

Datasheet - BNS 333-01yU

Safety sensors / BNS 333



- Thermoplastic enclosure
- Long life
- Suitable for food processing industry only in combination with BPS 303
- no mechanical wear
- 40 mm x 112 mm x 40 mm
- Insensitive to transverse misalignment
- Insensitive to soiling
- With integral evaluation
- 1 Cable entry M 20 x 1.5

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

Ordering details

| | |
|--------------------------|---------------|
| Product type description | BNS 333-01YU |
| Article number | 101169807 |
| EAN Code | 4030661296524 |
| eCl@ss | 27-27-24-02 |

Approval


Approval



Classification

| | |
|-----------------------------------|--|
| Standards | EN ISO 13849-1 |
| B10d Normally-closed contact (NC) | 20.000.000 |
| - 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 333 |
| Standards | IEC 60947-5-3, BG-GS-ET-14 |
| Compliance with the Directives (Y/N)  | Yes |
| Materials | |
| - Material of the housings | Plastic, glass-fibre reinforced thermoplastic |
| Weight | 145 |
| Coding available (Y/N) | Yes |
| Monitoring function of downstream devices (Y/N) | No |
| Prerequisite evaluation unit | |
| Recommended safety-monitoring module | |
| Recommended actuator | BPS 300, BPS 303, BPS 303 SS |

Mechanical data

| | |
|--------------------------------------|---|
| • Wiring compartment | |
| Design of electrical connection | Screw connection |
| Cable section | |
| - Min. Cable section | 2 x 0,75 |
| - Max. Cable section | 2 x 1.5 |
| AWG-Number | 15 |
| mechanical installation conditions | quasi-flush |
| Active area | bottom |
| Ensured switch distance ON S_{ao} | 4 mm |
| Ensured switch distance OFF S_{ar} | 14 mm |
| notice | All indications about the cable section are including the conductor ferrules. |
| 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 | +55 °C |
| Storage and transport temperature | |
| - Min. Storage and transport temperature | -25 °C |
| - Max. Storage and transport temperature | +70 °C |
| Protection class | IP65 |

Electrical data

| | |
|--|-------------|
| Integrated Safety monitoring module available (Y/N) | Yes |
| Cross circuit/short circuit recognition possible (Y/N) | No |
| Voltage type | VAC/DC |
| Switch frequency | max. 5 HZ |
| Switching voltage | max. 250 V |
| Switching current | max. 5 A |
| Switching capacity | max. 1250 W |

Outputs

| | |
|--------------------------|---|
| Design of control output | |
| Number of shutters | 0 |

| | |
|--|---|
| Number of openers | 1 |
| Design of output signal switching device | |

Electrical data - Safety outputs

| | |
|---|---|
| Number of secure semi-conductor outputs | 0 |
| Number of secure outputs with contact | 1 |

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) | Yes |
| - The LED is illuminated when the guard is closed. | |

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.

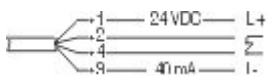
Included in delivery

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 333-01Y(1)-M20

| | |
|-----|----------------------------------|
| (1) | |
| 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 |

Documents

Operating instructions and Declaration of conformity (pt) 325 kB, 15.06.2018

Code: mrl_bns333_pt

Operating instructions and Declaration of conformity (it) 321 kB, 15.06.2018

Code: mrl_bns333_it

Operating instructions and Declaration of conformity (nl) 322 kB, 15.06.2018

Code: mrl_bns333_nl

Operating instructions and Declaration of conformity (pl) 340 kB, 15.06.2018

Code: mrl_bns333_pl

Operating instructions and Declaration of conformity (de) 300 kB, 15.06.2018

Code: mrl_bns333_de

Operating instructions and Declaration of conformity (jp) 1 MB, 14.12.2010

Code: mrl_bns333_jp

Operating instructions and Declaration of conformity (en) 322 kB, 15.06.2018

Code: mrl_bns333_en

Operating instructions and Declaration of conformity (fr) 324 kB, 15.06.2018

Code: mrl_bns333_fr

Operating instructions and Declaration of conformity (es) 322 kB, 15.06.2018

Code: mrl_bns333_es

Operating instructions and Declaration of conformity (da) 290 kB, 23.08.2012

Code: mrl_bns333_da

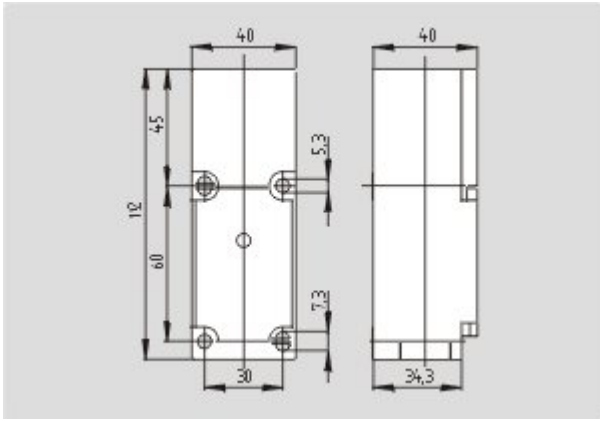
BG-test certificate (en) 559 kB, 05.01.2011

Code: z_b30p02

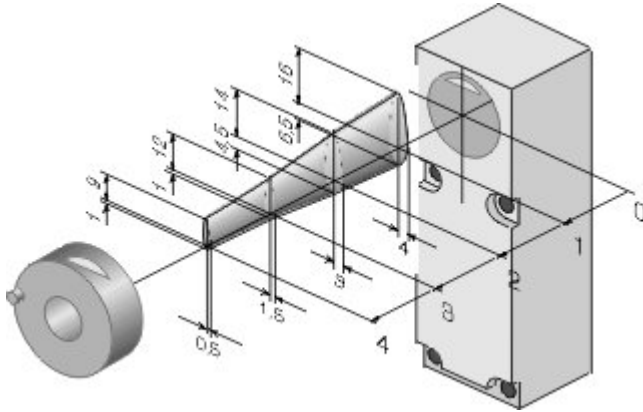
EAC certification (ru) 782 kB, 05.10.2015

Code: q_6044p17_ru

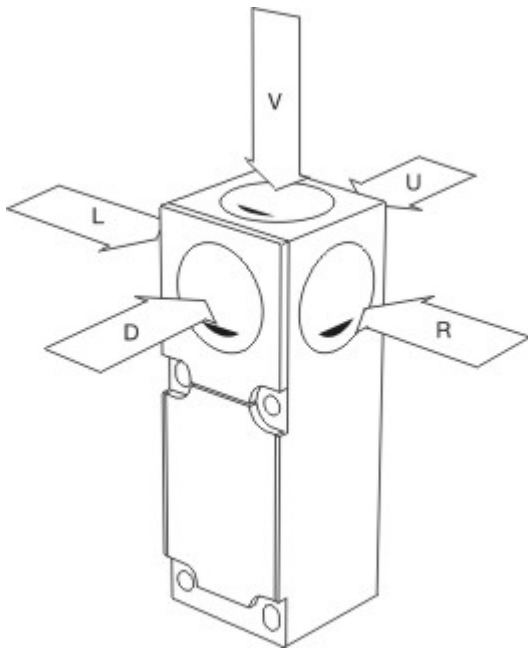
Images



Dimensional drawing (basic component)



Characteristic curve



Application

System components

Actuator

101113734 - BPS 300



101117076 - BPS 303

- Suitable for food processing industry



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

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