

Datasheet - BNS 40S-12Z

Safety sensors / BNS 40S



(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

Ordering details

Product type description	BNS 40S-12Z
Article number	101215517
EAN code	

Approval

Approval



BG under preparation



USA/CAN

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	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

Global Properties

Product name	BNS 40S
Standards	IEC 60947-5-3, BG-GS-ET-14
Compliance with the Directives (Y/N)	Yes
Materials	
- Material of the housings	Stainless steel (V4A)
- Material of the cable mantle	LiYY
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

Recommended actuator

BPS 40S-1, BPS 40S-2, BPS 40S-1-C, BPS 40S-2-C

Mechanical data

Design of electrical connection	Cable
Cable length	1 m
Conductors	6 x 0,25 mm ²
AWG-Number	23
mechanical installation conditions	not flush
Active area	Side
Ensured switch distance ON S _{ao}	8 mm
Ensured switch distance OFF S _{ar}	18 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

Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+80 °C
Storage and transport temperature	
- Min. Storage and transport temperature	-25 °C
- Max. Storage and transport temperature	+80 °C
Protection class	IP69K

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	100 max. VAC/DC
Switching current	250 mA max.
Switching capacity	3 W max.

Outputs

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

Electrical data - Safety outputs

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

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	
- Width of sensor	88 mm
- Height of sensor	27 mm
- Length of sensor	14.5 mm

notice

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

Actuators must be ordered separately.

Ordering code

BNS 40S-12Z(1)-(2)

(1)
without without LED switching conditions display
G with LED switching conditions display

(2)
without With countersunk mounting holes Ø 4.2 mm
C M4

Documents

Operating instructions and Declaration of conformity (da) 285 kB, 08.08.2012
Code: mrl_bns40s_da

Operating instructions and Declaration of conformity (de) 542 kB, 09.12.2010
Code: mrl_bns40s_de

Operating instructions and Declaration of conformity (sv) 282 kB, 16.04.2012
Code: mrl_bns40s_sv

Operating instructions and Declaration of conformity (fr) 285 kB, 16.04.2012
Code: mrl_bns40s_fr

Operating instructions and Declaration of conformity (jp) 361 kB, 24.05.2012

Code: mrl_bns40s_jp

Operating instructions and Declaration of conformity (pl) 283 kB, 24.05.2012

Code: mrl_bns40s_pl

Operating instructions and Declaration of conformity (pt) 286 kB, 16.04.2012

Code: mrl_bns40s_pt

Operating instructions and Declaration of conformity (it) 282 kB, 16.04.2012

Code: mrl_bns40s_it

Operating instructions and Declaration of conformity (nl) 280 kB, 08.11.2012

Code: mrl_bns40s_nl

Operating instructions and Declaration of conformity (es) 308 kB, 06.07.2012

Code: mrl_bns40s_es

Operating instructions and Declaration of conformity (en) 457 kB, 14.01.2011

Code: mrl_bns40s_en

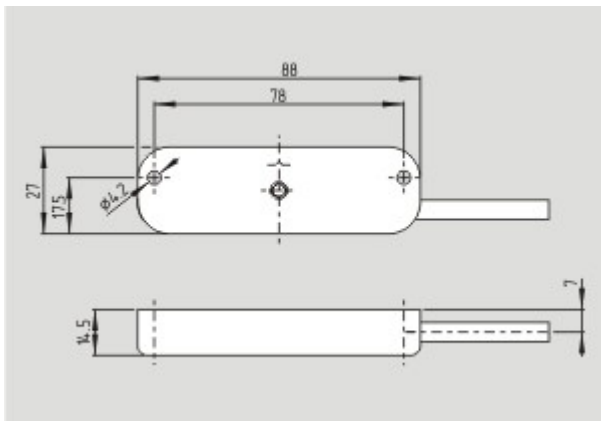
ECOLAB certification (en) 382 kB, 25.04.2012

Code: q_bnsp02

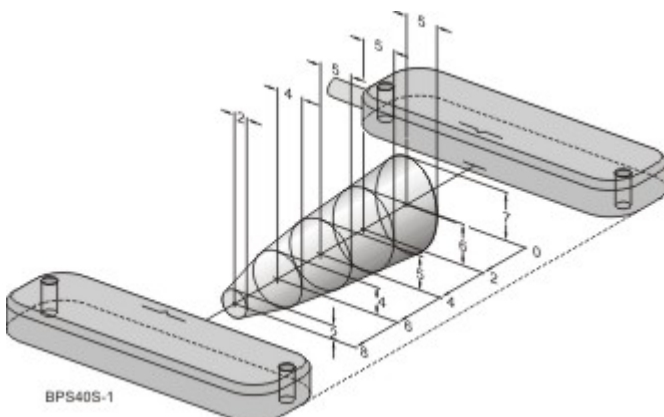
ECOLAB certification (de) 383 kB, 25.04.2012

Code: q_bnsp01

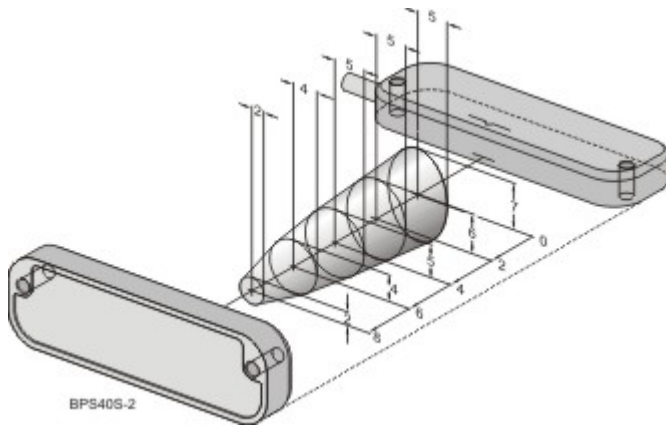
Images



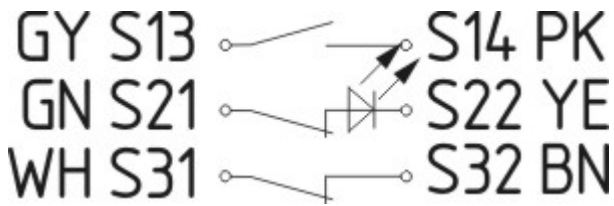
Dimensional drawing (basic component)



Characteristic curve



Characteristic curve



Diagram

System components

Actuator



101215267 - BPS 40S-2-C

- Stainless steel enclosure
- Actuator 90 ° attached to the sensor



101215266 - BPS 40S-1-C

- Stainless steel enclosure
- Actuator and sensor on a mounting level



101215269 - BPS 40S-2

- Stainless steel enclosure
- Actuator 90 ° attached to the sensor



101215268 - BPS 40S-1

- Stainless steel enclosure
- Actuator and sensor on a mounting level

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

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