Datasheet - BNS 16-12ZV

Safety sensors / BNS 16

☒ Preferred typ



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

- thermoplastic enclosure
- Suitable for food processing industry
- Concealed mounting possible
- 52 mm x 90 mm x 32 mm
- Long life
- Insensitive to transverse misalignment
- no mechanical wear
- Insensitive to soiling
- 3 cable entries M 20 x 1.5
- Wiring compartment

Ordering details

Product type description	BNS 16-12ZV
Article number	1172553
EAN code	4030661301129

Approval

Approval	BG USA/CAN

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

Global Properties

Product name	BNS 16
Standards	IEC 60947-5-3, BG-GS-ET-14
Compliance with the Directives (Y/N) CE	Yes
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
Weight	125 g
Coding available (Y/N)	Yes
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 2366, AES 2565, AES 2566, AES 2285, AES 3075, SRB 202C., SRB 400C.
Recommended actuator	BPS 16

Mechanical data

Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	0,25 mm²
- Max. Cable section	1.5 mm²
mechanical installation conditions	not flush
Active area	front side
Ensured switch distance ON	8 mm
Ensured switch distance OFF	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
notice	All indications about the cable section are including the conductor ferrules.

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. 400 mA
Switching capacity	max. 10 W

Outputs

Design of control output	Other, Reed contakts
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

ATEX

Explosion protection categories for gases	None
Explosion protected category for dusts	None

Dimensions

Dimensions of the sensor	
- Width of sensor	52 mm
- Height of sensor	90 mm
- Length of sensor	39 mm

notice

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

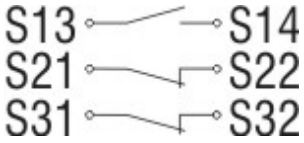
Included in delivery

Actuators must be ordered separately.

Indication legend

5 different directions of actuation: cover, front and below, right and left

Diagram



Note Diagram

positive break NC contact

active

no active

Normally-open contact

Normally-closed contact

Ordering code

BNS 16-(1)Z(2)-(3)

(1)

11 1 Normally open contact (NO) / 1 Opener (NC) (Only for Plug-in connection)

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

(2)

V Actuating planes front side

R Actuating planes right-hand side

L Actuating planes left-hand side

D Actuating planes cover-side

U Actuating planes bottom

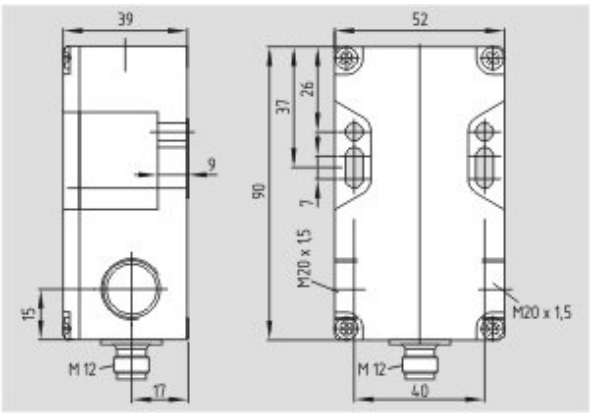
LR Actuating planes left-hand side/right-hand side

(3)

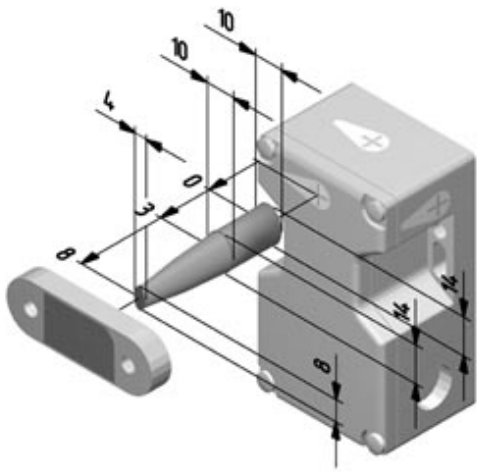
ST1 Connector Middle

ST2 Connector right

ST3 Connector left



Dimensional drawing (basic component)



Dimensional drawing (miscellaneous)



Operating principle

System components

Actuator

1172566 - BPS 16

