

## Datasheet - BNS 333-01yL

Safety sensors / BNS 333

 Preferred typ

- 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 333-01YL  |
| Article number           | 101169805     |
| EAN Code                 | 4030661296500 |
| 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   | 150   |
| 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

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|                                      |   |
|--------------------------------------|---|
| • 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                          | left-hand side  |
| 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

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|  |        |
|--|--------|
| 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

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|  |             |
|--|-------------|
| 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

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

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

### Electrical data - Safety outputs

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

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

### ATEX

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

### Dimensions

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

### notice

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

### Included in delivery

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Actuators must be ordered separately.

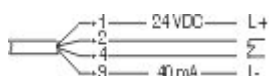
### Indication legend

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

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

### Diagram

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Note Diagram

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

## Ordering code

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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

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**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

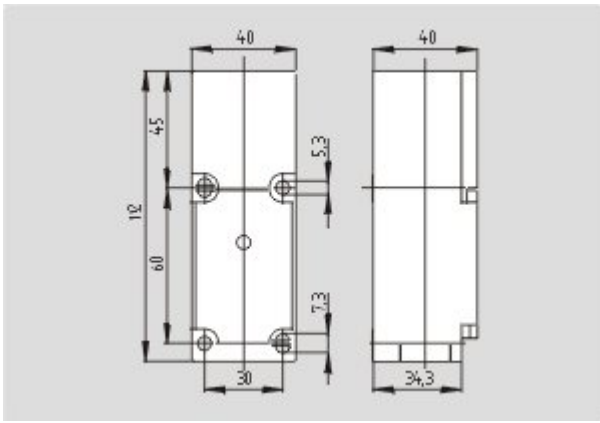
Code: z\_b30p02

**EAC certification** (ru) 782 kB, 05.10.2015

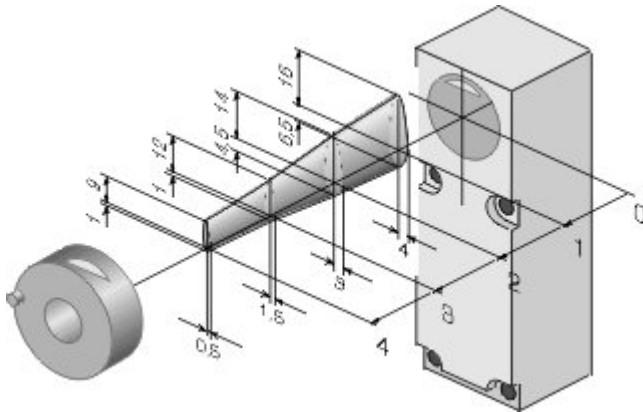
Code: q\_6044p17\_ru

## Images

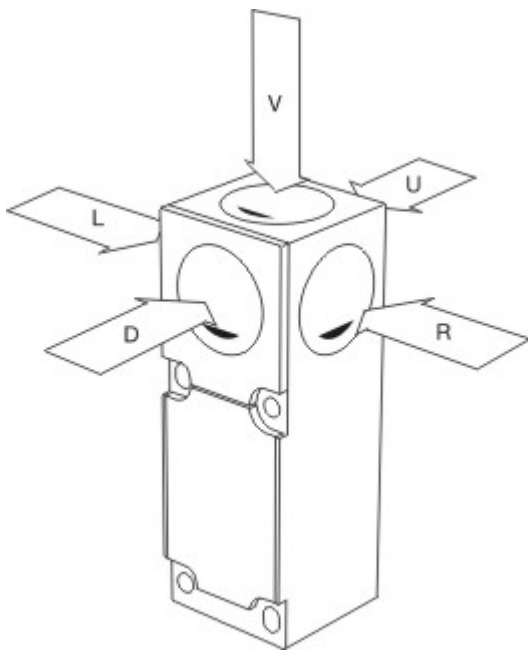
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Dimensional drawing (basic component)



Characteristic curve



Application

## System components

### Actuator

101113734 - BPS 300



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**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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