuit/short circuit recognition possible (Y/N)	Yes
Voltage type	
Switch frequency	5
Switching voltage	24
Switching current	250
Switching capacity	3
Required rated short-circuit current	100 A

## Outputs

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Design of control output	Other, Reed kontakts
Number of shutters	1
Number of openers	2

## Electrical data - Safety outputs

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

## Electrical data - Diagnostic output

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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

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LED switching conditions display (Y/N)	No
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## ATEX

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EX-marking	EX II 3D Ex tc IIIC T80°C Dc EX II 3G Ex nA nC IIC T6 Gc
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

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Dimensions of the sensor	
- Width of sensor	88
- Height of sensor	27
- Length of sensor	14.5

## notice

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Contact symbols shown for the closed condition of the guard device.  
Contact S21-S22 must be integrated in the safety circuit  
The contact configuration for versions with or without LED is identical.

## Included in delivery

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Actuators must be ordered separately.

## Ordering code

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EX-BNS40S-12Z(1)-(2)-3GD

(1)	
<i>without</i>	without LED switching conditions display
<b>G</b>	with LED switching conditions display
(2)	
<i>without</i>	With countersunk mounting holes
<b>C</b>	concealed threaded holes on the back

## Documents

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**Operating instructions and Declaration of conformity** (de) 305 kB, 29.09.2017

Code: mrl\_ex-bns40s\_de

**Operating instructions and Declaration of conformity** (jp) 391 kB, 18.09.2012

Code: mrl\_ex-bns40s\_jp

**Operating instructions and Declaration of conformity (da)** 279 kB, 05.06.2013

Code: mrl\_ex-bns40s\_da

**Operating instructions and Declaration of conformity (pt)** 336 kB, 17.10.2017

Code: mrl\_ex-bns40s\_pt

**Operating instructions and Declaration of conformity (it)** 328 kB, 17.10.2017

Code: mrl\_ex-bns40s\_it

**Operating instructions and Declaration of conformity (nl)** 305 kB, 07.08.2018

Code: mrl\_ex-bns40s\_nl

**Operating instructions and Declaration of conformity (es)** 332 kB, 17.10.2017

Code: mrl\_ex-bns40s\_es

**Operating instructions and Declaration of conformity (pl)** 351 kB, 01.02.2018

Code: mrl\_ex-bns40s\_pl

**Operating instructions and Declaration of conformity (en)** 305 kB, 29.09.2017

Code: mrl\_ex-bns40s\_en

**Operating instructions and Declaration of conformity (fr)** 333 kB, 13.10.2017

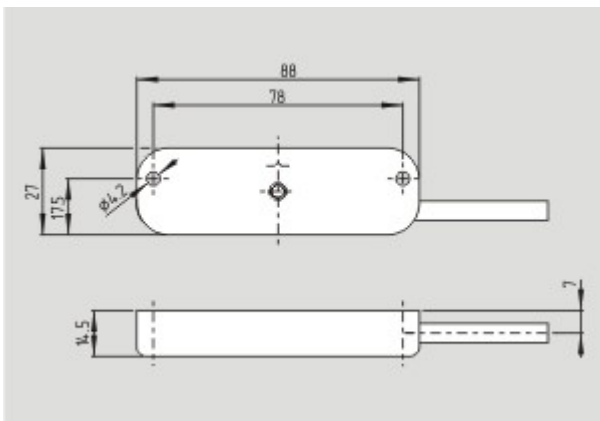
Code: mrl\_ex-bns40s\_fr

**Operating instructions and Declaration of conformity (cs)** 279 kB, 04.06.2013

Code: mrl\_ex-bns40s\_cs

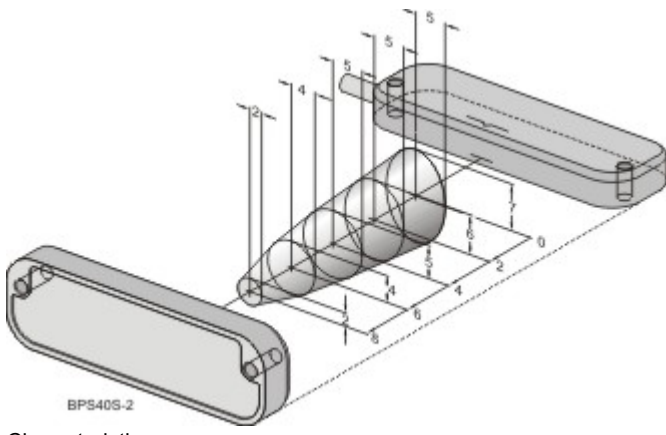
## Images

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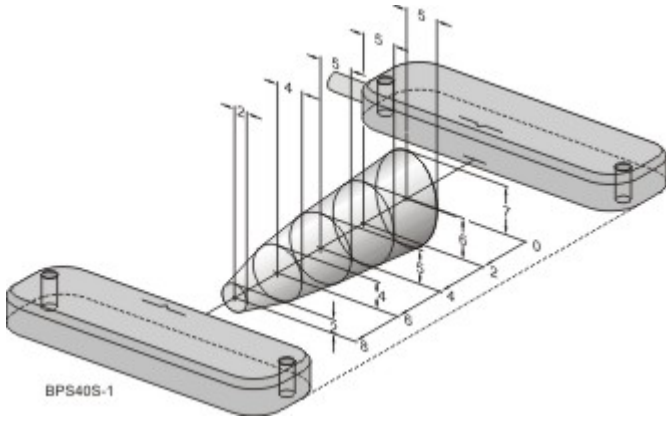


Dimensional drawing (basic component)

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Characteristic curve



Characteristic curve